Final Program-at-a-Glance & Poster Abstracts

DON’T MISS THESE EXCITING SPECIAL LECTURES!

OPENING KEYNOTE: Mark Kelly, retired astronaut and naval captain, with appearance by former Congresswoman Gabby Giffords
Thursday, Oct. 11, 10:15 – 10:45 a.m.

LEADERSHIP IN INNOVATION LECTURE: William P. Coleman, III, MD
Friday, Oct. 12, 10:45 – 11:15 a.m.

ANNUAL LAWRENCE M. FIELD, MD, HONORARY LECTURE:
Drs. Jean and Alastair Carruthers
Saturday, Oct. 13, 10 – 10:45 a.m.

NEW!
ASDS ANNUAL MEETING MOBILE APP
Download for the full program, abstracts, evaluations, schedule reminders and much more!
See page 9 for details.

Graciously supported in part by GALDERMA Booth #227
BOTOCOSMETHCOSMETIC (ONABOTULINITUMTOXINA) IMPORTANT INFORMATION

Indications
BOTOCOSMETHCOSMETIC (ONABOTULINITUMTOXINA) is indicated in adult patients for the temporary improvement in the appearance of:
- moderate to severe glabellar lines associated with corrugator and/or procerus muscle activity
- moderate to severe lateral canthal lines associated with orbicularis oculi activity
- moderate to severe forehead lines associated with frontalis activity

IMPORTANT SAFETY INFORMATION, INCLUDING BOXED WARNING

WARNING: DISTANT SPREAD OF TOXIN EFFECT
Postmarketing reports indicate that the effects of BOTOCOSMETHCOSMETIC and all botulinum toxin products may spread from the area of injection to produce symptoms consistent with botulinum toxin effects. These may include asthenia, generalized muscle weakness, diplopia, ptosis, dysphagia, dysphonia, dysthria, urinary incontinence and breathing difficulties. These symptoms have been reported hours to weeks after injection. Swallowing and breathing difficulties can be life threatening and there have been reports of death. The risk of symptoms is probably greatest in children treated for spasticity but symptoms can also occur in adults treated for spasticity and other conditions, particularly in those patients who have an underlying condition that would predispose them to these symptoms. In unapproved uses, including spasticity in children, and in approved indications, cases of spread of effect have been reported at doses comparable to those used to treat cervical dystonia and spasticity and at lower doses.

CONTRAINDICATIONS
BOTOCOSMETHCOSMETIC is contraindicated in the presence of infection at the proposed injection site(s) and in individuals with known hypersensitivity to any botulinum toxin preparation or to any of the components in the formulation.

WARNINGS AND PRECAUTIONS
Lack of Interchangeability between Botulinum Toxin Products
The potency Units of BOTOCOSMETHCOSMETIC are specific to the preparation and assay method utilized. They are not interchangeable with other preparations of botulinum toxin products and, therefore, units of biological activity of BOTOCOSMETHCOSMETIC cannot be compared to nor converted into units of any other botulinum toxin products assessed with any other specific assay method.

Spread of Toxin Effect
Please refer to Boxed Warning for Distant Spread of Toxin Effect. No definitive serious adverse event reports of distant spread of toxin effect associated with dermatologic use of BOTOCOSMETHCOSMETIC at the labeled dose of 20 Units (for glabellar lines), 24 Units (for lateral canthal lines), 40 Units (for forehead lines with glabella lines), 44 Units (for simultaneous treatment of lateral canthal lines and glabellar lines), and 64 Units (for simultaneous treatment of lateral canthal lines, glabellar lines, and forehead lines) have been reported.

Serious Adverse Reactions With Unapproved Use
Serious adverse reactions, including excessive weakness, dysphagia, and aspiration pneumonia, with some adverse reactions associated with fatal outcomes, have been reported in patients who received BOTOCOSMETHCOSMETIC injections for unapproved uses. In these cases, the adverse reactions were not necessarily related to distant spread of toxin, but may have resulted from the administration of BOTOCOSMETHCOSMETIC to the site of injection and/or adjacent structures. In several of the cases, patients had pre-existing dysphagia or other significant

IMPORTANT SAFETY INFORMATION (continued)
WARNINGS AND PRECAUTIONS (continued)
disabilities. There is insufficient information to identify factors associated with an increased risk for adverse reactions associated with the unapproved uses of BOTOCOSMETHCOSMETIC. The safety and effectiveness of BOTOCOSMETHCOSMETIC for unapproved uses have not been established.

Hypersensitivity Reactions
Serious and/or immediate hypersensitivity reactions have been reported. These reactions include anaphylaxis, serum sickness, urticaria, soft-tissue edema, and dyspnea. If such reactions occur, further injection of BOTOCOSMETHCOSMETIC should be discontinued and appropriate medical therapy immediately instituted. One fatal case of anaphylaxis has been reported in which lidocaine was used as the diluent and, consequently, the causal agent cannot be reliably determined.

Cardiovascular System
There have been reports following administration of BOTOCOSMETHCOSMETIC of adverse events involving the cardiovascular system, including arrhythmia and myocardial infarction, some with fatal outcomes. Some of these patients had risk factors including pre-existing cardiovascular disease. Use caution when administering to patients with pre-existing cardiovascular disease.

Increased Risk of Clinically Significant Effects with Pre-existing Neuromuscular Disorders
Individuals with peripheral motor neuropathic diseases, amyotrophic lateral sclerosis, or neuromuscular junction disorders (eg, myasthenia gravis or Lambert-Eaton syndrome) should be monitored when given botulinum toxin. Patients with neuromuscular disorders may be at increased risk of clinically significant effects including generalized muscle weakness, diplopia, ptosis, dysphonia, dysarthria, severe dysphagia, and respiratory compromise from onabotulinumtoxinA (see Warnings and Precautions).

Dysphagia and Breathing Difficulties
Treatment with BOTOCOSMETHCOSMETIC and other botulinum toxin products can result in swallowing or breathing difficulties. Patients with pre-existing swallowing or breathing difficulties may be more susceptible to these complications. In most cases, this is a consequence of weakening of muscles in the area of injection that are involved in breathing or oropharyngeal muscles that control swallowing or breathing (see Boxed Warning).

Pre-existing Conditions at the Injection Site
Caution should be used when BOTOCOSMETHCOSMETIC cosmetic treatment is used in the presence of inflammation at the proposed injection site(s) or when excessive weakness or atrophy is present in the target muscle(s).

Human Albumin and Transmission of Viral Diseases
This product contains albumin, a derivative of human blood. Based on effective donor screening and product manufacturing processes, it carries an extremely remote risk for transmission of viral diseases and variant Creutzfeldt-Jakob disease (vCJD). There is a theoretical risk for transmission of Creutzfeldt-Jakob disease (CJD), but if that risk actually exists, the risk of transmission would also be considered extremely remote. No cases of transmission of viral diseases, CJD or vCJD have ever been identified for licensed albumin or albumin contained in other licensed products.

ADVERSE REACTIONS
The most frequently reported adverse reaction following injection of BOTOCOSMETHCOSMETIC for glabellar lines was eyelid ptosis (3%).
The most frequently reported adverse reaction following injection of BOTOCOSMETHCOSMETIC for lateral canthal lines was eyelid edema (1%).
The most frequently reported adverse reactions following injection of BOTOCOSMETHCOSMETIC for forehead lines with glabella lines were headache (9%), brow ptosis (2%) and eyelid ptosis (2%).


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REFERENCES: 1. 

BOTOX® Cosmetic Prescribing Information, October 2017.

No definitive serious adverse event reports of distant spread of toxin effect have been reported at doses comparable to those used to treat cervical dystonia. In several of the cases, patients had pre-existing conditions at the injection site. In some of these cases, the adverse reactions were not necessarily related to distant spread of the toxin. However, there were reports of distant spread of effect in patients treated for cervical dystonia with onabotulinumtoxinA. In several of these cases, this is a consequence of weakening of muscles in the area of injection that are involved in breathing or oropharyngeal muscles that control swallowing or breathing. In most of these cases, this was a temporary improvement in the appearance of:

- moderate to severe forehead lines associated with frontalis activity
- moderate to severe glabella lines
- moderate to severe lateral canthal lines
- moderate to severe glabellar lines
- moderate to severe forehead lines
- wrinkles under the eyes

Results may vary.

* Aided and unaided awareness, based on a self-completed online interview with 206 women and men aged 18 to 75 who have used a neurotoxin and/or filler in the past 2 years and are considering at least 1 aesthetic treatment in the next 2 years.

** BOTOX® Cosmetic (onabotulinumtoxinA) Important Information

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** IMPORTANT SAFETY INFORMATION (continued)

DRUG INTERACTIONS (continued)

botulinum toxin prior to the resolution of the effects of a previously administered botulinum toxin.

Excessive weakness may also be exaggerated by administration of a muscle relaxant before or after administration of BOTOX® Cosmetic.

USE IN SPECIFIC POPULATIONS

There are no studies or adequate data from postmarketing surveillance on the developmental risk associated with use of BOTOX® Cosmetic in pregnant women. There are no data on the presence of BOTOX® Cosmetic in human or animal milk, the effects on the breastfed child, or the effects on milk production.

Please see brief summary of full Prescribing Information and indications on following page.
Cosmetic is contraindicated in individuals with known hypersensitivity to any simultaneaous treatment of lateral canthal lines and glabellar lines), 64 Units (for speech or respiratory disorders occur. No definitive serious adverse event reports of Patients or caregivers should be advised to seek immediate medical care if swallowing, doses comparable to or lower than doses used to treat cervical dystonia and spasticity.

Toxin Products -

There have been causal agent cannot be reliably determined.

Initial U.S. Approval: 1989

spasticity at the site of injection and/or adjacent structures. In several of the cases, patients had symptoms. These symptoms have been reported hours to weeks after injection. Swallowing and breathing difficulties can be life threatening and there have been reports of death. The risk of symptoms is probably greatest in children treated for spasticity but symptoms can also occur in adults treated for spasticity and other conditions. In those patients who have an underlying condition that would predispose them to these symptoms. In unapproved uses, including spasticity in children, and in approved indications, symptoms consistent with spread of toxin effect have been reported at doses comparable to or lower than doses used to treat cervical dystonia and spasticity. Patients or caregivers should be advised to seek immediate medical care if swallowing, speech or respiratory disorders occur.

CONTRAINDICATIONS: Known Hypersensitivity to Botulinum Toxin - BOTOX Cosmetic is contraindicated in the presence of inflammation at the injection site(s) - BOTOX Cosmetic is contraindicated in patients with pre-existing cardiovascular disease. Use caution when administering to patients with pre-existing cardiovascular disease. Increased Risk of Clinically Significant Effects with Pre-Existing Neuromuscular Disorders - Individuals with peripheral motor neuron disorders, amyotrophic lateral sclerosis or neuromuscular junction disorders (e.g., myasthenia gravis or Lambert-Eaton syndrome) should be monitored when given botulinum toxin. Patients with neuromuscular disorders may be at increased risk of clinically significant effects including generalized muscle weakness, diplopia, ptosis, dysphagia, dysphonia, dysarthria, urinary incontinence and breathing difficulties. These symptoms have been reported hours to weeks after injection. Swallowing and breathing difficulties can be life threatening and there have been reports of death. The risk of symptoms is probably greatest in children treated for spasticity but symptoms can also occur in adults treated for spasticity and other conditions. In those patients who have an underlying condition that would predispose them to these symptoms. In unapproved uses, including spasticity in children, and in approved indications, cases of spread of effect have been reported at doses comparable to those used to treat cervical dystonia and spasticity and at lower doses. [see Warnings and Precautions]

INDICATIONS AND USAGE: BOTOX Cosmetic (onabotulinumtoxinA) is indicated in adult patients for the temporary improvement in the appearance of: moderate to severe glabellar lines associated with corrugator and/or procerus muscle activity; moderate to severe lateral canthal lines associated with orbicularis oculi activity; moderate to severe forearm lines associated with frontalis muscle activity.

CONTRAINDICATIONS: Known Hypersensitivity to Botulinum Toxin - BOTOX Cosmetic is contraindicated in patients with pre-existing cardiovascular disease. Use caution when administering to patients with pre-existing cardiovascular disease. Increased Risk of Clinically Significant Effects with Pre-Existing Neuromuscular Disorders - Individuals with peripheral motor neuron disorders, amyotrophic lateral sclerosis or neuromuscular junction disorders (e.g., myasthenia gravis or Lambert-Eaton syndrome) should be monitored when given botulinum toxin. Patients with neuromuscular disorders may be at increased risk of clinically significant effects including generalized muscle weakness, diplopia, ptosis, dysphagia, dysphonia, dysarthria, urinary incontinence and breathing difficulties. These symptoms have been reported hours to weeks after injection. Swallowing and breathing difficulties can be life threatening and there have been reports of death. The risk of symptoms is probably greatest in children treated for spasticity but symptoms can also occur in adults treated for spasticity and other conditions. In those patients who have an underlying condition that would predispose them to these symptoms. In unapproved uses, including spasticity in children, and in approved indications, symptoms consistent with spread of toxin effect have been reported at doses comparable to or lower than doses used to treat cervical dystonia and spasticity. Patients or caregivers should be advised to seek immediate medical care if swallowing, speech or respiratory disorders occur. No definitive serious adverse event reports of Patients or caregivers should be advised to seek immediate medical care if swallowing, doses comparable to or lower than doses used to treat cervical dystonia and spasticity.

Toxin Products -

There have been causal agent cannot be reliably determined. Limiting the dose injected to the sternocleidomastoid muscle may reduce the occurrence of dysphagia. Individual patients may be at risk for an increased risk of upper respiratory infection and dysphagia. Patients treated with botulinum toxin may require immediate medical attention should they develop problems with swallowing, speech or respiratory disorders. These reactions can occur within hours to weeks after injection with botulinum toxin [see Warnings and Precautions]; Pre-existing Conditions at the Injection Site - Caution should be used when administering BOTOX Cosmetic treatment when the presence of wheals is associated with the proposed injection site(s). stosis, or when excessive weakness or atrophy is present in the targeted muscle(s).

Concomial Exposure and Ulceration in Patients Treated with BOTOX for Blepharospasm - Reduced blinking from BOTOX Cosmetic injection of the orbicularis muscle can lead to corneal exposure, persistent epithelial defect, and corneal ulceration, especially in patients with VII nerve disorders. Vigorous treatment of corneal epithelial defect should be employed. This may include ophthalmic drops, ointment, therapeutic soft contact lenses, or closure of the eye by patching or other means. Spatial Disorientation, Double Vision or Past-pointing in Patients Treated for Strabismus - Inducing paralysis in one or more extraocular muscles may produce spatial disorientation, double vision or past pointing. Covering the affected eye may alleviate these symptoms.

Human Albumin and Transmission of Viral Diseases - This product contains albumin, a derivative of human blood. Based on effective donor screening and product manufacturing processes, it carries an extremely remote risk for transmission of viral diseases and variant Creutzfeldt-Jakob disease (vCJD). There is a theoretical risk for transmission of Creutzfeldt-Jakob disease (CJD), but if that risk actually exists, the risk of transmission would also be considered extremely remote. No cases of transmission of viral diseases, CJD or vCJD have ever been identified for licensed albumin or albumin contained in other licensed products.

ADVERSE REACTIONS: The following adverse reactions to BOTOX Cosmetic (onabotulinumtoxinA) are included. See the full Prescribing Information for other reactions. See the labeling, Spread of Toxin Effect [see Warnings and Precautions]; Hypersensitivity [see Contraindications and Warnings and Precautions]; Dysphagia and Breathing Difficulties [see Warnings and Precautions]. Clinical Trials Experience - Because clinical trials are conducted under widely varying conditions, the adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in clinical practice. BOTOX and BOTOX Cosmetic contain the same active component, in the same dosage form, but have different labeled Indications and Usage. Therefore, adverse events observed with the use of BOTOX also have the potential to be observed with the use of BOTOX Cosmetic. In general, adverse reactions occur within the first week following injection of BOTOX Cosmetic and while generally transient, may have a duration of several months. In the adverse reaction tables, only adverse reactions reported at a frequency of 2% or greater with BOTOX Cosmetic are included in any of the labeled indications. These reactions were evaluated in the randomized, placebo-controlled clinical studies to assess the use of BOTOX Cosmetic in the improvement of the appearance of glabellar lines. Table 2 in the full Prescribing Information lists the Adverse Reactions Reported by ≥ 1% of BOTOX Cosmetic treated Subjects and More Frequent than in Placebo-treated Subjects in the Double-blind, Placebo-controlled Clinical Studies of BOTOX Cosmetic in Glabellar Lines. Adverse Reactions are listed by patients treated with BOTOX Cosmetic (N=405), followed by patients treated with Placebo (N=130). General Disorders and Administration Site Conditions - Facial pain: 6 (1%), 0 (0%); Nervous System
Disorders - Facial paresis: 5 (1%), 0 (0%); Eye Disorders - Eyelid ptosis: 13 (3%), 0 (0%); Musculoskeletal and Connective Tissue Disorders - Muscular Weakness: 6 (1%), 0 (0%); Lateral Canthal Lines - Table 3 lists selected adverse reactions reported in ≥ 1% of Botox Cosmetic treated subjects (N=665) aged 18 to 75 who were evaluated in two randomized, double-blind, placebo-controlled clinical trials to assess the safety of Botox Cosmetic in the improvement of the appearance of lateral canthal lines alone. Table 3 in the full Prescribing Information lists the Adverse Reactions Reported by ≥ 1% of Botox COSMetic treated Subjects and More Frequent than in Placebo-treated Subjects Within 12 Months Following Treatment. Placebo-controlled Clinical Studies of Lateral Canthal Lines. Adverse Reactions are listed by patients treated with Botox Cosmetic 24 Units (N=256), followed by patients treated with Placebo (N=350). Eye Disorders - Eyelid edema: 5 (1%), 0 (0%); Forehead Lines - Table 4 lists selected adverse reactions reported in ≥ 1% of Botox Cosmetic treated subjects (N=665) aged 18 to 77 who were evaluated in two randomized, double-blind, placebo-controlled clinical trials to assess the safety of Botox Cosmetic in the improvement of the appearance of forehead lines with glabellar lines. Table 4 in the full Prescribing Information lists the Adverse Reactions Reported by ≥ 1% of Botox COSMetic treated Subjects and More Frequent than in Placebo-treated Subjects, in double-blind, placebo-controlled clinical Studies of Treatment of Forehead Lines. Adverse Reactions are listed by patients treated with Botox Cosmetic (20 Units forehead lines with 20 Units glabellar lines) (N=675), followed by patients treated with Placebo (N=315). Nervous System Disorders - Headache: 58 (9%), 17 (5%); Eye Disorders - Eyelid ptosis: 12 (2%), 1 (0%); Skin and Subcutaneous Tissue Disorders - Brow ptosis: 13 (2%), 0 (0%); Skin tightness: 10 (2%), 0 (0%). There were no additional adverse drug reactions reported with the simultaneous treatment of forehead lines, glabellar lines, and lateral canthal lines. Immunogenicity - As with all therapeutic proteins, there is a potential for immunogenicity. The incidence of antibodies is highly dependent on the sensitivity and specificity of the assay. Additionally, the observed incidence of antibody (including neutralizing antibody) positivity in an assay may be influenced by several factors including assay methodology, sample handling, timing of sample collection, concomitant medications, and underlying disease. For these reasons, comparison of the incidence of antibodies to Botox COSMetic in the studies of Botox COSMetic and in other studies using similar products may be misleading. Treatment with botulinum toxins may result in the formation of neutralizing antibodies that may reduce the effectiveness of subsequent treatments by inactivating biological activity of the toxin. In three Lateral Canthal Line trials, 916 subjects (517 subjects at 24 Units and 399 subjects at 44 Units) treated with Botox Cosmetic had specimens analyzed for antibody formation. Among the 916 Botox Cosmetic treated subjects, 14 subjects (1.5%) developed neutralizing antibodies and no subjects (0%) developed the presence of neutralizing antibodies. The data reflect the subjects whose test results were considered positive or negative for neutralizing activity to Botox COSMetic in a mouse protection assay. The critical factors for neutralizing antibody formation have not been well characterized. The results from some studies suggest that botulinum toxin injections at more frequent intervals or at higher doses may lead to greater incidence of antibody formation. The potential for antibody formation may be minimized by injecting with the lowest effective dose given at the longest feasible intervals between injections. Post-marketing Experience - Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure. However, there have been spontaneous reports of dysphonia, sometimes associated with dysarthria, and/or other significant debility or anaphylaxis, after treatment with botulinum toxin [see Warnings and Precautions]. There have also been reports of adverse events involving the cardiovascular system, including arrhythmia and myocardial infarction, some with fatal outcomes. Some of these patients had risk factors including cardiovascular disease. New onset or recurrent seizures have also been reported, typically in patients who are predisposed to experiencing these events. The following adverse reactions by System Organ Class have been identified during post-approval use of BOTOX/BOTOX COSMetic: Ear and Labyrinth disorders - Hypoaacusis; tinnitus; vertigo; Eye disorders - Diplopia; lagophthalmos; strabismus; visual disturbances; vision blurred; Gastrointestinal disorders - Abdominal pain; diarrhea; dry mouth; nausea, vomiting; General disorders and administration site conditions - Dizziness, fatigue; Metabolic and nutritional disorders - Hyponatremia; Musculoskeletal and connective tissue disorders - Muscle atrophy; myalgia; Nervous system disorders - Brachial plexopathy; dysarthria; facial palsy; hypoaesthesia; localized numbness; myasthenia gravis; paresthesia; peripheral neuroathy; radioulnar syncope; Respiratory, thoracic and mediastinal disorders - Aspiration pneumonia, dyspnea, respiratory depression and/or respiratory failure; Skin and subcutaneous tissue disorders - Alopecia, including madarosis; hyperhidrosis; pruritus; Skin rash (including erythema multiforme, dermatitis poriormis, and psoriasiform eruption).

DRUG INTERACTIONS: No formal drug interaction studies have been conducted with BOTOX Cosmetic (onabotulinumtoxinA) for injection. Aminoglycosides and Other Agents Interfering with Neuromuscular Transmission - Co-administration of BOTOX Cosmetic and aminoglycosides or other agents interfering with neuromuscular transmission (e.g., curare-like compounds) should only be performed with caution as the effect of the toxin may be potentiated. Anticholinergic Drugs - Use of anticholinergic drugs after administration of BOTOX Cosmetic may potentiate systemic anticholinergic effects. Other Botulinum Neurotoxin Products - The effect of administering different botulinum neurotoxin products at the same time or within several months of each other is unknown. Excessive neuromuscular weakness may be exacerbated by administration of another botulinum toxin prior to the resolution of the effects of a previously administered botulinum toxin. Muscle Relaxants - Excessive weakness may occur if BOTOX Cosmetic is co-administered with a muscle relaxant before or after administration of BOTOX Cosmetic.

USE IN SPECIFIC POPULATIONS: Pregnancy - Risk Summary: There are no studies or adequate data from postmarketing surveillance on the developmental risk associated with use of BOTOX Cosmetic in pregnant women. In animal studies, administrations of BOTOX Cosmetic during pregnancy resulted in adverse effects on fetal growth (decreased fetal body weight and skeletal ossification) at clinically relevant doses, which were associated with maternal toxicity [see Data]. In the U.S. National Birth Defects Prevention Study, the reported incidence of major birth defects and miscarriages in clinically recognized pregnancies is 2%-4% and 15%-20%, respectively. The background risk of major birth defects and miscarriage for the indicated populations is unknown. Data: Animal Data - When BOTOX Cosmetic (4, 8, or 16 Units/kg) was administered intramuscularly to pregnant mice or rats twice a day during the period of organogenesis (on gestation days 5 and 13), reductions in fetal body weight and decreased fetal skeletal ossification were observed at the two highest doses. The no-effect dose for developmental toxicity in these studies (4 Units/kg) is approximately 4 times the average human dose for glabellar lines, lateral canthal lines, and forehead lines of 64 Units on a body weight basis (Units/kg). When BOTOX Cosmetic was administered intramuscularly to pregnant rats (0.125, 0.25, 0.5, 1, 4, or 8 Units/kg) or rabbits (0.083, 0.125, 0.25, or 0.5 Units/kg) daily during the period of organogenesis (total of 12 doses in rats; 13 doses in rabbits), reduced fetal body weight and decreased fetal skeletal ossification were observed at the two highest doses in rats and at the highest dose in rabbits. These doses were also associated with significant maternal toxicity, including abortions, early deliveries, and maternal death. The developmental no-effect doses in these studies of 1 Unit/kg in rats is approximately equal the average human dose of 64 Units based on Units/kg, and the developmental no-effect dose of 0.25 Units/kg in rabbits is approximately the average human dose of 64 Units based on Units/kg. When pregnant mice received single intramuscular injections (1, 4, or 16 Units/kg) at three different periods of development (prior to implantation, implantation, or organogenesis), no adverse effects on fetal development were observed. The developmental no-effect level for a single maternal dose in rats (16 Units/kg) is approximately 16 times the average human dose of 64 Units based on Units/kg. Lactation - Risk Summary: There are no data on the presence of BOTOX Cosmetic in human or animal milk, the effects on the breastfed child, or the effects on milk production. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for BOTOX Cosmetic and any potential adverse effects on the breastfed infant from BOTOX Cosmetic or from the underlying maternal conditions. Pediatric Use - Safety and effectiveness in patients below the age of 18 years have not been established. Idiopathic Scoliosis - Glabellar Lines: In the two initial clinical studies of BOTOX Cosmetic, the responder rates appeared to be higher for subjects younger than age 6 than for subjects 65 years or older [see Clinical Studies in the full Prescribing Information]. Lateral Canthal Lines: In the two lateral canthal line clinical studies of BOTOX Cosmetic, the responder rates appeared to be higher for subjects younger than age 60 than for subjects younger than age 65 or 75 years old. [see Boxed Warning and Warnings and Precautions]. When pregnant women are or may become pregnant while using this drug, it is essential that they consult with their health care provider to determine whether they should continue to use BOTOX Cosmetic. In the event of overdose, antitoxin obtained from the Centers for Disease Control and Prevention (CDC) in Atlanta, GA. However, the antitoxin will not reverse any botulinum toxin-induced effects already apparent by the time of antitoxin administration. In the event of suspected or actual cases of botulinum toxin poisoning, please contact your local or state Health Department for a request for antitoxin through the CDC. If you do not receive a response within 30 minutes, please contact the CDC directly at 1-770-488-7100. More information can be obtained at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5232a8.htm. Manufactured by: Allergan Pharmaceuticals Ireland a subsidiary of: Allergan, Inc. 2525 Dupont Dr., Irvine, CA 92612 © 2017 Allergan. All rights reserved. All trademarks are the property of their respective owners. Patented. See: www.allergan.com/patents.

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Marketing and Communications
Janine Wisniewski, Education
Associate
Janet Wynn, Digital
Communications Manager
Thank you!

Here’s to where we’ve been, where we are, and where we’re headed.

We owe it all to you.
Welcome to Phoenix! Each year, your ASDS Annual Meeting Work Group aims to deliver the best of the best in faculty and content. This year’s features include hands-on cadaver labs and workshops covering chemical peels, nail surgery, sclerotherapy, tumor excision / wound repair, injectables, mini-facelifts / threadlifts and blepharoplasty; new insights by leading experts on In-Office Compounding; Non-surgical Rejuvenation of the Peri-orbital Region; Approaches to Male and Millennial Patient Interactions; Beyond the Scalpel: Incorporating Non-surgical Approaches to Skin Cancer Treatment; Sophisticated Approach to Non-surgical Rejuvenation; and the Private Equity vs. Private Practice Debate.

Thursday morning kicks off with our opening Keynote Speaker Mark Kelly, retired NASA space mission commander and U.S. Navy Captain, who will share his moving journey that inspires new perspective on effective leadership, teamwork and commitment.

Back by popular demand are the engaging Unplugged: Straight Talk about Devices and More; Controversies in Dermatologic Surgery; the Iron Surgeon Competition; Reconstructive Conundrums; Breaking Bad: Cosmetic and Reconstructive Confessions and more. The all-day Sample Saturday event allows you to explore the Exhibit Hall’s more than 110 booths and learn about new products and services while collecting samples and other giveaways.

Colleagues can revitalize connections during networking events including the Welcome Reception, Networking Reception and Silent Auction and Casino Royale-themed 13th Annual ASDS Gala. Shared Interest Groups enable interactive topic-based discussions on Cosmeceutical Controversies; Wrinkles, Folds and Volumizing Cases; and Body Contouring Cases.

Also new in 2018 is the Social Media Wall, which will feature attendees’ Facebook, Twitter and Instagram posts that use #ASDSMeeting. The feed can be seen prior to General Sessions, in the ASDS/A Resource Center Booth #427 during Exhibit Hall hours and in the mobile app.

Make sure you download the new ASDS Annual Meeting App for useful on-site information, including the detailed program, faculty information, floor plans, Exhibit Hall, a personalized agenda, session evaluations and many more convenient features! Compete with colleagues in “Game On” for ASDS bucks and gift cards. This interactive mobile app game awards points for uploading a photo, completing the overall meeting evaluation, participating in the Exhibit Hall Scavenger Hunt and more.

Like the phoenix rising and beginning anew, this week will reinvigorate your passion for learning, revitalize your spirit and reestablish or foster friendships. Come soar with us!

Melanie Palm, MD, MBA  
2018 ASDS Annual Meeting Chair

Maral Skelsey, MD  
2018 ASDS Annual Meeting Co-chair  
2019 ASDS Annual Meeting Chair
THE MOST EXCITING ADVANCE IN SKIN CARE IS HERE

RECHARGES
the skin’s ability to repair itself

AMPLIFIES
any skin care regimen

DEFENDS
the skin from pollution and blue light

NEW LUMIVIVE™ FOR SKIN THAT THRIVES

Experience the SkinMedica® Digital Detox Center at booth 115

These SkinMedica® products are intended to meet the FDA’s definition of a cosmetic product, an article applied to the human body to cleanse, beautify, promote attractiveness, and alter appearances. These SkinMedica® products are not intended to be drug products that diagnose, treat, cure, or prevent any disease or condition. These products have not been approved by the FDA, and the statements have not been evaluated by the FDA.
JW Marriott Desert Ridge
Room Locator

LEVEL 1  LEVEL 2  OUTDOOR

WORK GROUP MEETINGS

HOSPITALITY SUITES

DESERT CONFERENCE SUITES

LEVEL 2
LOBBY LEVEL

WILDFLOWER BALLROOMS

EDUCATIONAL SESSIONS

Pinnacle Peak
Conference Rooms

LEVEL 1
MAIN BALLROOMS

EXHIBIT HALL

GRAND CANYON

EDUCATIONAL SESSIONS

Workshops

Resident and Early-Career Hospitality

REGISTRATION

EAST

EDUCATIONAL SESSIONS

Keynote Session
General Sessions
Business Meeting with Breakfast Gala

GRAND SAGUARO

NORTH

SOUTH

WEST

EDUCATIONAL SESSIONS

SUNSET LAWN

Press Office

Grand Saguaro Office

FREE VIDEO THURSDAY
Practice Management Roundtables

Speaker Ready Room
& Faculty / VIP Lounge

Escalator Down to
Exhibit Hall &
Educational Sessions

Press Office

Shuttle Drop-off / Pick-up
ASDS ANNUAL MEETING
MOBILE APP

It’s all at your fingertips!

App Features:
• Educational Program
• Oral Abstracts
• Exhibitor List
• Floor Plans
• Session Evaluations
• Attendee List
• Social and Networking Events
• ASDS Resources
• Full and Personalized Agenda
• Receive Important Notifications
• Earn Points for Prizes

The new ASDS Annual Meeting mobile app includes all the features you love and more! Redesigned with you in mind, the app will help you navigate the meeting and stay on top of all the action. ASDS materials, such as program flyers, can be downloaded directly to your device or shared to your preferred cloud storage service.

Download the free app now – just four simple steps:
1. Download MeetingPlay Events from your device’s app store, visit startmp.com/download or scan this QR Code.
2. Open the app and use passcode: asds2018
3. Enter the email address associated with your ASDS membership.
4. Enable push notifications, explore the app and enjoy the 2018 ASDS Annual Meeting!
IMPORTANT SAFETY INFORMATION

APPROVED USES:
Restylane® Refyne is for mid-to-deep injection into the facial tissue for the correction of moderate to severe facial wrinkles and folds, such as nasolabial folds, in patients over the age of 21.

Restylane® Defyne is indicated for injection into the mid-to-deep dermis for correction of moderate to severe, deep facial wrinkles and folds, such as nasolabial folds, in patients over the age of 21.

CONTRAINDICATIONS:
Restylane Refyne and Restylane Defyne contain traces of gram-positive bacterial protein and are contraindicated for patients with allergies to such material or for patients with severe allergies that have required in-hospital treatment. They should not be used by patients with bleeding disorders, with hypersensitivity to amide-type local anesthetics, such as lidocaine, or by women who are pregnant or breastfeeding.

POSSIBLE SIDE EFFECTS:
The most commonly observed side effects include swelling, redness, pain, bruising, tenderness, headache, lump formation, and itching at the injection site. Use at the site of skin sores, pimples, rashes, hives, cysts, or infection should be postponed until healing is complete.

These products should not be injected into the blood vessels as it may cause vascular occlusion, infarction, or embolic phenomena. Use with caution in patients recently treated with anticoagulant or platelet inhibitors to avoid bleeding and bruising.

As with all skin injection procedures, there is a risk of infection.

To report a side effect with any of the Restylane products, please call Galderma Laboratories, L.P at 1-855-425-9722.

Restylane Refyne and Restylane Defyne are available only through a licensed practitioner.

Complete Instructions for Use are available at www.RestylaneUSA.com.


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### WEDNESDAY, OCT. 10

<table>
<thead>
<tr>
<th>8 a.m.</th>
<th>Cosmetic Dermatologic Surgery</th>
<th>General Dermatology and General Dermatologic Surgery</th>
<th>Reconstruction, Skin Cancer &amp; Mohs</th>
<th>Practice Management / Regulatory &amp; ADAM Track</th>
<th>Networking, Social, &amp; Other</th>
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<tbody>
<tr>
<td>8:30 a.m. – 5 p.m.</td>
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**PRE-CONFERENCE:** Facial Cosmetic Surgery Workshop and Hands-on Cadaver Lab 8 a.m. – 5 p.m. (18PDWS2) $ MOQ Grand Saguaro E

**PRE-CONFERENCE:** Hands-on Workshop: Superficial to Deep Chemical Peels 8:30 a.m. – 4:30 p.m. (18PCGP) $ Off Property

Bus departs 7:30 a.m. at Ballroom entrance near Sunset Lawn

**Transition Break**

### THURSDAY, OCT. 11

<table>
<thead>
<tr>
<th>8 a.m.</th>
<th>Cosmetic Dermatologic Surgery</th>
<th>General Dermatology and General Dermatologic Surgery</th>
<th>Reconstruction, Skin Cancer &amp; Mohs</th>
<th>Practice Management / Regulatory &amp; ADAM Track</th>
<th>Networking, Social, &amp; Other</th>
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<tr>
<td>9 – 6 p.m.</td>
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**SPECIAL SESSION:** May the Force be with You: Doing Your Best with Laser and Energy-based Devices (18EBS) $ Grand Saguaro JK

**MORNING MASTERS:** A Stitch in Time: Thread Lifts (AB103) $ Grand Saguaro B

**MORNING MASTERS:** Comprehensive Coverage of Injectable Complications (AB106) $ Grand Saguaro I

**MORNING MASTERS:** Hard as Nails: Advanced Nail Surgery Videos (AB101) $ Grand Saguaro D

**SPECIAL SESSION:** May the Force be with You: Doing Your Best with Laser and Energy-based Devices (18EBS) $ Grand Saguaro JK

**MORNING MASTERS:** Hard as Nails: Advanced Nail Surgery Videos (AB101) $ Grand Saguaro D

**MORNING MASTERS:** Feeling Unflappable: Techniques for Flap Success (AB102) $ Grand Saguaro C

**Transition Break**

**OPENING SESSION (OP100)** President’s Welcome · Program Chair Remarks · FLN Presentations · Special Lecture Grand Saguaro North-South

**OPENING KEYNOTE (KY100)** Mark Kelly, retired astronaut and naval captain, with appearance by Gabby Giffords Grand Saguaro North-South

**GENERAL SESSION:** Sophisticated Approach to Non-surgical Rejuvenation (CS110) Grand Saguaro F

**GENERAL SESSION:** Better Than Pearls: Reconstructive Diamonds (RX111) Grand Saguaro East

**GENERAL SESSION:** Show Me the Money: Key Financial Management for Successful Dermatology Practices (AB104) $ Wildflower A

**RESIDENT & EARLY CAREER HOSPITALITY SUITE** Grand Saguaro G

**Networking Lunch in Exhibit Hall Grand Canyon Ballroom**

**Journal Board Lunch Grand Saguaro West • Residents Luncheon Grand Saguaro G**

**Networking Beverage Break in Exhibit Hall Grand Canyon Ballroom**

**Welcome Reception in Exhibit Hall Grand Canyon Ballroom**

### Industry-Organized Hot Topic Events (18HT) (See page 23)

- **Advisement:** MOC Part 2 SA Credits available.
- **Open to:** Office Staff, Surgical Assistants and ADAM Members.
- **Programming / time subject to change.**

$ Advance registration / additional fee required.
You’re listening to patients. We’re listening to you. We continually strive to introduce new products and services to support you in addressing a full range of patient and practice needs for the face, neck, décolletage, hands and more.

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:30 a.m.</td>
<td>GENERAL SESSION: Mind the Gap: Shoring up Residency Training in Cosmetic Dermatologic Surgery (18BC)</td>
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<td>Grand Sonoran E</td>
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<td></td>
<td>MORNINGS MASTERS: In Case You Missed It: Skin Cancer Review 2018 (AB204)</td>
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<td>Grand Sonoran H</td>
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<tr>
<td></td>
<td>MORNINGS MASTERS: Making Surgical Complications Less Complicated (AB201)</td>
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<td></td>
<td>Grand Sonoran I</td>
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<tr>
<td>8:15 – 8:30 a.m.</td>
<td>Transition Break</td>
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<tr>
<td>8:30 – 10 a.m.</td>
<td>General Dermatology and General Dermatologic Surgery</td>
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<td></td>
<td>RESEARCH LUNCHEON: Best Practices in Dermatological and Clinical Research (18RSCHL)</td>
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<td>Exhibit Hall Annex</td>
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<tr>
<td>10:45 – 11:15 a.m.</td>
<td>MORNINGS MASTERS: All About the Eyes: Non-surgical Rejuvenation of the Periorbital Region (AB202)</td>
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<td>Grand Sonoran C</td>
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<td>MORNINGS MASTERS: Finessing the Cosmetic Consult (AB206)</td>
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<td>Grand Sonoran J</td>
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<tr>
<td>10:45 a.m. – 12:15 p.m.</td>
<td>HANDS-ON CADAVER NAIL SURGERY TECHNIQUES (18WS219)</td>
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<td>Grand Saguaro East</td>
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<td></td>
<td>PATIENT DEMO AND HANDS-ON CADAVER: Sclerotherapy and Vein Techniques (18PD019)</td>
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<td>Grand Saguaro East</td>
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<td>PATIENT DEMO AND HANDS-ON CADAVER: Nail Surgery Techniques (18WS218)</td>
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<td>Grand Saguaro East</td>
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<td>12:15 p.m. – 12:45 p.m.</td>
<td>HANDS-ON CADAVER NAIL SURGERY TECHNIQUES (18WS219)</td>
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<td>Grand Saguaro East</td>
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<td>12:15 p.m. – 12:45 p.m.</td>
<td>PATIENT DEMO AND HANDS-ON CADAVER: Sclerotherapy and Vein Techniques (18PD019)</td>
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<td>Grand Saguaro East</td>
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<tr>
<td>Noon – 1:45 p.m.</td>
<td>MEMBER BUSINESS MEETING BREAKFAST (ASDS / ASDSA members only)</td>
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<td>Breakfast available at 8 a.m. Grand Saguaro North-South</td>
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<tr>
<td>Noon – 1:45 p.m.</td>
<td>NETWORKING LUNCH IN EXHIBIT HALL (Grand Canyon Ballroom)</td>
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<tr>
<td>1:45 – 3 p.m.</td>
<td>NETWORKING BEVERAGE BREAK IN EXHIBIT HALL (Grand Canyon Ballroom)</td>
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<td>Targeted Talk: Hot Button Issues in Practice Management (MC231)</td>
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<td>Grand Saguaro I</td>
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<tr>
<td>3 – 4 p.m.</td>
<td>GENERAL SESSION: Twelfth Annual Iron Surgeon Competition (GO240)</td>
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<td>Grand Saguaro North-South</td>
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<td>4 – 5:15 p.m.</td>
<td>NETWORKING BEVERAGE BREAK IN EXHIBIT HALL (Grand Canyon Ballroom)</td>
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<td>Patient Photo Best Practices (EB204)  Exhibit Hall Annex</td>
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<tr>
<td>5:15 – 5:30 p.m.</td>
<td>NETWORKING RECEPTION AND SILENT AUCTION IN EXHIBIT HALL (Grand Canyon Ballroom)</td>
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<td>Future Leaders Network and Industry Advisory Council Reception (invitation only) (Grand Sonoran CD)</td>
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<tr>
<td>5:30 – 6:30 p.m.</td>
<td>Residents Networking Reception (18RD)  Grand Sonoran G</td>
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<tr>
<td>6:30 – 7:30 p.m.</td>
<td>Residents Networking Reception (18RD)  Grand Sonoran G</td>
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Advance registration / additional fee required. MOC Part 2 SA Credits available. Open to Office Staff, Surgical Assistants and ADAM Members. Programming / time subject to change.
Not an actual patient.

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IN-OFFICE APPLICATION
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<table>
<thead>
<tr>
<th>Time</th>
<th>Saturday, Oct. 13</th>
<th>Sunday, Oct. 14</th>
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<tr>
<td>7 a.m.</td>
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<tr>
<td>8 – 9:15 a.m.</td>
<td><strong>Cosmetic</strong></td>
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<td>Dermatologic</td>
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<td>Surgery**</td>
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<td>Surgery**</td>
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<td><strong>Reconstruction,</strong></td>
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<td><strong>Skin Cancer</strong></td>
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<td>&amp; Mohs</td>
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<td><strong>Practice</strong></td>
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<td>Management /</td>
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<td>ADAM Track</td>
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<td><strong>Networking,</strong></td>
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<td>Social, Other</td>
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<td>9:15 – 10 a.m.</td>
<td><strong>General</strong></td>
<td><strong>Networking,</strong></td>
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<td><strong>Session:</strong></td>
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<td><strong>Keynote</strong></td>
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<td><strong>Speakers:</strong></td>
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<td></td>
<td><strong>Networking</strong></td>
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<td></td>
<td><strong>Beverage Break</strong></td>
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<td>10 – 10:45 a.m.</td>
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<td>10:45 a.m. – Noon</td>
<td><strong>Keynote</strong></td>
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<td>Social, Other</td>
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<tr>
<td>11 a.m. – 1 p.m.</td>
<td><strong>Networking</strong></td>
<td><strong>Breakfast</strong></td>
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<td>Noon – 1:45 p.m.</td>
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<td>1:45 – 3:15 p.m.</td>
<td><strong>Presentations</strong></td>
<td><strong>Practice</strong></td>
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<td>3:30 – 5 p.m.</td>
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<td>Management /</td>
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<td>3:15 – 3:30 p.m.</td>
<td><strong>Closing</strong></td>
<td>Regulatory &amp;</td>
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<td>7 – 11:30 p.m.</td>
<td><strong>Networking</strong></td>
<td>ADAM Track</td>
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<td><strong>Session</strong></td>
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<td><strong>Networking</strong></td>
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<td></td>
<td><strong>Beverage Break</strong></td>
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<tr>
<td>13th Annual ASDS Gala Dinner and Dance</td>
<td>Grand Saguaro Ballroom</td>
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<td>8 – 10 a.m.</td>
<td><strong>Networking</strong></td>
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<td><strong>Networking</strong></td>
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<td>10 – 11:30 a.m.</td>
<td><strong>Presentations</strong></td>
<td><strong>Practice</strong></td>
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*Advance registration / additional fee required. ♦️ MOC Part 2 SA Credits available. ✦ Open to Office Staff, Surgical Assistants and ADAM Members. Programming / time subject to change.*
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endo aesthetics

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SPECIAL LECTURES

**OPENING KEYNOTE LECTURE • THURSDAY, OCT. 11 • 10:15 – 10:45 A.M. ✦
Grand Saguaro North-South**

**Mark Kelly**

*Endeavor to Succeed*

NASA space mission commander and American hero Captain Mark Kelly inspires new perspective on effective leadership, teamwork and commitment to overcome formidable challenges and achieve personal and professional success.

Mark captivates audiences with lessons learned from his extensive travels and experiences in the Navy, outer space and on the ground. From leading teams in some of the most dynamic environments imaginable, to the thrill of spaceflight, and the recovery and resilience of his wife former Congresswoman Gabrielle Giffords, he reveals the foundations for success so you can accomplish your mission in life and work.

Mark is an American astronaut, retired United States Navy Captain, #1 New York Times best-selling author and an experienced naval aviator and test pilot who flew combat missions during the Gulf War. The winner of many awards – including the Legion of Merit, two Defense Superior Service Medals, two Distinguished Flying Crosses and the NASA Exceptional Service Medal – Mark was selected by NASA as an astronaut in 1996. He flew his first of four missions in 2001 aboard Space Shuttle Endeavour, the same space shuttle that he commanded on its final flight in May 2011. He has also commanded Space Shuttle Discovery and is one of only two individuals who have visited the International Space Station on four different occasions.

Mark's riveting presentation will close with an appearance by his wife, former state legislator and Congresswoman Gabrielle Giffords who survived an assassination attempt in 2011.

**ANNUAL LEADERSHIP IN INNOVATION LECTURE • FRIDAY, OCT. 12 • 10:45 – 11:15 A.M. ✦
Grand Saguaro North-South**

**William P. Coleman, III, MD**

*Tangled up in New: The Impact of Innovation on Dermatologic Surgery*

Innovation has been a fundamental driver of both dermatologic surgery and ASDS from the beginning. But as the specialty has matured, innovation has also spawned new threats. The future of our specialty depends on constantly developing new technology, as well as adjusting to unexpected disruptive forces.

**LAWRENCE M. FIELD, MD, HONORARY LECTURE • SATURDAY, OCT. 13 • 10 – 10:45 A.M. ✦
Grand Saguaro North-South**

**Drs. Jean and Alastair Carruthers**

*“Field of Dreams: The Carruthers’ View”*

*Introduction by Lawrence M. Field, MD*

Drs. Jean and Alastair Carruthers have remained on the forefront of research and teaching for injectables and cosmetic rejuvenating therapies and procedures. Over several decades, they authored numerous textbooks and participated in international trials and studies of new agents. In addition to their commitment to forward thinking and medical developments, they have dedicated a lifetime to sharing their expertise with others. Similar to Lawrence M. Field, MD, the Carruthers’ have spread a cloak of educational excellence across the globe in order to further the specialty and benefit patients. Listen as they recount their journey, and the importance of peer education and giving back.

This lecture honors the monumental achievements and motivational energy of Dr. Field, who served as a catalyst for the inception of the named lecture. Within the body of the lecture, each honored speaker describes how their dermatologic careers have followed the paths and emulated the contributions charted by Dr. Field and the impact his or her life’s work has made on the spread of dermatologic surgery and furthering physician education and patient care.
#1 PATIENT NEED
A LONGER LASTING FILLER

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Bellafill® can help you grow your aesthetic practice.

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Of the 9 million patients who have had dermal fillers, an estimated 8 MILLION are feeling filler fatigue.¹

90% of filler users are interested in a 5-YEAR filler that is FDA approved.¹

Bellafill® is FDA approved to smooth smile lines for up to 5 years.

Bellafill® is the only long-term filler that's FDA approved to treat distensible acne scars for up to 1 year.

IN A RECENT SURVEY

conducted by The Harris Poll among filler patients ages 30-65, a longer lasting filler was the #1 IMPROVEMENT they would like to see with current fillers.¹

Visit Suneva Medical at Booth #320

REFERENCES:

1. Survey conducted online by The Harris Poll on behalf of Suneva Medical and Vance & Associates within the United States between February 26 and March 14, 2018 among 503 U.S. adults.

IMPORTANT SAFETY INFORMATION

Bellafill® is indicated for the correction of nasolabial folds and moderate to severe, atrophic, distensible facial acne scars on the cheek in patients over the age of 21 years. Patients who have had a positive reaction to the Bellafill® Skin Test, have a history of severe allergies, have known bovine collagen allergies, are allergic to lidocaine, have bleeding disorders or are prone to thick scar formation and/or excessive scarring should not receive Bellafill®. The safety of Bellafill® for use during pregnancy, breastfeeding, or in patients under 21 has not been established. You may experience temporary swelling, redness, pain, bruising, lumps/bumps, itching, and discoloration at the treatment site. These side effects are usually transient and typically resolve within 1–7 days. You may experience lumps/bumps/papules that may occur more than one month after injection and that may persist. Less common side effects include rash and itching more than 48 hours after treatment, persistent swelling or redness, lumps/bumps, acne, and increased sensitivity at treatment sites. Infrequently, granulomas may occur and may be treated by your licensed physician provider. Be sure to call your licensed provider immediately if you notice any unusual skin reactions around the treatment area. Based on the 5-year Post Approval Study on nasolabial folds with 1008 patients, long term safety of Bellafill® for up to 5 years has been established.

For more safety information, please consult with your physician and the patient labeling that can be found by visiting our website www.bellafill.com.
HIGHLIGHTS OF THE ASDS ANNUAL MEETING
• Hands-on workshops covering tumor excision, flaps, suturing, nail surgery, facial anatomy / lifting procedures and injectable techniques.
• Sessions on:
  ♦ Mohs Micrographic Surgery, skin cancer treatment, dermatopathology, tumor oncology and research.
  ♦ Reconstructive dermatologic surgery including flaps, scar and vein treatments.
  ♦ Patient demonstrations in dermal fillers, neuromodulators, other injectables, sclerotherapy and vein techniques.
  ♦ Lasers and energy-based technology for cosmetic and reconstructive procedures.
  ♦ Fillers, injectables and neuromodulators; facial and body rejuvenation and sculpting; hair transplantation.
  ♦ Coding, social networking, documentation, regulatory and practice management issues.
• General dermatologic surgery.
• More value. Attendees can select a number of break-out sessions without the need for additional add-on or à la carte pricing. All Targeted Talks are complimentary!
• Team-based learning. Knowing the delivery of dermatologic surgery patient care is a true team effort, a comprehensive practice management track has been developed in partnership with the Association of Dermatology Administrators and Managers (ADAM). These sessions, marked with a ✦, are designed to enhance the effectiveness and efficiency of the physician-office team as they work together to optimize the patient experience. All surgical assistants and office staff / ADAM members are invited to attend and benefit from the robust practice management offerings.

ASDS ANNUAL MEETING SESSION RECORDINGS
All sessions (with faculty permission) at the 2018 ASDS Annual Meeting will be captured via synchronized slide and / or audio, including question-and-answer sessions, and made available as an Internet download for a fee. Please see the registration desk or ASDS Resource Center, Booth #427 to order.

REGISTRANT POLICIES AND CODE OF CONDUCT
Camera / Video Recording Policy: Use of cell phones, cameras and any video or recording equipment is strictly prohibited in all educational sessions. Violations of this policy will result in immediate removal from the session and request to destroy images/recordings. Cell phones MAY be used to utilize the ASDS Annual Meeting App.

Session Content and Patient Confidentiality: Patient images are an essential element of continuing medical education to demonstrate conditions, treatments and outcomes in dermatologic surgery. It is the responsibility of all presenters to obtain the necessary consent forms for use of patient or other images in their presentations at ASDS learning activities, and take full responsibility for the content of their presentations. It is the responsibility of all educational session faculty AND participants to maintain a patient’s right to privacy and keep confidential all discernible patient information disseminated during the meeting and in any collateral materials. Photographing, copying, downloading or any other capture or transfer of presentation images is against ASDS policy and strictly prohibited.

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AMERICANS WITH DISABILITIES ACT
ASDS wishes to take steps to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently than other individuals because of the absence of auxiliary aids and services. If you require any auxiliary aids or services identified in the Americans with Disabilities Act in order to attend any ASDS program, please notify an ASDS staff member at the Registration Desk, located in the Grand Saguaro Foyer on Level 1.

CONFERENCE PHOTO / VIDEO POLICY
Registration (attendee and exhibitor) and payment for the ASDS Annual Meeting gives consent that any pictures, video and / or audio recording taken by ASDS staff and ASDS photographers during the meeting and ASDS-related events can be used for meeting coverage and future ASDS promotional purposes. ASDS is able to use your likeness without remuneration.

SHUTTLE INFORMATION
Continuous shuttle between the Fairmont Scottsdale Princess and JW Marriott Phoenix Desert Ridge will be available to attendees during the hours below. You can view the status of the buses through the Shuttle Tracker feature within the ASDS Annual Meeting Mobile App.

Wednesday, Oct. 10 ... 6:30 – 10:30 a.m. and 3 – 7 p.m.
Thursday, Oct. 11 ...... 6:30 – 10:30 a.m. and 5 – 10 p.m.
Friday, Oct. 12 ......... 5:30 – 9:30 am. and 4 – 8 p.m.
Saturday, Oct. 13 ...... 6:30 – 10:30 a.m. and 5 – Midnight
Sunday, Oct. 14 ......... 7:30 – 12:30 p.m.

• Buses at the Fairmont will be outside the main lobby in the bus circle.
  • For the JW Marriott, buses will be outside the Ballroom Entrance, on the Ballroom level just past the Sunset Lawn.

• Chemical Peel Pre-Conference Workshop (pre-registration required): Bus departs from Sunset Lawn at 7:30 a.m. Bus returns to hotel by 5:15 p.m.

• President’s Dinner (by invitation only): Buses depart from Sunset Lawn 7 p.m. Buses begin to return at 10 p.m., last bus departs Four Seasons at Troon North at 11:59 p.m.
The American Society for Dermatologic Surgery (ASDS) is an organization whose primary purpose is to promote optimal quality care for patients as well as support and develop investigative knowledge in the field of dermatologic surgery. The Society carries out this mission in order to further the interests and needs of the specialty, with the underlying purpose of contributing to the delivery of quality health care in the ambulatory setting.

**AUDIENCE**

The primary target audience of the ASDS CME program includes the Society’s more than 6,400 members. Secondary audiences include members of the American Academy of Dermatology and other membership organizations who are dermatologists but not ASDS members. The ASDS CME program is designed for physicians; however, some activities include subject matter (e.g., general dermatologic surgery, practice management) that may provide learning opportunities for other members of the medical practice team.

**RESOLUTION OF CONFLICTS OF INTEREST**

ASDS is committed to providing an open forum for the exchange of ideas and methodology for dermatologic surgery and related basic sciences. ASDS must ensure the content of its educational activities are scientifically based, accurate, current and objectively presented. ASDS has developed policies that will identify and resolve all conflicts of interest prior to the educational activity being presented. ASDS has developed policies that will identify and resolve all conflicts of interest prior to the educational activity being delivered to participants.

**SPEAKER READY ROOM AND VIP / FACULTY LOUNGE**

*Pinnacle Peak 1*

Wednesday, Oct. 10 . . .  8 a.m. – 7 p.m.
Thursday, Oct. 11 . . . .  6:30 a.m. – 5 p.m.
Friday, Oct. 12 . . . . .  5:30 a.m. – 5 p.m.
Saturday, Oct. 13 . . . .  6:30 a.m. – 5 p.m.
Sunday, Oct. 14 . . . . .  7:30 a.m. – 10 a.m.

Presenters, please be sure to report to the Speaker Ready Room prior to your session to confirm success of your upload. If you are unable to pre-upload, we ask that you meet with the AV specialist 24 hours prior to your presentation with a jump drive to upload.

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The views expressed and the techniques presented by the speakers at ASDS-sponsored educational meetings are not necessarily shared or endorsed by the organization. Speakers are required to disclose all relevant conflicts of interest and any unapproved or “off-label” uses of medical devices or pharmaceutical agents that they discuss, describe or demonstrate during their presentations. Registrants must use their independent judgment in applying the information discussed in these educational sessions in the treatment of patients. It is the responsibility of any presenter to obtain all necessary consent forms for use of patient or other images in their presentations. Any and all handout materials are prepared and submitted for distribution by the presenters, who are solely responsible for their content.

**Fair and Balanced Content:** All faculty members are required to complete a faculty disclosure form of their financial relationships as well as an attestation form. All faculty members are requested to disclose their relevant financial relationships both verbally and in the first slide of their presentation. Faculty disclosures will be will be published in the ASDS Annual Meeting App.

**Disclosure of Commercial Interest:** All participants in presentations AND discussion sessions are required to disclose any commercial interests. This includes audience members who participate in question-and-answer sessions. Although members of industry are allowed to sit in on general educational sessions as silent observers, participation in question-and-answer sessions or otherwise is strictly prohibited based on ACCME guidelines for fair and balanced content.

**ACCREDITATION STATEMENT AND CME CREDIT DESIGNATION**

The American Society for Dermatologic Surgery (ASDS) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

ASDS designates this live activity for a maximum of 24.25 AMA PRA Category 1 Credits™.

Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**Post-graduate Credit for Other Medical Societies:**

Appropriate credit for attendance should be ascertained and reported by the individual physicians to the particular state or medical society to which he or she belongs.

**Verification of Attendance:** Verification of attendance documents will be available on the ASDS Annual Meeting App under Resource Center and at the ASDS/A Resource Center, Booth #427 in the Exhibit Hall. Documents will reflect the amount of credit available for the ASDS Annual Meeting; physicians are on their honor to report credit commensurate with their actual participation in sessions.

**MOC SELF-ASSESSMENTS CREDITS AVAILABLE**

A maximum of 43 MOC Part 2 SA credits can assigned and claimed for the ASDS Annual Meeting, and a maximum of 70 MOC Part 2 SA credits can be assigned and claimed for Pre-Conference PCWSC. See the MOC next to sessions offering credit in the Program-At-A-Glance. Report MOC-SA credits via your profile at abderm.org after November 20.
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Demonstration of the ACGME / ABMS published list of core competencies is critical to a well-rounded physician. Based on Criterion #6 of the Accreditation Council for Continuing Medical Education’s Provider Requirements for CME, ASDS has developed the 2018 ASDS Annual Meeting educational program to address the six core competencies as outlined below. Each session within the program addresses patient care and medical knowledge at a minimum.

Practice-based Learning and Improvement: Show an ability to investigate and evaluate patient care practices, appraise and assimilate scientific evidence and improve the practice of medicine.

Patient Care and Procedural Skills: Provide care that is compassionate, appropriate and effective treatment for health problems and to promote health.

Systems-based Practice: Demonstrate awareness of and responsibility to the larger context and systems of health care. Be able to call on system resources to provide optimal care.

Medical Knowledge: Demonstrate knowledge about established and evolving biomedical, clinical and cognate sciences and their application in patient care.

Interpersonal and Communication Skills: Demonstrate skills that result in effective information exchange and teaming with patients, their families and professional associates.

Professionalism: Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to diverse patient populations.

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The following commercial interests provided in-kind support for the 2018 ASDS Annual Meeting at the time of publication:

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**NEW!**

**ASDS Silent Auction**

Use your smartphone to start bidding now!

Go to [bidpal.net/asds2018](http://bidpal.net/asds2018)

Bidding ends at 6:30 p.m. on Friday, Oct. 12

Bidding to support ASDS educational programs is easier than ever!

For assistance with the BidPal app and to preview items in person, visit the Silent Auction Booth # 417.

**BID EARLY – BID OFTEN!**
HOT TOPIC SESSIONS
Thursday, Oct. 11 • 6:30 – 9 p.m.

Attendees are invited to the Hot Topic Sessions hosted by members of industry.

Shootout at the Crow’s Feet Corral: RF Microneedling vs. Microneedling
Grand Sonoran BCD
Hosted by Aesthetics Biomedical

Stem Cells in Dermatology. Defensins as a Most Advanced Antiaging Technology
Grand Saguaro East
Hosted by DefenAge Skincare

The Final Frontier: Muscle Sculpting
Grand Saguaro West
Hosted by BTL

Introducing Endo Aesthetics: Meet & Greet Reception
7 p.m. Ballroom Lawn at the JW Marriott
Invitation Only
Hosted by Endo Aesthetics

The Splendor of Hair Removal with NEW Synchronized Emissions & Square Spot + Body and Skin Aftercare
7 p.m. Isle of Capri at the JW Marriott
Hosted by Lumenis

All Hot Topic Sessions are independent of the 2018 ASDS Annual Meeting with regard to topic, planning and available CME credits.
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- **Suneva Medical**: Booth 320
- **Syris**: Booth 238
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Conclusion: with a Breslow thickness of 7 mm.

Of 225 total patients who had a PET-CT scan within 3 months after their initial 7, 2016 for a diagnosis of melanoma.

University Medical Center who were imaged with PET-CT from January 1, 2005 to October

Design:

Disclosure(s) of Interest:

Deanne Mraz Robinson, MD

Author:

questions concerning relevant doses, optimal timing of STS and administration relative to

has also been used successfully to treat skin calcifications in connective tissue diseases.

study demonstrates the reversibility of CaHA with STS injection in controlled settings. STS

intralesional STS was able to dissolve previously injected CaHA microspheres with no visible

calcium deposits remaining at the time of histologic analysis, 24 hours after STS injection.

intralesional STS was not associated with any damage to collagen or surrounding tissue

In the conclusion, some CaHA injection sites did not receive intralesional sodium thiosulfate and acted as control sites. Approximately 1:2 h after sodium thiosulfate injection, tissue samples were collected as part of the scheduled surgery, and 4-mm punch biopsies were obtained. The samples were fixed in 10% formaldehyde solution before processing for light microscopy. The 5-mm thick sections were stained with hematoxylin and eosin to evaluate the presence, absence, or degradation of CaHA. A board-certified dermatopathologist who was blinded to control or treatment reviewed all specimens to determine the CaHA microspheres present in each sample.

Summary: At approximately 1:2 h post-sodium thiosulfate injection, CaHA appeared markedly dissolved in all human tissue samples in the histologic analyses. The dermatopathologist noted similar levels of CaHA reduction with all the tested CaHA sodium thiosulfate ratios. In contrast, in control skin samples injected with CaHA alone, the CaHA microspheres were clearly visible in the subdermis. Histologic analyses revealed no deleterious effects on collagen or surrounding structures after intralesional sodium thiosulfate.

Conclusion: In this prospective histologic study, administration of intralesional STS immediately after subdermal CaHA was effective at reversing the presence of CaHA in all skin samples examined and at all CaHA:STS ratios. In contrast, CaHA microspheres remained visible in skin samples injected with CaHA alone. The results complement those from a recent proof-of-concept study in porcine skin samples, which demonstrated that intralesional STS was able to dissolve previously injected CaHA microspheres with no visible calcium deposits remaining at the time of histologic analysis, 24 hours after STS injection. Intralesional STS was not associated with any damage to collagen or surrounding tissue structures immediately post-injection; additional studies with longer time periods between STS injection and histologic analysis are now warranted. The current proof-of-concept study demonstrates the reversibility of CaHA with STS injection in controlled settings. STS has also been used successfully to treat skin calcifications in connective tissue diseases. Further research is now warranted to qualify these observations and to answer important questions concerning relevant doses, optimal timing of STS and administration relative to CaHA injection.

Author: Deanne Mraz Robinson, MD

Disclosure(s) of Interest: There are no interests to disclose.

Poster # 2 Utility of Staging PET-CT in Patients with Stage II Melanoma

Purpose: The aim of this study was to evaluate the utility of PET-CT in the staging of patients with stage II melanoma.

Design: A single-center, retrospective review was performed of all patients seen at Duke University Medical Center who were imaged with PET-CT from January 1, 2005 to October 7, 2016 for a diagnosis of melanoma.

Summary: Of 225 total patients who had a PET-CT scan within 3 months after their initial melanoma diagnosis, 89 had stage II melanoma. Of these 89 patients, PET-CT detected distant metastasis in only 1 patient (1.1%). This patient had an ulcerated primary melanoma with a Breslow thickness of 7 mm.

Conclusion: Our findings indicate that staging with PET-CT in patients with stage II melanoma rarely provides information that is likely to change management. Further study is warranted to identify strategies for accurately predicting which patients would be most likely to benefit from baseline staging PET/CT.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 3 Evaluating the Effects of Injected Calcium Hydroxylapatite on Changes in Human Skin Elastin and Proteoglycan Formation

Purpose: Previous studies have shown that calcium hydroxylapatite (CaHA) injected intradermally resulted in new collagen production at 6 months post filler injection, and even suggested there may be an increase in elastin formation. Additionally, a recent study showed the formation of new collagen, elastin, and angiogenesis after CaHA injection at 4 and 9 months. The purpose of the present study was to evaluate and characterize any changes in the presence of elastic fibers, proteoglycans and elastin in facial photodamaged skin after injections with calcium hydroxylapatite.

Design: Fifteen female subjects underwent a 3mm punch biopsy of the right infra-auricular areas on day 1 pre-treatment and post-treatment on day 180 after calcium hydroxylapatite injection in this area. Biopsied skin sections were stained prior to microscopic evaluation for elastin, elastic fibers and proteoglycan presence and analyzed.

Summary: Quantitative analysis demonstrated a percent change in elastic fibers varying between 29% and 179% at 6 months in comparison to baseline. Subjects showed an increase in elastin between 12% and 66%. Subjects had positive mean percentage change in proteoglycans of 76.27% (t-test of 0.198). Qualitative analysis demonstrated the aforementioned increases in proteoglycans, elastic fibers, and elastin as well.

Conclusion: This is the first study to show that calcium hydroxylapatite can increase proteoglycans, and echo prior studies showing it can also have an effect on elastin, which indicates it can induce remodeling of all aspects the extracellular matrix. Much larger, and longer studies are required to confirm its unique impact on collagen, elastin and proteoglycans.

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Disclosure(s) of Interest: There are no interests to disclose.

Poster # 4 In-Vitro Evaluation of Pre-Injection Aspiration as Safety Checkpoint for Hyaluronic Fillers

Purpose: Hyaluronic acid (HA) fillers have increased in popularity, especially for scar correction, rhytid augmentation, and volume rejuvenation. In 2017, about 2.1 million procedures using HA fillers were performed in the United States. While complications are rare, knowledge regarding their prevention and management are crucial. Intra-arterial injection of HA fillers through comparison of physiochemical and rheological properties in an in-vitro model. Shedding light on this technique can help practitioners increase patient safety.

We investigated the utility of pre-injection aspiration as a safety checkpoint for HA fillers through comparison of physiochemical and rheological properties in an in-vitro model.

Design: An in-vitro model consisted of fresh whole blood collected in EDTA-coated vacutainers that were pressure equalized. Various syringes containing HA filler were each inserted, and the plunger was pulled back at distances of 2 cc and 5 cc volumes to mimic pre-injection aspiration. The plunger was held at this distance until flashback was visualized or until 30 seconds had passed, when a value of 30 seconds was used for analyses.

Syringes of ten commonly used HA fillers were evaluated: Alengan (Pingy, France) Juvederm Ultra Plus XC, Juvederm Ultra XC, Juvederm Volbella, Juvederm Voluma, and Juvederm Voluma; Gaiderma (Uppsala, Sweden) Restylane Defyne, Restylane Lyft, Restylane Refyne, and Restylane Silk; and Merz (Raleigh, N.C.) Belotero Balance. Factory provided needles were utilized. Values for physiochemical and rheological properties at 0.1 Hz were gathered.

Summary: For the ten HA fillers, the values for HA concentration, elastic modulus (G'), viscous modulus (G''), and complex modulus (G*) varied. Using a multivariable regression model (R2 = 0.96, p<0.0001) Y= -76.01 - 67A + 146B - 2.3C - 10.2D - 1.7E - 0.4F, where Y=time to flash, A=pushback distance, B=needle gauge, C=HA concentration, D=G', E=G'', and F=G*. HA concentration (p=0.0016), G' (p=0.0017), G'' (p=0.0029), and G*
Cellular dermatofibromas (CDF) are a variant of benign fibrous histiocytomas and have a high local recurrence rate. In the literature, CDF are noted to metastasize, making them concerning lesions. The aim of this study was to further describe the presentation and outcome of the cellular variant of benign fibrous histiocytomas so that it can be diagnosed and treated appropriately.

**Design:** A retrospective chart review was performed on all patients seen in a single hospital system in Detroit, MI from 2007 to 2017. CDF was confirmed by pathology. Baseline demographics, specialty service of diagnosis and treatment, treatment modality, and outcome were collected and analyzed.

**Summary:** Of the 93 qualifying patients, the average age at diagnosis was 42.65 years. The most common specialty service that diagnosed and treated patients was dermatology (38.71%). 95.0% of CDF’s stained positive for Factor 13A (19/20) and 90.48% were CD34 negative (19/21). 33.33% of patients had recurrences of their CDF (9/27). Two patients had 3 or more recurrences. One patient death was attributed to the CDF.

**Conclusion:** Pre-injection aspiration may have utility as a safety checkpoint for HA fillers. Practitioners may have to adjust pullback distance of the plunger and waiting time to visualize the flashback based on physicochemical and rheological properties.

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**Disclosure(s) of Interest:** There are no interests to disclose.
have a preceding trigger, such as a viral illness, and in this presented case, may have been triggered by the trauma of the patient’s fall. Regarding treatment, multiple strategies have been reported with success, with the use of hyaluronidase being the most useful in this situation which led to resolution of the symptoms. Of note, given the properties of the filler introduced into this patient, a higher amount of hyaluronidase is needed to dissolve the product. Additional strategies reported with success range from use of systemic and injected corticosteroids, systemic antibiotics and also the absence of intervention, as some events have resolved with time.  


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Disclosure(s) of Interest: Derek Jones, MD is a consultant and received honoraria from Allergan.  

Poster # 9  
Squamous Cell Carcinoma in Hidradenitis Suppurativa: Experience of 12 Patients  
Purpose: Fewer than 100 reports describe squamous cell carcinoma (SCC) arising in hidradenitis suppurativa (HS); clinical series are limited. The three objectives were 1) to calculate the population-based incidence of SCC in HS in Olmsted County, Minnesota; 2) to describe the clinical characteristics, pathologic findings, and postoperative outcomes of SCC arising in HS at our institution; and 3) to assess whether human papillomavirus (HPV) might be involved in the pathogenesis. 

Design: Potential cases of SCC in HS were identified through institutional medical records (1976-2013) and the Rochester Epidemiology Project (REP). Tumour specimens were assessed for HPV DNA/RNA with in situ hybridization. 

Summary: Twelve patients were identified from institutional medical records (11 white, 9 male). All cases involved gluteal, perianal, or perineal skin. Mean duration of HS before SCC development was 28.5 years (range, 15-53 years). Mean follow-up was 4.3 years after surgical excision. Seven of 12 patients had postoperative SCC recurrence. SCC caused death in 7 patients. SCC was not associated with high-risk or low-risk HPV. No incident cases of SCC arising in HS were identified through the REP. 

Conclusion: In conclusion, we found that the occurrence of SCC in HS is most common in men with chronic gluteal, perianal, and perineal HS. All patients were treated with surgical excision and despite aggressive surgical and radiotherapeutic intervention, all our patients with adequate follow up (7/7) with invasive SCC died from SCC related causes. We did not find an association with HPV infection, as was reported in a previous series. 

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Disclosure(s) of Interest: There are no interests to disclose.  

Poster # 10  
Recurrent Xanthelasmas Treated with Intralosomal Deoxycholic Acid  
Purpose: Xanthelasmas represent the most common cutaneous form of xanthomas. These superficial lipid deposits are benign, but can be cosmetically disfiguring and cause psychosocial distress. Various treatment modalities, including surgical excision, laser, and chemical destruction are available. However, these do not always produce cosmetic results for patients. Kythera Biopharmaceuticals developed a synthetic form of DCA (ATX-101, Kybella), a type of bile acid, which was FDA approved in 2015 for the reduction of convexity or fullness of submental fat. Since inception of this drug, there have been several studies that have validated its efficacy and safety profile. Subcutaneous injection of DCA causes adipolysis and thus offers a minimally invasive treatment alternative to liposuction for treatment of submental fat. There have been no cases reported to date using DCA for the treatment of xanthelasmas. We present two cases of patients with recurrent xanthelasmas treated with intralosomal DCA injections. 

Design: A 47-year-old female presented to dermatology clinic twelve years prior with slowly enlarging yellow plaques on bilateral lower medial eyelids. Examination at that time demonstrated an 11 mm x 6 mm yellow plaque at the left medial lower eyelid and a similar plaque measuring 7 mm x 4 mm at the right medial lower eyelid. She underwent CO2 laser excision of these lesions by an oculofacial plastic surgeon; given the relatively large defect on the left, a FTSS from the left upper eyelid was utilized to avoid ectropion with punctual erosion. Pathology demonstrated xanthelasma. Approximately two years ago, she presented with a three-week history of new yellow papules on her bilateral lower eyelids and left lateral canthus. The right lower eyelid, left lower eyelid, and left lateral canthal lesions were removed with a surgical blade. Pathology was again consistent with xanthelasma. Laboratory workup demonstrated slightly elevated HDL, low LDL, and normal total cholesterol. The patient returned 18 months later with recurrence of yellow plaques on her right upper, right lower and left upper eyelids. Concurrently, the patient had substantial fullness for which DCA injections were initiated. The periocular lesions were anesthetized with 30% lidocaine cream. A total of 0.35 mL of DCA (20 mg/2 mL) was injected intradermally in the right upper, right lower and left upper eyelid lesions. The remaining portion of the 2 mL vial was injected into the submental fat. The patient was re-injected with the same dose and quantity of DCA into the same locations 4 weeks later, then 6 weeks later, and again 4 weeks later. A total of 4 vials were used to date between October 2017 and February 2018. The patient demonstrated a modest decrease in the size and thickness of her xanthelasma plaques at each follow-up visit. Our second case is a 68-year-old male with a history of borderline hypercholesterolemia who was previously on a lipid lowering medication. He presented to his local oculofacial plastic surgeon with a five-year history of slowly enlarging yellow plaques on his left upper eyelid (9 mm x 6 mm), left lower eyelid (15 mm x 9 mm), right upper eyelid (5 mm x 4 mm), and right lower eyelid (6 mm x 5 mm). He underwent excisional biopsies with pathology demonstrating xanthelasma. Four months later, he developed recurrence of disease adjacent to prior biopsy sites with yellow plaques measuring 14 mm x 4 mm on the right lower eyelid and 5 mm x 6 mm on the right upper eyelid. He completed oral prednisone 40 mg daily for 2 weeks and underwent intralosomal injection of 0.2 mL triamcinolone acetonide 20mg/mL into the right upper eyelid plaque with minimal improvement. In the interim, he had also developed smaller yellow plaques on the left eyelids and left lateral canthus. The patient elected to proceed with intralosomal DCA injections. All periocular lesions were anesthetized with lidocaine 2% with epinephrine. Approximately 0.2 mL of DCA (20 mg/2 mL) was injected intradermally into each lesion on the bilateral upper and lower eyelids as well as the left lateral canthus. The patient returned in 6 weeks with modest improvement and was re-injected with the same dose into all lesions. 

Summary: These cases highlight the safe use of DCA to treat xanthelasma. Serial clinical examinations of both patients demonstrated modest improvement in the size and thickness of the treated lesions. We encountered no complications with DCA injections when delivered in very small intradermal aliquots on the eyelids. Additionally, the patients reported good satisfaction with the procedure. 

Conclusion: Intralosomal DCA injections represent another minimally invasive non-surgical treatment alternative for xanthelasmas. Based on the mechanism of action demonstrated in iplomous lesions, DCA likely leads to acute inflammation, macrophage engulfment, and subsequent clearance of insoluble lipids. Some of the improvement we noted may also be secondary to a decrease in the vascular supply to the lesions. Future studies on the use of intralosomal DCA in cutaneous xanthomas are necessary. 

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Poster # 11  
Efficacy, Safety, and Patient-Reported Outcomes in Male Subjects Treated with OnabotulinumtoxinA for Improvement of Moderate to Severe Horizontal Forehead Lines  
Purpose: Men represent a growing, often overlooked segment of the aesthetic market. Two recent pivotal studies evaluated the efficacy and safety of onabotulinumtoxinA (onabotA) for treatment of moderate to severe dynamic horizontal forehead lines (FLH). This post hoc analysis of these studies evaluated investigator-assessed efficacy and patient-reported outcomes (PROs) of onabotA in male subjects. 

Design: Subjects were randomized to onabotA or placebo (PBO); onabotA subjects received 20 U in the frontalis and 20 U in the glabellar complex (onabotA 40 U), with/without concurrent treatment of 24 U in the bilateral crown’s feet regions (onabotA 64 U). We pooled data for all male subjects who received onabotA during the double-blind period across both pivotal studies. Efficacy endpoints included investigator-assessed FLH severity on the Facial Wrinkle Scale (FWS) at maximum (max) eyebrow elevation and at rest from days 30 to 180. Subjects completed 2 validated PRO measures: Facial Line Satisfaction Questionnaire (FLSQ) and 11-item Facial Line Outcomes Questionnaire (FLO-11). This analysis focused on FLSQ Item 5 (proportion of subjects mostly/very satisfied with treatment); FLSQ Impact (FLSQ) and 11-item Facial Line Outcomes Questionnaire (FLO-11).
Poster # 12

Efficacy of Single Treatment 1,064 nm Picosecond Laser for Melasma

Purpose: Conventional treatment of melasma consists of broad-spectrum photoprotection followed by the step-wise addition of topical compounds, peels, and laser therapy for refractory cases. While light- and laser-based therapies are initially effective, rebounding of melasma and postinflammatory hypo/hyperpigmentation (PIH) from adjacent thermal spread are oft-reported complications. Recent innovations in laser design have led to the availability of picosecond lasers, whose photoacoustic properties induce minimal surrounding tissue damage and subsequently less PIH. Efficacy of picosecond lasers for acquired pigmentary conditions such as nevus and tattoo pigment have been reported, but few studies evaluate the use of picosecond lasers for management of melasma.

Design: We sought to evaluate the use of an Nd:YAG picosecond laser for the treatment of facial melasma. A series of four female patients with a range of Fitzpatrick skin types (II-V) were evaluated. Patients received a single treatment with the picosecond laser at a wavelength of 1,064 nm, 6 mm spot size, 0.7 J/cm² fluence, 5 Hz frequency with 2-4 passes. Patients were pretreated with topical hydroquinone 4% for 1 month prior to laser therapy and 2 months post-procedure. The modified melasma area severity index (mMASI) score was evaluated at 1 month and 6 months post treatment.

Summary: All four patients achieved a significant mMASI score reduction at one month follow up. These results were sustained at 6 months post laser treatment. No adverse effects such as dermatochal or hypopigmentation or hyperpigmentation were noted.

Conclusion: This is the first study demonstrating the efficacy and safety of a single application of the 1,064 nm Nd:YAG picosecond laser for the treatment of melasma in conjunction with topical hydroquinone. There are only a handful of reports in the literature describing use of picosecond lasers for melasma. Our patients had significant reduction in mMASI scores with a single treatment. None of the patients developed rebound hyperpigmentation, commonly attributed to Q-switched lasers. The extremely narrow pulse width of picosecond lasers minimizes adverse dyspigmentation and confers a distinct advantage over traditional laser therapy.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 13

Procerus-based Propeller Flap: A Single-stage, Myocutaneous Flap for Nasal Reconstruction

Purpose: Propeller flaps have classically been described in the plastic surgery literature for defects of the lower extremities. In 2011, the Tokyo consensus provided clarification regarding the definition and terminology of a propeller flap, noting that it is a type of island pedicle flap that reaches the recipient site through axial rotation. The use of an axial-based propeller flap has been described in the facial plastic surgery literature for reconstruction of large nasal defects. However, to our knowledge, there have been no reports of propeller flaps used for nasal reconstruction in the dermatology literature. Moreover, the use of a random-pattern myocutaneous propeller flap for nasal reconstruction has not yet been described. Herein, we present a viable myocutaneous, single-stage reconstructive option for defects involving the nasal dorsum and sidewall.

Design: Three patients, 2 females and 1 male, all had comorbidities, travel restrictions or personal preferences making the use of a paramedian forehead flap unacceptable. A full thickness skin graft (FTSG) was also considered but abandoned given the need for donor site surgery and less than optimal skin match. We therefore utilized a processus-based myocutaneous propeller flap. All cases had complete flap survival, with good patient satisfaction and cosmetic result.

Summary: A FTSG or a two-stage reconstructive procedure to repair defects of the nose is not always feasible or the best option for patients, whether due to travel hindrances, comorbidities or patient preference. Therefore, a need exists to functionally and aesthetically reconstruct large nasal defects with a single-stage operation. Herein we present a case series of nasal reconstruction through the use of a processus-based propeller flap, with good patient satisfaction and cosmetic result.

Conclusion: The processus-based propeller flap is an excellent, single-stage reconstructive option for patients with large defects of the nasal dorsum and sidewall, in whom more laborious flaps are not an option. The flap also affords an excellent match with regards to skin texture and thickness, which is not readily achieved with a FTSG for large or deep defects, and provides minimal donor site morbidity.

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Poster # 15

A Phase 2 Trial of Topical Itraconazole for the Treatment of Basal Cell Carcinoma in Patients with Basal Cell Nevus Syndrome or High Frequency Basal Cell Carcinomas

Purpose: This study aimed to (1) determine whether 4-12 weeks of itraconazole 0.7% gel reduces GL1 mRNA levels, the target of the hedgehog signaling pathway and a biomarker for basal cell carcinoma (BCC) as well as (2) assess whether itraconazole gel reduces BCC tumor area in patients with basal cell nevus syndrome (BCNS) or high-frequency BCCs (HF-BCCs).

Design: In this open-label, intra-patient, single center study, 9 patients each contributed at least 4 target BCCs: one tumor was collected at baseline for GL1 mRNA comparison, one or more tumors were treated with placebo gel twice daily (BID), and 2 or more tumors were treated with itraconazole 0.7% gel for 4 to 12 weeks. Tumors were measured and photographed in addition to measuring research blood and safety labs at baseline, 4 weeks, and 12 weeks. Safety assessment visits were performed at 4 and 12 weeks. Target BCC tissue was collected at baseline and 4 weeks. Seven patients who participated in the 4-week treatment regimen opted to continue with the 12-week regimen. The primary outcome was reduction in GL1 mRNA expression measured by quantitative polymerase chain reaction. The secondary outcome was reduction in BCC tumor area. Safety analyses included all patients who received at least one dose of study treatment with graded adverse events reported according to the National Cancer Institute Common Terminology Criteria for Adverse Events, version 4.03.

Summary: Our study enrolled 6 BCNS and 3 HF-BCC patients contributing a total of 114 tumors. Seven patients were male, and the majority (67%) were non-Hispanic white with a mean age of 53 years. The mean percent change in GL1 mRNA was not significantly different between the itraconazole and placebo groups at 4 (132% vs 19.0% from baseline, p=0.2) or 12 weeks (1140% vs 424% from baseline, p=0.7). There was no significant difference in the mean percent change in tumor area at 4 (0.04% vs -10.9% from baseline, p=0.4) or 12 weeks (8.9% vs 26.5% from baseline, p=0.4). The mean intra-tumor itraconazole concentration was 97 ug/g at 4 weeks and 96 ug/g at 12 weeks. Topical itraconazole did not lead to systemic absorption and caused only grade 1-2 side effects including application site reaction (N=4), pruritus (N=4), lesion pain (N=3), dysgeusia (N=2), and xerosis (N=2).

Conclusion: Topical itraconazole 0.7% gel was safe, led to measurable drug concentrations within the tumor, and did not cause systemic absorption. However, in this small phase 2 pilot study, topical itraconazole at the maximally soluble formulation of 0.7% did not reduce GL1 mRNA or BCC tumor area after 12 weeks. Topical itraconazole may not be effective in patients with BCNS or HF-BCCs, perhaps due to this populations genetic phenotype. Further study is needed to determine whether topical itraconazole can potentially treat sporadic BCCs.

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Disclosure(s) of Interest: There are no commercial interests to disclose.
Poster # 16
Development of Patient-Reported Outcome Measures for Masseter Prominence

Purpose: To identify characteristics, symptoms, impacts, and satisfaction concepts associated with masseter prominence in US-based participants, and to evaluate the content validity of the Lower Facial Shape Questionnaire (LFSQ) patient-reported outcome (PRO) measure originally developed for use in primarily Asian populations.

Design: Participants age; 18 years old with investigator-assessed masseter prominence, were recruited from 3 US sites. Hybrid concept elicitation (CE) and cognitive debriefing (CD) interviews were conducted to 1) document the relevant characteristics, symptoms, impacts, and condition-related satisfaction concepts of masseter prominence and 2) evaluate the participants ability to read, understand, and complete the LFSQ assessments (symptoms, impacts, and satisfaction). Important and relevant concepts were organized into a conceptual model and compared to the content of the LFSQ.

Summary: The study included 20 participants (mean age 41 (SD=15); 75% female; 60% Caucasian) who were mainly classified with moderate or marked masseter prominence (65%). The most commonly reported masseter prominence characteristics included shape (75%; eg, square), volume (60%; eg, full), and characterizations (55%; eg, pronounced). The most frequently reported symptoms were grinding teeth and jaw pain (45% each). The most frequently mentioned impacts were emotional (75%; eg, self-conscious) and social (40%; eg, shyness). Participants reported that successful treatment would include improved appearance (65%), facial symmetry (45%), and reduced symptoms (35%). Review of the CE in comparison to the existing concepts of LFSQ demonstrated that frequently-reported concepts were included. Cognitive debriefing demonstrated that the LFSQ was relevant to the masseter prominence experience and easy to use.

Conclusion: Results confirmed the content validity of the LFSQ regarding its use in mainly Caucasian participants with masseter prominence. The psychometric properties of the LFSQ need to be evaluated to further support validity and reliability.

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Disclosure(s) of Interest: Sabrina Fabi, MD is a consultant for Allergan, Galderma, Revance, Merz, Colorscience, Thermi, Alastin, Almirall; ownership in Revance; honoraria from Allergan and Merz, and member of the Speaker’s Bureau for Allergan, Galderma, Merz, Thermi, Alastin and Vixical.

Poster # 17
Appearance-based versus Health-based Sun-Protective Messages: A Randomized, Double-Blind Controlled Study

Purpose: Appearance-based messages have shown promise in improving sun-protection habits among Caucasians but have scarcely been investigated in ethnic populations. The goal of this study was to compare the effectiveness of appearance-based versus health-based messages in an ethnic patient population, where hyperpigmentation disorders are prevalent and often cosmetically concerning.

Design: One hundred thirty-seven patients were randomized to receive images of (a) skin cancer, (b) hyperpigmentation, or (c) wrinkles. Analysis-of-variance tests for repeated measures were used to estimate the effects of the different stimuli on participants’ knowledge and intention to sun-protect.

Summary: Appearance-based interventions were more effective in improving intentions to sun-protect among both Hispanics and non-Hispanic Whites (p ≤ 0.05). They were furthermore more effective among younger patient population (40 years old) and patients who thought that a tanned appearance is attractive (p ≤ 0.05).

Conclusion: Appearance-based photos of sun-damage were more effective than health-based messages to improve intentions to sun-protect among both Hispanics and non-Hispanic Whites (p < 0.05). Health-related messages were more effective among older patients and patients who thought that a healthy appearance is attractive (p < 0.05).

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 18
Patient Acceptance of Smartphones for the Use of Medical Photography in the Dermatology Clinic

Purpose: The use of medical photography in clinical practice is becoming more common, particularly among visually oriented fields such as dermatology. Photographs can be used to track disease progression, response to therapy and to prevent wrong site surgery. Smartphones have been rapidly adopted by physicians and prior studies have shown up to 82% of board certified dermatologists use them for medical purposes. Despite physicians having increased access to a camera via their smartphone, most patients (ranging from 73-88%) are not accepting of this practice and prefer hospital owned cameras due to concerns of confidentiality and privacy. This study was designed to see if informing patients about the secure nature of smartphone photography would influence their acceptance of medical photography as well as physician use of personal smartphones in the clinic setting.

Design: This study was conducted at a dermatology clinic at an academic university in New Orleans, LA. A six-question survey was designed to evaluate patient acceptance of medical photography and physician use of smartphones to record images. A patient information sheet was also created that informed the patients about the safety, security, and HIPAA-compliant nature of the smartphone photos being stored in a password protected smartphone app. 200 subjects were recruited into the study and assigned into two groups. Group 1 (n=100) was given the patient information sheet and then the survey. Group 2 (n=100) was first given the survey, then the patient information sheet to read, and then asked to repeat the survey.

Summary: For the group that was given the information sheet and then the survey, 97/100 (97%) said that medical photography in general was acceptable; 97/100 (97%) said that a smartphone was acceptable for medical photography. For the group that was given the survey, the patient information sheet, and then the survey, initially 85/100 (85%) initially said a medical photograph in general was acceptable, and of those subjects 66/85 (77.6%) initially said a smartphone was acceptable for medical photography. After being given the information sheet, 96/100 (96%) said that medical photography in general was acceptable, and of those subjects 88/96 (91.7%) said that a smartphone was acceptable for medical photography. For those who initially said they did not find a smartphone acceptable for medical photography, they cited concerns about confidentiality (25/44) and privacy (20/44).

There was a significant difference in acceptance of medical photography in general between group 1 (97/100) and group 2 prior to the information sheet (85/100). There was no significant difference between those who found a smartphone acceptable for medical photography in group 1 (87/100) and in group 2 prior to being given the information sheet. There was a significant difference in acceptance of a smartphone for medical photography in group 2 prior to being given the information sheet (85/100) and after being given the information sheet (96/100). Of all patient responses after being given the information sheet (summation of group 1 and group 2 post-survey), 193/200 (96.5%) said that medical photography in general was acceptable and 183/200 (91.5%) were accepting of smartphones for medical photography.

Conclusion: In general, the majority of patients are accepting of the use of medical photography in the dermatology clinic. Patients are more tolerant to the use of smartphones for this purpose if they are preemptively informed that the same measures to ensure patient privacy are taken, regardless of whether the camera is hospital owned or physician owned. A simple information sheet describing the purpose, storage, and HIPAA-compliant nature of any photograph taken in clinic leads to a significantly higher degree of patient acceptance. Given that most physicians already use a smartphone, this appears to be an acceptable method that physicians can incorporate in the clinic as another tool to track disease and prevent wrong-site surgeries.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 19
Understanding the Hispanic Facial Aesthetic Patient

Purpose: Aesthetic injectors may perceive challenges with addressing the aesthetic needs of the diverse population of Hispanic patients. Understanding the anatomy, facial aging patterns, aesthetic concerns, and treatment preferences may increase the comfort level for injectors and improve outcomes for these patients. Clinical case studies can provide practical examples for implementing this knowledge during patient consultation, assessment, and treatment.

Design: Two research studies were performed to gain insights into self-reported facial aging patterns and treatment preferences for a total of 927 female respondents of Hispanic ethnicity. 526 participants in the first study assessed their static facial features against photometric scales depicting degrees of severity for 10 areas across the upper,
mid, and lower face. 401 US-based participants in the second study reported current facial conditions, areas of aesthetic concern, relative prioritization of treatment areas, and attitudes toward injectable treatments. Respondents for both studies were naive to facial aesthetic treatments. A subsequent meeting of experts with significant experience in treating the Hispanic population produced case studies to illustrate the translation of these data to the clinical setting.

**Summary:** The majority of Hispanic respondents reported having facial wrinkles (56%), dark circles (65%) and bags (45%) under the eyes. Moderate-to-severe nasolabial folds were present in ~30% of respondents by their 40s, while more broad signs of aging were reported by their 50s. Upper facial lines (crow’s feet lines [CFL], forehead lines [FHL], and glabellar lines) reached the moderate-to-severe threshold for Hispanic respondents 10 years later compared to data obtained for 1317 Caucasian females. The areas of greatest aesthetic concern for Hispanic respondents were the submental region, periorbital region (under eye/tear trough and CFL) and FHL. Correspondingly, areas most likely to be prioritized for treatment were under eye/tear trough and CFL, followed by the submental area and FHL. All respondents were considering a facial aesthetic treatment administered in a physician’s office within two years; 84% of them would consider injectables. Cost and safety/side effects were the most reported barriers to receiving injectables.

**Conclusion:** There was general alignment between the self-reported facial aging patterns, areas of greatest aesthetic concern, and those that were prioritized for treatment. Accordingly, treatment of the periorbital (CFL and under eye/tear trough), FHL and submental regions may be seen as entry points for injectables in this population. Understanding these objective research findings and practical case studies may increase the comfort level for injectors and improve outcomes for Hispanic patients.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 20**

**Simultaneous Lateral Tarsal Strip and Medial Spindle Procedures for Cicatricial Ectropion**

**Purpose:** Cicatricial ectropion is a complication after dermatologic surgical procedures, most commonly encountered after repair of periocular or cheek defects. The lateral tarsal strip (LTS) and medial spindle (MS) procedures are surgical techniques to address cicatricial ectropion. Our objective is to evaluate the clinical characteristics and efficacy of simultaneous LTS and MS procedures for repair of cicatricial ectropion occurring after dermatologic surgeries.

**Design:** A retrospective review of all cases of symptomatic cicatricial lateral and medial punctal ectropion in one author’s practice over 2 years was performed. Those resulting from dermatologic surgical procedures and repaired with simultaneous LTS and MS procedures were included.

**Summary:** Fifty-six tumors involving the lower eyelid were considered highly at risk and treated with Mohs micrographic surgery and reconstruction in the senior author’s practice during the review period, resulting in 3 (5.3%) cases of cicatricial ectropion. Five additional cases resulted from Mohs surgery and resulted from excisions of pigmented lesions, all performed by other surgeons. One post-operative complication (6.7%) of undercorrection required reoperation, with initial surgical success rate being 93.3% and overall surgical success being 100% after the single reoperation.

**Conclusion:** Simultaneous LTS and MS are useful procedures for dermatologic surgeons yielding high surgical success and a low complication rate for correction of medial and lateral cicatricial ectropion with punctal eversion.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 21**

**Quantification of Erythema Associated with Continuous versus Interrupted Sutures in Facial Reconstruction Following Mohs Micrographic Surgery: A Randomized Prospective Study**

**Purpose:** Continuous and interrupted suturing are among the most common suturing techniques used in the closure of facial incisions in Mohs micrographic surgery (MMS). Patients are often concerned about the cosmetic appearance of facial scars post-surgery, including residual erythema. However, few studies have investigated the cosmetic outcomes of continuous versus interrupted sutures. We sought to establish whether continuous or interrupted sutures are associated with the greatest intensity of residual erythema in surgical scars resulting from MMS on the face, and to determine the rate of regression of this erythema over time.

**Design:** This was a prospective, single-center, evaluator-blinded, randomized split-scar comparison trial. Following MMS, 105 patients were randomized into two groups. Depending on randomization, either the superior/medial or inferior/lateral half of the incision was sutured with continuous nylon sutures, whereas the other half was closed with interrupted nylon sutures. Post-operatively, subjects were assessed at 1 week, 2 months, and 6 months and close-up photographs of their scars were taken under comparable lighting and photography parameters. Computer-assisted image processing was utilized in all interval photographs to quantify the erythema intensity in each half of the scars.

**Summary:** Paired T-tests demonstrated that the average erythema intensity of interrupted sutures is greater than that of continuous sutures by 9.2% at 1 week (P=0.001) and 7.3% at 2 months (P=0.021), but comparable at 6 months post-operatively (P=0.87). For interrupted sutures, the average relative decrease in erythema intensity from 1 week to 2 months is 29.2%, and from 1 week to 6 months is 33.5%. A similar trajectory was noted in continuous sutures. Although interrupted sutures demonstrated greater erythema intensity than continuous sutures at 1 week and 2 months, these differences were visually imperceptible in most cases, and erythema intensity differences resolved by 6 months in nearly all cases.

**Conclusion:** Continuous sutures are associated with statistically significantly less erythema during early scar maturation on the face. However, in most cases, the perceived clinical difference in erythema was minimal. These results may nevertheless guide the choice of suturing technique to improve early cosmetic outcomes and patient satisfaction throughout the healing phase. Our results also demonstrate that the regression of erythema occurs most predominantly in the first two months post-operatively, which could help better inform patients regarding the anticipated evolution of scar appearance over time.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 22**

**Bringing Back Intralesional Cryosurgery for Large Keloids Refractory to Excisions or Traditional Therapies**

**Purpose:** Intralesional (IL) cryosurgery is generally successful for flattening large, bulky keloids. Today, most patients are initially treated with IL steroid injections as this has remained first line therapy for decades now. While IL steroids are effective in causing atrophy, there is concern for systemic absorption which restricts its usage. Generally, for adults this is 1mL of triamcinolone acetonide injectable suspension of 40mg/ml per dose. Other precluding factors include patient compliance with multiple visits and tolerating several injections with medium or large bore needles. In patients with large, bulky keloids, it can be advantageous to add IL cryosurgery to a dermatologist’s armamentarium.

**Design:** Two African-American patients with a long-standing history of large keloids were seen at the Veterans affairs (VA) hospital in Brooklyn, NY. Patient A is a 38 year old man with a very large, bulky keloid on the right postauricular region encompassing the entire posterior auricular surface pinning down the right ear and extending to the right lateral cheek. He previously had four separate excisions along with more than 30 IL steroid injections spanning a decade. His keloid continued to remain active and grow. Patient A opted to have IL cryosurgery. A handheld portable cryogenic device [Cry-Ac B-700, Brymill, Ellington, CT] is always available in our dermatology clinic. We had an accessory to the cryogen device [Original Bent Spray Extension Model #103, Brymill] which was attached to the cryogen spray tip narrowing the spray output. To allow technician movement and malaeability, IV tubing that is traditionally used for IV fluid administration was taken and cut with scissors to produce 12 inches of tubing. The proximal end of the IV tube was placed on the spray tip and the distal end was connected to an 18 gauge needle. The affected site was cleaned with alcohol and anesthetized with local anesthesia in a ring-block pattern. The distal end of the needle was inserted into 4 different treatment zones of the keloidal plaque passing through the keloid to exit so nitrogen gas and ice crystals would be expelled. And this was covered with tubing to protect the surgeons. Each zone was treated until the entire surface turned white from being frozen. After thawing completely, this was repeated a second time at each zone. With each treatment session, the patient noted significant flattening of the keloid. Patient B is a 40 year old man who more than 50 visits to the dermatologist spanning 13 years for multiple keloids on the chest and extremities. At each visit, he was treated with IL steroids; however, his keloids continued to remain active and grow. This patient was a clear candidate for IL cryosurgery and opted to treat 2 adjacent keloids on the central chest with this technique. The procedure was performed in similar fashion to patient A. After follow-up, the patient opted to continue with IL cryosurgery as he found the results efficacious.

**Author:** Ardalan Akbari; David Zloty, FRCP

**Disclosure(s) of Interest:** There are no commercial interests to disclose.
**Summary:** Presented here are two patients with large, bulky keloids that were active, growing, and failed multiple therapies. Both patients opted for an alternative treatment and were satisfied with the decrease in keloid size following IL cryosurgery. In both patients, the keloids remained active; however the flattening was significant with each session. They noted an increase in efficacy with IL cryosurgery versus IL steroids. The cryosurgery did lead to short-term crusting and edema of the treated areas. There was also significant hypopigmentation in Patient A noted at each visit; however, the patient had hypopigmentation prior to starting IL cryosurgery. Overall, both patients continued to proceed with further sessions of IL cryosurgery spaced at least six weeks apart. In addition to the cryogen apparatuses, the only tools necessary included IV tubing and an 18 gauge needle.

**Conclusion:** Intralesional cryosurgery can serve as a treatment option in patients with long-standing large, bulky keloids who are refractory to multiple excisions and IL steroid administration. IL cryosurgery is generally safe to perform for large keloids, and proves to be safe in recurrent keloids or those status post excision. The main side effect is hypopigmentation of the treatment site. The device for IL cryosurgery can be created in an office setting with minimal set-up or tools.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 23**

**Implementation and Evaluation of Stanford Health Care Store-And-Forward Teledermatology Consultation Workflow Built within an Existing Electronic Health Record System**

**Purpose:** Teledermatology services that function separately from patients' primary electronic health record (EHR) can lead to fragmented care, poor provider communication, privacy concerns and billing challenges. This study addresses these challenges by developing PhotoCareMD, a store-and-forward (SAF) teledermatology consultation workflow built entirely within an existing Epic-based EHR.

**Design:** Thirty-six primary care physicians (PCPs) from 8 outpatient clinics submitted 215 electronic consults (eConsults) for 211 patients to a Stanford Health Care dermatologist via PhotoCareMD. Comparisons were made with in-person referrals for this same dermatologist prior to initiation of PhotoCareMD.

**Summary:** Compared to traditional in-person dermatology clinic visits, eConsults decreased the time to diagnosis and treatment from 23 days to 16 hours. The majority (73%) of eConsults were resolved electronically. In-person referrals from PhotoCareMD (27%) had a 50% lower cancellation rate compared to traditional referrals (11% versus 22%). The average in-person visit and documentation was 25 minutes compared to 8 minutes for an eConsult. PhotoCareMD saved 13 additional clinic hours to be made available to the dermatologist over the course of the pilot. At 4 patients per hour, this opens 52 dermatology office setting with minimal set-up or tools.

**Conclusion:** An internal SAF teledermatology workflow can be effectively implemented to increase access to and quality of dermatologic care. Our workflow can serve as a successful model for use in dermatology surgery workflow.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 24**

**Restrospective Analysis of the Efficacy and Safety of Combination Treatment with Q-switched 755 nm Alexandrite and 1927 nm Thulium Fiber Laser for Hypertypegmentation**

**Purpose:** Hyperpigmentation is a common concern among patients and is caused by several factors such as photodamage, aging, and melasma, and laser therapy can be an effective treatment option. The q-switched 755 nm alexandrite and 1927 nm thulium fiber laser are frequently used for treating hyperpigmentation, but there have been no reports in the literature of using them as a combination treatment. Our goal is to describe the efficacy and safety of this combination treatment to improve hypertypegmentation both on and off the face.

**Design:** We performed a retrospective chart review of 39 patients from January 1, 2014 to September 25, 2017 who had one treatment with q-switched alexandrite laser combined with the 1927 nm thulium fiber laser for hypertypegmentation on the face, neck, chest, and arms. Blinded assessment of clinical improvement based on a modified grading scale (adapted from Alexiades-Armenakas) and a global aesthetic improvement scale was performed by two clinicians 2-4 weeks and 1-3 months post treatment.

**Summary:** Preliminary statistical analysis showed an improvement in pigmentation at assessment at both 2-4 weeks (2.22 +/- 0.62 to 1.51 +/- 0.71) and 1-3 months (2.15 +/- 0.75 to 1.24 +/- 1) on a 0 to 4 scale that was statistically significant (p< 0.05). Fine lines and skin texture showed statistically significant improvement (p<0.001) at 1-3 months post-treatment on a 0-4 scale as well. Overall global aesthetic was improved to very much improved in 65% of patients at 2-4 weeks and 69% at 1-3 months. No major adverse events were reported.

**Conclusion:** Combination treatment of q-switched 755 nm alexandrite and 1927 nm thulium laser for hypertypegmentation on the face and upper body show statistically significant improvement in pigmentation, fine lines, and skin texture. Further analysis of this retrospective study will be presented.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 25**

**Understanding the Asian American Facial Aesthetic Patient**

**Purpose:** Aesthetic injectors may perceive challenges with addressing the aesthetic needs of Asian patients. Understanding the anatomy, facial aging patterns, aesthetic concerns, and treatment preferences may increase the comfort level for injectors and improve outcomes for these patients. Clinical case studies can provide practical examples for implementing this knowledge during patient consultation, assessment, and treatment.

**Design:** Two research studies were performed to gain insights into self-reported aging patterns and treatment preferences for a total of 1,113 female respondents of Asian ethnicity. 710 participants in the first study assessed their static facial features against photometric scales depicting decades of severity for 10 areas across the upper, mid, and lower face. 403 US-based participants in the second study reported current facial conditions, areas of aesthetic concern, relative prioritization of treatment areas, and attitudes toward injectable treatments. Respondents for both studies were naãuklm/ve to facial aesthetic treatments. A subsequent meeting of experts with significant experience in treating the Asian American patient population produced case studies to illustrate the translation of these data to the clinical setting.

**Summary:** The majority of respondents reported having uneven skin tone/color (64%), facial wrinkles (50%), and sun damage (48%). Moderate-to-severe nasolabial folds and puffiness under the eyes were present in ~30% of respondents in their 40s followed by the appearance of forehead lines (FHL) in their 50s. More broad signs of facial aging across the upper, mid and lower face were reported by their 60s. The moderate-to-severe threshold was reached ~10 years later for many facial areas when compared to similar data for 1317 Caucasian females. Areas of greatest aesthetic concern were under eye/tear trough, FHL and crow’s feet lines (CFL). Areas most likely to be prioritized for treatment were under eye/tear trough and CFL, followed by FHL and the submental region. All respondents were considering a facial aesthetic treatment administered in a physician’s office within two years; 74% of them would consider injectables. Safety/side effects and cost were the most reported barriers to receiving injectables.

**Conclusion:** There was general alignment between the self-reported facial aging patterns, areas of greatest aesthetic concern, and those that were prioritized for treatment. Accordingly, treatment of the periocular (under eye/tear trough and CFL), FHL and submental regions may be seen as entry points for injections in this population. Consideration should also be given to their focus on addressing specific concerns including hyper/hypertypegmentation. Understanding these objective research findings and practical case studies may increase the comfort level for injectors and improve outcomes for Asian American patients.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 26**

**Surgical Complication Following Daily Consumption of Turmeric**

**Purpose:** With a trend toward use of natural and organic products and treatments, herbal supplements have been on the rise in the U.S., most commonly in the highly educated population. The use of complementary and alternative medicine is steadily increasing, with up to 27% of surgical patients consuming over-the-counter (OTC) products that can theoretically inhibit coagulation, including turmeric. While these supplements have been
shown to have therapeutic benefit in complementary alternative medicine, confidence in its use is limited by lack of controlled trials for dosage and frequency. Nonetheless, patients use these supplements regularly, and they may not think to convey them to their healthcare providers, which may affect patient care and surgical outcomes.

**Design:** A 37-year-old male, otherwise healthy, underwent Mohs surgery for an infiltrative BCC on the right medial cheek. Patient denied use of any over-the-counter or prescription medications. He underwent 1 stage of Mohs surgery, and his defect was closed using a complex linear closure. Intra-operative course notable for excessive oozing and pinpoint bleeding involving small vessels from wound edge and wound bed. Despite aggressive cauternation, patient continued to have oozing during and after repair from wound edge and closure line. Patient again denied any use of aspirin, ibuprofen or any other OTC or prescription medications. Given notable erythema and edema, pressure was held for 30 minutes after repair to promote hemostasis. Patient was evaluated on POD4, where he was found to have a large hematoma with hemorrhagic crusting and wound dehiscence. Hematoma was evacuated and wound repair was attempted in areas of dehiscence to minimize scarring and salvage closure. Despite minimal manipulation, the wound edge was oozing vigorously (but less so than during surgery day). Wound was bandaged and patient instructed to return in 4 days. On POD8, exam was notable for recurrent but smaller hematoma and area of dehiscence. The remaining hematoma was evacuated, and the wound was left open to allow any residual oozing to drain. At this visit, the patient admitted to consuming turmeric powder every morning in his smoothie for many years and failed to mention it during his surgery and follow up visits. Patient instructed to stop turmeric and return in 7 days. On POD15, the patient returned with a significantly improved granulating wound with smaller clot and no further dehiscence. There was minimal oozing despite manipulation and clot removal. Few interrupted sutures were placed after cleaning granulating wound edge to help close wound, and no oozing was noted during this procedure. Follow-up two weeks later demonstrated a well-healing surgical site without any evidence of oozing or dehiscence.

**Summary:** Turmeric (*rhizomatous plant of Curcuma longa*, a spice from Asia widely used as an herbal supplement, is known for its supposed anti-inflammatory, antiproliferative, antimicrobial and antiangiogenic activities. Turmeric consists of polyphenolic compounds, notably curcumin and bisdemethoxycurcumin (BDMC), which are responsible for many of its beneficial health effects. In Unani medicine, turmeric is used to open blood vessels; to improve circulation. Curcumin has been found to have antiangiogenic activities by way of inhibiting platelet aggregation, which plays a key role in thrombus formation and thus coagulation. Additionally, both curcumin and BDMC have been shown to significantly prolong aPTT and PT, measures of both the intrinsic and extrinsic pathway of coagulation, in in vitro studies. In vivo studies have also demonstrated prolonged bleeding time. While formal studies have not been done in a dermatologic surgery setting, we report a case of Mohs surgery complicated by bleeding diatheses most likely secondary to the ingestion of turmeric, with an otherwise negative antiangiogenic workup.

**Conclusion:** Surgeons should specifically ask about herbal supplements, powders and liquid during pre-operative intake. Turmeric may contribute to bleeding complications in even otherwise healthy patients. Other herbal supplements to ask about that can affect coagulation include: anise, bromelain, celery, clove, fish oil, feverfew, garlic, ginger, gingko, ginseng, kava kava, onion and vitamin E.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 27 Clinical Study to Assess the Safety and Efficacy of a 1060nm Laser System for Treating the Submental Area via 3D Imaging and Analysis with Three Month Follow Up**

**Purpose:** This study was designed to evaluate, through 3D image capture and volume analysis, the reduction generated by 2 treatments of the non-invasive 1060nm laser system treatment to the submental area to achieve disruption of adipocyte cells.

**Design:** 19 healthy female subjects with BMI greater than or equal to 45 with visible submental fat were treated once a month for two months with the 1060nm laser system. 8 subjects had 3D images were taken at baseline and 3 months post second treatment and the submental region was analyzed for overall volume in cm³ and for surface area in mm². Subject and physician satisfaction was rated at the 3 month follow up visit.

**Summary:** 3D images were analyzed for 8/19 subjects. The average reduction seen was 5.4 cm³ (+/- 4.02) with a range of 0.38 cm³ to -11.4 cm³ (P=0.006). Subject images analyzed at 3 months post 2 treatments showed an average surface area reduction of 64.4 mm² which corresponds to a 23.9% reduction as compared to baseline. At the 3 month follow up visit all subjects were satisfied with their results and graded as improved by the physician. Conclusion: Two treatments of 1060nm laser demonstrates the ability to reduce volume in the submental region as measured by 3D imaging in most subjects.

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**Disclosure(s) of Interest:** David McDaniel, MD is a consultant for Cynosure/Hologic, Allergan/SkinMedica/Zeltiq, Dermarfecta, Illumitex, Skinceuticals, Dermaforce Labs, PhotonMD, RegenX Science, Pacific Biosciences Laboratory Products Inc, Galderma, ReparoGen and owner of NorthCell Pharmaceuticals, McDaniel Institute of Anti-Aging Research, McDaniel Laser and Cosmetic Center of Virginia, LifeSpan Extension.

**Poster # 28 Withdrawn**

**Poster # 29 Barbed Suture Suspension of the Lower Eyelid with Primary Closure to Repair a Lateral Lower Eyelid Defect**

**Purpose:** Barbed sutures have been used in cutaneous surgery by many authors primarily for cosmetic purposes with variable success. Barbs engage the soft tissue and offer a means for remodeling and repositioning of facial soft tissue. Herein we introduce a technique for re-suspension of the lower eyelid using barbed suture to minimize downward tension and avoid ectropion following Mohs micrographic surgery.

**Design:** A 60-year-old woman underwent Mohs micrographic surgery for basal cell carcinoma of the left lower eyelid. Tumor clearance was achieved after three stages and the resultant defect involved the left lateral lower eyelid. Primary closure alone would prevent significant risk of ectropion. Primary closure with canthal suspension to laterally elevate the lower eyelid was selected to repair the defect. Lateral canthopexy was an option for canthal suspension. However, it presents several disadvantages including lateral extension of the incision, dissection of the lateral orbital rim and longer scar length. Instead we chose to perform barbed suture suspension of the lower eyelid. The application of barbed sutures for the reconstruction of the lower lid is rarely described in the literature, the technique we describe is simpler and effective. A 4-0 poliglecaprone barbed suture on a P3 needle was passed in buried intradermal fashion at the lateral edge of the defect. A knot was formed and the lateral edges of incision were approximated while the free strand attached to the needle was pulled taut. The needle was then passed into the dermis at the lateral apex of incision, guided superolaterally and pulled taut through the intact skin in the direction of the ipsilateral lateral canthus. The soft tissue of the lateral lower eyelid was engaged and resuspended by the barbs. The suture was then cut at the level of skin. The remaining medial aspect of the wound was closed primarily.

**Summary:** Barbed suture passed through the lateral apex of a lower lateral eyelid defect in the direction of the ipsilateral canthus effectively re-suspends the lower eyelid, preventing ectropion after Mohs micrographic surgery.

**Conclusion:** Techniques to avoid ectropion following Mohs micrographic surgery of the lower eyelid have rarely been described. Few reports describe the application of barbed sutures for the reconstruction of the lower lid. The barbed suture suspension technique we describe offers an easy-to-use yet effective technique to prevent ectropion following Mohs micrographic surgery of the lower lateral eyelid.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 30 A ‘Tented’ Septal Mucoperichondrial Hinge Flap for the Restoration of Intranasal Lining**

**Purpose:** The reconstruction of total or subtotal nasal defects is challenging. Any reconstructive approach must accomplish three main objectives: reconstruction of the internal nasal lining, structural replacement of missing cartilaginous framework; and soft tissue restoration reproducing the rounded contour of the ala and nasal tip. Of these, restoration of the intranasal lining is paramount to successful reconstruction. Failure to restore the continuity of the intranasal lining may result in scar contraction and deformity. Herein we discuss reconstructive options for the restoration of intranasal lining and present the ‘tented’ septal mucoperichondrial hinge flap as a well-vascularized option for reestablishing nasal lining.

**Design** An 86-year-old man underwent Mohs micrographic surgery for an ulcerative, 1.7 x 2.2 cm, basal cell carcinoma of the right lower third of the nose. Tumor clearance was achieved after three stages. The resultant full thickness defect measured 4 cm and involved the lateral crus of the right lower lateral cartilage as well as the lower half of the right upper lateral cartilage. Restoration of the nasal lining was accomplished using a ‘tented’ septal...
mucoperichondrial hinge flap raised off the caudal septum and based on perforators from the anterior ethmoidal artery. Tenting the flap minimizes obstruction of the nasal vestibule when it is turned over. A cartilage graft from the anti-helix of the right ear provided structural support. Lastly, a two-stage paramedian forehead flap was performed for soft tissue restoration.

**Summary:** Reconstruction of a large full thickness defect of the lower half of the nose affords few options with respect to reconstructive design. The “tented” septal mucoperichondrial hinge flap offers a well vascularized option for restoring nasal lining

**Conclusion:** Mucoperichondrial turnover hinge flaps based on perforators from the anterior ethmoid artery offer a well-vascularized option for restoring nasal lining. Tenting the flap anteriorly and medially after its initial inset can reduce the likelihood of nasal obstruction.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 31**

**Title:** Treatment of Skin Texture and Wrinkles using a Novel, Non-Mechanical 1mm Radiofrequency (RF) Microneedling Tip

**Purpose:** Minimally invasive bipolar micro-needle RF electrodes induce active dermal remodeling and are used for skin resurfacing and tightening. Systems using mechanical penetration and wide diameter needles (typically 0.3 mm) produce pain during treatment, requiring topical or local anesthesia, and have social downtime. We report the first experience using a novel, non-mechanical RF microneedling device that utilizes a “hot-penetration”; mode enabling smooth insertion of the needles driven by RF with 1.0 x 0.15 mm microneedles. The RF energy is the driving force for insertion, and, together with a unique energy management regime and small needle diameter, the needle insertion is smooth and barely perceptible. Prior studies using this system with 0.6 x 0.15mm microneedles demonstrated its safety and efficacy for dermal volumizing and treatment of wrinkles with minimal pain and downtime.

**Design:** The study is a single center, prospective, open label study of male and female subjects with a baseline Fitzpatrick Elasticity and Wrinkles scale (FEWS) score of 3-6. Each subject received three full-face microneedling treatments at 3-week intervals. At each treatment visit, pain scores were documented by the subjects via a visual analogue scale (VAS), side effects were recorded, and high-resolution digital photography was obtained. Patients are also assessed at 1 month and 3 months following the last treatment for degree of clinical improvement by investigator scoring, standardized digital photography and subject questionnaires.

**Summary:** A total of 10 female subjects with phototypes II-IV skin were enrolled and 7 of 10 subjects completed all treatment visits at the time of submission. Post-procedure reactions included erythema and/or edema, lasting up to 12-18 hours following each treatment. Pain and downtime were minimal and patients were able to continue their activities on the same day. Anesthesia was not applied during any of the treatments, as they were well tolerated by all patients. Visible improvement in skin texture, pore size and skin redness were observed in all patients. In addition, wrinkle improvement was noted following the second treatment. Results from 1 and 3 month follow up visits will be presented.

**Conclusion:** The study results suggest that treatment with the 1.0 x 0.15mm microneedling tip is safe and effective for skin texture, color and wrinkle improvement. Treatment is well tolerated without any anesthetic due to the combination of RF enabled needle insertion and small diameter needles. The ability to perform effective, minimally-invasive treatments without the need for an anesthetic, and minimal to no downtime, makes this an excellent approach for an aesthetic rejuvenation procedure.

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**Poster # 32**

**Title:** Regulatory Hurdles and Impact on Dermatology Residency Cosmetic Education

**Purpose:** Technological advancements in medical devices have lead to a proliferation of laser, intense pulsed light, microwave, and other energy based cosmetic treatments. There are three botulinum toxins approved for aesthetic indications, but many more are in the pipeline, including long and short acting toxins. Soft tissue fillers are also proliferating. As the number of cosmetic treatments increases due to patient demand, safe and effective treatments delivered by highly skilled dermatologic surgeons is critical. There is significant data to support education in mitigating untoward side effects that carry significant morbidity and mortality in cosmetic patients. As a result, manufacturers of toxin and soft tissue devices have devised educational initiatives for residency programs. However, the regulatory hurdles to utilize these educational programs has been increasing. While the potential conflict of interest is important to note, preventing dermatology residency programs from accessing educational programs places significant financial burden on the programs to independently fund these programs given its importance in resident education.

**Design:** ACGME cosmetic procedural requirements for dermatology residency were reviewed. Residents must observe or operate on 23 laser cases, including ablative, vascular and non-ablative procedures, 10 botulinum toxin chemodenervations, and 5 chemical peels. We surveyed our current residents to assess the number of cases where they have been resident surgeon versus observer and their degree of comfort regarding performing the procedure, discussing procedure and potential side effects with patients, and how to manage complications. We also assessed if performing a particular procedure rather than observing increased resident comfort in performing the procedure, discussing procedure with patients, and managing complications.

**Summary:** Final data pending, preliminary findings suggest that performing procedures rather than observing result in increased resident confidence in their ability to safely and effectively perform cosmetic procedures on their own.

**Conclusion:** Expertise in cosmetic dermatology is essential to optimal patient care by dermatologists and dermatologic surgeons. Reducing barriers to resident cosmetic education and allowing for residents to perform more procedures rather than just observe would increase resident confidence in their ability to safely and effectively perform ACGME required cosmetic procedures.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 33**

**Title:** A Pilot Study to Determine the Utility of Perioperative Antibiotics in High Risk Locations and Flap/Graft Closures Following Mohs Micrographic Surgery

**Purpose:** Mohs micrographic surgery is a common procedure in dermatologic surgery and is performed in a procedure rather than strictly sterile. Several studies have demonstrated a very low overall rate of surgical site infection, therefore, antibiotic prophylaxis is usually not indicated. Recommendations for antibiotic prophylaxis in dermatologic surgery have evolved over the past several years and the newest recommendations reflect the 2007 guidelines of the American Heart Association, the American Dental Association, and the American Academy of Orthopaedic Surgeons. These recommendations were presented in an advisory statement in the Journal of the American Academy of Dermatology in 2008. Prophylactic antibiotics are recommended for high risk indications, including high risk for surgical site infection (flap or graft closure, wedge excision of lip or ear, skin flaps on nose, skin grafting, and extensive inflammatory skin disease), high risk for infective endocarditis, and high risk for hematogenous total joint infection. The purpose of this pilot study was to determine whether perioperative antibiotics are truly necessary to reduce the rate of surgical site infections in high risk locations and flap/graft closures following Mohs micrographic surgery.

**Design:** A retrospective chart review was performed to compare the incidence of post-operative infection in high risk locations and flap/graft closures after Mohs surgery in patients treated with or without perioperative antibiotics. Inclusion criteria included: patients who had Mohs surgery performed on the leg or groin, patients with a Mohs surgery defect that was closed with a skin flap on the nose, patients with a Mohs surgery defect that was closed with a skin graft, and patients with a Mohs surgery defect resulting in a wedge excision of the lip or ear.

**Summary:** The overall incidence of surgical site infection was low. There was no statistical difference in surgical site infection following a skin flap closure on the nose, skin graft, or a wedge excision of the ear in patients treated with or without perioperative antibiotics. Inclusion criteria included: patients who had Mohs surgery performed on the leg or groin were treated with perioperative antibiotics and the incidence of surgical site infection in these cases was very low.

**Conclusion:** Antibiotic prophylaxis in dermatologic surgery has a clear role in prevention of infective endocarditis and hematogenous total joint infection. However, the role of antibiotic prophylaxis in prevention of surgical site infection in dermatologic surgery is less clear. This pilot study illustrates the need for larger scale studies to help determine whether prophylactic antibiotics are necessary in high risk locations and flap/graft closures.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.
Managing Skin Cancers Over Implanted Cardiac Devices: A Case Series

**Purpose:** To report a series of cases of skin cancer arising directly over or in close proximity to an implanted cardiac device and to discuss the different management strategies used to successfully remove the lesion.

**Design:** A series of 4 cases between 2011-2018.

**Summary:** Skin cancer directly overlying or in close proximity to an implanted cardiac device is a rarely reported occurrence. Removal of these lesions requires joint management between dermatology and cardiology. For a basic excision or Mohs surgery, the teams should consider sterility of the operating environment, the risk of entering the device pocket, and the potential use of electrocautery for coagulation. The following cases illustrate the collaboration of dermatology and cardiology to optimize patient care. An 88 year old female with a squamous cell carcinoma in-situ directly adjacent to an implanted device had a pre-operative fluoroscopic device interrogation which was utilized to guide surgical management. This is the first report of preoperative imaging used to guide management of lesions near an implanted device. The imaging revealed safe operable margins of up to 5 millimeters beyond the clinical border of the skin cancer before the device pocket would be encountered. Mohs surgery was indicated given the size of the lesion (2.2x2.1cm) and ill-defined borders. An initial stage was performed with 2 millimeter margins around the debulking defect. Margins were negative after one stage. Thermal coagulation was used to reduce the risk of device interference. While modern devices often feature insulated coatings and filters that remove non-physiologic signals, the risk for interference still exists. In the other three cases, the skin cancers arose directly over the implanted device. Given the high risk for entering the device pocket, the teams performed a coordinated Mohs surgery with device pocket revision in the sterile electrophysiology lab. In each of these cases, the device was first explanted by cardiology followed by removal of the lesion by the Mohs surgeon and, after obtaining negative margins, the device was reimplanted and the pocket closed.

**Conclusion:** With increasing prevalence of implanted cardiac devices, we believe dermatologic surgeons should be prepared to manage these complex cases. The use of preoperative fluoroscopic device imaging is a novel management strategy that can provide objective data for operative planning.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 35 Surgical Practices in Pregnancy and Lactation: A Pilot Survey of U.S. Dermatologic Surgeons**

**Purpose:** Pregnant and lactating women pose a particular challenge to the dermatologic surgeon as the welfare of both mother and fetus or infant must be considered when evaluating the risks and benefits of a procedure. In addition, safety information is frequently lacking in pregnancy and lactation. There is evidence suggesting worse prognosis in pregnant compared to non-pregnant women with malignant cutaneous neoplasms. Although recent data has recommended immediate surgical management of skin cancers or lesions concerning for skin cancer in pregnancy and lactation, it is unclear whether or not this is applied in clinical practice. In this study, we analyze the management patterns of basal cell carcinoma (BCC), squamous cell carcinoma (SCC), and melanoma in pregnant and lactating women. We also explore how intra- and peri-operative practices are modified in pregnancy and lactation.

**Design:** This is an anonymous, descriptive, survey-based, pilot study of members of the American College of Mohs Surgery (ACMS). Demographic information, intra- and peri-operative practices, and surgical procedures performed are analyzed as a function of skin cancer type, pregnancy trimester, and lactation status.

**Summary:** One hundred twenty-three dermatologic surgeons completed the survey. Eighty percent of respondents report that they modify their clinical or surgical practice based on a patient’s pregnancy or lactation status. The intra- and peri-operative practices most affected by pregnancy and lactation include anesthetic selection and use of prophylactic antibiotics. Overall, dermatologic surgeons are least likely to perform surgical procedures during the first trimester. Malignancy type affects the likelihood of surgical intervention. Forty-five percent, 67%, and 95% of dermatologic surgeons report comfort performing an excision during the first trimester for BCC, SCC, and melanoma, respectively. Fear of legal repercussions was the most frequently cited concern when approaching the surgical management of pregnant or lactating women.

**Conclusion:** Pregnancy or lactation status impacts and potentially delays surgical management of skin cancers.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 36 Effect of Stimuli on Sun Protective Habits: A Randomized Double-Blind Controlled Study**

**Purpose:** Visual imagery has been shown to improve adherence to health messages but has been scarcely investigated in sun-protection campaigns. The goal of this study was to determine the effectiveness of photo- versus textual-based sun-protective messages.

**Design:** One-hundred forty-five participants received standard of care (SOC) as defined as sun-protective counseling and were then randomized to receive either (a) images of sun-damage, (b) a textual pamphlet about sun damage, or (c) no further messages. Analysis-of-variance tests for repeated measures were used to estimate the effects of the different stimuli on participants’ knowledge and intention to sun-protect.

**Summary:** All stimuli groups demonstrated an improvement in perceived effectiveness of sun-protective habits (p<0.05). However, photo and textual stimuli were both more effective than SOC in improving intentions to sun-protect (p<0.05), but there was no differential effect between the two.

**Conclusion:** Providing tangible messages through pictures or brochures may be more effective than brief verbal counseling in improving intentions to sun-protect.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 37 Fractional Carbon Dioxide Laser Treatment of Radiation-Induced Fibrosis and Limited Range of Motion of the Neck**

**Purpose:** Radiation-induced fibrosis (RIF) is a subset of chronic radiation dermatitis that may manifest as functional disability due to limited range of motion, contractures and pain. These function-limiting complications are lacking therapeutic options, typically relying on conservative measures including pain management, wound care, and physical therapy. Fractional ablative carbon dioxide (CO2) laser in combination with fractional epidermal grafting has been reported to improve radiation-induced scarring and depigmentation. To expand the role of ablative fractional CO2 lasers in treating radiation associated disease, we report our success treating RIF induced limited range of motion of the neck.

**Design:** Case report

**Summary:** A 66-year-old Caucasian female with a history of right-sided tonsillar cancer, status-post tonsillecctomy, chemotherapy and external beam radiation in 2001 presented for evaluation of pathologic skin tightening consistent with RIF in the field of prior radiation therapy. RIF had led to a localized pain, a sensation of tightness and limited range of neck extension. This patient notably suffered from late-stage limited systemic scleroderma and her RNA polymerase III positivity may have had a role in her development of tonsillar cancer. However, the localized area of radiation-induced fibrosis appeared to be distinct, from the orofacial fibrosis associated with her scleroderma. We proceeded with fractionate C2 laser of the visible and palpable areas of skin tightening on the anterior-lateral neck. Settings for the first treatment included: 600 Hertz, timed exposure of 10 ms, repeat delay 0.3 sec, density of 5% and fluence of 20-30 mJ x 1 pass. The patient tolerated the treatment well with immediate softening of the tissue and subjective increase in neck extension, as well as a decrease in the associated sensation of tightness, and pain. Although measurements were not taken, improvement in range of motion was corroborated by the treating physicians. Some immediate post-laser erythema was noted. Immediately post-laser treatment, all treated areas were covered with white petrolatum and ice. Acyclovir was prescribed for prophylaxis. The patient reported sustained improvements following her first treatment and no complications. We were encouraged by these results and ultimately performed 6 treatments with progressive benefits. Similar settings were used for subsequent treatments except with increasing fluence to thicker areas up to 80 mJ in step-wise manner as the patient proved her tolerance to treatment. Additionally, laser-assisted drug delivery with triamcinolone 40mg/ml was utilized in treatments 5 and 6. Now 3 months following her last treatment, she continues to report sustained improvement in range of motion, sensation of tightness and associated pain.

**Conclusion:** Fractional CO2 laser treatment was successful in providing gains in functional abilities in RIF induced limited range of motion of the neck, skin tightness and associated pain in our patient. This offers evidence of the utility of ablative fractional lasers for the improvement of RIF associated contractures and restricted motion, as has been reported in...
a number of other fibrotic and/or scarring conditions. Although studies are needed to further investigate this therapy, we propose ablative fractional CO₂ laser is a viable treatment option in RIF.

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Co-author(s): Cynthia DeKlotz, MD

Disclosure(s) of Interest: Cynthia DeKlotz, MD is an inventor on a patent application filed by Georgetown University related to the technology described in this publication.

Poster # 38
Ten Year Post-Marketing Experience of a PMMA-Collagen Gel Dermal Filler

Purpose: The practice of monitoring the safety of a pharmaceutical drug or medical device after it has been released on the market is known as post-market surveillance (PMS) data. While clinical trials are conducted for Food and Drug Administration (FDA) approval to assess safety and effectiveness in a relatively small cohort of patients, PMS allows further confirmation (or denial) of safety (drug or device) after it is used in the general population by large numbers of people. Pharmaceutical and device makers are required to monitor and report adverse events (AE) resulting from spontaneous reports, literature or other known databases. Suneva desires to share its PMS data from 2007-2017 to further educate clinicians on the safety profile of polymethyl methacrylate-collagen gel (PMMA-Collagen Gel) in both clinical trials and in real world use. The objective of this report is to demonstrate the safety profile of PMMA-Collagen Gel (Bellafill®, Suneva Medical, Santa Barbara, CA) for the correction of nasolabial folds and acne scars through the evaluation of real world experience as collected and documented through post market surveillance of PMMA-Collagen Gel.

Design: Post marketing surveillance data was captured by the Suneva Quality Affairs department from February 2007 through December 31, 2017 for its PMMA-Collagen Gel dermal filler. The Medical Device Reporting (MDR) regulation (21 CFR 803) contains mandatory requirements for manufacturers, importers, and device user facilities to report certain device-related adverse events and product problems to the FDA. MDRs typically involve the serious adverse events, or those of special interest to the FDA.

Summary: Since sales and marketing commenced in 2007 through the end of December 2017, 775 adverse events were reported to the manufacturer, FDA, or via public disclosure (journal article, abstract or presentation). In this same time period, 650,387 syringes were distributed worldwide. The overall AE rate was found to be 0.18%. Twenty-six MDRs were reported, which included both specified treatment sites, and some involving multiple treatment areas. In more than half of the MDRs, the event was resolved or was resolving at the time of report submission. There was one case of blindness, four surgical excisions and eight cases where the outcome was unknown. There were fifteen granulomas confirmed by the histologic analysis of a biopsy. Thirty-two unconfirmed granulomas were “reported” and as such, believed to be a granuloma based on clinical presentation as reported by the healthcare provider or patient. The majority of granulomas (confirmed and unconfirmed) were treated with intralesional steroid injection, alone or in combination with 5-fluorouracil (5-FU). Twenty-seven reports of hypersensitivity were reported. Thirteen of the 27 reports were in skin tested negative patients; eight patients had waived the skin test (mandated in USA; optional in Canada) and in 5 of the cases the skin test status was unknown. All 27 cases resolved following treatment with antihistamines, steroids and/or anti-inflammatory medications. Other adverse event reports included bruising, redness, injection site pain, lumps, and discoloration. These submissions were consistent with known or potential AEs of the other dermal fillers on the market. Unknown events were submitted to the manufacturer as reported, but specific details were either not provided, or follow up was not possible.

Conclusion: As facial rejuvenation has evolved, so have areas being treated. The aesthetic/medical community has evolved from treating nasolabial fold (NLF) and other mid-face volume loss directly to treating these areas indirectly by injecting dermal filler in lateral facial regions. Proper preparation, patient selection, treatment plan and injection technique are crucial for success when utilizing a long-lasting filler for your patient population. It is important to be knowledgeable about anatomy, product composition, handling, and uses as well as appropriate injection techniques. Additionally, one must be familiar with known or potential complications the appropriate management of such events. PMMA-Collagen Gel has been proven safe and effective in 4 US clinical trials with over 1500 patients treated and 5500 patient years of exposure. Post bsmartmarketing surveillance data demonstrates an overall AE rate of 0.18% (775 AEs) from early 2007 through end of 2017. The number of syringes distributed in this same timeframe was 650,387 worldwide and serves as the proxy denominator. Post marketing surveillance data has limitations, mainly in that it relies on voluntary reporting. Additionally, patients and health care providers are more inclined to report serious adverse events as opposed to the common types of untoward effects or experiences, which can lead to underreporting bias. The safety profile of PMMA-Collagen Gel is comparable with other dermal fillers on the aesthetic market. This data suggest that further study is needed to explore the potential etiology of the reported adverse effects as well as ways to reduce risk from a patient selection and a procedural standpoint. The post marketing experience of PMMA-Collagen Gel supports what was observed in clinical trials, and further confirms the safety of PMMA-Collagen Gel.

Author: Todd Schlesinger, MD
Co-author(s): Laura Abrignani, RN

Disclosure(s) of Interest: Todd Schlesinger, MD is a consultant, speaker, on the Advisory Board and Speaker’s Bureau for Suneva Medical, received research funding from Allergan, Lilly, Regeneron, Galderma, Merz, Dermira, Bayer, Leo, Athenex, Akros, Cutanea, Abbvie, Sienna, Sebacia, Novartis, Boehringer Ingelheim, Novan. Laura Abrignani, RN is a Suneva Medical employee.

Poster # 39
Learning Curves: Historical Trends of FDA-Reported Adverse Events for Injectable Dermal Fillers

Purpose: Aesthetic injectable dermal fillers are medical devices regulated by the Food and Drug Administration (FDA), which makes reported adverse events (AEs) publicly available via the OpenFDA API. Historical trends of AE data may help distinguish between AEs related to expected learning curves with a new type of filler from AEs related to inherent characteristics of a product.

Design: We identified all AEs between 1983 and 2017 and categorized them by filler type. AEs were normalized to AE rates by dividing absolute number of AEs by reported annual volumes for each filler type extrapolated from American Society of Plastic Surgeons (ASPS) data. AE rates were plotted by year with various filler approvals designated.

Summary: We found that each AE rate curve tells a story. Hyaluronic acid fillers had the lowest AE rate profile, underscoring their favorable safety profile and popularity. Collagen and poly-L-lactic acid fillers showed similar AE rate peaks after approval with resolution over 3 years, representing what we found to be a normal learning curve. Hydroxylapitate filler AE rates showed that there are likely overlapping learning curves from multiple sequential anatomic site indication approvals. Polymethylmethacrylate fillers did not follow normal learning curves, suggesting there may be a need for ongoing surveillance for safety.

Conclusion: This is the first study of its kind to report on the full history of AEs for aesthetic dermal fillers and to demonstrate the presence of reproducible learning curves within this data. Reactions to AEs for new fillers that garner FDA approval, or are awarded new indications, should be in response to analysis of AE rate data and determination of whether it fits on a historically normal learning curve.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 40
What’s in a Name: Patient’s Preferences on How They are Addressed and its Impact on the Physician-Patient Relationship.

Purpose: The doctor-patient relationship begins immediately at the first greeting. Studies indicate that compassion, professionalism and ensuring that the patient feels his/her voice has been heard heavily influences patient satisfaction. As many insurance payment models are increasingly including the Hospital Consumer Assessment of Healthcare Providers scores (HCAHPS) scores and patient satisfaction scores into physician reimbursement, it is imperative that physicians optimize their communication to ensure a positive interaction for both individuals. By further understanding patients’ psychology related to how they wish to be addressed by their physician and how they wish to address their physician and their team, physicians can improve the patient experience. Our study aims to investigate how dermatology patients wish to be addressed by their physician and staff and if implementing this practice change reflects positively on the patient attitude towards the medical team. Research Question: How does establishing preferred names in the doctor-patient relationship affect a patient’s disposition towards their physician?

Objectives: 1. To determine how patients prefer to be addressed by their physician and staff in the outpatient setting. 2. To assess how patients prefer to address clinic staff in the outpatient setting. 3. To identify factors that may affect patient preferences. 4. To identify if using preferred names improves patient attitude towards providers.

Purpose: To enhance the knowledge regarding doctor-patient relationships and improve patient satisfaction in a university-based setting.

Design: The targeted population was patients scheduled for dermatology specialty clinic at the USF-Morsani building. Patients who meet inclusion criteria were recruited...
consecutively as they enter into clinic. All patients who met criteria were surveyed over a one week period. They received a paper questionnaire survey that included 10 single answer multiple choice questions in English and Spanish. Data from survey was compiled into an Excel spreadsheet. No identifying information was collected. Further subgroup analysis will be performed on demographic factors including: race, age, gender and level of education. In addition, characteristics of the treating physician (junior or senior) were collected. The sample size was one week of all patients seen at USF-Morsani dermatology clinic: Approximately 280 patients. All patients over the age of 18 that attend USF-Morsani dermatology clinics that agreed to participate were included. Patients under the age of 18 and patients with significant cognitive impairment were excluded.

Summary: Although there have not been any studies performed in a dermatology clinic setting, there have been studies centered around how patients wish to be addressed in different countries. An Australian study in a medical inpatient setting found that 99% of patients preferred informal address, with greater than a third preferring to be called a name other than their legal first name. Another Australian study surveyed patients in the setting of an outpatient general practitioner’s office found that 90% of patients preferred to be called by their first name only. Older patients, patients born overseas, and patients with higher educational qualifications preferred formal address. 35% of patients preferred to address their general practitioner by their first name only, with most of the census most comfortable using formal address with their physician. A study performed at the University of Tennessee outpatient surgery clinic found that 74.3% of patients desire to be addressed by their first name. An Israeli study conducted in an oncology practice concluded that 59% patients outpatients surgery clinic found that 74.3% of patients desire to be addressed by their first name only. Older patients, patients born overseas, and patients with higher educational qualifications preferred formal address, 35% of patients preferred to address their general practitioner by their first name only, with most of the census most comfortable using formal address with their physician. A study performed at the University of Tennessee outpatient surgery clinic found that 74.3% of patients desire to be addressed by their first name. An Israeli study conducted in an oncology practice concluded that 59% patients desired to be addressed by their first name on initial encounter and 75% of patients desired to be addressed by their first name on subsequent encounters. Despite multiple studies suggesting the idea of asking for and using a patients’ preferred name, it is standard for doctors to address their patients by their first name in an informal setting. We found that 89.56% of patients preferred informal address of their name including first and nick names compared to formal address such as last or first and last name with title. Additionally 74.75% of patients preferred to address their physicians formally with the title doctor as opposed to addressing them informally with first name or nick name. Further emphasizing the downstream effects of these positive patient-physician interactions, approximately 50% of patients felt that the use of a preferential name positively impacted their relationship with their physician. This leads us to believe that creating a comfortable environment for our patients and addressing them in a more informal and friendly manner may help foster and optimize the patient physician relationship.

Conclusion: Patients surveyed at the USF-Dermatology clinic reported they preferred their first name or nickname 89.56% of the time; whereas, 74.75% of patients preferred to address their physician formally with the title doctor. This data identifies variants from normal dermatologic clinical practice, highlighting potential angles for improvement in patient care.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

References:

Poster # 41
Use of the “Fish-Mouth Flap” Combined with Orbicularis Oculi Myocutaneous Flap in the Repair of Basal Cell Carcinoma in Facial Buccal Region

Purpose: This study summarizes and evaluates the effectiveness of the “fish mouth flap” used in combination with the orbicularis oculi myocutaneous flap in the repair of basal cell carcinoma in facial buccal region.

Design: From July 2013 to October 2017, our center treated 25 patients with basal cell carcinoma in facial buccal region. Of these, 13 were males and 12 females, with the age ranging from 44 to 82 years (mean age = 67 years). The course of disease ranged from 2 to 20 years. The size of tumor ranged from 1.0cm x 0.8cm to 3.5cm x 2.0cm. The tumor was removed with 0.3-1.0cm extended resection, and all defects were reconstructed with “fish mouth flap” combined with orbicularis oculi myocutaneous flap.

Summary: All the flaps survived after operation. The patients were followed up from 6 months to 4 years post-surgery and results showed adequate flap color and texture, inconspicuous scarring, and no deformation of the lower eyelid and nose.

Conclusion: Overall, this method is simple to carry our but provides a good esthetic and functional repair with adequate flap blood supply, minimal postoperative scarring, making this a promising way to repair skin defects near the lower eyelid face.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 42
Efficacy and Patient-Reported Outcomes of OnabotulinumtoxinA for Treatment of Moderate to Severe Horizontal Frontalis Lines in Millennials

Purpose: Millennials are a substantial and growing segment of the aesthetic market. Two recent pivotal studies evaluated the efficacy and safety of onabotulinumtoxinA (onabotA) for treatment of moderate to severe dynamic horizontal forehead lines (FLH) in adults. In a post hoc analysis of these studies, we evaluated investigator-assessed efficacy and patient-reported outcomes (PROs) for millennials (aged 18-34 years at time of study enrollment) compared with those aged ≥ 35 years.

Design: Subjects randomized to onabotA were treated with 20 U in the frontalis and 20 U in the glabellar complex (onabot 40 U), with or without concurrent treatment of 24 U in the bilateral crow’s feet regions (onabot 64 U). We pooled subjects from the double-blind period across both studies. Efficacy endpoints included investigator-assessed FLH severity on the Facial Wrinkle Scale (FWS) at maximum eyebrow elevation (max elevation) and at rest from days 30 to 180. Subjects completed validated PRO measures: Facial Line Satisfaction Questionnaire (FLSQ) and 11-item Facial Line Outcomes Questionnaire (FL-O-11). For this analysis, we focused on FLSQ item 5 (proportion of subjects mostly/very satisfied with treatment); FLSQ Impact Domain; and FL-O-11 Items 1 (bothered by facial lines), 4 (looking older), and 5 (looking less attractive).

Summary: The pooled intent-to-treat population comprised 1178 subjects, with 15% included in the millennial subgroup (n=176; onabotA n=139, placebo n=37). The two age groups had similar baseline severity based on investigator-assessed FLH at max elevation. Day 30 responder rates for millennials were higher vs the age 35-year group for achieving a none or mild FWS investigator rating at max elevation (97.1 vs 92.7%, respectively) and at rest (99.2 vs 90.1%, respectively). These higher responder rates for millennials were maintained through day 180. A similar trend was observed for age 1-grade FWS improvement. The proportion of millennials mostly/very satisfied on FLSQ item 5 and the responder rates for the FLSQ Impact Domain were higher at day 30 through day 180 compared with the age 35-year group. Responder rates for FL-O-11 Items 1, 4, and 5 were similar in both age groups across all time points.

Conclusion: OnabotA improved the severity of FLH in both the millennial and age 35-year age groups. The millennials in these studies reported incrementally greater improvements than the age 35-year age group in both appearance-related and psychological impacts of FLH treatment.

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Disclosure(s) of Interest: Melanie Palm, MD is a consultant for Allergan, Galderma, BTL, received honoraria from Allergan, BTL, Galderma, Merz, Lumenis, Lufternic, Valeant, member of the Speaker’s Bureau for Allergan, Galderma, Merz, BTL, Lumenis, Lutronic.
**Poster # 43**

**Topical Bimatoprost for Chemical Blepharoplasty: An Open-Label Pilot Study**

**Purpose:** Topical bimatoprost has been shown to cause periorbital changes of soft tissue which are most pronounced when used directly onto the cornea for the treatment of glaucoma. Changes are primarily felt to be the result of prostaglandin-mediated adipocyte loss, resulting in deepening of the upper eyelid sulcus and recession of infraorbital pseudoherniation. Bimatoprost applied to the upper eyelid margin for eyelash enhancement attempts to capitalize on the desirable effects of darker, longer, thicker eyelashes, while limiting more significant and undesirable effects through limited exposure of the drug to ocular tissues. This same concept may apply for dermatochalasis: at a metered dose, topical bimatoprost to the lid margin could lead to subtle periorbital fat loss resulting in improved dermatochalasis.

**Design:** This was a prospective, open-label single-arm study. 14 subjects with dermatochalasis were treated with topical bimatoprost 0.03% solution to the upper eyelid margin for 12 weeks. Digital photographs of the subjects were taken at weeks 0 and 12, and two blinded evaluators assigned a degree of dermatochalasis on a 4-point photographic scale. Change in dermatochalasis was the primary endpoint. The secondary endpoints measured overall change in subject satisfaction and perceived change in dermatochalasis, captured by survey.

**Summary:** 15 patients were recruited, with 14 completing the study. The mean age was 57, 100% were female, and 13/14 were Caucasian. On a 0-4 scale, there was a significant improvement in dermatochalasis of 2.67% which was statistically significant (p=0.003, 95% CI 0.0970 to 0.4307). Treatment did not result in overall improvement in subjects’ satisfaction with their appearance, even though 64% of subjects perceived improvement in eyelid droop.

**Conclusion:** After 12 weeks of topical bimatoprost 0.03% to the eyelid margin nightly, there was a small but statistically significant improvement in dermatochalasis. Additionally, 64% of patients perceived an improvement in eyelid appearance, but this did not correlate with improved satisfaction with appearance. While sample size and study population were limited, results are supportive of a potential role for topical bimatoprost in the treatment of dermatochalasis.

**Author:** Megan Couvillion, MD

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**Poster # 44**

**Platelet Rich Plasma and Fibrin Matrix Dressings as an Alternative Treatment for Chondrodermatitis Nodularis Helicis**

**Purpose:** Platelet rich plasma (PRP) is a popular aesthetic treatment used in facial rejuvenation and hair regeneration in patterned alopecia. Preparations of PRP are rich in hematogenous growth factors and have seen increased utilization in maxillofacial and orthopedic surgery due to properties of the matrix that result in sustained release of growth factors. Unlike PRP, in which growth factors decline precipitously after 48 hours, PRF membranes offer sustained elution of growth factors for up to one week after creation of the matrix. Based on research supporting the benefit of PRF membranes in healing chronic wounds, including venous stasis ulcers, we hypothesized that these techniques could be employed as a surgery sparing alternative in the treatment of chondrodermatitis nodularis helicis (CNH). We report a case of CNH in an 89 year old female recalcitrant to pressure offloading and multiple rounds of steroid injections that resolved completely with PRP injection and PRF dressings.

**Design:** An 89 year old female patient with CNH recalcitrant to pressure offloading and two rounds of intralesional steroid injections was referred to our practice for surgical excision and repair of CNH on the right antihelix. The wound was very painful with ulceration and exposed cartilage measuring 2.5 by 1 cm. She elected to undergo two rounds of PRP injections with concomitant application of PRF matrix dressings as a potential surgery sparing treatment. Treatment was administered two weeks apart. Images and measurements were obtained prior to treatment, at the two week follow up treatment, and the 6 week follow-up. PRP protocol: 11 cc of whole blood was drawn and processed using a Regen 11 cc PRP kit. Blood was centrifuged at 2950 rpm (1540g) for 10 minutes yielding 3 cc of PRP. The 3 cc of PRP was then injected circumferentially around the CNH ulceration. PRF protocol: 5 cc of whole blood was drawn into a 10 cc syringe without anticoagulant. The blood was then spun in the centrifuge at 1500 rpm (390g) for 7 minutes. The separated components were left to sit for 15 minutes to allow for matrix formation (during this time the PRP component of treatment was processed). The final yield was a 2 cc fibrin matrix. After formation the matrix was placed on adaptpec mesh and pressed using light fingertip pressure. The final membrane was applied after PRP injections as an overlay onto the cartilage (and granulation tissue on follow up) prior to applying petroleum coated telfa bandage. The telfa dressing was left in place for one week at which point the patient was instructed to apply a new bandage and keep the area covered until follow up.

**Summary:** At the two week follow up, the wound was approximately 75% healed with almost complete coverage of the exposed cartilage. The patient also reported resolution of pain within the first week of initial therapy. At the 6 week follow up the wound had completely healed and no additional treatment was indicated. The patient reported 100% satisfaction with treatment.

**Conclusion:** Autologous regenerative therapies such as PRP and PRF membrane dressings provide significant therapeutic benefit in wound healing and dermatologic care, as demonstrated in our patient who experienced complete resolution of CNH with just two treatments. In addition to offering an alternative to surgery, these regenerative therapies may also be more economic. The total cost in consumables for our patient’s treatment was approximately $300 USD for both applications; far cheaper than the cost of a single application of a growth factor rich allograft. More research into the benefits of PRP and PRF membrane therapy is necessary to increase awareness of these regenerative modalities beyond aesthetic consideration in dermatologic care.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

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**Poster # 45**

**Efficacy and Tolerability of a New Non-Hydroquinone Skin Brightening Cream in Subjects with Mild to Severe Dyschromia**

**Purpose:** Evaluate efficacy and tolerability of ETCS in females with facial dyschromia/ hyperpigmentation caused by photodamage. Evaluate combination use of ETCS and a retinoid/AHA-based cream (AHA-Ret) in subjects.

**Design:** This open-label trial evaluated twice-daily use of ETCS or ETCS + AHA-Ret (PM) in 56 subjects, 30-65 years of age, Skin Types I-V with mild to severe Dyschromia. Images were obtained at baseline, 4, 8, and 12 weeks using Canfield VISIA-CR. Changes were assessed using a 6-point scale (0=none to Severe=5) for Dyschromia, Erythema, Fine Lines/Wrinkles, Pore Size, and Texture. Additional parameters assessed: Global Improvement, Mexameter measurements, and self-assessments. Adverse Events (AEs) were collected throughout the study. A four-week extension study evaluated use over 16-weeks.

**Summary:** Fifty-two subjects completed the study. Significant mean (LS) percent reductions from baseline occurred for Dyschromia in both groups (ETCS, n=42; ETCS + AHA-Ret, n=10) at every time point over 12 weeks (p < 0.0001, for each). Significant mean percent reductions from baseline in Mexameter measurements were achieved in both groups at every time point over 12 weeks: 4 weeks; and 12 weeks). Substantial improvements were demonstrated in Global Improvement, Fine Lines/Wrinkles, Erythema, Pore Size, and Texture at 12 weeks. Continued reductions from baseline occurred for Dyschromia and Mexameter measurements (0.0001, each) at 16 weeks. Mild, transient AEs were reported; no subject discontinued the study due to an AE.

**Conclusion:** Use of ETCS led to early, significant reductions in Dyschromia. The addition of AHA-Ret demonstrated enhanced reductions. ETCS effectively reduced hyperpigmentation, improved overall appearance of skin, and was highly tolerable.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

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**Poster # 46**

**Evaluation of Fractional-Laser Resurfacing followed by Topical Tacrolimus 0.03% Cream versus Topical Tacrolimus alone in Stable Vitiligo: a Comparative Study**

**Purpose:** The aim of our clinical trial was to find out whether fractional CO2 laser sessions in combination with application of daily topical tacrolimus 0.03% would enhance the action of the drug and pose as a possible combination treatment option for stable vitiligo lesions. We applied this combination treatment on one side of the body and compared the response to the response of the lesions on the other side of the body to daily topical tacrolimus 0.03% alone, which we used as control.
**Design:** Twenty seven lesions with a total number of 152 stable vitiligo lesions were included in the study. Each patient included in the study received treatment A on the lesions on one side of his/her body, and treatment B on the other side. Treatment A included 4 monthly sessions of fractional CO2 laser on the lesions plus application of topical tacrolimus 0.03% (Tarolimus) on the lesions 6 hours after each session and twice daily in between the sessions and for 1 month after the last session.

Treatment B included only the application of topical tacrolimus 0.03% (Tarolimus) on the lesions twice daily for 4 months.

Fractional laser: The device used was DEKA, SmartXide DOT (Dermal Optical Thermolysis), Italy fractional Carbon Dioxide Laser (fig. 8). This device is an ablative fractional 10,600 nm CO2 Laser with variable pulse duration (0.2–2 ms), 350-μm beam spot size, scanner area of 15x15 mm and penetration depth between 200 to 1,500 μm.

Tacrolimus ointment 0.03% (Tarolimus): Applied on the lesions treated by fractional CO2 laser 6 hours after each laser session, then twice daily in between the sessions and 1 month after the last session.

Applied on the lesions on the other half of the body (not treated with fractional CO2 laser) twice daily for 4 months.

**Clinical assessment:** Before every session, lesions were inspected for patterns of pigmentation, change in size. Presence of complications was assessed before every session; such as koebnerization, burns or keloids. VASI score was done again at the end of the study.

**Statistics:** Data were statistically described in terms of mean ± standard deviation (± SD), median and range, or frequencies (number of cases) and percentages when appropriate. Comparison of numerical variables between the study groups was done using Student t test for independent samples. For comparing categorical data, Chi-square (χ²) test was performed. Exact test was used instead when the expected frequency is less than 5. p values less than 0.05 was considered statistically significant. All statistical calculations were done using computer program SPSS (Statistical Package for the Social Science; SPSS Inc., Chicago, IL, USA) release 15 for Microsoft Windows (2006).

**Summary:** Vitiligo is a chronic acquired depigmenting disease with a profound psychological and social impact. Many treatment options have been implemented to treat and control it. Topical and systemic medical treatments, phototherapy, surgical options have all been used in management of vitiligo with a wide array of results. Many combination treatment options have been used like phototherapy followed by topical treatment, different ablative methods have been tried as well as a pretreatment modality to enhance drug transdermal delivery. In this study, we evaluated the efficacy of using fractional carbon dioxide laser to enhance the effect of topical tacrolimus in treatment of stable symmetrical vitiligo.

Twenty seven patients were included in the study, each participant received four monthly sessions of fractional CO2 laser and daily topical tacrolimus treatment on one side of the body, and used only daily topical tacrolimus ointment on the other side of the body.

A total of 152 lesions in different areas of the body were evaluated in the study. Seventy six lesions received the combination treatment and 76 received topical tacrolimus alone. Forty six lesions were in the head and neck region, 40 were acral in location, 36 were in the upper and lower limbs, 22 lesions were over bony prominences and 8 lesions were present on the trunk. Response was assessed using clinical and photography means at each laser session. VASI scoring system was applied to evaluate response.

We found clinical improvement to combination treatment with laser and tacrolimus was slightly higher than mono-treatment with tacrolimus alone: 17 lesions (22.36%) out of the 76 that received the combination treatment showed clinical improvement, versus 13 (17%) out of 76 lesions that received the mono-treatment. This difference, however, turned out to be statistically insignificant with a p value of 0.41. The best response was noted in the head and neck region and in the upper limb lesions, no improvement took place in our study in the lower limb lesions and lesions over bone prominences. Age, smoking history and duration of disease showed no statistical impact on the results of our study.

**Conclusion:** In conclusion, treatment of vitiligo with tacrolimus 0.03% ointment either alone or combined with fractional CO2 results in mild improvement of lesions and the earlier the start of the treatment the better the results. The addition of fractional CO2 gives slightly better response especially in head and neck and acral regions. Since acral lesions, are known to be resistant to therapy, this modality of treatment gives hope for those patients yet still needs to be thoroughly investigated.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.
Post-operative assessment:

- Photography was done on weekly basis.
- Punch biopsies were taken from ulcers every week post-operative for 3 weeks.

Assessment was done by comparing time needed to heal, graft-take percentage, histopathological findings and presence of any complications.

**Summary:** Our study included 20 patients, 14 patients with bilateral venous ulcers, 2 patients with bilateral lymphatic ulcers and 4 patients with chronic post-traumatic ulcers, with a total of 34 ulcers. Seventeen ulcers received PRP-enhanced treatment (group A), and the other 17 ulcers received conventional grafting with no PRP treatments (group B).

Eleven out of the 17 ulcers in group A showed graft-take, percentage of graft-take in this group ranged from 0 to 95% with a mean value of ±73.75%. Similarly, 11 out of the 17 ulcers in group B showed graft-take with a percentage that ranged from 0 to 95%, but with a mean value of ±92.25%.

Equal number of venous ulcers in each of the groups showed graft-take (8 ulcers out of 13 venous ulcers in each group), but the mean percentage of graft-take in group A was ±32.3%, while in treatment group B was ±18.46%. Three out of 4 post-traumatic ulcers showed graft-take in both groups with a mean percentage of graft-take in treatment group A of ±68.75% versus ±66.25% in treatment group B.

All lymphatic ulcers in both groups showed graft-failure. Differences in age, smoking history and duration of disease showed no statistically significant impact on the results of our study. Histopathological findings showed evidence of relatively more fibroblasts recruitment and collagenosis in biopsies of group A versus those in group B. Angiogenesis and inflammatory infiltrates showed variability and equivocal results in both groups.

Our study included patients with lower limb ulcers that showed resistance to various conventional treatments over a period of at least 6 months. Most of our patients had their chronic ulcers for years. Although statistically insignificant, our study showed clinical significance in a slightly higher percentage of graft-take in group A versus group B.

**Conclusion:** Chronic leg ulcers commonly require long-term medical care and multidisciplinary approach in their management. Treatment should effectively target control/elimination of cause combined with proper wound care and preventing possible complications.

Autologous PRP injection could improve outcome of graft-take in resistant chronic ulcers and poses as a promising adjuvant therapy coupled with proper wound care and management.

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**Disclosure(s) of Interest:** There are no commercial interest to disclose.

**Poster # 48 Metabolic Changes in Subcutaneous Abdominal Adipose Tissue after Cryolipolysis as Characterized by a Novel, Non-invasive Imaging System**

**Purpose:** Cryolipolysis is becoming a widely used, non-invasive, body contouring technique on the market. However, there are no reliable, non-invasive, quantitative techniques to characterize adipose tissue changes after treatment. Diffuse optical spectroscopic imaging (DOSI) is a novel, non-invasive imaging technology that has been successfully used to image adipose tissue structure, blood flow, and metabolic activity in healthy and pathologic states.

The technology utilizes frequency-domain photo migration (FDPM) and broadband near infrared spectrum (NIRS) to measure absorption coefficients of hemoglobin, water, lipid and oxygen content, that can be combined to visualize and assess metabolic changes of adipose tissue. We present the first data sets obtained with DOSI to help visually depict chronological changes in abdominal adipose tissue post-cryolipolysis.

**Design:** A 40 year-old, female volunteer was treated with cryolipolysis of the lower abdomen (-11 oC. 35 minutes) followed by two minutes of vigorous massage. No serious adverse events were reported post-treatment. The patient’s abdomen was mapped over a 17 by 7 cm area in a 2 by 2 cm grid pattern for DOSI measurements. Data was collected prior to treatment, immediately post-treatment, and days 7, 15, 30, 40, 60 and 75. Using a linear mixed effects model, raw data was transformed into three-dimensional surface images (i.e. heat maps) corresponding to the treated abdominal area.

**Summary:** DOSI is a promising non-invasive, imaging modality for monitoring adipose tissue changes in response to treatment such as cryolipolysis. Pre-treatment optical signals are consistent with healthy adipose tissue; high lipid content, low oxy- and deoxyhemoglobin concentrations, and 80-85% oxygen saturation. Immediately post-treatment, acute changes in the metabolic profile of the treated adipose tissue occur suggesting injury and inflammation; increased deoxyhemoglobin and water content. Over the 75-day recovery period, it is clear that the adipose tissue metabolic profile begins to return to normal, however it does not reach pre-treatment baseline suggesting a fundamental change in tissue architecture and functionality has occurred. Ultrasound measurement of the adipose tissue layer pre- and post-treatment demonstrates a 10 mm decrease 60-days post-treatment.

**Conclusion:** DOSI is evolving as a tool to non-invasively characterize metabolic changes in adipose tissue after a variety of adipose tissue treatments. Future directions include expansion of DOSI use to determine efficacy of heat, mechanical, ultrasound and radiofrequency modalities for lipolysis. Early monitoring of tissue response may help characterize patients at risk for paradoxical adipose hyperplasia. Other yields of DOSI include optimizing clinical parameters, determining optimal post-procedure mechanical manipulation, and utility of adjuvant techniques to maximize lipolysis outcomes.

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**Disclosure(s) of Interest:** Dr. Margit Juhasz, MD the University of California, Irvine, Clinical Research Fellow, is currently supported by a fellowship grant from AbbVie, Inc.

**Poster # 49 Ten-Year Retrospective Review of Safety and Efficacy in Skin of Color of a Fractional Bipolar Radiofrequency Device for Facial Skin Ablation and Resurfacing**

**Purpose:** The purpose of this evaluation was to review the ten-year experience of two clinical centers within the same dermatological practice in treatment of patients with Fitzpatrick skin phototypes III to VI with a bipolar radiofrequency (RF) device that delivers energy to the skin in a fractional manner via an array of multi-electrode pins. This device is intended to induce deep dermal heating, ablation and coagulation with relative sparing of the epidermis. It is cleared by the US FDA for treatment of fine lines and wrinkles.

**Design:** A total of 474 consecutive full-face fractional bipolar RF procedures performed on 139 patients were reviewed via examination of medical charts, standardized digital imaging, and verbal interviews with patients where indicated for clarification. Patients were aged between 29 and 62, and had Fitzpatrick skin phototypes ranging from III to VI. Patients were included in the retrospective review if they had received at least 3 sessions of treatment. They were excluded if they had received other treatments that might impact results, such as lasers / energy-based devices, injectables or chemical peels, within a year prior to or concomitant with the fractional bipolar RF procedures. Clinical indications for treatment were scarring including acne scarring, hyperpigmentation, pore prominence, skin dullness, or fine lines and wrinkles. Patients had received between 3 and 6 sessions of treatment with moderate energy (60mj/pin), spaced at 3 to 8-weekly intervals. Assessments of safety and tolerability of treatment were performed by reviewing medical records for adverse events. Assessments of efficacy were performed via review of medical records, including patient self-evaluations; and by grading of pre- and post-treatment patient images. Verbal interviews were also conducted with patients where appropriate to clarify treatment safety or efficacy.

**Summary:** All patients experienced mild to moderate facial erythema lasting hours to 5 days; 23% of patients experienced minimal to mild facial edema lasting hours to 2 days following one or more treatment sessions. Both were expected, transient sequelae of treatment, and self-resolving. No long-term complications of treatment were noted. Of note, no post-inflammatory hyperpigmentation was seen. All patients achieved clinical improvement. Global improvement was assessed using a five-category grading scale. Excellent improvement (76 to 100% better than pre-treatment baseline) was achieved in 104 patients (50%) based on blinded evaluator assessments, and in 120 patients (86%) according to their own self-evaluations. Good improvement (51 to 75% better than baseline) was achieved in 35 patients (25%) based on blinded assessments, and in 19 patients (14%) according to self-evaluations. Blinded evaluator assessments of pigmentation showed fair improvement (26 to 50% better than baseline) in 50% of patients, good improvement in 14% of patients and excellent improvement in 36% of patients. Blinded assessments of skin radiance showed good improvement in 50% of patients, and excellent improvement in 50%. Blinded assessments of skin tightening (decreased tissue laxity) showed good improvement in 24% of patients and excellent improvement in 50%. Improvements were also noted in pore prominence and in fine lines and wrinkles when present.

**Conclusion:** Based on this retrospective review, fractional bipolar RF appears to be a safe and effective treatment modality for skin resurfacing in patients of color. Fractional RF technology has the potential to overcome some challenges of ablative lasers when used...
for pigmented skin, including the risk of post-inflammatory hyperpigmentation. This may be attributable to the relative sparing of the epidermis and preferential delivery of RF energy to the deep dermis during treatment.

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Poster # 50
Predictive Value of Positive Margins in Diagnostic Biopsies of Dysplastic Nevi

Purpose: Dysplastic nevi (DN) are both common and controversial. Many definitions and theories regarding their classification and treatment have been described and the standard management of dysplastic nevi after diagnosis is not always clear. We assessed the diagnostic and treatment methods used in our community-based dermatology practice by determining concordance rates between biopsy pathology reports and excisional histological findings. Doing so allowed us to better understand the extent to which excision of DN is necessary and under which circumstances DN may be left untreated. Decreasing the number of unnecessary excisions improves outcomes for the patient, the practicing dermatologist, and the dermatopathologist.

Design: The pathology record books from four locations of our community-based dermatology practice were reviewed for reports of DN from one calendar year. Biopsy-proven DN with positive margins were reviewed, as well as their subsequent excisions if performed. Positive margins were determined by an outside dermatopathology lab. The pathology reports from the resultant excisions were analyzed, specifically for report of any residual lesion or any change in diagnosis from the original biopsy. This analysis of concordance allowed for the determination of the positive predictive value (PPV) of positive margins in diagnostic biopsies of DN. The data obtained from our practice was analyzed in comparison to current similar studies in order to determine statistical significance. The patients’ demographic data was also evaluated.

Summary: A total of 122 diagnostic biopsies with DN present at the margin collected between January and December 2017 were selected. Of these, 69 total post-biopsy excisions and re-excisions were performed (57%). The findings on initial biopsy ranged from “slight” (mild) to severe atypia. Decision for excision was made based on degree of atypia, clinical judgement, and patient preference. Excisional concordance with initial biopsy was determined through review of the excisional pathology reports. Residual lesions were described in 32 of 69 (46.4%) excisional pathology reports. This illustrates a PPV of positive margins in diagnostic biopsies of DN of 46.4%. This value is similar to the findings of Maghari (44.9%), higher than those of Reddy et al (33.0%) and Cohen et al (39.7%, 24.0%), and much higher than the PPV presented by Strazula et al (18.2%).

Conclusion: The low positive predictive value of positive margins in diagnostic biopsies of DN supports the Pigmented Lesion Subcommittee of the Melanoma Prevention Working Group recommendation that MDN with positive margins and no clinically apparent residual pigmentation may be monitored instead of re-excised. Monitoring these lesions instead of excising will decrease unnecessary procedures and costs to the patient, decrease resources expended by dermatologists and dermatopathologists, and increase the overall value of the healthcare that we provide. The lifetime risk of transformation of DN into melanoma is estimated at 1 in 10,000 by Tsao et al. If the low risk of malignant transformation is considered along with the low PPV of a margin-positive diagnostic biopsy, the strength of this recommendation is improved even further. We have sought to support this conclusion through the addition of our data and the included analysis. It is our opinion that many post-biopsy excisions of DN may be deferred when judged clinically appropriate, regardless of margin status, and that this will be of benefit to both the patient and the providers.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 51
Patient Preferences and Satisfaction with Skin Biopsy Result Notification

Purpose: Dermatologists perform a high volume of skin biopsies, leading to a large number of pathology results that must be communicated to patients in an effective and accurate manner. This task is often delegated to non-physician providers or resident physicians. Previous studies have indicated that patients prefer to receive skin biopsy results via telephone. However, no studies have addressed whether patients find it acceptable to receive biopsy results from a non-physician support staff member or resident physician.

Design: All patients seen in pre-operative consultation for a non-melanoma skin cancer during a one-month period at our outpatient surgical center were provided an anonymous, optional survey to complete prior to their surgery. The survey questioned patients regarding who informed them of their biopsy results, their satisfaction with the explanation of the diagnosis and treatment plan, and their preferences regarding future biopsy result notification.

Summary: Of the 148 patients who completed the survey, 71 (48%) received their biopsy results from a nurse or medical assistant, 42 (28%) from their physician, 18 (12%) from a physician extender, and 4 (3%) from a resident physician. Thirteen (13) patients (9%) did not remember who gave them their results. Patients who received their results from their physician were more likely to be satisfied with the explanation of the diagnosis than patients receiving results from a nurse or medical assistant (88% very; or somewhat satisfied; versus 66%, p = 0.009, chi square test). Patients reported slightly higher satisfaction with explanation of the treatment plan when receiving results from a physician (85% very; or somewhat; satisfied) than a nurse or medical assistant (75% very; or somewhat; satisfied), but this difference did not reach statistical significance. Satisfaction scores were similar between physicians and physician extenders. Patients had mixed preferences regarding future biopsy result notification, with 42% preferring a physician, 7% preferring a physician extender, 3% preferring a nurse or medical assistant, and 44% of patients with no preference.

Conclusion: In this single-center, time limited study, patients had higher satisfaction scores when they received skin biopsy results conveying a diagnosis of non-melanoma skin cancer from their physician or a physician extender rather than a nurse or medical assistant. Patient preferences regarding biopsy result notification are variable. Future multicenter studies are needed to further assess biopsy notification practices and their impact on patient satisfaction.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 52
Incobotulinum Toxin for the Treatment of Axillary Hyperhidrosis in the U.S. Veteran Population

Purpose: The only FDA approved botulinum toxin for axillary hyperhidrosis in the United States is onabotulinum toxin. The U.S. Department of Veterans Affairs (VA) negotiates drug pricing and is often able to reduce the cost of prescription medications by approximately 50% compared to private health insurance plans. Starting in 2017, the VA designated incobotulinum toxin as the preferred botulinum toxin A for the treatment of veterans for numerous indications including axillary hyperhidrosis. We report our 12-month experience using incobotulinum toxin as an off-label treatment of axillary hyperhidrosis at two Veterans Affairs hospitals.

Design: A retrospective review of patients treated with incobotulinum toxin over a 12-month period at two Veterans Affairs hospital was conducted. Approximately half of the patients included in the study had previously been treated with onabotulinum toxin. All patients reported equivalent duration of effect as measured by reduced axillary perspiration and increased quality of life. No patients reported adverse effects such as muscle weakness. Pain with injection was similar between the two toxins, both of which were reconstituted using bacteriolastic saline. All patients were provided with the FDA black box warning printout for botulinum toxins and were informed that off-label treatment was performed due to hospital guidelines.

Summary: On average patients noted 5-6 month duration of action. Special considerations in the veteran population include previous immunization for botulinum toxoid. None of the patients reported known immunization for botulinum toxoid. No reports of resistance to treatment was reported although concern for antibody formation in a previously immunized population would be of concern.

Conclusion: In conclusion, incobotulinum toxin is safe and effective for the treatment of axillary hyperhidrosis. Dosing is similar to the FDA approved onabotulinum toxin. Although larger studies would be beneficial, this initial report suggests that incobotulinum toxin is a suitable alternative to onabotulinum toxin, especially when the price comparison is favorable.

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Disclosure(s) of Interest: There are no commercial interests to disclose.
Poster # 53

Squamous Cell Carcinoma Arising from a Nevus Sebaceous in an 11-Year-Old Patient

Purpose: Even though malignant transformation associated with nevus sebaceous is extremely rare in childhood, we would like to increase awareness since there are a handful of cases that support close follow-up observation of these patients.

Design: Case report

Summary: An 11-year-old patient presented to the department of pediatric dermatology at Oregon Health & Science University for evaluation of a new, growing papule that developed within a birthmark on his right lower eyelid two weeks prior. Our patient was otherwise healthy and had no family history of malignancy. On clinical examination, he was found to have a 1-2 mm clustered yellow flat topped papules arrayed linearly on right malar cheek. At the superior most aspect of this plaque was an 8mm crusted yellow red nodule. (Figure 1).

Shave biopsy of the lesion was performed and the specimen was sent for standard histopathology examination. The histology showed an atypical squamous proliferation arising within a nevus sebaceous. (Figure 2). We decided to pursue an excision with oculoplastics over Mohs, given the appearance of the lesion, history and his age. Complete excision of the lesion with frozen section-controlled margins was performed 1 week after the biopsy. Nevus sebaceous (NS) is an unusual congenital hamartoma with well-recognized potential for neoplastic transformation, most commonly seen on the head and neck. Various types of cutaneous neoplasms are associated with NS. The most common benign neoplasms associated with NS are trichoblastoma and syringocystadenoma papilliferum. BCC is the most common malignant neoplasm occurring in sebaceous naevi (5–7%). Less common malignant tumours which may develop include SCC, apocrine and adnexal carcinoma and eccrine poroma. BCC is the most common malignant neoplasm occurring in sebaceous naevi (5–7%). Less common malignant tumors include SCC, apocrine and adnexal carcinoma and eccrine poroma. Some authors suggest that NS should be considered premalignant since malignant degeneration, most commonly basal cell carcinoma and squamous cell carcinoma, occurs with a lifetime risk of between 5% and 22%. Neoplastic transformation of NS occurs rarely in children. Two large case series did not observe malignant transformation of NS. There have only been a few case reports of basal cell carcinoma associated with NS in children. 5, 6, 9-11

Conclusion: The occurrence of a squamous cell carcinoma within a NS in children is considered to be extremely rare and only three other cases (ages 9, 11 and 15 years at time of diagnosis) have been reported in the English literature. 9-11 Even though malignant transformation associated with NS is extremely rare in childhood, there are a handful of cases that support close follow-up observation of these patients. We suggest that early prophylactic excision should be discussed with these patients and their families, particularly if close follow up is not possible.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 54

In-vivo Reflectance and Ex-vivo Fluorescence Confocal Microscopy to Evaluate Clinically Suspicious Lesions

Purpose: Confocal microscopy represents a non-invasive and high-resolution imaging modality to determine characteristics of skin lesions. Through use of distinct light-scattering properties of different tissues, patterns of benign and malignant lesions can be elucidated that are similar to histological images. While in-vivo reflectance confocal microscopy (RCM) of skin lesions has increasingly been incorporated in practice, ex-vivo fluorescence confocal microscopy (FCM) of fresh tissue samples has been introduced more recently. RCM is limited by its depth of imaging to 250-300 microns and strong bright scattering interference from the dermis. FCM relies on a fluorescent contrast agent to stain cell DNA and RNA, therefore increasing identification of nucleated cells. While FCM has been utilized in evaluating basal cell carcinomas during Mohs surgery, its use in melanocytic lesions, particularly in determining tumor depth, is only recently being studied.

Design: Three suspicious lesions on three patients were first imaged with RCM (Visiagoscope 1500, CaliberID, Rochester, NY). Images were interpreted by a trained confocal specialist and atypia or malignancy were identified in all three lesions, thus warranting biopsies. Two lesions were sampled with deep shave biopsies, and one lesion was sampled with an excisional biopsy. Prior to histological processing and interpretation, the tissue samples were imaged with FCM (Visiagoscope 2500, CaliberID, Rochester, NY), and images were interpreted by a trained confocal expert with provisional diagnoses. Histopathology was subsequently obtained.

Summary: The first lesion showed tumor islands with peripheral palisading and streaming on both RCM and FCM images. The lesion further showed epidermal disarray, indicating a diagnosis of basal cell carcinoma. The second lesion showed few atypical cells (melanocytic), edged and non-edged papillae, and irregular honeycomb pattern on RCM and FCM, indicating a nevus with cellular atypia. The third lesion showed more polymorphic cells on RCM, thus warranting an excisional biopsy to rule out severely atypical nevus versus melanoma. The FCM image showed several atypical cells, irregular honeycomb pattern, non-edged papillae, uneven clusters of atypical cells, and pagetoid cells. These all indicated the diagnosis of melanoma. The thickness was estimated from the FCM image. Histological processing confirmed the diagnostic suspicions of both RCM and FCM.

Conclusion: CM represents a new technique to analyze tissue samples. In non-melanoma skin cancer, FCM images have shown a high correlation with RCM and histological images. An advantage of FCM is a more immediate and bedside diagnosis, thus further directing treatment of care. In particular, when used in Mohs surgery, this technique can be used to quickly determine tumor clearance, with one study reporting creation of an image in <3 minutes (1). In addition, tumor depth is more clearly elucidated with FCM than with RCM. Future implementation may serve as a quicker alternative to frozen section staining during Mohs micrographic surgery, with one study showing a reduction in time needed for diagnosis by almost two-thirds when comparing FCM with frozen sectioning (1, 2). Moreover, current non-contemporary interpretation of biopsies of suspicious lesions may be eliminated. The combination of RCM and FCM can guide clinicians in determining the type of biopsy to perform, the size of excision margins, and the size of Mohs micrographic surgery margins.

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Disclosure(s) of Interest: Babar Rao, MD is a consultant for Caliber ID (maker of Visiagope)

Poster # 55

Microcystic Adnexal Carcinoma: The Washington University Experience

Purpose: Microcystic adnexal carcinoma (MAC) is a rare, slow-growing, locally aggressive adnexal tumor most commonly presenting as a firm, non-ulcerated, asymptomatic papule, plaque or nodule on the head and neck. Often both clinically and histologically challenging MACs characteristically spread beyond clinical margins by local invasion with rare reports of lymph node metastases. Recurrence can occur due to its high propensity for perineural invasion Moths micrographic surgery (MMS) is often the treatment of choice as it offers the highest cure rate while sparing tissue. The purpose of this study was to describe the demographics and surgical outcomes of a case series of patients with MAC treated with MMS and local surgical excision (LSE).

Design: We performed a retrospective analysis and cohort comparison of all cases of MAC from January 2000 through July 2016 at a university-affiliated tertiary referral hospital. We reviewed records for 8 patients with primary MAC diagnosed by biopsy with immunohistochemical characterization. The main outcomes and measures were: patient demographics, medical history including immune status, anatomic location, size, and tumor immunoprofile with treatment modalities, operative measurements, available follow-up, and recurrence.

Summary: Among 8 cases with median age at diagnosis 68.5 years (range 49 to 90), three-fourths occurred in males (6/8). Cases primarily occurred on the head and neck (7/8), independent of age at diagnosis. Most (4/7) of the cases on the head and neck presented on the lips, eyelids, or nose or the remaining cases (3/7) occurred elsewhere on the face. One case presented on the trunk. Half of the patients (4/8) had a history of skin cancer and a quarter (2/8) of the patients had a history of immunosuppression. Most patients (5/8) underwent MMS. Mean pre-operative size, in the longest dimension of the tumor, was 1.9 cm. The mean post-operative size was 3.46 cm for MMS, 4.0 cm for LSE, and 3.66 cm, irrespective of treatment modality. A median 9 months of follow-up (range 0.251) was available for cases, for which recurrence was observed (post-LSE) at 10 months after treatment of the primary tumor. This recurrent case was subsequently treated with a second LSE with no evidence of recurrence observed during follow-up. Zero cases of lymphatic or metastatic organ involvement were noted within our patient cohort

Conclusion: Despite diagnostic confounding by both clinical and histopathologic criteria, surgical treatment of MAC remains effective. Tissue-sparing resection via MMS affords the potential for cosmetic and reconstructive advantage, without compromising recurrence compared to conventional excision.
Apocrine Adenocarcinoma of the Scrotum: A Case Series

**Poster # 56**

**Citrobacter Koseri Infection Masquerading as Eruptive Keratoacanthoma**

**Purpose:** To emphasize the importance of detailed clinical history taking in correlation with physical exam findings, so that all other possible diagnoses, such as infection, are sufficiently considered before proceeding with more invasive treatment plans.

**Design:** Case report

**Summary:** A 40-year-old man presented to our clinic seeking treatment for multiple growing lesions on his nose that had previously been diagnosed as invasive squamous cell carcinoma. The lesion initially presented as a small acneiform papule, which then significantly grew in size to become 5 coalescing plaques in the subsequent 4 months. The patient denied any symptoms. In these last 4 months, three biopsies had been performed by an outside dermatologist. Per the patient, the first two biopsies did not reveal malignancy. However, the most recent biopsy described histologic change suggestive of squamous cell carcinoma, leading to a presumed diagnosis of invasive squamous cell carcinoma. The patient was referred to a Mohs surgeon at another institution to proceed with surgery, at which time the patient sought a second opinion at our clinic.

On exam, there were 5 coalescing, erythematous plaques and papules with crust on the right nasal sidewall, between the proximal bridge and the distal tip. The largest plaque demonstrated a central white scar where a biopsy had been taken. Given that a diagnosis of invasive squamous cell carcinoma growing at such rapid pace seemed unusual in this otherwise young and healthy patient, we performed additional skin biopsies at this time and sent for fungal, atypical mycobacterial, and bacterial culture. Biopsy was notable for multiple neutrophilic abscesses and endophytic keratinocytic proliferations with syringosquamous metaplasia. Culture was significant for growth of Citrobacter koseri, a microbe typically found in the gastrointestinal tract. Further history taking revealed that the patient had undergone an upper gastrointestinal endoscopic procedure just prior to the development of these lesions. It is possible that removal of the endoscope could have resulted in iatrogenic inoculation of the skin with this gastrointestinal bacteria, resulting in pseudocarcinomatous hyperplasia induced by bacterial infection, rather than a true carcinoma. The patient was started on oral ciprofloxacin 500 mg twice daily, with significant improvement of the lesions in 10 days, further favoring this alternate diagnosis of bacterial infection as the cause of this unusual lesion. While Citrobacter koseri has been recognized as a cause of abscesses in neonates, immunocompromised individuals, and occasionally adults, especially in the abdominal cavity, there are limited reports of Citrobacter koseri infection of the skin. One case report has detailed C. koseri folliculitis of the face. However, no literature has been published to date of C. koseri mimicking keratoacanthoma and carcinomatous change.

**Conclusion:** This is an unusual case of C. koseri infection causing extraordinary epithelial alteration and hyperplastic change mimicking keratoacanthoma and being previously misdiagnosed as squamous cell carcinoma. Given the patients immediate improvement with treatment of the infection and subsequent ability to forego large, invasive resection of the tumor, this case demonstrates the importance of detailed history taking, paired with appropriate clinical suspicion and intuition, especially in the context of surgical consideration.


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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 57 Withdrawn**

**Poster # 58**

**Invasive Extramammary Paget's Disease in Conjunction with Apocrine Adenocarcinoma of the Scrotum: A Case Series**

**Purpose:** Extramammary Paget’s disease (EMPD) in conjunction with apocrine adenocarcinoma is a rare entity. It is presently unknown if one tumor arises from the other or if these two tumors occur simultaneously. We present several cases of invasive EMPD with apocrine adenocarcinoma and nodal metastasis.

**Design:** Case-series

**Summary:** Extramammary Paget’s disease (EMPD) is a rare intraepithelial carcinoma that classically involves areas with large concentration of apocrine glands. It typically involves the female perineum, with vulva being the most common site, followed by scrotum, and the male groin and axilla. EMPD affects females more often than males and also tends to arise in older individuals. It can be a mimic of many other common skin conditions as the clinical presentation is variable, though initially it presents as pruritic well-demarcated red to brown plaques. Because of its insidious onset and resemblance to other more common skin disorders, the diagnosis of EMPD is often delayed and only realized once conventional therapeutics for the more common conditions have failed. Diagnosis is confirmed by the presence of Paget’s cells on histopathological examination. Unlike Paget’s disease, which as a rule indicates an underlying breast malignancy, EMPD is less commonly associated with underlying malignancy though the exact frequency of this is highly variable depending on the site and severity of the tumor. Primary apocrine adenocarcinoma also occurs infrequently and is historically unrelated to Paget’s disease though it tends to involve similar anatomic areas that are dense in apocrine glands such as the axillae and the perineum. As the association with EMPD and underlying malignancy is highly variable ranging from 4-20%, it is recommended that all patients with a new diagnosis of EMPD should receive full workup for malignancy.

Invasive EMPD is associated with higher recurrence rates and a worse prognosis for patients than localized EMPD. Apocrine adenocarcinomas also portend a poorer prognosis, with 40% of these tumors exhibiting metastasis upon diagnosis. EMPD has previously been reported to occur in conjunction with apocrine adenocarcinoma of apocrine glands, though this is exceedingly uncommon, with only a handful of cases occurring in the literature. We present several interesting cases of invasive EMPD in conjunction with apocrine adenocarcinomas involving the male inguinal area with lymph node metastasis.

**Conclusion:** In all of these cases, the patients initially presented with a patch or plaque that developed over time into a thicker nodule; presumably, what started as superficial disease gradually formed an invasive component. All of these cases were men in their 6th or 7th decade of life, and all involved the inguinal area. In situ EMPD portends a better prognosis than metastatic disease; a review article with 197 patients with EMPD from 1985 found that patients with underlying malignancy exhibited a 46% mortality rate, compared to the 18% mortality rate for patients without evidence of other malignancy. Tumor depth and lymph node metastases seem to be the most important factors for providing stage and prognostic information for patients with EMPD however; prognostic information is not available for patients with both EMPD and apocrine adenocarcinoma. Even superficial invasive EMPD has been found to metastasize. In 2007, Hatta et al evaluated 78 patients with EMPD and proposed a Tumor-Node-Metastasis (TNM) classification system to be used to further characterize EMPD tumors; a Kaplan-Meier curve demonstrated clear differences between TNM categories in their study. Our question in writing this case report is how do these two tumors occur together? And, which tumor arises first: EMPD or apocrine adenocarcinoma? It is presently unknown if these tumors develop independently or if one arises from the other. Seo et al postulated two theories connecting EMPD with apocrine adenocarcinoma. These authors questioned whether Paget cells are capable of progressing to invasive carcinoma and subsequently metastasize to visceral organs. They also questioned if apocrine carcinoma involving the dermis could exhibit intra-epidermal pagetoid spread and subsequently deeply invade into subcutaneous tissue. More recently, immunohistochemistry (IHC) has been used to aid in the identification of EMPD mimicking other tumors and aid in the correct diagnosis of these tumors. Hons et al reported two cases of EMPD that were initially misdiagnosed as Melanoma-in-situ and Bowen disease respectively and were only clarified by using IHC markers CAM 5.2+, CK7+, EMA+, CEA+, IHC markers specific for EMPD include CK7, CK20, CAM5.2, CEA, EMA. Differing from metastatic adenocarcinomas, primary skin adenocarcinomas have a more positive reaction for p63, CK15, and D2-40. In three of the four cases presented here, the clinical history suggested that the rash preceded the growth of the tumor. We postulate that EMPD arises as an intraepidermal neoplasm, can progress as invasive as apocrine adenocarcinoma, which increases the risk for regional and distant metastatic disease. Similar to the development and prognosis in melanoma, the risk of poor outcomes is likely related to the depth of invasion at diagnosis. In situ EMPD can be cured by surgical excision, with Mohs surgery providing decreased recurrence rates when compared to conventional wide excision. No difference has been seen in survival between wide (2cm) and narrow (2cm surgical margins). In patients with lymph node positive disease, surgery and radiation therapy are the mainstays of treatment. In 2001, Pierie et al identified risk factors for recurrence of EMPD in a retrospective review; the authors identified that invasive tumor growth, underlying malignancy and the presence of non-confluent patches of disease were associated with increased likelihood for tumor recurrence after primary resection. Various chemotherapeutic treatment options are available. Ogata et al successfully treated a patient with bilateral multiple lymph node metastases with 5FU and paclitaxel in conjunction with surgery and achieved resolution of the disease. As all of the existing data for these rare combined tumors stems from case reports, more data with standard nomenclature is needed to further characterize these unusual combinations of tumors and delineate prognosis and treatment options for patients.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 59
Tattoo Aftercare: An Analysis of the Content and Recommendations of 700 Aftercare Instructions

Purpose: Tattoo aftercare instructions are provided to individuals after a tattoo has been placed. These instructions are analogous to aftercare instructions given by dermatologists following biopsies and procedures. Proper aftercare is essential to prevent infection and maximize cosmetic appearance. Despite their importance, 13 states do not require tattooists to provide aftercare instructions, and only 7 states require a health department to review these instructions for accuracy. To better understand what tattooists perceive to be the standard of care, our group analyzed the content of 700 aftercare instructions.

Design: A total of 700 aftercare instructions from all 50 states and Washington D.C. were analyzed. The number of aftercare instructions that came from each state were assigned proportionally based on the percentage of the U.S. population that lived in that state. Using the search phrase “tattoo aftercare instructions [state name]” in Google, instructions were selected in order of the Google search results until the number allotted for that state were met.

Summary: A total of 84.7% of instructions told individuals when and how to wash their new tattoo. Of these instructions, 60.3% explicitly recommended the use of an antibacterial soap. However, regarding hygiene, only 20.1% of instructions told individuals to wash their hands before touching their healing tattoo. Tattooists in our instructions recommended a total of 70 different emollients, 22 of which were brands that are made specifically for tattoo aftercare. Among tattooists, there is a fear of using petroleum on a healing tattoo, and it was the most commonly recommended product to avoid. A total of 71.1% of the instructions listed potential side effects individuals should expect, including desquamation (92.8%), pruritus (43.0%), pigment shedding (12.0%), soreness/irritation (7.0%), and bruising/swelling (10.4%). While their tattoo heals, 90.0% and 84.4% of instructions told individuals to avoid excessive water and sun exposure, respectively. However, only 48.4% of instructions encouraged individuals to use sunscreen on their tattoo to minimize fading. Finally, 49.9% of instructions encouraged individuals to contact their tattoo artist should there be a complication with their healing, while only 19.4% encouraged patients to contact a physician.

Conclusion: There is tremendous variation in the content and quality of recommendations in tattoo aftercare instructions. Given that nearly one in three Americans have a tattoo, there is a need to ensure that the public is provided with accurate information and recommendations. Ultimately, the dermatology community has the knowledge and an opportunity to work with tattooists to develop better, evidence-based aftercare practices.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 60
Liposomal Bupivacaine: A Review and Guide to Use in Dermatologic Surgery

Purpose: Postoperative pain is a fundamental component of the patient experience in dermatologic surgery. There is an unmet opportunity to enhance postoperative pain management for dermatologic surgery patients. Liposomal bupivacaine is a long-acting local anesthetic that has been used successfully in a variety of disciplines and could expand pain control options in dermatologic surgery. Here we review the published medical literature on the use of liposomal bupivacaine and provide a practical guide for its use in dermatologic surgery.

Design: A thorough literature search of liposomal bupivacaine was performed using PubMed, and all references for its use in postoperative pain management were reviewed. Based on the information presented in these publications and the authors' clinical experience, a guide for the use of liposomal bupivacaine in dermatologic surgery is outlined. Pharmacology, safety, technique, and appropriate case selection are described.

Summary: Liposomal bupivacaine is an effective agent for postoperative pain management in a variety of surgical disciplines, including total joint arthroplasty, breast augmentation, and thoracic surgery. Liposomal bupivacaine can also be utilized for post-extirpation reconstruction as well as facial cosmetic procedures.

Conclusion: Liposomal bupivacaine is a safe and effective medication for postoperative pain management. Dermatologic surgeons have an opportunity to expand postoperative pain management options for their patients.

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Disclosure(s) of Interest: Cameron Chesnutt, MD is a consultant and on the Speakers Bureau for Allergan and Galderma.

Poster # 58
5-Fluorouracil Improves the Appearance of Pigmented Facial Lesions in Older Caucasian Men: Measurements Using a Newly Developed Facial Pigmented Lesion Scale (FPLS)

Purpose: Current photo-numeric scales have not detected a change in facial photodamage after a course of topical 5-flurouracil (5-FU). Development of a pigmented facial lesion scale to evaluate the effect of 5-FU on pigmented lesions.

Design: We developed a photoaging scale measuring darkness and extent of PFL. Intraclass correlation coefficients (ICC) between 2 raters were assessed. This scale was used to grade baseline and 12-month images from the Veterans Affairs Dermatologic Pigmentation Prevention Study, in which subjects were randomized to a standard course of 5-FU or vehicle control cream to their face and ears.

Summary: 111 participants were scored. Mean ICC for PFL extent was 0.86 and 0.82 for rounds 1 and 2, respectively. Mean ICC for PFL darkness was 0.84 and 0.92, respectively. Intra-rater reliability was 0.97 and 0.95 for both graders. Baseline to 12-month darkness of PFL showed lightening of lesions in the 5-FU (p < 0.05), but not control (p = 0.15) group (p = 0.1). There was no significant difference in baseline to 12-month extent of PFL in 5-FU (p = 0.14) vs control (p = 0.06).

Conclusion: A single 2-4 week course of topical 5-FU lightens pigmented facial lesions in treated skin.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 57
Best Practice for the Use of ATX-101 for Submental Contouring

Purpose: In 2015, ATX-101 (deoxycholic acid injection) was approved in the United States and Canada for reduction of moderate to severe submental fat (SMF). As with many first-in-class products, the use of ATX-101 has evolved over the last 3 years in clinical practice as physicians have become more experienced with the treatment. This abstract reports findings from a survey conducted 2 years after the approval of ATX-101 to evaluate current trends for treating SMF.

Design: In 2017, 27 physicians (19 dermatologists, 6 plastic surgeons, 1 ophthalmologist, and 1 otolaryngologist) were surveyed regarding the current methods for treating SMF. Physicians were asked to rate the importance of various factors through the use of ATX-101 included the importance of patient counseling/education to help set expectations prior to treatment (rated by 33% of physicians), opportunities for off-label use (such as for reduction of jaw fat (27%), encouraging patients to buy packages/multiple treatments (23%), and benefits of treating more laterally (extending the inferior border of the mandible)) to improve overall submental contour (23%). Top barriers to the adoption of ATX-101 in clinical practice included cost (rated by 87% of physicians), swelling (50%), need for multiple treatments (43%), and potential downtime (33%). Treatments used most frequently in combination with ATX-101 included botulinum toxin (noted by 33% of physicians), dermal fillers (33%), cryolipolysis (27%), and ultrasound (20%). Physicians noted that their use of ATX-101 has mostly evolved based on trial/error and consultations with their peers.

Conclusion: The majority of surveyed physicians are using ATX-101 to treat mild to moderate SMF, which is an evolution from the approved indication for moderate to severe SMF. In addition, ATX-101 is being used successfully to treat areas of fat in the lower face/neck outside of the labeled indication (such as jaw fat), and in combination with botulinum toxin and dermal fillers to further contour the lower face/jawline. Cost followed by post-procedure swelling were top barriers to adoption of ATX-101 for treatment of SMF; however, several physicians suggested ways to offset these barriers. Patient counseling on potential adverse events and timing of the procedure is critical for patient satisfaction. Patients should be encouraged to view ATX-101 as a treatment package, which requires more than a single treatment cycle and may require combination therapy with other modalities (in certain patients) to achieve optimal results. Based on these data, ATX-101 can be considered as
part of a complete spectrum of treatments designed to achieve optimal outcomes for lower face rejuvenation.

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Disclosure(s) of Interest: Nazanin Ashourian; Nnazdole I Onunkopr; Sara Sangha are employees of Allergan, Terrance Keanev, MD is co-founder of SkinDeC; Terrance Keanev, MD; Cameron D. Chesnutt, MD; Annie Chiu, MD; Gilly Munavalli, MD; Vic A. Narukar, MD; Todd Schlesinger, MD; Sachin M. Shridharani, MD; Craig F. Teller, MD; Steve Yoelin, MD are consultants; Cameron D. Chesnutt, MD; Gilly Munavalli, MD; Todd Schlesinger, MD; Sachin M. Shridharani, MD; Craig F. Teller, MD; Steve Yoelin, MD are investigators; Annie Chiu, MD, Nazanin Ashourian; Nnazdole I Onunkopr; Sara Sangha own stock; Terrance Keanev, MD, Annie Chiu, MD received honorarium and are members of the Speakers Bureau for Allergan

Poster # 63
A Prospective, Multi-center, Randomized, Elevator Blinded, Split-hand Study to Evaluate the Effectiveness and Safety of Large-gel Particle Hyaluronic Acid with Lidocaine for the Correction of Volume Deficits in the Dorsal Hand

Purpose: To evaluate the effectiveness and safety of large-gel particle hyaluronic acid with lidocaine (HAL) compared to no treatment for the correction of volume deficits in the dorsal hand.

Design: A prospective, multi-center, randomized, evaluator-blinded, split-hand study was conducted. Subjects (N = 89), aged ≥22 years with a volume deficit in the hand, received treatment on Day 0 with HAL in one hand in a randomized fashion. The fellow untreated hand served as the primary comparator. HAL was applied subcutaneously using 296 x 3/8-inch thin-walled needles. Treatments were administered to all subjects at Day 0 and at Month 6, including optional touch-ups 4 weeks after the first injection. The primary efficacy endpoint was based on ≥1 point of improvement with treatment versus no treatment in the Merz Hand Grading Scale (MHGS) at Week 12. Other assessments included Central Independent Photographic Reviewers (CIPR) evaluations of hand photographs, Global Aesthetic Improvement Scale (GAIS), Subject Satisfaction questionnaires, and safety (including passive and active range of motion).

Summary: For each treatment, the mean injection volume was 2.13 mL and, in most cases (98.9%), a topical anesthetic was not used. Subjects demonstrated a significantly higher responder rate for HAL (85.9%) compared with no treatment (21.2%) at 12 weeks (P<0.001). CIPR assessments showed improvements in the treated hands compared with the untreated hand from Week 12 to Week 24 (range 69.5% to 88.1%). Most subjects and treating investigators (92.8% to 100%) reported improvements across all time points in the GAIS. There was no impairment in hand function after treatment. Seven (7.9%) subjects experienced 13 adverse events related to the product and/or injection procedure. Most were mild in severity and none were serious.

Conclusion: Large-gel particle hyaluronic acid with lidocaine injected with sharp needle is safe, well-tolerated, and superior to no treatment for the correction of volume deficits in the dorsal hand.

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Disclosure(s) of Interest: Joel Cohen, MD is a consultant for Allergan, Merz, Gaiderma, Sciton, Lutronic, Biopelle, Swiss American, received honoraria and is a member of the Speakers Bureau for Gaiderma, Sciton.

Poster # 64
Polydioxanone Threads to Correct Infraorbital Hollowness: A Novel Approach

Purpose: Correction of the infraorbital hollows is a growing cosmetic request and is challenging given the delicate anatomy. The infraorbital hollows, or tear troughs, are due to volume loss of the aging face. Specifically, they result from loss of infraorbital subcutaneous fat, protrusion of infraorbital fat, or sagging of the upper cheek. Treatment is often tailored to the specific anatomical defect and include laser therapy, dermal fillers, and surgical intervention. We present the use of polydioxanone (PDO) threads as a novel alternative to provided lift and volume to the infraorbital hollows.

Design: A 50-year-old healthy female presented with bilateral infraorbital hollows with negative deflection secondary to loss of infraorbital subcutaneous fat and sagging upper cheeks. The patient had no prior history of dermal fillers or surgical intervention of the infraorbital region. She desired a non-invasive approach. Polydioxanone 1.25 inch 29G USP 6-0 threads with twisted configuration were chosen. Multiple threads were woven into the dermis in a net-like pattern. There was immediate improvement to the infraorbital hollows with results continuing to last for several months.

Summary: Polydioxanone is a polymer of ether-ester units and it is most often utilized in preparation of surgical sutures. PDO threads have recently been refashioned with the purpose of lifting the aging face in facial rejuvenation. Although it is fully absorbated by hydrolysis within 4-6 months, the foreign body reaction stimulates collagen synthesis which produces prolonged volume and lift up to an additional 12 to 15 months. While there are reported techniques to address cheek, jaw, neck, and even lip abnormalities with PDO threads, this is the first case, to the best of our knowledge, of PDO threads to correct infraorbital hollows. An additional advantage over other methods is the elimination of intravascular occlusion and related complications.

Conclusion: This case highlights the challenges and risk of infraorbital hollow correction, and presents polydioxanone threads as a relatively safe non-invasive alternative.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 65
Porcine Versus Synthetic Skin: Surgical Training Tools for Dermatology Residents

Purpose: The growing incidence of cutaneous malignancies requiring surgical treatment has highlighted the importance of surgical proficiency for the modern-day dermatologist. Surgical training is an increasingly integral part of dermatology residency education. Traditionally, dermatology residents learn through an apprenticeship model in which proficiency is obtained via direct patient care coupled with didactic lectures. Reliance on live patients for surgical experience may constrain case volume and limit practice opportunities. Several solutions have been developed to counteract this issue, including the use of pig as well as synthetic skin as alternative practice mediums. Of these two solutions, synthetic skin represents the safer and lower maintenance option. However, to our knowledge no data exists regarding dermatologic trainee satisfaction with synthetic skin models compared with pig skin. The purpose of this study was to investigate resident satisfaction with synthetic skin as a surgical training tool, compared to prior experiences with pig skin. Additionally, this study sought to investigate whether synthetic skin could be utilized to assess surgical skill proficiency with a modified suture task checklist.

Design: Nineteen dermatology residents from the Chicago area were recruited for this study. Participants were first, second, or third year dermatology residents enrolled in an ACGME approved dermatology training program. Participants were instructed to carry out a simple elliptical excision on a simulated benign lesion marked by a standardized 8 millimeter circle on a synthetic skin pad (platinum-cured silicone, Reynolds Smooth-On; Chicago IL). Participants were instructed to repair the remaining defect after excision was completed. During excision and repair, still photographs were taken at seven specific steps: 1) after ellipse was drawn, 2) during excision of lesion, 3) after excision of lesion, 4) during placement of a dermal suture, 5) after all deep sutures are placed, 6)期间 placement of a superficial suture, and 7) after completion of suturing. At the conclusion of the repair, each participant was asked to complete a simulation skin survey. Survey results were analyzed using Wilcoxon signed rank test. Four blinded physicians then graded the obtained photographs using a modified suture task checklist.

Summary: Residents were more likely to prefer pig skin to simulated skin for overall use (p=0.040) and suturing (p=0.018). There was a trend towards preference for tissue handling as well, though this was not statistically significant (p=0.086). There was no statistically significant difference between satisfaction with pig skin versus synthetic skin with regards to excision experience (3.21±0.79 versus 3.31±1.16, p = 0.37, t = -0.33). The majority of residents (10/19) performed all suture task checklist tasks correctly. Of those who did not perform all steps correctly (9/19), the majority of residents had difficulty obtaining adequate dermal eversion (9/9) and wound approximation (6/9).

Conclusion: Synthetic skin represents a surgical medium that is readily available, maintenance free, portable, and avoids potential biohazard exposure or ethical concerns. Additionally, synthetic skin can be employed to evaluate surgical proficiency with a modified suture task checklist. In this study, residents preferred pig skin over synthetic skin when practicing surgical excisions. Further investigation regarding enhancements to make the model more similar to human skin is needed.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 66
Helical Rim Island Pedicle Flap

Purpose: Wounds of the helical rim are commonly encountered in Mohs surgery and can be a challenge to reconstruct especially when cartilage is exposed and there is no perichondrium for a suboptimal recipient base. Unlike posterior ear defects, wounds of the helical rim are not as amenable to secondary intent healing or skin grafting. In the past, wounds that extend over the helical rim have been repaired with wedge resections. However, this unavoidably creates asymmetry and can cause prolonged pain after surgery. A frequently used alternative in this location is a helical rim advancement flap. While useful for small, deep wounds, helical rim advancement flaps are not as favorable for broader defects and often unavoidably alter the natural contour of the ear. Bilateral hatchet flaps are commonly employed on the ear but have more of a role on the posterior aspect of the ear, as is the case for bileded and banner transposition flaps. Postauricular pedicle or interpolation flaps can be effective for these kinds of defects, but the need for a multi-staged procedure may not be convenient for the patient. To circumvent these issues, an island pedicle flap was considered. Island pedicle flaps (IPFs) are a commonly used reconstruction in dermatologic surgery. Historically, IPFs were utilized with a defined vascular supply. However, random pattern vasculature flaps are now used routinely allowing for increased versatility. With recent modifications, IPFs can be employed for the reconstruction of a variety of facial defects. In this brief case series, we demonstrate the effective use of an island pedicle flap for the reconstruction of defects of the helical rim with no complications and good cosmetic outcomes.

Design: The two cases were that of a 65 year-old male with melanoma in situ and a 72 year-old male with basal cell carcinoma. Both lesions were located on the right superior helical rim. Mohs surgery was performed to remove the skin cancers. After removal, both wounds measured approximately 1.5cm x 1cm. A triangular-shaped island flap was designed bordering the proximal margin of the wound at the helical root. Once designed, the flap was sharply incised to the level of perichondrium along its anterior border and down to the level of superficial subcutis along its posterior border to free it from all epidermal and dermal attachments. Dual level undermining was then carried out in a similar manner to nasalis sling IPFs to isolate a posteriorly based vascular pedicle composed of subcutis and loose connective tissue present on the posterior surface of the ear. The flap and pedicle were undermined from the anterior border at the level of the perichondrium. Next, undermining was carried out from the posterior border of the flap at the level of the superficial subcutis towards the postauricular sulcus to free the pedicle from the overlying dermal attachments. Back cuts were performed medially on the posterior ear in order to enhance the mobility of the pedicle. Although no named muscle and scant tissue is present, we have found the blood supply to be adequate to support the flap. Once prepared, the flap was rotated to the recipient site. After proper placement was confirmed with the flap under minimal tension, the secondary defect was closed with absorbable buried dermal vertical mattress sutures. The flap was then trimmed to precisely fit the remaining defect and similarly secured with a minimal number of buried dermal sutures. Finally, interrupted surface sutures were placed to approximate the epidermal edges. The patients tolerated the procedure well without complication and demonstrated a good functional and aesthetic outcome.

Summary: An island pedicle flap with a posteriorly-based pedicle was used for the reconstruction of helical rim defects with good functional and aesthetic outcomes.

Conclusion: Wounds of the helical rim can be a challenge to repair when cartilage is exposed and there is no perichondrium. We present two cases of helical rim defects repaired effectively with an island pedicle flap with a posteriorly-based sling pedicle isolated with dual level undermining.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 67
Treatment of Oral Propranolol for Infantile Hemangioma: Predictors of Successful Response

Purpose: To evaluate the efficacy and safety of oral propranolol for IH and to analyze predictors of successful response.

Design: A total of 96 patients aged 2-29 months with IH were included from September 2010 to August 2015. All infants received 2.0 mg/kg per day of propranolol after detecting any preexisting cardiac abnormalities by a pediatric cardiologist and followed up every 2-4 weeks. Clinical response was evaluated with 10-point scaled IGA score (0-10) at every follow-up visit.

Summary: The duration of treatment with oral propranolol ranged from 16 to 48 weeks (mean: 23 weeks). Mean IGA score decreased from 10 to 8.05 after 8 weeks, 7.19 after 12 weeks, 6.61 after 16 weeks, 5.87 after 24 weeks of treatment, respectively. Administration of oral propranolol before 6 months of age responded better compared to the group of age over 6 months. IGA score of deep type and indeterminate type decreased more and faster compared to other types. Decreased IGA score in IH with solitary lesion was more significant than IH with multiple lesions. There was no significant difference in according to sex, size and location of the lesion.

Conclusion: We suggest that earlier administration of oral propranolol for IH under 6 months of age is more effective than starting after 6 months of age. Deep type and indeterminate type, and IH with solitary lesion has better response to the treatment with propranolol.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 68
Lip Enhancement and Enlargement using Phenol/Croton Oil Peels

Purpose: The use of fillers to enhance the lip vermilion is popular. Fillers fail to address photo damage and occasionally appear unnatural. We present an alternative technique for lip enhancement and enlargement using a phenol-croton oil deep chemical peel formula. Ideal candidates for deep lip peels are females over the age of 40 with fair skin and photo damage.

Design: To evaluate the effects of deep chemical peels on lip enhancement and volumization.

Summary: This case series of 6 patients demonstrate long-term clinical volumization and reduction of lip vertical lip lines after application of a phenol-croton oil peel. Lips are first degreased with acetone. The physician applies the classic Baker-Gordan or 0.4-1.6% Croton oil in 35% phenol (Hetter) formulas with a cotton-tipped applicator to the entire surface of the lips from the wet-dry line to beyond the vermilion border. Deep perioral lines can be additionally treated using a cotton-tipped toothpick. Patients usually only refer a numbness sensation by phenol anesthetic effect. Petroleum jelly (vaseline®) is applied for occlusion and continued for about one week when re-epithelialization is complete, without food or mouth hygiene restrictions. Patients are given valacyclovir 500mg every eight hours herpes prophylaxis. No procedures of burning pain or throbbing subsides in about eight hours. Deeper individual lines can be additionally treated using the wooden end of the cotton-tipped applicator. Patients are instructed that the peel will sting for 13 seconds. Any delayed pain or throbbing will subside in about 8 hours. Petroleum is applied and continued for about one week when re-epithelialization is complete. Patients are prescribed acyclovir for herpes prophylaxis. After the first week, lipstick and makeup can be applied to cover any residual erythema. The lip peel can be performed as a standalone procedure or in combination with a full face chemical peel. No cardiac monitoring is indicated for isolated lip peeling. Patients can drink 24 ounces of water prior to beginning the peel as an additional precaution. Younger females tend to have less photodamage and typically desire a much larger lip volume increase than a deep chemical peel can produce. The degree of lip enlargement after a deep chemical peel varies and depends on the previous lip size. The contour, lines, and luster are always improved. After the first week, lipstick and makeup can be applied to cover temporary erythema or hyperpigmentation. The degree of lip enlargement varies mainly on the previous size. Larger wrinkled surface area results in increased necroangiogenesis volume by the lip peel. Skin tightening and eversion occurs along with improved lip contour. The lip peel can be performed as a standalone procedure or in combination with perioral or full face chemical peels. The natural anatomy of the vermilion border displays slight hyperpigmentation in the unpeeled skin in everyone. Showing this to the patient in advance is reassuring to the patient if you are using a higher strength CO formula. Therefore, using a croton oil formula of greater than 1.0% does not change this natural color but removes wrinkles, actinic chelitis and causes eversion, producing a medical and a cosmetic improvement.

Conclusion: Deep phenol-croton oil peels represent a safe and effective method for lip enhancement and volumization.

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Disclosure(s) of Interest: There are no commercial interests to disclose.
**Poster # 69**

**The Comprehensive Dynamic Assessment Tools (CDAT): A New Protocols for Ethnically Appropriate Evaluation of the Perioral Region and Lips**

**Purpose:** The purpose of this prospective evaluation was to develop methodologies for analysis of facial canons and dynamic characteristics of the lips and perioral region in individuals of African-American and Middle Eastern (Arabic Gulf) ethnicity, with Caucasian individuals as comparators. These data are of value to define ethnically appropriate treatment protocols and endpoints of efficacy for injectables and other cosmetic dermatology procedures. Facial canons for Caucasians have been studied since antiquity. However, there is a paucity of data for ethnic patients, and those canons that have been defined pertain principally to rhinoplasty rather than to facial volume or neuromodulation. As a result, perceptions of beauty and perceived endpoints of treatment in ethnic patients can become skewed. For example, studies using computer-generated images demonstrate that even ethnic evaluators prefer faces within their own ethnicity that deviate from population norms by being more Caucasian in appearance. This study specifically evaluated key measurements that have been used to define ideal lip proportions, including a ratio of 1 to 1.6 for upper lip to lower lip height, and the relationship of lip projection to the Steiner line (S line) extending from the midpoint of the columna of the nose to the soft tissue pogonion. Perioral rhytids in repose were also evaluated because validated assessment scales tend to focus on their presence as an indication for procedural interventions. In addition, the perioral region and lips were evaluated in animation with novel methodologies.

**Design:** A total of 75 healthy female subjects were evaluated in repose using standardized, high-resolution digital imaging of the face. They comprised 25 African-American subjects with Fitzpatrick skin phototypes V to VI, 25 Middle Eastern (Arabic Gulf) subjects with Fitzpatrick skin phototypes III to IV, and 25 Caucasian subjects with Fitzpatrick skin phototypes I to II. Each ethnic group included a sequential, pre-screened series of 20 younger subjects between 18 and 25 years of age with good facial tissue quality and no significant volume loss as assessed by validated scales and skin snap and stretch testing. Each ethnic group also included 5 older subjects between 45 and 65 years of age who complained of age-related changes in the perioral region or lips and whose tissue quality and volume loss were quantified via validated scales and skin snap and stretch testing. Measurements of upper and lower lip height and lip projection were obtained for all subjects from the standardized images. All subjects were also assessed on a validated scale for the presence of perioral rhytids in repose. Dynamic analysis of the perioral region was performed on 10 subjects from each ethnic group (5 young and 5 older) with a new “video burst” assessment protocol. This included formal evaluations of perioral and lip animations on command; and informal evaluations while subjects conversed or read from word lists designed to elicit a range of spontaneous animations. Still frames from the video bursts were examined to provide further insight into specific dynamic characteristics of the perioral region for each subject. If this abstract is selected for oral presentation, illustrative video examples will be shown. Analysis of further subjects is now ongoing for further quantification and increased evidence level of these findings. A separate project is in progress to evaluate Asian and male patients.

**Summary:** Evaluations in repose showed a statistically significant trend for a higher ratio of upper to lower lip height in young African-American than young Caucasian subjects. This trend was also evident in young Middle Eastern subjects. Lip projection was beyond Steiner’s line for the majority of young African-American subjects, whereas it followed or remained within Steiner’s line for Caucasian subjects. Perioral rhytids in repose ranged from none to mild in older African-American subjects, from none to moderate in older Middle Eastern subjects, and from mild to severe in older Caucasian subjects. Dynamic analysis demonstrated significant differences between young and older subjects in each of the three ethnic groups, even for older subjects who did not have rhytids in repose. On animation, older subjects manifested the appearance of perioral rhytids that were not apparent in repose, increased prominence of perioral rhytids that were evident in repose, and decreases in upper and lower lip heights and fullness compared to repose. There were qualitative and quantitative differences in these changes with formal (on-command) versus informal (spontaneous) animations. These differences are being analyzed with respect to pattern and degree of perioral muscle recruitment and relationship to facial morphotype.

**Conclusion:** These evaluations showed significant differences for African-American and Middle Eastern in comparison to Caucasian females in key measurements that are used to define ideal lip proportions. There were also significant inter-ethnic differences for perioral rhytids in repose and in dynamic assessments of the lips and perioral region. Of note, older African-American and Middle Eastern subjects displayed age-related changes on dynamic assessment even when these were not apparent on static assessments that are currently employed to determine whether treatment is indicated. The anatomical rationale for these observations may include previously reported ethnic variations in fibroblast size and structure, and in fat compartments; including the pattern and extent of fat distribution above and below the orbicularis oris and mentalis muscles. The perioral region is most commonly considered to have a Type 2 subcutaneous fat distribution, although a layered distribution (PODF) has been proposed by some authors. Further anatomical studies are needed to correlate ethnic variations in fat distribution with observed differences in patterns of aging. An emerging imperative for injectables and other cosmetic dermatology procedures is to offer individualized, patient-tailored approaches. As patient populations continue to diversify, a pre-requisite to fulfill this imperative and achieve optimal results and satisfaction for all patients is to design and implement treatment plans that adequately address ethnicity, gender and age. This study, and subsequent ones now in progress to extend the findings, may help by expanding the database for ethnic facial canons that relate specifically to cosmetic dermatology procedures, and by providing tools to quantify dynamic sequelae of aging that are of particular relevance to patients of color. Comprehensive, ethnically appropriate assessments can avoid under-diagnosis of age-related changes, inadvertent facial disharmony (ethnocorphic) due to application of guidelines based on Caucasian facial canons, and a disconnect between what ethnic patients seek and what they are offered. Our evolving understanding of facial aging from anatomical and physiological perspectives yields the insight that dynamic assessments should ideally be included in the pre- and post-procedural evaluation of all patients. The video burst; methodology developed for this study provides a time-efficient technique for performing dynamic assessments in a clinical office setting. It enables treatment plans that appropriately balance the use of soft tissue fillers, botulinum toxin neuromodulation and other treatment modalities, and hence maintain natural appearance and expressivity in all patients.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

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**Poster # 70**

**Patient Falls in Mohs Surgery Practices: A Survey of American College of Mohs Surgery**

**Purpose:** Falls are the leading cause of fatal and non-fatal injuries in adults 65 years and older. Mohs micrographic surgery (MMS) comprises a unique constellation of potential fall risk factors: an aging patient population; an often lengthy, fatiguing, multi-stage procedure; the potential for multiple room transitions; and the use of benzodiazepine anxiolytics. However, there have been no formal studies of patient falls in MMS practices. Our study attempts to fill this gap in the literature by evaluating the frequency, characteristics, and screening practices of falls and near-falls in MMS.

**Design:** A 15-question survey was approved by the American College of Mohs Surgery (ACMS) executive committee. ACMS members received the survey via email followed by a reminder in 2 weeks and also had access to the survey on the ACMS website for 3 months.

**Summary:** Of all respondents (n=79), 44% and 64% of Mohs surgeons had experienced at least one patient fall and near-fall in their careers, respectively. The percentage of Mohs surgeons experiencing either event increased with practice volume. There were no significant associations for private vs academic practice (70% vs 74%; p=0.782), patient remaining in the same room vs the waiting area between stages (60% vs 74%; p=0.278), or screening vs not screening for patient fall risk (77% vs 70%; p=0.525). Respondents most frequently experienced events while patients were entering or exiting the office (45%), transitioning in or out of the surgical chair (35%), walking to or from the bathroom (25%), in the bathroom (22%), walking to or from the waiting room between Mohs stages (20%), and in the surgical chair (5%). Of those experiencing an event, 42% resulted in patient injury, of which 77% required further medical attention or workup for the injuries sustained. In the event of a patient fall, 41% have an established protocol in place. Overall, 34% of Mohs surgeons screen for patient fall risk through the use of a medical assistant or nurse (69%), medical history form completed by the patient (27%), and/or as part of a consultation visit (12%). Patients were most commonly questioned about their need for an assistive walking device (77%), falls in the past year (58%), if they are currently feeling dizzy or imbalanced (58%), and their use of a prescription anxiolytic, analgesic, or sleeping aid (27%). Of those respondents who do not screen, the most common reasons were never thinking to do it (51%), being unsure of how to perform a screen effectively (31%), not thinking there is any benefit (29%), and having time constraints (24%).

**Conclusion:** Patient falls and near-falls are relatively common in MMS practices and often result in patient injury. However, many respondents do not regularly screen patients, which may be due to a lack of awareness, unreasons of how to screen, and time constraints. A few key questions may present a time-sensitive screening solution to increase patient safety.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.
Poster # 71
Social Media Training in Dermatology Residency: A National Survey

**Purpose:** In the growing age of technology and digital communications, social media has become more pervasive in medicine now than ever before. Social media can be used for public engagement, community health campaigns, recruitment for research trials, and academic discourse. Dermatology offers a unique opportunity, since the majority of residency graduates choose to pursue private practice, where the use of social media for patient engagement and marketing purposes are beneficial to successful business, especially in aesthetics and surgery. Our study investigated the experiences and preferences with social media during dermatology residency.

**Design:** An online survey was distributed via the internet to current residents of ACGME-approved dermatology residency programs as of 2017-2018. The survey included demographic data, experiences with and attitudes on social media, and preferences for social media training.

**Summary:** A total of 109 residents completed the survey. The majority practiced in an urban location (72.5%) compared to suburban (24.8%) and rural (2.8%) settings. The vast majority planned to pursue predominately private practice (82.6%) versus academia (17.4%). Of all respondents, 59.6% believed social media is either very important or extremely important to the field of dermatology. Social media was believed to be most helpful for patient engagement and education (89.0%), brand building (77.1%), marketing (77.1%), networking with colleagues (54.1%), and public health campaigns (47.7%). Although only 14.7% currently use social media related to their practice of dermatology, 75.2% plan to use it with their future practice after residency. Residents planning to pursue private practice were significantly more likely to plan to use social media (84.4% vs. 31.6%; p=0.001). Interestingly, only 22.0% believed that dermatologists are using social media safely and responsibly. The biggest concerns included maintaining appropriate patient-physician boundaries (76.2%), providing accurate and truthful information (75.2%), declaring any conflicts of interest (67.9%), protecting patient confidentiality (52.3%), and protecting the physician’s privacy (40.4%). While very few residents (6.4%) had formal social media training as part of their residency curriculum, 85.3% of those who did not have this, desired it. Those who had this training most highly rated its quality as fair. The vast majority (79.8%) believed that social media training is beneficial for dermatologists. Residents planning to pursue private practice were significantly more likely to believe it is beneficial (87.8% vs. 42.1%; p<0.001).

**Conclusion:** Dermatology residents believe that social media is important and beneficial to the practice of dermatology, which is amplified for residents planning to pursue private practice. Current social media training during residency is insufficient and inadequate.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

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Poster # 72
The Online Dermatology Office: Cross Sectional Analysis of the Dermatologic Conditions Posted on Social Media

**Purpose:** Social media platforms have become an integral part of how patients learn about and come to access medical care. Reddit is an international news, web content and discussion website; any registered user can post content (websites, photo, video, and discussion links) which are subsequently “upvoted” or “downvoted” by other reddit users. It consistently ranks in the top 6 most visited websites in the world. Posts with the most upvote counts are displayed on the front page of website, ultimately reaching the most internet viewers. The reddit website is divided into innumerable sub-reddits or forums based on unique interests. Reddit-Dermatology is a sub-reddit, with over 4,490 registered users, that focuses on medical, surgical and cosmetic dermatologic topics. Buntin-Krieg et al, characterized 38 of the most popular dermatology communities on Reddit and noted the majority of posts (70%) were centered around medical or cosmetic advice. The purpose of this study is to classify and quantify the dermatology-related posts from the online community www.reddit.com. In addition to presenting demographic information, we categorize the posts into specific diagnostic categories with recommended tests or procedures.

**Design:** The Dermatology sub-reddit was mined for the top 100 posts available on 5/16/2018. Posts were ranked from 4/17/2018-5/15/2018. Only photos with a clear, interpretable photograph were analyzed. Information regarding patient sex, age, lesions location and chief complaint was collected. Chief complaints were divided into rashes (diffuse, multi-focal, erythema) vs. growths (uni-focal, papules and nodules) and further classified based on presence of absence of stated symptoms (ie. “growing”, “itchy”, “painful”, “draining”, “scaling”). A dermatology resident physician reviewed all clinical information and photographs before best assigning each post to a specific diagnostic category/morphologic reaction pattern. Diagnostic categories and morphologic patterns were used to refine a differential diagnosis for a static photograph. Cases that would benefit from further diagnostic procedures (ie. biopsy, potassium hydroxide, viral polymerase chain reaction, aerobic or fungal culture) or treatment measures (ie. cryotherapy, intralesional triamcinolone injection, incision & drainage) were additionally noted.

**Summary:** 100 posts were initially collected; 9 were discarded due to blurry or uninterpretable photographs. Of the 91 remaining cases, 36 were male, 24 were female and 31 were not identified. Nine of the posts included an age; the mean age was 34.8 years old, median age 24 years old and the range included those between 16-84 years. 22/91 (24.2%) were from the head and neck, 21/29 (23.1%) were from the upper extremity, 13/91 (14.3%) were from the trunk, 7/91 (7.7%) were from the back, 2/91 (2.2%) were from the genital/ buttock, 22/91 (24.2%) from the lower extremities, 1/91 (1.1%) the nails, 2/91 (2.2%) full body and 1/91 (1.1%) was from an unknown location. 61 (67.6%) of the posts were classified as rashes; 30/91 (33%) were symptomatic and 31 (24%) were asymptomatic. The remaining 30 (33%) cases were classified as growths; 8/91 (8.8%) were symptomatic and 22/91 (24%) were asymptomatic. Based on chief complaint and photograph review, each lesion was placed into a best fitting diagnostic category: Acneform 6 (6.6%), Cystic 3 (3.3%), Connective Tissue 3 (3.3%), Eczematous-acute 2 (2.2%), Eczematous-subacute 7 (7.7%), Eczematous-chronic 2 (2.2%), Granulomatous 2 (2.2%), Infectious 12 (13.2%), Nail/Hair 1 (1.1%), Neoplastic-adenal 5 (5.5%), Neoplastic-epidermal 6 (6.6%), Neoplastic-dermal 4 (4.4%), Neoplastic-lipid 1 (1.1%), Neoplastic- melanocytic 10 (11%), Papulosquamous-annular 2 (2.2%), Papulosquamous-hyperkeratotic 5 (5.5%), Papulosquamous-lichenoid 1 (1.1%), Papulosquamous-psoriasiform 5 (5.5%), Papulosquamous-pityriasisform 7 (7.7%), Perforating 1 (1.1%), Vascular 3 (3.3%) and Vascular-urticular 3 (3.3%). Further diagnostic procedures and treatments were recommended in 40/91 cases (44%). A total of 44 total procedures were recommended: Biopsy 22 (24.2%), KOH 7 (7.7%), Viral PCR 1 (1.1%), Aerobic/Fungal Culture 8 (8.8%), Incision and Drainage 2 (2.2%), Intralesional Triamcinolone 2 (2.2%), Cryotherapy 2 (2.2%).

**Conclusion:** This cross-sectional analysis of a dermatology-specific social media platform demonstrates the variety and depth of disease that comes to the internet office. While some of the posts were demographically anonymous, we found there was similar representation from both males and females. The median age of posters was 24 years old, suggesting that social media platforms provide easier and convenient points of access for healthcare, especially for young patients. The majority of posts involved the head, neck, upper and lower extremities. The fewest posts involved the genital/buttock and nail locations. 69/91 (75.6%) of posts were of symptomatic rashes and growths. Social media provides instant access to medical opinion, which confers an advantage for growing, painful, itchy and draining lesions. Online medical evaluation can help triage the urgency of a condition which can be useful when the average wait time for office-based dermatology visits can be 3-4 weeks. Infectious (13.2%), Neoplastic-melanocytic (11%), Papulosquamous-pityriasisform (7.7%), Eczematous-subacute (7.7%), Acneform (6.6%) and Neoplastic-epidermal (6.6%) were the most frequently classified diagnostic categories/reaction patterns. This distribution is similar to that seen by dermatologists and non-dermatologists who most commonly saw acne (13.2%), actinic keratosis (11.4%), non-melanoma skin cancers (9.5%), contact dermatitis (12%) and cellulitis/abscesses (8.5%) in office based visits. Similar to teledermatology, dermatology-specific social media platforms may increase access to face-to-face, office based health care. Social media posts and teledermatology are best coupled with in-person comprehensive evaluation. 40/91 (44%) of cases required additional diagnostic or therapeutic intervention. 25% of the cases would be appropriate for biopsy based on available clinical and photographic information. Certain conditions, like the evaluation of pigmented lesions, are generally inappropriate for evaluation with a static photograph. Despite limitations and caveats, social media platforms remain a powerful tool for patients and providers to extend their interactions with each other.


Polydioxanone Threads to Correct Infraorbital Hollowness: A Novel Approach

**Purpose:** Correction of the infraorbital hollowness is a growing cosmetic request and is challenging given the delicate anatomy. The infraorbital hollows, or tear troughs, are due to volume loss of the aging face. Specifically, they result from loss of infraorbital subcutaneous fat, protrusion of infraorbital fat, or sagging of the upper cheek. Treatment is often tailored to the specific anatomical defect and include laser therapy, dermal fillers, and surgical intervention. We present the use of polydioxanone (PDO) threads as a novel alternative to provide lift and volume to the infraorbital hollows.

**Design:** A 50-year-old healthy female presented with bilateral infraorbital hollows with negative deflection secondary to loss of infraorbital subcutaneous fat and sagging upper cheeks. The patient had no prior history of dermal fillers or surgical intervention of the infraorbital region. She desired a non-invasive approach. Polydioxanone 1.25 inch 29G USP 6-0 threads with twisted configuration were chosen. Multiple threads were woven into the dermis in a net-like pattern. There was immediate improvement to the infraorbital hollows clinically and histologically (in one patient) at follow-up visits. There was immediate improvement to the infraorbital hollows with results continuing to last for several months.

**Summary:** Polydioxanone is a polymer of ether-ester units and it is most often utilized in cosmetic surgery for facial rejuvenation. Although it is fully absorbed by secondary intention healing with the aid of tension sutures, or 3) excision followed by debriement of maturing granulation tissue and neoeplithelium with secondary intention healing.

**Conclusion:** These novel surgical techniques discussed in this paper enable better control over wound contracture with improved cosmesis and better aesthetics of the hairline in AKN.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

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Reconstruction of Nasal Sidewall and Alar: Combined Cheek Advancement Flap and Tunneled Transition Flap

**Purpose:** The treatment of broad areas of squamous cell carcinoma in situ can pose a therapeutic challenge to physicians. While effective surgical and topical treatment options exist, these are often seen as unfavorable by patients due to reluctance to undergo a surgical procedure or due to prolonged application and discomfort of topical treatment. Intralesional 5-fluorouracil (5-FU) has been shown to be effective in treating keratinocyte carcinomas in patients unwilling or unable to undergo other treatment modalities. Recently, micronedle-assisted drug delivery has been demonstrated to improve efficacy of topicals used in the treatment of a variety of skin conditions including verruca and actinic keratoses, theoretically by improving drug delivery through the epidermis. Delivery of 5-FU to superficial carcinoma such as SCC via microneedling presents an alternate therapeutic modality for patients unwilling or unable to undergo other treatment.

**Design:** Herein, we describe a case series of two patients who underwent treatment of biopsy-proven SCC with intralesional 5-FU delivered via microneedle on the heel and thigh. Affected areas were treated microneedle pen (at 1 mm depth) along with 5-FU (50 mg/ml) for 1 minute or until pin-point bleeding was achieved. After the treatment, the lesion was immediately covered with an occlusive dressing for 24-48 hours. Results were assessed clinically and histologically (in one patient) at follow-up visits.

**Summary:** The treatment was well tolerated. One patient required pain control with intralesional injection of lidocaine with epinephrine. Treated areas healed without scarring. Results were assessed clinically and histologically (in one patient) at follow-up visits.

**Conclusion:** Intralesional 5-FU delivered via microneedle is a promising treatment option for patients with SCC who are unwilling or unable to pursue other treatment options.

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**Co-author(s):** Michael Knabel, MD; Edil Olasz, MD

**Disclosure(s) of Interest:** There are no commercial interests to disclose.

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Intralesional 5-Fluorouracil Delivered via Microneedle for the Treatment of Squamous Cell Carcinoma In Situ

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.
Poster # 77
The “Combo-Z” Variable Tissue Movement Flap for Repair of Multiple Adjacent Defects

Purpose: When two adjacent defects are located proximally for a combination repair, the desired direction of a standing cone deformity should be determined. This may be vertically to push tissue upward in order to avoid an ectropion (Figure 1 a,b,c,d) or horizontally to hide the desired incision line in the hair line, away from an obvious cosmetic focal point, or under area covered by clothing. A line of incision is drawn diagonally between the defects. This line is then incised, and the defects are both undermined at the appropriate depth in order to allow free tissue movement. Skin hooks are used to pull the flap edges into the desired location. If the tissue tension does not allow for a natural movement, the direction of the overlap between the defects created by the incised line may then be reoriented by either rotating, advancing, or even transposing the flap edges in a different direction, analogous to a Z-plasty. Due to the potential for reorientation, standing tissue cones are not removed prior to elevating the flap and choosing the appropriate direction. This delay in tissue cone removal also allows for sparing of tissue and taking out only a minimum amount of redundant tissue. Once the flap edges are oriented appropriately, a central key stitch is then used between the flap edges to keep the orientation in place. Stitches are then placed in the middle of each of the defects to bring the tissue edges together and relieve the tension of the central stitch. The rule of halves is then used to repair the wounds and central portion of the flap until the redundancy of the tissue cones remains. This redundancy is then removed, and final subcutaneous and epidermal sutures are placed. The resulting suture line is in the shape of a Z.

Summary: Horizontal movement flaps such as the East-West, double advancement, as well as rotation flaps such as the 0-Z double rotation flap have been described in cutaneous literature with the final repair resembling the shape of a Z. The presented Combination-Z, or Como-Z, flap is designed to move tissue in a rotation, advancement, or transposition direction, depending on the desired location of the standing cone deformity, the cosmetic subunits, or the natural tension of the tissue.

Conclusion: The Como-Z flap is a variable movement flap used to close 2 adjacent defects. It may either have an advancement, rotational, or transposition motion, depending on the desired direction of the standing tissue cone. It uses elements of a Z-plasty, bilateral advancement, and bilateral rotation flaps to properly orient wound tension of both defects, spare normal tissue, and create a functional and aesthetically acceptable repair.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 78
Cutaneous Metastasis as a Primary Manifestation of Breast Cancer: A Systematic Review

Purpose: Metastatic breast cancer may initially present with cutaneous lesions. The goal of this systematic review is to evaluate available reports where the initial discovery of primary breast cancer occurred through the diagnosis of metastatic cutaneous lesions. We aim to better understand these cases and the role of dermatologists in their diagnosis.

Design: A review of literature for case reports and retrospective studies was conducted using the following databases: Medline/Pubmed, EMBASE, CINAHL, and EBSCO. The PRISMA guidelines were utilized. Studies were included if they reported a cutaneous metastasis of a primary breast cancer in females. Studies were excluded if skin metastasis occurred in a patient with a history of breast cancer.

Summary: Thirty-six publications were identified. Among these, 27 were case reports and 9 were retrospective reviews. Lesions most commonly presented on the chest and ranged from erythematous macular eruptions to black nodules. In 12 of the 36 cases, a dermatologist was involved in lesion diagnosis. Cutaneous biopsy and subsequent histopathology and immunohistochemistry played a significant role in identifying a breast cancer origin to these lesions in many cases.

Conclusion: The diagnosis of an occult primary breast cancer by means of cutaneous metastatic lesions is a rare occurrence. An enhanced understanding of how these cutaneous metastases present may be of clinical benefit to dermatologists.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 79
The Rheological Properties of FDA-approved Dermal Fillers, and their Application in Clinical Practice

Purpose: To date, there are sixteen unique, FDA-approved hyaluronic acid (HA) dermal fillers, as well as the popular non-FA fillers calcium hydroxylapatite (CaHA) and poly-L-lactic acid (PLLA). While a filler may be FDA-approved for only specific indications, it is common for fillers to be placed in different areas of the face and at different depths to achieve a desired aesthetic result. With a growing array of choices for the cosmetic dermatologist, it has become increasingly important to understand the rheological properties of each dermal filler in order to optimize results and avoid undesired effects. Unfortunately, the rheology of many dermal fillers has not yet been studied. In this presentation, we show the most up-to-date rheological literature, discuss the limitations of rheological studies, and debate about the manufacturer’s role in disclosing data. Our goal is to boil down this information to offer a simplified approach to selecting dermal fillers based on their physical properties.

Design: A Medline search was performed using terms including: dermal fillers, rheology, hyaluronic acid/administration & dosage, hyaluronic acid/chemistry, particle size, viscosity, elasticity, cosmetic techniques, and viscoelastic substances. This search returned 14 relevant articles dating from 2007-2017. We then interviewed two expert injectors regarding their preferences and algorithms for dermal filler selection given their interpretation of the rheological properties.

Summary: Data on HA concentration, crosslinking technology, G’, viscosity, cohesivity, and hydrophilicity are presented. Available data is summarized for CaHA (Radiessse and Radilessse(+))TM, Cohesive Polydextrose Matrix (CPM, Belotero BalanceTM), PLLA (SculptraTM), nonanimal-source small gel particle hyaluronic acid (SPG-HA, Restylane and Restylane-LTM), nonanimal-source small gel particle hyaluronic acid with lidocaine (SPG-HAL, Restylane SilkTM), Restylane DefyneTM (RR), Restylane LyftTM (RD), large particle hyaluronic acid with lidocaine (SPG-HAL, Perlane/Restylane LyftTM), Hyalurax 24H (HYC-24H, Juvederm Ultra and Ultra XCTM), Hyalox 30H (HYC-30H, Juvederm Ultra Plus and Ultra Plus XCTM), Vycross 20mg/mL (VYC-20L, Juvederm VolumaTM, Vycross 15mg/mL (VYC-15L, Juvederm VolbellaTM), and Vycross 17.5mg/mL (VYC-17.5L, Juvederm VollenXM). Rheological parameters are compared between products, and suggestions for clinical application are made.

Conclusion: Understanding rheological properties for dermal fillers is crucial for selecting the appropriate filler for a given location and purpose. Additional studies are needed to assess components of rhology like hydrophilicity, which can alter the effects of dermal fillers in tissue. If manufacturers are not publishing rheological data, we agree that a standardized approach to the study of rhology is needed for third party researchers.

Author: Betty Jiang, MD
Co-author(s): Roshni Ranjit-Reeves, MD; Leslie Baumann, MD; Julie Woodward, MD
Disclosure(s) of Interest: Duke dermatology residency program receives donated products from Allergan.

Poster # 80
Infrared and Visible Light Augments Rejuvenation Effects of Broadband Light by Gene Expression Profiling of Human Skin

Purpose: Prior studies have demonstrated that broadband light can alter the gene expression patterns to rejuvenate the skin. Clinically, addition of infrared light (IR) plus visible light to broadband light is known to improve the visible signs of skin aging. The main objective of this study was to assess whether IR plus visible light can augment the rejuvenation effects of BBL by gene expression profiling.

Data on HA concentration, crosslinking technology, G’, viscosity, cohesivity, and hydrophilicity are presented. Available data is summarized for CaHA (Radiessse and Radilessse(+))TM, Cohesive Polydextrose Matrix (CPM, Belotero BalanceTM), PLLA (SculptraTM), nonanimal-source small gel particle hyaluronic acid (SPG-HA, Restylane and Restylane-LTM), nonanimal-source small gel particle hyaluronic acid with lidocaine (SPG-HAL, Restylane SilkTM), Restylane DefyneTM (RR), Restylane LyftTM (RD), large particle hyaluronic acid with lidocaine (SPG-HAL, Perlane/Restylane LyftTM), Hyalurax 24H (HYC-24H, Juvederm Ultra and Ultra XCTM), Hyalox 30H (HYC-30H, Juvederm Ultra Plus and Ultra Plus XCTM), Vycross 20mg/mL (VYC-20L, Juvederm VolumaTM, Vycross 15mg/mL (VYC-15L, Juvederm VolbellaTM), and Vycross 17.5mg/mL (VYC-17.5L, Juvederm VollenXM). Rheological parameters are compared between products, and suggestions for clinical application are made.

Conclusion: Understanding rheological properties for dermal fillers is crucial for selecting the appropriate filler for a given location and purpose. Additional studies are needed to assess components of rhology like hydrophilicity, which can alter the effects of dermal fillers in tissue. If manufacturers are not publishing rheological data, we agree that a standardized approach to the study of rhology is needed for third party researchers.

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Design: After IRB approval and written informed consent, five patients with Fitzpatrick skin type I-III were treated on the sun exposed forearm with two adjacent fields: one field with infrared (800 nm) plus 590 nm visible light, and one with broadband light, infrared and
590 nm visible light. RNA was extracted from these skin samples and subjected to whole transcriptome RNA-sequencing (Hi-Seq), with raw reads aligned to hg38 reference genome using TopHat 2. Significant genes were called out using D-Seq 2 (R package). Gene ontology (GO) term analyses was derived from DAVID.

**Summary:** Compared to untreated skin, IR plus visible light treated skin demonstrated genes that were differentially expressed (+/-0.1), and IR, visible light plus BBL treated skin demonstrated 189 genes that were altered (+/-0.01). GO term analysis of IR, visible light plus BBL treated skin demonstrated response to wounding and inflammatory responses as the most significantly altered biologic themes (+/- 0.0001), themes that are distinct from BBL alone.

**Conclusion:** Although not directly comparable to the previous BBL gene expression study due to differences in RNA sequencing method and the lack of a comparison group consisting of young individuals, this study did show that additional gene expression changes are detectable with IR, visible light plus BBL compared to BBL alone. As a number of the genes altered by IR plus visible light were previously identified rejuvenation genes, the data suggests that IR plus visible light can augment the rejuvenation effects of BBL on a molecular as well as clinical level.

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**Disclosure(s) of Interest:** Tyler Hollmig, MD and Anne Chang, MD are consultants for Merck. Tyler Hollmig, MD is a consultant for Pathways Genomics, Sciton and Life Spectacular; Anne Chang receives research funding from Sciton, Galderma, Merck, Novartis, Regeneron and NuSkin. Sciton lent Stanford the device for this study.

**Poster # 81 Gender Differences in Perioral Rhytides – Does Facial Hair Play a Role?**

**Purpose:** Studies have demonstrated that women have a higher degree of perioral wrinkling. The cause of this has not been fully delineated but in one study has been attributed to increased sebaceous glands, eccrine glands, and increased local vasculature in the perioral region in men. We postulated that this difference is attributed to the higher density of terminal perioral hairs found in men which provide a protective effect, acting as a scaffolding to support the surrounding connective tissue and resist the formation of wrinkles. In this study, we sought to better quantitate the differences in perioral facial hair density between the genders by estimating the percentage area of the dermis that the follicular units occupies.

**Design:** We performed a 4 mm punch biopsy on 6 fresh frozen cadavers (3 male and 3 female cadavers). The biopsies were taken from the right upper cutaneous lip, 1 cm above the vermilion border midway between the oral commissure and the right philtrum. Hair follicles exiting the epidermis were counted for each punch biopsy specimen. Once fixed in formalin and embedded in paraffin, each specimen was sectioned horizontally and stained with hematoxylin and eosin. Photomicrographs were taken at 10x magnification and the formalin and embedded in paraffin, each specimen was sectioned horizontally and stained with hematoxylin and eosin. Photomicrographs were taken at 10x magnification and the follicular density was calculated for each specimen. Follicular density was defined as the percentage area of the follicles relative to the entire specimen, not the number of hair follicles. A sample t-test was used to calculate significance.

**Summary:** No difference was detected in number of hair follicles. The mean number of hair follicles per punch biopsy was 9.93 for males (range 8 - 11; standard deviation (SD) 1.25) and 10.33 for females (range 9 - 15; SD 3.40) (p = 0.67). There was a statistical significance in the difference in the mean hair follicle density. The mean follicular density was 17.60% for males (range 11.45 ; 26.39, SD 6.37) and 3.09% for females (range 0.74; 4.8, SD 1.71) (p = 0.05)

**Conclusion:** Our findings demonstrate that perioral terminal hair growth in men occupies a larger percentage area of the dermis than in females despite an equal number of hair follicles. We believe that terminal perioral facial hair may serve a protective role, acting as a scaffolding to support the surrounding connective tissue and resist the formation of wrinkles. The limited size of this study, however, may limit generalizability. We hope to expand this study by reproducing these findings with a larger sample size. We also would like to stain the specimen with additional stains for collagen and elastin to evaluate for additional differences between the genders contributing to perioral wrinkling.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 82 A Single-Center, Prospective, Single Treatment Area, Historical Comparator Study to Evaluate The Efficacy and Safety of Altasian Regenerating Skin Nectar in Combination with the 1540 nm Non-Ablative Fractionated Laser for the Treatment of Striae Distensae**

**Purpose:** Striae distensae (SD) are a major psychosocial stressor to patients. Likened to scars, due to similarly disorganized collagen, elastin and vascular structures, their management is challenging. There is still no single, consistently effective treatment modality. Striae rubrae, or newer lesions, are relatively more responsive to treatment. Striae albacia, or end-stage lesions, are particularly stubborn. The authors (NAR; NZ) demonstrated efficacy of the 1,540 nm Non-Ablative Fractionated Laser (NAFL) for the treatment of abdominal SR and SA in a prior pilot study. The present study examines the safety and added efficacy of a post-procedure, Tri-Hex peptide serum that generates collagen and elastin to improve skin texture and plumpness (Altasian Skincare® Inc., Carlsbad, CA) as an adjunct to 1,540 nm NAFL treatment of SD.

**Design:** Ten patients with abdominal SD were sequentially recruited via convenience sampling. SD were treated daily with topical serum, beginning two weeks prior to the first NAFL treatment until ninety-days post-final treatment (follow-up visit). Subjects received a total of 2x1,540-nm NAFL treatments (settings: 50% overlap with four passes (two with both the XD and XF microlens hand pieces)). Photographic, patient and provider six-point Leikert scale evaluations, SD measurements, AEs, blinded observer assessment of pre- and post-photographs and skin biopsies (from two arbitrarily chosen patients) were compared from baseline and follow-up visits. Biopsies stained for collagen and elastin were graded, using pre-established criteria, by two independent dermatopathologists for changes in collagen, elastin and epidermal and dermal thicknesses.

**Summary:** A total of nine patients completed the study as one dropped out due to the inconvenience of travelling to the treatment site. The average patient was 38 years of age (median, 36 years; min 27 years, max 57 years), patients were 89% (n=8) female, Fitzpatrick Skin Types I to IV were represented. SD had been present an average of 12 years (median, eight; min 0.75 years; max 28 years); 89% were SA (n=8) and 11% (n=1) were SR. Within the two week pre-treatment period using the topical serum alone, 33% (n=3) patients demonstrated 10-15% improvement. Specifically, there was improved skin tightness, texture and erythema reduction. This improvement was also noted in patient ratings. Patients received an average of five NAFL treatments (median, six treatments; min, four treatments; max, six treatments). Treatments were an average of 22 days apart (median, 20 days; min, 16 day; max, 33 days). At their last laser treatment, patients rated SD improvement on a six-point Leikert scale (From -3; Very Much Worse; to +3; Very Much Improved ) an average of +2, Much improved; (median 2; min 1; max 3). Objective provider ratings, using the same six-point scale, rated improvement an average of 2, Much improved; (median 2; min 2; max; 3 ). Of note, patients who received six treatments versus four treatments had similar improvement. Intra-procedural pain was rated an average of 4.6 (median; 4; min; 2; max; 9) (scale of 1 to 10, with 10 being the worst). Other AEs included post-procedural edema lasting a few hours, erythema lasting one to three days. Two patients with FPST III and IV had mild and moderate post-treatment hyperpigmentation, respectively. At three months’ follow up, the mild PH had nearly resolved without bleaching agents; the moderate PH was treated with hydroquinone 4% cream once daily and was much improved after 3 months. Ninety-day post-treatment objective and subjective evaluations, SD measurements, histopathologic analysis, historical comparison and independent-reviewer pre- and post-photograph assessments are pending.

**Conclusion:** Preliminary data demonstrate that this TriHex peptide is an effective adjunct to NAFL for the treatment of abdominal SD. Specifically, it reduced erythema, skin laxity and roughness; moreover, it effectively reduced incidence of post-treatment hyperpigmentation, a common AE of NAFL that deters patients and providers from aggressive treatment regimens. Treatments were able to be compounded, which increases efficacy and reduces length of therapy. As results were comparable between patients who underwent four versus six treatments, it suggests improvement may follow a logarithmic curve that plateaus after four treatments. Final data regarding historical comparisons, SD size reduction, histopathologic changes, subjective and objective Leikert-scale ratings and blinded observer photographic pre- and post-treatment evaluations are pending. In addition, further, large scale studies are necessary to continue to elucidate the utility of this TriHex peptide as an adjunct to NAFL treatments of SD of the abdomen.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.
**Poster # 83**  
**Modified Mohs Micrographic Surgery for Squamous Cell Carcinoma of the Dorsal Hand in Solid Organ Transplant Patients: Pre-treatment with One Cycle of Electroscopy and Curettage**

**Purpose:** Solid organ transplant patients are at a significantly increased (65-250x) risk of cutaneous squamous cell carcinoma (SCC). Mohs micrographic surgery (MMS) is the treatment of choice. Field carcinization with high background mutational burden and squamous atypia is a challenge in many of these cases, and if extreme may lead to challenging clearance with multiple Mohs stages and large surgical defects. In an effort to mitigate these challenges, we propose for select cases to use one cycle of light electroscopy and curettage (E & C), immediately prior to the first Mohs stage. Rationale: twofold: removal of epidermis improves clinical delineation of invasive tumor component, while the destructive technique treats background actinic damage.

**Design:** A retrospective analysis was conducted using an institutional MMS database. Sixty transplant patients who underwent MMS for SCC of the dorsal hand from 2013 to 2016 were included. Two treatment groups were included: (1) patients undergoing one cycle light E&C prior to MMS (Modified MMS group) and (2) traditional MMS alone. Primary outcome was local recurrence, while secondary outcomes were defect size and number of Mohs layers. Descriptive statistics were performed, and treatment group comparisons were conducted using Fisher exact tests and nonparametric Wilcoxon rank sum tests.

**Summary:** From 2013-2016, a total of 113 tumors were treated. To ensure similar treatment groups with adequate followup, comparative outcomes data were limited to records from 2014-2015, during which 54 tumors treated; 22 (40.7%) were treated with Modified MMS (Table 2). Overall recurrence rate was 8.0% (4/50); 5.0% (1/18) in Modified MMS group, and 9.4% (2/32) with traditional MMS (P=0.001). Follow-up information was missing for 4 patients. Modified compared to traditional MMS required fewer Mohs layers for lesion clearance (One stage MMS: 63.3% vs. 29.0%, P=0.001). Despite no statistical difference in initial lesion size (P=0.632), surgical defects were smaller in the modified MMS group at the conclusion of treatment (P=0.044).

**Conclusion:** Initial results indicate modified MMS with adjunct one cycle of light E&C is associated with similar recurrence rates to traditional MMS, but importantly decreased number of Mohs layers and smaller final surgical defects. While epidermal removal prior to MMS contradicts classical dogma which requires presence of epidermis, we advocate that this added step in only a select group of patients improves clinical delineation of invasive tumor components, and offers improved identification of clinical tumor margins as well as provides “field” treatment of background actinic damage. This study presents a simple adjunct treatment that may improve management of cutaneous SCC of sun exposed sites in solid organ transplant patients. Limitations include retrospective nature, limited follow-up and small study size.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 84**  
**Cysteamine: A New Treatment for Melasma & Other Hyperpigmentation Disorders**

**Purpose:** Cysteamine hydrochloride is known for its potent depigmenting effect since 1960's when Chavin tested it through injecting cysteamine into the black goldfish skin. A few years later, different in vivo studies showed the higher depigmenting efficacy of this molecule compared to hydroquinone. Superiority to hydroquinone was recently confirmed in vitro. However, cysteamine has never been utilisable in human mainly due to the very offensive odor it produced in topical products. An innovative technology has now released an innovative technology to deodorize cysteamine. Cysteamine thus became utilisable for the first time in a topical product.

**Deodorization:** Deodorized cysteamine has now released an innovative technology to deodorize cysteamine. Cysteamine thus became utilisable for the first time in a topical product. Deodorized cysteamine showed a significant melanogenesis inhibiting effect in different in vitro and in vivo models. Two double-blind, placebo-controlled randomized human studies in patients with epidermal melasma showed the significant efficacy of deodorized cysteamine for the treatment of this hyperpigmentary disorder. In a recent well-controlled clinical trial, cysteamine showed a significant efficacy against hyperpigmentary disorders such as melasma and hydroquinone.

**Conclusion:** Cysteamine is biologically produced in mammalian cells and serves as an intracellular anti-oxidant. This molecule has been orally used in human, mainly for the treatment of cystinosis, and has a long history of safety for human use. The anti-mutagenic effects might make it a suitable substitute for phenolic depigmenting compounds, such as hydroquinone.

**References:**

**Author:** Jeanine Downie, MD

**Disclosure(s) of Interest:** Jeanine Downie, MD is a consultant for Aclaris, Allergan, BTL, Galderma, Intendis, Johnson & Johnson, LaViv, Lifes 2 Good, Merz, Nutrafol, Perigree Medical, Pfizer, Proctor & Gamble, Restorea, Revance, SkinMedica, Theraplex LLC, ThermRF, Valeant; has ownership interest in Medinetricks, RegimenMD

**Poster # 85**  
**Near-Infrared Vein Visualization during Injectable Cosmetic Procedures for Potential Reduction of Side Effects**

**Purpose:** Using near-infrared light technology to visualize vessels during cosmetic injections to avoid adverse events or increase the success of procedures has been anecdotally reported. We aim to evaluate the clinician and patient experience with NIR vein visualization during cosmetic injectable procedures.
Design: Seventy-one patients underwent cosmetic injections of neuromodulators, soft-tissue fillers, or sclerosants. The vessels were visualized using NIR imaging just prior to the injection. The device used is designed to primarily identify venous structures. The injector and subject completed user surveys immediately following the procedure.

Summary: More vessels were visualized with NIR imaging than with the naked eye in 100% of patients. Injectors agreed that the device provided more confidence about where to perform the injection, and felt patients found the device engaging and helpful. Patients liked the idea of the practitioner using the device and thought it helped them understand and be less fearful of the procedure. The incidence of post-injection bruising was far lower than reported in filler clinical trials.

Conclusion: Both practitioners and patients had positive experiences with NIR vein visualization during cosmetic injectable procedures. As made apparent by the device, there are often large complexes of veins within commonly treated areas. This could greatly increase the risk of bruising after injectables if they are not outlined prior to the procedure. Further studies are needed to accurately assess the effect on adverse events such as bruising, although the trend herein is a marked reduction in bruising immediately post-injection.

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Disclosure(s) of Interest: Robert Weiss, MD and Mitchel Goldman, MD received free use of equipment for this study, loaned from Christie Medical Holdings, Inc.

Poster # 86
Discrepancies in Pain Perception: Lessons Learned from a Clinical Trial

Purpose: This retrospective study compares subject-reported pain levels and expectations set forth by industry and treating physicians during a clinical trial of an energy-based device for skin tightening. The physiologic and emotional aspects of pain expectations are discussed and recommendations are made for strategic patient counseling.

Design: Average and median pain scores were collected from the records of a previously conducted clinical trial investigating a radiofrequency microneedling device for skin tightening. The study protocol and device manual were reviewed to ascertain language regarding procedural pain. Treating physicians were asked how they learned about procedural pain and how they described it to subjects. Subject-reported pain scores and verbal pain descriptors from the device manual and study protocol were translated onto validated pain scales, the Numerical Rating Scale and the Verbal Rating Scale, for comparison.

Summary: A total of 90 procedural pain scores were collected from 30 subject charts. The average procedural pain score was 5.5 out of 10 and median pain score was 6 out of 10. The study protocol, device manual, and description by the company’s president translated to a pain level of 2-4 on the NRS.

Conclusion: Subject-reported pain scores were higher than those set forth by industry materials and personnel. Physicians should be wary of manufacturer materials or anecdotal evidence that might mislead patients and cause undue physiological or emotional stress, and may corrode the integrity of the doctor-patient relationship.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 87
Superficial Fascia Treatment Depth Assessment Using Microfocused Ultrasound with Visualization

Purpose: Targeting the appropriate anatomical layer for treatment is key to achieving optimal outcomes with aesthetic procedures. Underneath the skin lies the superficial fascial system (SFS), where the superficial facia sits between the superficial lamina (small-sized fatty tissue layer) and the intermediate lamina (large-sized fatty tissue layer). In order to achieve optimal neocollagenesis and neoelastogenesiss with microfocused ultrasound with visualization (MFU-V), depth is important for effective lines of treatment. The purpose of this study was to evaluate the depth of superficial fascia relating age and body mass index (BMI), in order to achieve safe and effective treatment outcomes.

Design: A total of 30 male and female subjects were evaluated. Male and female subjects were matched by age and BMI, and 15 combined ranges were evaluated (age 20-25; BMI: 20-25 to age: 60-65; BMI: 30-35). The distance from skin to superficial fascia was measured using visualization with MFU-V in the buccal space (lower mid-cheek), pre-maseteric space (angle of the mandible), and lateral neck.

Summary: The depth of superficial fascia varies by age, gender, and BMI. Application of energy superior to the superficial fascia results in ineffective treatment due to only the superficial lamina being targeted. Application of energy deep into the superficial fascia in facial/neck areas could result in nerve damage.

Conclusion: No standard recommendations on target depth can be made due to variation of tissue layers by age, gender, and BMI. The depth of superficial fascia should be assessed for each individual and energy carefully applied to ensure effective and safe outcomes. Factors that contribute to satisfying outcomes with microfocused ultrasound include the use of visualization for proper customization of target depth during face and body treatment.

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Disclosure(s) of Interest: There are no commercial interests to disclose.

Poster # 88 Withdrawn
Poster # 89
Nipple Adenoma: Use of Mohs Surgery to Spare the Nipple-Areolar Complex

Purpose: Nipple adenoma, formerly known as erosive adenomatosis of the nipple or florid papillomatosis of the nipple, is a benign proliferation of the lactiferous ducts of the nipple. Histologically, an irregular ductal proliferation with papillary projections is seen within the nipple stroma without significant cellular atypia. Clinically it presents as an eroded mass on the nipple, most commonly in women ages 40-50. Tumor margins are often indistinct and ill-defined requiring total removal of nipple-areola complex to avoid recurrences. Recently, Mohs micrographic surgery (MMS) has been reported for the treatment of nipple adenomas. We present a case of nipple adenoma in a 26-year-old woman that was treated with MMS, thus allowing for tissue sparing of the nipple-areolar complex.

Design: A 26-year-old, nulligravid woman presented with a growing mass on her left nipple of 3-months duration. Days prior to presentation, it began to drain serosanguinous fluid, which prompted her to seek medical attention at an urgent care facility who referred her to dermatology. Physical examination revealed a 7 mm x 6 mm pink, dome-shaped papule overlying the left nipple with a central erosion. Linear and serpentine structures were visualized on dermoscopy. Shave biopsy of the lesion demonstrated a superficial and deep dermal tumor composed of tubular arborizing structures with papillary areas. The ducts were lined with 2 cell layers (epithelial and myoepithelial) and decapsulation secretion was identified. There was no frank atypia. Overall, this was consistent with nipple adenoma with positive margins.

Summary: The patient was referred for breast imaging. Given her age, a breast ultrasound was performed, which demonstrated a small benign cyst in the left breast, but otherwise no concerning underlying lesion. After discussion of surgical treatment options, the patient elected to proceed with MMS. Frozen section examination of the first stage demonstrated an irregular and arborizing proliferation of the lactiferous ductal epithelium, which was clearly demarcated from the organized normal breast glandular epithelium. Clear histologic margins were obtained on the second stage, leaving some of the nipple and all of the areola intact. Repair of the 10 mm x 9 mm defect was performed with a purse-string suture to recreate the shape of the nipple. The patient has done well, now 4 months postoperative with a good cosmetic result.

Conclusion: Nipple adenoma is a benign, but distressing tumor of the nipple ductal epithelium. It has traditionally been treated with wedge excision of the nipple-areolar complex. Recently, MMS has been used as a tissue sparing alternative. We report the 6th case of the use of MMS for this tumor and in, as far as we are aware, the youngest patient reported to date. With the use of MMS, maximal tissue sparing was possible while ensuring a low risk of recurrence. MMS should be considered for this diagnosis to avoid unnecessary mutilation of the nipple-areola complex, which has tremendous cosmetic importance especially when the tumor is present in younger individuals.

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Disclosure(s) of Interest: There are no commercial interests to disclose.
Poster # 90
Analysis of Mohs Micrographic Surgery Stages for Basal Cell Carcinoma on the Nose by Cosmetic Subunits and Tumor Subtypes

**Purpose:** There are limited studies in the literature which examine the number of stages required for a Mohs micrographic surgeon to achieve clear margins of a tumor on each cosmetic unit of the face. Nose, lips, and ears tumors often take more than 1 stage to clear. To further explore this topic, we analyzed a subset of patients treated with Mohs micrographic surgery for basal cell carcinoma (BCC) on the nose and assessed the number of stages and tumor type by nasal cosmetic subunit.

**Design:** This is a retrospective study that examined all cases with basal cell carcinoma on the nose that were treated between December 2014 and March 2018 in a private practice setting. 424 patients fulfilled the inclusion criteria. Cases were further analyzed by cosmetic subunit location on the nose, and by tumor histopathological type. Cosmetic subunits on the nose were: Columella, tip, root, ala, dorsum, nares, and sidewall and Nasolabial Fold. Categories for histopathological tumor type included: BCC non-subtyped (referred to as BCC), BCC nodular, BCC infiltrative, BCC micronodular, BCC sclerosing, BCC keratinizing, and BCC superficial. Pearson’s Chi-squared analysis was performed to compare 1) Number of stages and Location and 2) Number of stages and Tumor Type.

**Summary:** There was no statistical significance when comparing number of stages required to achieve clear margins with specific location of nose (p = 0.99, p = 0.811, p = 0.534, p = 0.739) or with tumor histopathological type (p = 0.454). The most common location was the nasal tip and the least common was the columella. The highest number of stages was found at the nasal tip (Mean = 1.8) and the lowest for the nasal root (Mean = 1.4). Superficial BCC required the highest number of stages (Mean = 2.14) and micronodular BCC required the lowest number of stages (Mean = 1.59).

**Conclusion:** Although no statistical significant difference was found within this study among cosmetic subunits of the nose, it was clear that the mean number of stages is higher than the mean elsewhere on the face. Additional studies examining other cosmetic subunits of face would be valuable to delineate any associations between location and number of stages.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

Poster # 91
A Single Site, Open Label Clinical Trial, Evaluating the Duration, Efficacy, and Safety of a Novel Lip Plumper

**Purpose:** Lip augmentation has been on the rise in recent years in part due to changing societal trends and the advent of minimally invasive dermal fillers. Due to cost, pain, and potential risk for complications, some individuals elect to opt-out of having these procedures and for these reasons, a topical lip-care treatment to temporarily plump the lips may be an attractive option to many women. Lip plumpers are topical agents that offer immediate, but temporary, volumization of the lips. While these products are becoming increasingly popular and are available at multiple retailers, there is a lack of clinical studies to the efficacy, longevity, and safety of the lip plumping products. This prospective study will evaluate the efficacy and safety of novel lip plumper using 3D photography, and will relay subjects’ assessment and opinions of this product.

**Design:** This is a prospective, single center, clinical trial to evaluate the duration, efficacy, and safety of a lip plumping agent in two clinical visits. Lip volume and adverse event were assessed by two clinicians at various time points: 15 minutes, 1 hour, 2 hours, 3 hours, and 4 hours. Subject self-assessments were performed at the various time points as well and an end of study questionnaire was administered.

**Summary:** Twenty-two subjects were enrolled in the study, and eighteen completed the study. Investigator assessments of global improvement 15 minutes after application of the lip-plumping product demonstrated improvement in lip fullness in 100% of the patients (18/18), and 1 hour post-application 67% (12/18) showed an improvement in lip fullness that was statistically significant compared to the 2 hour assessment (p < 0.05). Subject evaluations noted improvement in lip fullness 15 minutes post application in 94.4% (17/18) of subjects, and one hour post-application, 89% (18/18) of the subjects who completed the trial noted some improvement in the volume of their lips that was statistically significant compared to the 2 hour post-application time point (p < 0.0001). Subjects noted that they did experience a tingling and heat sensation, but a majority noted that this sensation lasted less than 15 minutes.

**Conclusion:** Our study demonstrated that the lip plumping product increased lip volume in almost all patients 15 minutes post application and showed a continued improvement in lip fullness per investigator assessments 1 hour after application. Adverse events of a tingling or heat sensation were expected and observed as the topical product contained capsaicin, cinnamon, and menthol, all of which can induce this sensation by the release of substance P.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

Poster # 92
The Life of a Wound: Serial Documentation of Wound Healing after Shave Removal using Reflectance Confocal Microscopy

**Purpose:** We present the reflectance confocal microscopy in vivo characteristics of wound healing after shave excision of an atypical nevus over a 3-month period.

**Design:** This case report discusses wound repair using in vivo serial imaging. A patient presented with a suspicious pigmented nevus that was described as “changing and growing”. This lesion was visualized under dermoscopy and reflectance confocal microscopy (RCM), which is a non-invasive diagnostic imaging technique that images the epidermis and papillary dermis at a near-histologic resolution. On RCM, it was noted that this melanocytic nevus had moderate cellular atypia, therefore the decision was made to perform a shave excision. Serial images of the wound were taken using reflectance confocal microscopy before shave excision and at days 1, 4, 7, 10, 14, 21, 28, 56, and 84 days after removal. Stack and mosaic images were acquired and analyzed by an expert confocal reader. A timeline of epithelialization, cellular infiltrate, and connective tissue deposition was reported in conjunction with prevailing observations. These state that the inflammatory phase occurs within 1-6 days after insult, the proliferative phase within 1-4 weeks, and the remodeling phase from 3 weeks to months or years.

**Summary:** After obtaining RCM images at specific intervals before and after shave excision, characteristics of wound repair over time after were described, including the inflammatory, proliferative, and remodeling phases. Such findings may help to better manage wound healing in the future.

**Conclusion:** Reflectance confocal microscopy can be used to assess and describe the stages of wound healing and remodeling after superficial shave excision.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

Poster # 93
Stem Cell Rich Amniotic/Chorionic Membrane in the Prevention of Impending Graft and Flap Necrosis

**Purpose:** Flap and graft necrosis can result in devastating functional and cosmetic outcomes in dermatologic surgery. Unfortunately there are few treatment modalities that can salvage tissue undergoing pending necrosis. Recent advances in regenerative medicine have shown that mesenchymal stem cells (MSC) and vasogenic growth factors have been successful in reversing limb ischemia in animal models. We propose the use of amniotic/chorionic allografts rich in stem cells and angiogenic growth factors as a potential means to salvage tissue undergoing pending necrosis. Here we report a case of pending full thickness (FTSG) necrosis averted with the application of stem cell rich amniotic/chorionic membranes.

**Design:** A 57 year old female underwent full thickness skin grafting of the entire nasal tip subunit as part of a scar revision procedure. At the time of surgery she was noted to have significant fibrosis and a relatively poor vascular bed at the graft recipient site. The patient had been poorly compliant with wound care, and unbeknownst to the surgeon had continued to smoke. Two days post operatively, she presented to clinic with features of early graft necrosis. The graft site was cleansed with hypochlorous acid and a 2x3 cm amniotic/chorionic membrane graft containing 3% mesenchymal stem cells (MSC) and vasogenic growth factors was placed over the wound. An occlusive bandage was applied and the patient was instructed to leave the dressing in place, undisturbed for 1 week. The patient was also started on 325 mg aspirin daily; however she declined hypotensive oxygen therapy due to cost, and also refused topical nitroprusside out of concern for headache. The patient was treated at one week intervals using aforementioned membranes for four weeks - when grafted tissue had completely healed. Photos and wound measurements were taken at every visit. The patient was also seen at 3 and 6 month post operative follow up visits to assess graft appearance.

**Summary:** Graft necrosis was averted with the application of amniotic/chorionic membranes with the most dramatic improvement occurring after the first membrane
application. Overall take rate of the FTSS was 100% with excellent cosmetic and high patient satisfaction.

**Conclusion:** Membranes rich in stem cells and growth factors may provide angiogenic stimuli that reduces tissue ischemia in dermatologic surgery and thus could serve as an important adjunct to other therapies for early stages of tissue necrosis. Better tools for objectively measuring tissue necrosis and response are necessary to enhance our understanding of the treatment response in cutaneous ischemia. Larger studies are necessary to help account for the many variables encountered in wound healing and provide a better assessment of treatment response.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 94**  
**Surgical Reconstruction Using Guiding Sutures**

**Purpose:** The surgical repair of large facial defects poses a unique challenge to the dermatologic surgeon. Compared to other locations of the body, the face has a relative dearth of recruitable tissue. This challenge is compounded by the fact that there are numerous free margins and facial cosmetics units that must be respected at all costs to achieve a satisfactory outcome. Guiding sutures are a versatile yet underutilized tool in a surgeon's armamentarium in the repair of facial defects left to heal by secondary intention. Though first described in detail by Dr. Albright in 1961, there are very few recent papers discussing their use in the literature. Here we will discuss the ease and use of this technique.

**Design:** Placed using nonabsorbable superficial interrupted sutures strategically oriented linearly across the defect, guiding sutures "guide" the tissue into a desired plane to heal in the most cosmetically suitable manner. They offset any unfavorable contractile forces. The remaining defect is then allowed to heal by secondary intention with minimal risk of unwanted distortion of surrounding free margins.

**Summary:** Secondary intention healing offers many benefits. It eliminates the need for a laborious time-intensive repair, often a limiting factor in elderly or ill patients. There is no need to extend the wound edges to achieve elliptical closure or create a secondary defect as needed for grafts and flaps. It avoids many of the complications of the more complex repairs including hematomas and seromas, graft loss, and flap necrosis. It circumvents the need for general anesthesia, as used in some large repairs. Wound care is relatively easy, consisting of daily dressing changes with an occlusive bandage. When used in the right locations, secondary intention healing often produces a superior cosmetic outcome. Despite its benefits, there are two major factors that limit the utility of secondary intention healing, including undesirable tissue retraction and prolonged healing times.

**Conclusion:** Guiding sutures are a versatile yet underutilized tool for the repair of facial defects. They offer an excellent options for large defects near free margins, especially in patients who will benefit from more conservative treatment and repair options. They are quickly and easily placed by the surgeon and can eliminate many of the complications involved with more complex repair options.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 95**  
**Aesthetic Rejuvenation of the Earlobe**

**Purpose:** Much deliberation has been given to the aesthetic improvement of various aspects of the face. However, with respect to the earlobe, relatively little has been done. Studies have shown that there is a preferred shape and size for the earlobe. With age, changes in laxity can result in lengthening and atrophy of the earlobe. Patients can find these changes undesirable. Consequently, it is important to take into consideration the earlobe when evaluating a patient for facial rejuvenation.

**Design:** Although there is a paucity of noninvasive therapies published for earlobe aesthetics, it stands to reason that therapies successful for the face and neck would be effective in this region as well. In this article we review the various modalities that have been explored in earlobe aesthetics, as well as the potential for novel therapies.

**Summary:** There has been much discussion into surgical correction of elongated earlobes during rhytidectomies. However, surgical intervention is not always warranted or desired. To date, there is a relative paucity of literature on the topic of non-surgical earlobe rejuvenation approaches. Numerous non-invasive options are currently available for facial rejuvenation and are applicable for rejuvenation of the earlobe. These include hyaluronic acid fillers, which have been used to increase earlobe volume, radiofrequency, laser, and dermabrasion for skin quality and improvement of rhytides, as well as various topical therapies.

**Conclusion:** There are a myriad of minimally invasive therapies that could be efficacious in the rejuvenation of the earlobe. Modalities that have proven safe and effective for the face and neck could prove valuable and. Physicians should have non-surgical alternatives to consider as an adjunct to facial rejuvenation. Further clinical investigation into these modalities should be performed.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.

**Poster # 96**  
**Practicality of Optical Coherence Tomography to Accelerate Treatment of Basal Cell Carcinomas**

**Purpose:** The gold standard of basal cell carcinoma (BCC) diagnosis is histopathology. Given the steps involved in preparing and reading biopsies, BCC treatment typically involves multiple visits to the dermatologist. Incorporating optical coherence tomography (OCT) into a clinic setting, as is currently the standard of care in the author's (O.M.) practice, can expedite the diagnosis, treatment, and clearance of BCCs into one single clinic visit.

**Design:** A 71-year-old Caucasian man with a history of non-melanoma skin cancers was seen at the Veterans Affairs (VA) hospital in Brooklyn, NY. During a routine full-body skin exam, the patient was discovered to have four pink scaly papules on the torso which were all concerning for BCCs under dermoscopy. He lived 100 miles from the VA hospital and wished to have all of the lesions treated as quickly as possible. He did not want to return for multiple follow-ups nor delay treatment. All 4 lesions were photographed, triangulated, and imaged with OCT (Vivosight, Michelson Diagnostics, Kent, UK). The OCT images were used for both diagnosis and margination. A thin shave of the 4 lesions was sent to pathology for confirmation. Then each site was treated with curettage once for treatment followed by a small application of 35% trichloroacetic acid for hemostasis. After the curettage, the lesions cannot be viewed with OCT given the inflammation and ulceration that has been produced. However, OCT was repeated to view the margins of each lesion. No evidence of residual BCC was present at the lateral margins. All images were examined by the same physician (O.M.). Next, a second thin shave was performed on all 4 treated sites and sent to confirm clearance. Three days after the patient was diagnosed, treated, and had confirmatory biopsies sent, the final histopathology results were available. The patient’s 4 pretreated shave specimens were all diagnosed as superficial BCCs (sBCC), and all 4 post-treated sites were clear of BCC and had clear margins. He returned at one-month and all the sites were healed appropriately with very minimal scarring. At six month follow-up, there was no evidence of recurrence at any site.

**Summary:** We present a case where cutaneous imaging was used in vivo to identify BCCs. On the day that he came for a full-body skin exam, our patient was able to have 4 different sBCCs diagnosed, treated, and have confirmation of clearance all in one visit. Diagnosis was made based on clinical, dermoscopic and OCT findings by the author (O.M.). All the specimens were sent for further confirmation by histopathology; however, the patient did not need to return for another month and this was only for a site check given he had multiple treatments.

**Conclusion:** Cutaneous imaging and OCT has been used in dermatology for over 10 years now, yet it is still used sparingly in our field. Its utility is valuable and can expedite the identification of BCCs as well as other skin lesions. There is a learning curve with the devices and dermatologists need to be trained with hands-on experience before utilizing them in a clinic setting. Similar to learning histopathology, dermatologists have to become accustomed to the modality of the device and become familiar with how images of skin are projected. Additionally, given the handpieces, it can be difficult to scan certain concave surfaces. Once a physician is trained in OCT scanning and interpretation, application of the device in a clinic setting can be useful in accelerating BCC identification.

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**Disclosure(s) of Interest:** There are no commercial interests to disclose.
The following abstracts represent poster presentations sponsored by industry (numbers 97 – 125).

**Poster # 97**
Evaluation of the Antioxidant Capacity and Protective Effects of a Comprehensive Topical Antioxidant Containing Water-Soluble, Enzymatic, and Lipid-Soluble Antioxidants

**Sponsoring / Presenting Company:** Skinbetter Science, LLC

**Author(s):** David H. McDaniel, MD, Diane B. Nelson

**Co-Author(s):** Jacob M. Waugh, Lily I. Jiang, Thomas J. Stephens, Alex Yaroshinsky, Chris Mazur

**Objective / Purpose:** To evaluate the antioxidant capacity of a comprehensive topical antioxidant (Alto Defense Serum™; WEL-DS), its ability to protect skin against the oxidizing effects of UVA/UVB radiation, and to assess the effectiveness and tolerability of WEL-DS for visible improvements in facial photodamage.

**Design:** In vitro testing utilized a hydrogen peroxide assay to detect activity in human skin explants following application with WEL-DS, a leading antioxidant serum (L-AOX) and saline. Clinical studies included a minimal erythema dose (MED) trial in females, aged 35-60 years. Skin was initially irradiated to determine each subject’s MED. WEL-DS was applied for 4 days to one site on the lower back of subjects; the other site remained untreated. Both sites were irradiated with 1X, 2X and 3X each subject’s MED, digital images were obtained, and punch biopsies were collected from irradiated areas (3X MED) for histological analysis. A second clinical study evaluated efficacy and tolerability of twice daily application of WEL-DS in females, aged 25-65 years with mild to moderate photodamage. Changes in fine lines/ wrinkles, dyschromia, erythema, skin tone, pores, and tolerability were assessed at baseline, 4, 8 and 12 weeks. A subset of subjects was evaluated through week 16.

**Results / Summary:** Skin treated with WEL-DS neutralized up to 53% more hydrogen peroxide relative to L-AOX. Further, skin treated with WEL-DS demonstrated 94%, 76% and 50% less UV-induced erythema vs. untreated irradiated skin at 1X, 2X and 3X MED N=5; p=0.025, p<0.001, and p=0.004, respectively. Skin treated with WEL-DS demonstrated significant cellular protective effects vs. untreated skin at 3X MED exposure as evident by reductions in molecular markers: thymine dimer, p<0.02; MMP-9, p<0.005; CD1a Langerhans Cells, p<0.008. WEL-DS demonstrated average improvements from baseline of 37%, fine lines/wrinkles; 18%, erythema; 17%, skin tone; 13%, dyschromia; and 4%, pores (N=21; week 12). Continued improvements were demonstrated in all parameters in a 4-week extension study (n=14). WEL-DS was well-tolerated.

**Conclusion:** In addition to the innate ability of Alto Defense Serum to quench hydrogen peroxide, these studies show that skin treated with Alto Defense Serum demonstrated significantly less UV-induced erythema and provided substantial cellular protection in comparison to untreated irradiated skin, illustrating its ability to provide comprehensive protection against the oxidizing effects of UV radiation. Treatment with Alto Defense Serum safely and effectively reduced the visible effects of facial photodamage, demonstrating early clinical improvements in the visible signs of photoaging and leading to progressive improvements in a subset of subjects long-term.

**Poster # 98**
Use of a High-Strength Serum Containing N-Acetyl Tyrosinamide

**Sponsoring / Presenting Company:** NeoStrata Company

**Author(s):** Brenda L. Edison, BA, Peter Konish, MS, Yaling Lee, PhD, Barbara A. Green, RPh, MS

**Objective / Purpose:** Serums are used by consumers for their concentrated ingredients and targeted effects. They provide a desired product form which can be used alone or easily layered under products to boost everyday antiaging regimens. A high-strength serum was formulated with 1.25% N-acetyl tyrosinamide, a novel matrix-building amino acid derivative shown to provide firming effects in skin, and 8% glucuronolactone, a polyhydroxy acid (PHA) to gently increase cell turnover and promote an even skin tone. The serum also contains low molecular weight (LMW) hyaluronic acid fragments to draw surface hydration and smooth skin. An in vitro assessment of the effect of the combination of N-acetyl tyrosinamide and glucuronolactone on anti-aging matrix markers was conducted as well as an in vivo 12-week clinical study to assess tolerability and effectiveness of the serum when used twice daily on an aging population.

**Design:** In vitro: Human fibroblast cell culture was exposed to the combination of N-acetyl tyrosinamide and glucuronolactone in roughly proportional ratios as formulated in the serum to assess changes in type I collagen and hyaluronic acid. In vivo: Women, ages 40-60 years with Fitzpatrick skin types II-IV and the presence of moderate global facial lines and wrinkles and/or moderate global facial mottled hyperpigmentation (4-6 on a modified Griffiths’ scale (0 = none to 9 = severe) used the serum, followed by a balm daily use sunscreen (SPF 35), for 12 weeks. At weeks 0, 4, 8 and 12, clinical grading for fine lines, wrinkles, pigmentation, clarity/brightness, firmness, evenness of skin tone/redness, skin smoothness and pore size was conducted using a 0-9 scale; pinch recoil (objective measure of firmness) was conducted and irritation/tolerability was assessed using a 0-3 scale. Digital photographs and self-assessment were also captured.

**Results / Summary:** In vitro results showed the combination of N-acetyl tyrosinamide and glucuronolactone increased type I collagen (35%, p=0.01) and hyaluronic acid (32%, p=0.01) in human fibroblast cells. In the in vivo clinical study had 38 women complete the study. As early as 4 weeks, many of the clinically graded anti-aging parameters were significantly improved and by 8 weeks all parameters were significantly improved, p<0.05. After 12 weeks clinically graded, mean percent improvements included: fine lines (25%), wrinkles (11%), pigmentation (10%), clarity/brightness (13%), firmness (14%), evenness of skin tone/redness (19%), skin smoothness (21%), pore size (9%). In addition, pinch recoil / firmness was significantly improved by an average of 10% (p<0.05). Corresponding self-assessed skin improvements were noticed including firmness (82%), improvements in signs of aging (82%) and smoother texture (82%). Digital photography demonstrated obvious anti-aging effects including fewer lines and wrinkles, better skin clarity and more even pigmentation. The serum was well tolerated.

**Conclusion:** Anti-aging effects were shown through both in vitro and in vivo assessments. Clinical, objective and self-perceived anti-aging benefits, including significant firming, skin smoothing and pigmentation-evening benefits were demonstrated from use of this serum with N-acetyl tyrosinamide, PHA and LMW hyaluronic acid.

**Poster # 99**
Escalating Doses of IncobotulinumtoxinA (Xeomin®) for Extended Treatment of Glabellar Frown Lines: Results from a Randomized, Double-Blind Study

**Sponsoring / Presenting Company:** Merz North America

**Author(s):** Corey Mass, MD

**Objective / Purpose:** The effect of escalating doses of Xeomin (>20U for GFL) on response rates and duration of response has not been studied. Previously, an analysis of a pilot study suggested a roughly linear relationship to duration of response with doses escalating in 20U increments. Here, the objective was to assess the effect of varying doses of Xeomin on the safety, efficacy and duration of treatment effect for GFL.

**Design:** Subjects (N=37) with moderate to severe GFL (Merz Aesthetics Scales [MAS] were randomized to receive 1 of 3 doses; 20U [control]; n=8), 60U (n=11), and 100U (n=17). The mean time to return to baseline for mean MAS scores (at maximum frown) was used to assess duration of response. Subjects with a ≥2-point improvement in wrinkle severity at maximum contraction were also assessed over time, consistent with the stringent endpoint used for FDA approval. Patients were followed through one year. Adverse events (AEs) were monitored throughout the study.

**Results / Summary:** A strong dose response was observed for clinical efficacy and duration of effect. A progressive increase in the duration of effect (return of mean MAS score to baseline) was noted with higher doses; mean scores returned to baseline at ≤4 months for the 20U dose, ≤7 months for 60U, and ≤11 months for 100U. Treatment response was highest in the 60U and 100U dose groups throughout the study. By 9 months, 23% of those in the 100U group remained responders (defined by a stringent ≥2-point MAS score improvement). Overall subject satisfaction was high. All AEs (19 total AEs in 14 subjects) were consistent with previous Xeomin studies, and none were considered related to distant spread of toxin. A somewhat higher incidence of AEs was noted in the 100U group (47% of subjects) compared with the other groups (25-36% of subjects).

**Conclusion:** Within the range of doses examined, there was a generally linear relationship between the Xeomin dose and duration of treatment effect. Safety of Xeomin at higher doses was favorable, with no unexpected safety findings. Overall, findings suggest that the dose of Xeomin for GFL may be safely increased from the standard 20U to help achieve patients’ individual treatment goals, including duration of effect. On the basis of these findings, a larger study is warranted.

**Poster # 100**
Optimizing Patient Outcomes through a Customized Approach of Microfocused Ultrasound with Visualization Treatments: Consensus Guidelines

**Sponsoring / Presenting Company:** Merz North America

**Author(s):** Sabrina Guillen Fabi MD, on behalf of the Ultherapy Treatment Consensus Group

**Objective / Purpose:** Microfocused ultrasound with visualization (MFU-V) is FDA-cleared for the lifting the skin of the brow, neck and submentum, as well as for improvement of lines and wrinkles of the décolleté. Published pivotal studies have led to the development of basic treatment maps and guidelines; however achieving optimal outcomes in clinical practice...
requires a fully customized approach. The objective of the present consensus guidelines is to provide a framework for clinicians to develop a customized treatment plan informed by key patient characteristics and proper use of ultrasound visualization to assess skin anatomical features.

**Design:** Consensus guidelines and recommendations were developed by a global panel of expert aesthetic physicians who convened for a half-day advisory meeting to discuss best practices for the use of ultrasound visualization. Key topics for discussion included: patient factors that contributed to favorable or poor outcomes; customization of the number of treatment lines, energy settings and treatment depths; distinguishing approaches for restorative vs. preventative vs. maintenance treatments; and important safety considerations.

**Results / Summary:** Use of ultrasound visualization is the most important factor for selecting transducers / treatment depth and planning the number of lines at each depth. Higher density treatments (in 3 dimensions, planned according to measured tissue depths) are associated with ideal outcomes. Treatment intervals should be tailored to age, with older patients requiring more frequent treatments to maintain results driven by continued collagen production. Because neocollagenesis is valuable to all patients, MFU-V can be applied for both preventative and restorative treatments. In addition to proper treatment technique, the most important factors associated with positive outcomes are management of patient expectations and proper diagnosis by providers.

**Conclusion:** Supported by a large body of clinical literature, a well-characterized mechanism of action and high reported patient satisfaction, MFU-V is considered by the expert panel of physicians to be a key foundational aesthetic treatment and the gold standard for nonsurgical lifting and tightening of the skin. The consensus guidelines presented here expand upon the available evidence and clinical data to provide a framework for physicians to fully customize their approach to treating patients with MFU-V, leading to excellent outcomes that are integral to a patient’s overall aesthetic treatment plan.

**Poster # 101**
**Comparison of Xeomin to Botulinum Neurotoxin Type-A Formulations in Asia**

**Sponsoring / Presenting Company:** Merz North America

**Author(s):** Jurgen Frevert

**Co-Author(s):** Ki Young Ahn, Mee Young Park, Owen Sunga

**Objective / Purpose:** All protein-based products, such as botulinum neurotoxin type A, are potentially immunogenic and can lead to diminished or complete absence of efficacy, especially if administered repeatedly. As such, the protein content in botulinum neurotoxin formulations is an important consideration when selecting a product for treatment. Because formulation data are not always publicly accessible, this study analyzed the neurotoxin composition of each product relative to Xeomin®.

**Design:** The neurotoxin composition of botulinum neurotoxin type A formulations newly introduced in Asia, including Botulax®, Meditoxin®, Nabota® and Relaxtox®, were measured by sandwich enzyme-linked immunosorbent assay with antisera compared to Xeomin.

**Results / Summary:** Botulax and Nabota contained 844 and 754 pg of neurotoxin protein, respectively; the percentage of inactive neurotoxin was calculated to be 103 and 81, respectively. Meditoxin and Relaxtox had 575 and 578 pg of neurotoxin, respectively, marginally higher than that of Xeomin, while the percentage of inactive neurotoxins was 38 and 33, respectively. The potency per pg of neurotoxin was 0.174 and 0.173 U, respectively. By comparison, Xeomin with no inactive neurotoxin contained 416 pg/vial of purified neurotoxin and 0.240 U of efficacy per pg of neurotoxin, yielding the lowest neurotoxin protein content and consequently the highest specific potency compared to the four Asian botulinum neurotoxin type A formulations.

**Conclusion:** Botulax, Nabota, Meditoxin and Relaxtox had higher neurotoxin protein concentrations due to greater amounts of inactive neurotoxin. This analysis of four botulinum neurotoxin type A formulations in Asia shows lower neurotoxin purity and specific potency compared to Xeomin.

**Poster # 102**
**OnabotulinumtoxinA for Treatment of Forehead and Glabellar Lines: Patient Satisfaction and Impact**

**Sponsoring / Presenting Company:** Allergan

**Author(s):** Steven Dayan, MD; Patricia Ogilvie, MD; Alexander Rivkin, MD; Steven Yoelin, MD; Julia Garcia, PhD, MS

**Objective / Purpose:** Clinical trials of facial aesthetic treatments tend to use combined clinician / patient assessments as the primary efficacy measure, but in clinical practice, the success of such treatments depends more on patient satisfaction. Several patient reported outcome (PRO) metrics have been developed and validated, including the 11-item Facial Line Outcomes (FLO-11) questionnaire, the Facial Line Satisfaction Questionnaire (FLSQ), and the Self-Perception of Age (SPA) questionnaire. OnabotulinumtoxinA became the first botulinum toxin approved in the United States for treatment of forehead lines (FHL) based on the results of two 12-month, phase 3 studies (142 and 143) that included simultaneous treatment of glabellar lines (GL). PRO measures were pooled from these two studies to gain insight into the appearance-related psychological impacts of treatment and patient satisfaction following treatment with onabotulinumtoxinA 40 U for moderate to severe FHL.

**Design:** Studies 142 and 143 consisted of a 6-month, double-blind, placebo-controlled treatment period followed by a 6-month, open-label treatment period. The present analysis pooled prespecified PRO data from the placebo-controlled periods of these studies. In addition to the single-item SPA, metrics were responder rates for all FLO-11 items and all FLSQ follow-up items. The questionnaires were administered at baseline, on days 7, 14, and 30, and monthly thereafter. Response was defined differently for each PRO metric.

**Results / Summary:** The pooled cohort comprised 608 participants randomized to receive onabotulinumtoxinA 40 U and 257 participants randomized to receive placebo, representing the ITT population. Significantly greater proportions of participants treated with onabotulinumtoxinA 40 U versus placebo were responders on all FLO-11 items, all FLSQ follow-up items, and SPA at day 30. Differences from placebo were significant for all metrics at all time points. For all metrics except for FLSQ follow-up item 6 (feeling older), results were significant at the level of P ≤0.005; for this item, P=0.01 at day 150 and returned to P≤0.005 at day 180.

**Conclusion:** A high level of satisfaction and significant improvements in psychosocial impacts and perception of age, as measured by 3 validated PRO assessment tools, were observed among participants whose facial rhytids were treated using onabotulinumtoxinA injections to FHL and GL in 2 placebo-controlled trials. Studies demonstrating the benefits of treating FHL with simultaneous injection of GL contribute to the body of evidence guiding treatment decisions, and this analysis of PRO data sheds light on patient perceptions of appearance-related psychological impacts and overall satisfaction following onabotulinumtoxinA treatment.

**Poster # 103**
**Ultherapy Stimulates Collagen Synthesis in Human Skin: A Pilot Study**

**Sponsoring / Presenting Company:** Merz North America

**Author(s):** Gordon H. Sasaki, MD

**Co-Author(s):** Lisa Misell, Jody Grossman

**Objective / Purpose:** Microfocused ultrasound with visualization (Ultherapy, MFU-V) is an effective means for tightening and lifting lax facial and neck skin. The subcutaneous delivery of MFU causes tissue coagulation and initiates neocollagenesis and collagen remodeling. The objective of this study was to measure dermal and subcutaneous tissue collagen synthesis following MFU-V treatment.

**Design:** To label newly-synthesized collagen with 2H (deuterium), two healthy adult female subjects scheduled for rhytidectomy drank 60 mL of 70% 2H2O (heavy water) three times daily for 5 days to label –1% of body water followed by a maintenance dose of 60 mL of 70% 2H2O twice daily for 37 days prior to surgery. Two weeks after starting 2H2O, subjects underwent unilateral dual-density MFU-V treatment in the preauricular region. Subjects continued drinking 2H2O twice daily for 4 more weeks. At week 6, treated and control tissues were excised during rhytidectomy and analyzed for 2H labeling by liquid chromatography-mass spectroscopy.

**Results / Summary:** MFU-V-treated tissue demonstrated a higher percentage of collagen synthesized vs. control tissue. Type I collagen increased by 5.5% in Subject 1 and 11.2% in Subject 2 while Type III collagen increased by 15.7% in Subject 1 and 17.8% in Subject 2.

**Conclusion:** A high level of satisfaction and significant improvements in psychosocial impacts and perception of age, as measured by 3 validated PRO assessment tools, were observed among participants whose facial rhytids were treated using onabotulinumtoxinA injections to FHL and GL in 2 placebo-controlled trials. Studies demonstrating the benefits of treating FHL with simultaneous injection of GL contribute to the body of evidence guiding treatment decisions, and this analysis of PRO data sheds light on patient perceptions of appearance-related psychological impacts and overall satisfaction following onabotulinumtoxinA treatment.
**Poster # 104**

**Mechanism of Action of Implanted Polymethylmethacrylate (PMMA) collagen gel filler**

**Sponsoring / Presenting Company:** Suneva Medical, Inc.

**Author(s):** Stephen Ronan, MD

**Co-Author(s):** Christoff P. Erickson, MD

**Objective / Purpose:** To characterize PMMA-induced collagen production in the skin.

**Design:** Single center, open-label prospective study in 11 healthy volunteers undergoing abdominalplasty. PMMA filler (Bellafill®) was injected intra- or sub-dermally into abdominal skin planned for removal. Punch biopsies were harvested at 1 week, 1-, 2-, 3- and/or 6 months and stained for extracellular matrix proteins. Blinded histopathologic readings were performed by a dermatopathologist.

**Results / Summary:** Normal inflammatory infiltrate was exhibited at all timepoints with an influx of fibroblasts and new vasculature. Increased deposition of collagen type III began following the first week post-injection, peaked at month 2 and diminished through months 3 through 6. Collagen type I deposition became evident at month 1 and continued to increase in intensity through the study endpoint (6 months). Elastic staining was inconclusive. PMMA microspheres remained within the initial injection area and became encapsulated within new collagen fibers. The growth and pattern of new connective tissue mimicked a normal wound healing response.

**Conclusion:** PMMA-collagen gel filler stimulates types I and III collagen when injected into human skin. This combination of neo-collagenesis followed by microencapsulation of PMMA microspheres in the new tissue provides for long-lasting results.

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**Poster # 105**

**Bellafill® Rheology Study**

**Sponsoring / Presenting Company:** Suneva Medical, Inc

**Author(s):** Z. Paul Lorenc, MD

**Co-Author(s):** Brian Pilcher, PhD; Tina MacArthur

**Objective / Purpose:** To characterize the rheologic properties of PMMA dermal filler.

**Design:** Rheological analysis was performed on dermal fillers, including PMMA (Bellafill®), 4 Hyaluronic Acids (HA) (Restylane-L®, Juvederm Ultra XC®, Juvederm Voluma XC® and Belotero Balance®) and CaHA (Radiesse-L®). Measurements were made using a TA Instruments AR1000-N rheometer calibrated at 25°C. Frequency sweeps were performed (0.1 to 10 Hz on a logarithmic scale) with 10 points per decade and 5 Pa oscillatory stress. The elastic modulus (G’), complex viscosity (η*), and viscous modulus (G”) of each dermal filler was measured in triplicate and readings at 0.7 Hz approximating skin tension were averaged and reported.

**Results / Summary:** Measurements for HA and CaHA fillers approximated previously reported G’, and G” ranges low to high with Belotero < Juvederm Ultra XC < Juvederm Voluma < Restylane-L < Radiesse. Bellafill exhibited a G’ and η* slightly higher than Radiesse. G” measured slightly below Radiesse, but significantly higher than HA gels.

**Conclusion:** PMMA-collagen gel filler exhibits the highest G’ and η* of available dermal fillers, indicating its capacity for lifting and support in facial aesthetic procedures.

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**Poster # 106**

**The Hidden Impact of Seborrheic Keratosis: Analysis of a Psychometric Survey of an Ethnically-Diverse Cohort of U.S. Adults**

**Sponsoring / Presenting Company:** Aclaris Therapeutics, Inc.

**Author(s):** Shuai Xu, MD, MSc, Stacy Wang, PharmD, and Esther Estes, MD, MPH

**Objective / Purpose:** Seborrheic keratosis (SKs) are among the most common benign skin lesions, yet an individual’s perception of these lesions is not well understood. A survey was conducted to assess the psychosocial impact of having SKs.

**Design:** Email was sent to a diverse panel of 612,500 registered U.S. consumers from September to October 2017 and 8,775 responded. Those who met the screening criteria or self-identified via photographs as having an SK were invited to participate in an online survey. There were 64 questions to assess socio-demographics, perceptions, coping behaviors and experience with HCPs related to their SKs.

**Results / Summary:** A total of 702 adults with SKs (mean age 50 years, 80% female, and mean annual household income $120,000) completed the survey. Respondents were 62% Non-Hispanic White, 14% Asian, 12% Hispanic, and 10% African American. Among participants with SKs on multiple body locations (67%, n=468), SKs on the face or hairline were of greatest concern (86%). Among respondents (45%, n=314) who expressed concern about their SKs to their HCP, the most common reasons for doing so were concern that the lesion could be cancer (60%) and negative cosmesis (56%). The majority (84%, n=590) reported attempts to mask or modify their SKs, and make-up application was the most common strategy (53%: 65% of females and 8% of males), followed by use of OTC products such as wart removers or anti-aging products (44%) and avoidance of sun exposure (27%). The majority (81%, n=569) were highly or extremely interested (4 or 5 on a 5-point Likert scale) in receiving treatment for their face/hairline SKs, yet the majority (71%, n=502) elected not to have their face/hairline SKs removed due to fear of scarring or procedure-associated pain (32%) or their HCP not informing them of treatment options (29%). Less than third of the respondents reported having had a facial/neck (28%) and trunk/extremity (24%) SK removed by an HCP.

**Conclusion:** Despite the high interest in SK removal, less than a third of the participants opted to have an SK removed by a dermatologist/HCP due to treatment safety concerns or their provider not educating them on options. Findings from this survey highlight the negative impact benign SKs could have on patients and inform dermatologists/HCPs on missed opportunities to improve communications with patients on SK treatment options.

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**Poster # 107**

**Analysis of Potential Impact of Healthcare Provider Gender on Rating Cellulite Severity**

**Sponsoring / Presenting Company:** Synchrony Medical on behalf of Endo Pharmaceuticals

**Author(s):** Gengzhou Liu, PhD

**Co-Author(s):** V. Leroy Young, MD; Mitchel Goldman, MD; Neil S. Sadick, MD; David Hurley, MD; Michael McLane, PhD

**Objective / Purpose:** Cellulite is predominantly observed in women. Data have shown that patient gender can potentially impact medical assessment and subsequent patient care. However, debate continues as to whether healthcare provider (HCP) gender might influence the perception of the severity of a medical condition or treatment decisions. It has been hypothesized that researchers and patients may have concerns regarding the potential impact of HCP gender on medical and/or aesthetic condition assessments and treatment decisions. This analysis sought to assess the potential impact of the gender of the HCP on evaluating cellulite severity.

**Design:** Aesthetic surgeons or dermatologists rated female cellulite severity using the Clinician-Reported Photonumeric Cellulite Severity Scale (CR-PCSS). The CR-PCSS is a 5-point scale that rates cellulite severity from “0” (none) to “4” (severe). HCPs (n=31; 10 female and 21 male) evaluated cellulite while viewing a set of 25 digital images that represented the range of cellulite severity on buttocks or thighs. In a separate, real-world live assessment population approach to evaluate the effect of HCP gender, buttocks and thighs of 483 patients with cellulite were assessed: 118 patients by 6 female HCPs and 365 patients by 19 male HCPs.

**Results / Summary:** The mean CR-PCSS ratings (standard deviation) of the images by 10 female and 21 male HCPs were 2.1 (1.3) and 2.2 (1.3), respectively. Similar results were observed during a second round of rating the 25 images as well as in a comparison of all ratings from both rounds. Mean scores ranged from 1.8 to 2.4 for female HCPs and from 1.7 to 2.5 for male HCPs. Although there was an unbalanced size between male (n=21) and female (n=10) raters, an equivalence test was conducted and the results indicated that the gender rating ratio (female/male=1.03) and resulting 95% confidence interval (0.95-1.13) were within an acceptable confidence interval range of 0.8 to 1.25. In the population analysis, the overall mean rating of buttocks and thighs was 2.8 (0.8) when rated by female HCPs and 2.9 (0.7) when rated by male HCPs.

**Conclusion:** HCP gender did not appear to impact assessment of cellulite severity ratings. Thus, researchers and patients can be reassured that whether during clinical trials or in clinical practice, HCP gender should not bias HCP assessment of cellulite severity.

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**Poster # 108**

**A Phase III, Multicenter, Randomized, Double-Blind, Active and Placebo-Controlled, Single Dose Study to Investigate the Efficacy and Safety of PrabotulinumtoxinA in Adult Subjects for Treatment of Moderate to Severe Glabellar Lines**

**Sponsoring / Presenting Company:** Evolus Inc.

**Author(s):** Rui L. Avelar on behalf of the EBV-003 Study Group

**Objective / Purpose:** To investigate the efficacy and safety of prabotulinumtoxinA, a 900 kDa botulinum toxin type A produced by Clostridium botulinum for the treatment of glabellar lines.

**Design:** This was a 150-day, multicenter, randomized, double-blind, active- and placebo-controlled, single-dose, Phase III, non-inferiority study. Adult subjects (n=540) were treated with a dose of prabotulinumtoxinA or placebo. A Phase III, Multicenter, Randomized, Double-Blind, Active and Placebo-Controlled, Single Dose Study to Investigate the Efficacy and Safety of PrabotulinumtoxinA in Adult Subjects for Treatment of Moderate to Severe Glabellar Lines.
to severe glabellar lines at maximum frown as assessed by the investigator on the 4-point Glabellar Line Scale (GLS, 0=no lines, 1=mild, 2=moderate, 3=severe) were enrolled provided that they also felt their glabellar lines had an important psychological impact. Eligible subjects were randomized 5:5:1 to receive a single treatment (0.1 mL injected into each of 5 glabellar sites) of 20 U prabotulinumtoxinA (n=245), 20 U onabotulinumtoxinA (n=246) or placebo (n=49). PrabotulinumtoxinA and onabotulinumtoxinA were each administered as 4 U/0.1 mL; placebo consisted of 0.9% saline. The primary efficacy endpoint was the proportion of responders on day 30; a responder was defined as a subject with a GLS score of 0 or 1 at maximum frown as assessed by the investigator on day 30. Safety outcomes including adverse events were evaluated throughout the study.

Results / Summary: Responder rates for the primary efficacy endpoint were 87.2%, 82.8% and 4.2% in the prabotulinumtoxinA, onabotulinumtoxinA and placebo groups, respectively. The tests of superiority versus placebo were statistically significant: the absolute difference between prabotulinumtoxinA and placebo groups, and between onabotulinumtoxinA and placebo groups were 83.1% and 78.6%, respectively (both p<0.001).

The absolute difference between prabotulinumtoxinA and onabotulinumtoxinA groups was 4.4%; 95% CI = (-1.9, 10.8). Given that the lower bound of the 95% CI for the difference was greater than -10.0%, non-inferiority of prabotulinumtoxinA versus onabotulinumtoxinA was concluded. 211 subjects (211/540, 39.1%) experienced a total of 344 adverse events over the course of this 150-day study.

Within each group, 32.7% of Placebo subjects (16/49), 41.9% of onabotulinumtoxinA subjects (103/246) and 37.6% of prabotulinumtoxinA subjects (92/245) experienced adverse events. Three prabotulinumtoxinA subjects (3/245, 1.2%), 1 onabotulinumtoxinA subject (1/246, 0.4%) and 1 placebo subject (1/49, 2.0%) experienced serious adverse events. No serious event was assessed as study-drug related.

Conclusion: The study met its primary end point. A single dose of 20 U prabotulinumtoxinA was found to be non-inferior to 20 U onabotulinumtoxinA for the treatment of moderate to severe glabellar lines in subjects who felt their glabellar lines had an important psychological impact.

Poster # 109
Assessing Cellulite Severity: Test-Retest Reliability of and Concordance Between New Clinician Reported and Patient Reported Photonumeric Scales

Sponsoring / Presenting Company: Synchrony Medical on behalf of Endo Pharmaceuticals

Author(s): M. Todd Kirby, PhD; William R. Lenderking, PhD; Randall H. Bender, PhD; Jun Chen, MS; David Hurley, MD

Co-Author(s): Naomi B. Kroble, PhD; Genchou Liu, PhD; Michael P. McLane, PhD; Jeffrey A. Davidson, PhD

Objective / Purpose: The Clinician Reported Photonumeric Cellulite Severity Scale (CR-PCSS) and Patient Reported Photonumeric Cellulite Severity Scale (PR-PCSS) were recently developed to allow efficient, reliable assessment of cellulite severity. This non-interventional study evaluated intra- and inter-rater reliability of the CR-PCSS in live (“in person”) patients and concordance with the PR-PCSS.

Design: The CR-PCSS and PR-PCSS are 5-point photonumeric scales (separate for buttocks and thigh) that include 5 photographs ranked in increasing order of cellulite severity, according to number and depth of dimples on the evaluated area, with corresponding labels (0—none to 4—severe) and text descriptors. CR-PCSS test-retest reliability was evaluated at baseline and day 2. To minimize clinician reliance on memory, patient order was changed on day 2 and clinicians were not permitted visual, vocal, or palpation cues. The same patients used the PR-PCSS to self-rate cellulite severity, using either photos or mirrors at baseline and the other method 14 days later; method order was randomized. Intra- and inter-rater (CR-PCSS) reliability were estimated using intraclass correlation coefficients (ICCs). Baseline concordance of the CR-PCSS with PR-PCSS ratings (regardless of PR-PCSS baseline method) was also calculated.

Results / Summary: Six clinicians (83.3% male; mean duration of medical practice, 21.3 years; 50% specialization in plastic surgery and 50% dermatology) and 75 patients (mean age, 44.8 years [range, 18-71 years]) were included. The overall mean (95% confidence interval [CI]) ICC point estimates for clinician intra-rater reliability of the CR-PCSS between baseline and Day 2 for the left and right buttock were 0.81 (0.73, 0.90) and 0.81 (0.72, 0.90), and for the left and right thigh were 0.78 (0.67, 0.90) and 0.79 (0.67, 0.90). At baseline, overall mean (95% CI) ICC point estimates for clinician inter-rater reliability for the left and right buttock were 0.76 (0.69, 0.83) and 0.76 (0.68 0.82), and for the left and right thigh were 0.74 (0.67, 0.81) and 0.75 (0.68, 0.82). CR-PCSS intra- and inter-rater reliability were considered within acceptable range for all areas, with 95% CI lower-bound estimates near or above 0.70, and upper-bound estimates at approximately 0.90. At baseline, concordance (ICC [95% CI]) between the CR-PCSS and PR-PCSS (across methods) for the left and right buttock were 0.51 (0.32, 0.66) and 0.56 (0.38, 0.70), and for the left and right thigh were 0.61 (0.44, 0.73) and 0.67 (0.53, 0.78).

Conclusion: The CR-PCSS is a reliable tool for evaluating cellulite severity of the buttocks and thighs and correlates well with the PR-PCSS.

Poster # 110
Differentiation of Ultherapy (Microfocused Ultrasound with Visualization) Treatment Using a Customized Management Protocol of See-Plan-Treat

Sponsoring / Presenting Company: Merz North America

Author(s): Julia Sevi, MD

Objective / Purpose: Consensus guidelines and recommendations have recently been developed by a global panel of expert aesthetic physicians to consider best practices for the use of microfocused ultrasound with visualization (MFU-V Ultherapy). A component of this discussion included our clinical experience with a customized management protocol (see-plan-treat). In our clinical practice, we sought to evaluate whether this customized management protocol provides improved efficacy and patient comfort.

Design: Our customized management protocol was designed based on the following rationale: 1) target tissues to determine the best approach using MFU-V anatomy, and 2) customize treatments to access the target using see-plan-treat. We conducted an efficacy and comfort audit to compare the standard treatment protocol vs. the customized management protocol.

Results / Summary: Fifty patients were included in this single-site audit. Use of the customized management protocol resulted in all patients reporting positive results: 63% “agree” and 37% “strongly agree” vs. the standard treatment protocol in which 66% reported positive results (43% “agree” and 23% “strongly agree”); 14% “neither agree nor disagree”; 10% “disagree”; and 5% “strongly disagree” (5% were lost to follow-up). Pain was assessed on a 10-point scale. Use of the customized management protocol resulted in an average pain rating of 2.3 vs. 3.3 using the standard treatment protocol. Customized MFU-V treatment using a see-plan-treat approach was demonstrated with before and after case photos at 12 weeks.

Conclusion: Our customized management protocol provides improved efficacy, as well as comfort. Factors affecting MFU-V targeting include facial area, morphology, body fat/BMI, underlying anatomy and tissue health (age and photodamage). Using customized MFU-V patient records for both the SMAS/fibromuscular layer and dermal base to document the scan and plan, and then the treatment, provides a reliable structure to customize one’s approach to treating patients with MFU-V.

Poster # 111
Multicenter Pivotal Study of the Safety and Effectiveness of Cellfina for the Treatment of Cellulite — 5 Year Update

Sponsoring / Presenting Company: Merz North America

Author(s): Michael S. Kaminer, MD, on behalf of the Cellfina 5-Year Study Group

Objective / Purpose: Cellfina is a common cosmetic concern, and tissue release (subcision) for cellulite has been practiced for decades as a treatment option with limited success. A novel procedure has been developed which strengthens and stabilizes tissue while providing integrated anesthesia delivery and precise depth control of minimally-invasive tissue release. The pivotal study supported the FDA-clearance of this novel tissue stabilized-guided subcision (TS-GS) system (Cellfina System) as an effective and safe treatment for the long-term improvement in the appearance of cellulite in the buttocks and thighs with no diminishment of benefit for up to three years. The purpose of this study update was to determine the safety and efficacy of TS-GS for maintained improvement in the appearance of cellulite of the buttocks and thighs out to five years.

Design: A pivotal prospective multi-centered safety and effectiveness study enrolled 55 subjects. Subjects served as their own controls, underwent a single treatment, and were followed at regular intervals out to five years. Safety was assessed and effectiveness was evaluated by blinded, independent physician evaluators using randomized (before/after) professional photographs and a novel, validated 5-point severity scale.

Results / Summary: Treatments were well tolerated with minor expected side effects that resolved quickly. Improvement was rapid and pronounced. 37 subjects completed 5-year follow-ups. The 5-year average reduction in cellulite severity was 1.8 points (p<0.0001) and masked evaluator improvement was 92.8%. At five years, evaluators rated 100% of subjects as having noticeable improvement and 78.4% of subjects were either satisfied or very satisfied.
Conclusion: Tissue release at precise depths leads to significant, lasting improvement in cellulite. The results of this study further demonstrate that a single treatment with a novel TS-GS release system improved the appearance of cellulite on the thighs and buttocks through five years of follow-up with minimal adverse effects.

Poster # 112
Validated Assessment Scales for Cellulite Dimples on the Buttocks and Thighs in Female Patients
Sponsoring / Presenting Company: Merz North America
Author(s): Michael S. Kaminer, MD, on behalf of the Grading Scale Study Group
Objective / Purpose: New treatment methods for cellulite require globally-accepted scales for aesthetic research and patient evaluation. Currently available scales do not meet this need because they are not specific for cellulite dimples and because they are time-consuming for use in clinical practice. Here, we present the cellulite dimple grading scales for the objective quantification of the severity of cellulite dimples in both static (relaxed) and dynamic states, as well as the validity and reliability of these photonumeric scales.

Design: Two photonumeric grading scales were created and validated for dimples in the buttocks in female patients: Cellulite Dimples-At Rest and Cellulite Dimples-Dynamic. Sixteen aesthetic experts rated photographs of 50 women in two validation sessions. The final rating scale was a 5-point cellulite severity scale with a score ranging from zero to four. Responses were analyzed to assess interrater and intrarater reliability.

Results / Summary: Overall interrater and intrarater reliability were both “almost perfect” (≥0.81, intraclass correlation efficient and weighted kappas) for the At Rest scale. For the Dynamic scale, interrater and intrarater reliability were “substantial” (0.61-0.80). There was a high correlation between the cellulite scales and body mass index, age, weight and skin laxity assessments. The results of this validation study demonstrate that the newly developed Merz Aesthetics cellulite dimple grading scales are a reliable and reproducible scoring system for aesthetic evaluation of cellulite dimples on the buttocks and thighs. The scales provide 5-point photonumeric assessments with photo guides of cellulite severity at rest as well as in a dynamic state.

Conclusion: Consistent outcomes between raters and by individual raters at two time points confirm the reliability of the cellulite dimple grading scales for buttocks and thighs in female patients and suggest they would be a valuable tool for use in research and clinical practice.

Poster # 113
Diluted and Hyperdiluted Calcium Hydroxylapatite (Radiesse®) for Skin Tightening: Guidelines from a Global Consensus Panel
Sponsoring / Presenting Company: Merz North America
Author(s): Heidi Waldorf, MD, on behalf of the Radiesse Global Consensus Panel
Objective / Purpose: Calcium hydroxylapatite (CaHA, Radiesse) provides safe and effective correction of moderate-to-severe wrinkles and folds and correction of volume loss in the midface and dorsal of the hands. Clinicians have also begun to expand the uses of CaHA through dilution and subdermal injection to improve skin laxity in multiple areas of the face and body: CaHA hyperdilution contributes to its skin-tightening properties without a volumizing effect. The objectives of the present consensus guidelines were to summarize the available data and evidence for the safe and effective use of diluted CaHA, and to provide recommendations to aesthetic physicians for how to effectively leverage these techniques in clinical practice.

Design: A panel of expert aesthetic physicians from multiple international regions convened to develop a consensus on guidelines for treating laxity and superficial wrinkles using diluted CaHA (ratio of 1:1) and hyperdiluted (≥1:2) CaHA.

Results / Summary: Biostimulation is a key function of diluted and hyperdiluted CaHA. Targeted neocollagenesis can improve laxity and skin quality in several areas of the body, including the face/nape, décolletage, upper and lower extremities, abdomen and buttocks. Superficial use of diluted/hyperdiluted CaHA can be complementary to volume augmentation with undiluted product, and may be combined with additional modalities for optimal results. Injection of diluted/hyperdiluted CaHA is well tolerated, with adverse events predominantly associated with the injection procedure itself. Great care should be exercised when used in thinner and darker skin types; in such cases, too-superficial injections of less diluted CaHA may be associated with an increased number of adverse events.

Conclusion: These guidelines are presented for the novel use of diluted CaHA for biostimulation in the face and body to provide clinicians with a suggested approach. Additional studies will further clarify treatment paradigms for optimal outcomes.

Poster # 114
Safety and Efficacy of Xeomin® for the Treatment of Upper Facial Lines
Sponsoring / Presenting Company: Merz North America
Author(s): Martina Kerscher
Objective / Purpose: In clinical practice, multiple areas of the upper face (glabellar frown lines [GFL], horizontal forehead lines [HFL], and lateral periorbital lines [LPL]) are often treated together using botulinum toxin. Xeomin (incobotulinumtoxinA) was the first toxin approved in Europe for combined treatment of upper facial lines (UFL: GFL+HFL+LPL). This approval was based upon the main period (MP) of a double-blind, placebo controlled, phase 3 study. Here we report efficacy and safety of repeated Xeomin injections for the treatment of UFL in a 3-month open-label extension (OLEX) period of the phase 3 study.

Design: In the MP, subjects with moderate-to-severe UFL (using the Merz Aesthetics Scales [MAS]) received placebo (n=51) or 54-64U of Xeomin (n=105) administered to the GFL (20U), HFL (10-20U), and LPL (24U). In the OLEX, all subjects (n=139) received one treatment with 54-64U of Xeomin. Investigator- and subject-assessed MAS scores were evaluated. Responders were defined as those with a MAS score of ‘none’ or ‘mild’ or those with a ≥1-point improvement. Additional endpoints included Global Impression of Change Scale (GICS) scores and subject-assessed onset of treatment effect. Adverse events were monitored throughout the study.

Results / Summary: Rapid, significant responses were observed in individual treated areas and all treated areas combined. At day 30, the proportions of responders (i.e., score of ‘none’ or ‘mild’) were 80.1%, 77.2%, and 66.9% for GFL, HFL and LPL, respectively. In the OLEX, 88% and 84% of subjects were assessed by the investigator and subject, respectively, as “much improved or “very much improved” on the GICS at 30 days. Onset of effect was rapid, with high response rates observed by 8 days. Xeomin was well tolerated throughout the MP and OLEX, with no increase in adverse events with repeat injection.

Conclusion: Xeomin is effective and well tolerated for the combined treatment of UFL with repeat injection.

Poster # 115
Radiological Evaluation of Radiesse® Implantation to Correct Volume Loss in the Dorsum of the Hand
Sponsoring / Presenting Company: Merz North America
Author(s): Amir Moradi, MD
Objective / Purpose: The objective of this prospective, single-center, open-label study was to evaluate whether Radiesse® (calcium hydroxylapatite) implantation in the dorsum of the hands interfered with radiological assessment by obscuring the bones.

Design: Twenty female subjects were enrolled and had baseline Merz Hand Grading Scale (MHGS) grades ranging from moderate to very severe volume loss. All subjects received Radiesse injection in the dorsum of the hands and were offered up to three retreatments. Ten subjects with very severe volume loss (MHGS grade 4 in one or both hands; Group A) and 10 subjects with moderate to severe volume loss (MHGS grades 2 or 3 in both hands; Group B) received an initial Radiesse injection.

Results / Summary: No obscuration of the bones was reported in either hand for either view (AP or lateral) at any time point. Foreign material was present in all hand X-rays (100%) at month 1. At month 24, in subjects who received four treatments, foreign material was present in 83.3% of hand X-rays, demonstrating durability of the product. Eleven subjects (55%) received retreatment at 6 months, 16 (80%) were retreated at 12 months, and 11 (55%) were retreated at 18 months. AEs reported in 30% of subjects were injection-site abnormalities of mild to moderate severity, namely swelling, pain or nodule. No serious AEs were reported. MHGS results showed ≥1-point improvement from baseline in all subjects at Month 1 and in 65% of subjects at month 24. Subjects in both groups reported improvements in aesthetic appearance of the hands.

Conclusion: Results support the safety and efficacy of Radiesse for improving the overall aesthetic appearance of the hands in subjects with moderate to severe volume loss. Radiesse injection in the hands does not obscure the bones or shift over time as seen on X-rays up to 24 months after initial injection.
Poster # 116
AI-Assisted, Robotic Follicular Unit Excision and Implantation for Hair Restoration with ARTAS iX
Sponsoring / Presenting Company: Restoration Robotics
Author(s): David A. Berman, MD; Eric Selvik, MS; Gabe Zingaretti, PhD
Objective / Purpose: The objective of this case study is to evaluate the use of a new, novel robotic system for hair restoration surgery that both harvests and implants follicular units in men diagnosed with androgenic alopecia.
Design: A 37 y/o male with brown straight hair presented with androgenic alopecia, Norwood Grade 3, and elected to undergo a FUE hair transplantation procedure. The patient was treated using the ARTAS iX system (Restoration Robotics, San Jose, CA), a novel robotic system that assists in the performance of minimally invasive hair transplantation, including both follicular unit excision and graft implantation. Data collected included # of grafts implanted, case time, excision and implantation rates, hair density, and number of hairs/grft.
Results / Summary: The hair transplantation case was completed safely and efficaciously. The ARTAS iX system harvested and implanted 1026 grafts at an average of 28 per cm2, per the pre-operative plan. The total case operative time was 3:26. Harvesting rate was 750 grafts/hr, and implantation rate was 500 grafts/hr, with an average of 1.9 hairs/grft.
Conclusion: The ARTAS iX System is a novel robotic hair restoration platform that provides safe, effective, and clinically efficient follicular unit harvesting and implantation functionality in hair transplantation cases.

Poster # 117
The DeScribe PFD Patch in Picosecond and Q-Switched Laser-Assisted Tattoo Removal: Safety in Fitzpatrick IV-VI Skin Types
Sponsoring / Presenting Company: Merz North America
Author(s): Selina S. Hamill, Paul M. Friedman, MD
Objective / Purpose: The topical transparent DeScribe PFD (perfluorodecalin) patch (Merz North America) has demonstrated a reduction in epidermal whitening produced in association with laser-assisted tattoo removal. This optical clearing agent has enabled multiple laser passes to be made in one treatment session. Previous studies using the PFD patch have showed enhanced clearance with picosecond and Q-switched lasers on blue/ black tattoos in Fitzpatrick skin types I-III. We sought to explore the safety and efficacy of using the PFD patch with Q-Switched and picosecond lasers in Fitzpatrick skin types IV-VI.
Design: A retrospective, single institution chart review was used to assess the safety of treating tattoos using the PFD patch with Q-Switched and picosecond lasers in Fitzpatrick skin types IV-VI. A total of 14 patients, ages 23-66 years, with Fitzpatrick skin types IV-VI were treated with the PFD patches and liquid PFD using the picosecond (532, 785 and 1064nm) and the Q-switched Nd:YAG (1064nm). The treated tattoos contained blue, black, red, green, purple and pink ink. Patient reported adverse events were evaluated.
Results / Summary: The PFD patch and liquid PFD were used with the picosecond (532, 785, 1064nm) and the Q-switched Nd:YAG (1064nm). The treated tattoos contained blue, black, red, green, purple and pink ink. Patient reported adverse events were evaluated.
Conclusion: Our retrospective chart review supports the safety and efficacy of the PFD patch in protecting the epidermis from thermal injury during laser-assisted tattoo removal of various colors in patients with Fitzpatrick skin types IV-VI.

Poster # 118
Ultherapy Treatment Plans and Comfort Management in Real-World Practice
Sponsoring / Presenting Company: Merz North America
Author(s): Amanda K. Doyle, MD
Objective / Purpose: Ultherapy® (microfocused ultrasound with visualization; Merz North America) is a non-invasive procedure that is FDA-cleared to lift skin on the neck, on the eyebrow and under the chin as well as to improve lines and wrinkles on the décolletage. The purpose of this case series was to collect data on the customized treatment plans using Ultherapy with DeepSEE visualization to treat the lower face and submentum and to assess a new comfort management option in real-world clinical use.
Design: Ten patients were recruited at a single-site to receive Ultherapy treatment of the lower face and submentum. Patient selection was based on age, skin laxity, skin quality, comorbidities and facial volume. Prior to treatment, patients received 800mg ibuprofen orally and topical 20% lidocaine/5% prilocaine was applied to all treatment areas for 45-60 minutes. Patients also had PRO-NOX™ (fixed 50% oxygen and 50% nitrous oxide mixture; CAREstream America, Inc.) as an anesthetic, which was self-administered voluntarily, as needed, throughout the duration of the procedure by the patient. Patients verbally rated their discomfort for each treatment area using a 10-point scale (1=Alert, smiling to 10=Closed eyes, moaning/tearing).
Results / Summary: The lower face and submentum was treated in nine patients over the course of three consecutive days. Ultherapy treatments were individualized for each patient and incorporated the use of the 4-4.5, 7-3.0, and/or 10-1.5 MHz transducers (TDs). The number of lines delivered with each transducer was customized based upon degree of skin laxity, patient tolerability, skin texture and quality. Patients completed an increased amount of overall lines compared to the standard recommendations with continuous or intermittent use of self-administered PRO-NOX during treatment. Subject-reported mean pain scores per treatment site were as follows: face (4.5mm TD): 4.1; face (3.0mm TD): 2.4; submentum (4.5mm TD): 4.2; submentum (3.0mm TD) 4.4. No serious adverse events were reported.
Conclusion: This treatment modality of Ultherapy using DeepSEE visualization is well tolerated and safe. The use of self-administered PRO-NOX may facilitate a more intensive treatment course with Ultherapy.

Poster # 119
Efficacy, Safety and Subject Satisfaction Using Rotational Fractional Resection for the Improvement of Submental Contouring
Sponsoring / Presenting Company: Recros Medica
Author(s): Steve Dayan, MD, Jill Wailbel, MD, Steve Yoell, MD
Objective / Purpose: The objective of this study is to evaluate the efficacy, safety and subject satisfaction of the Recros Medica Focal Contouring System to improve submental contouring using Rotational Fractional Resection (RFR). RFR uses small rotating, cylindrical scalpsels to resect lax skin and a small rotating lipectomy cannula to perform focal lipectomy through fractionally resected access ports. Directed closure of the resected sites using an elastic adhesive membrane assures healing and supports the focal contouring effect.
Design: This is a prospective, multi-center, single-arm (non-randomized), interventional cohort study. Each subject was assessed at baseline and six follow-up visits through 180 days after the procedure visit. Up to approximately 60 adult subjects with mild to moderate submental fat and skin laxity will be enrolled. Subject satisfaction was evaluated throughout the study.
Results / Summary: Results include submental skin laxity, submental lipodystrophy scales (5 point scales, 0 = none to 4 = very severe) and a subject satisfaction questionnaire. To date, a total of 20 subjects (16 female, four male) have been treated. Results are based on 11 subjects that have completed the day 30 visit. Most (82%) subjects were satisfied (somewhat satisfied, satisfied or very satisfied) with the results of the procedure and the appearance of their neck and jawline after the procedure. 91% were satisfied with the recovery time of the procedure, and 100% were likely to recommend the procedure to friends and family. Skin laxity was improved by at least one grade in 82% of subjects and two grades in 27% of subjects. Lipodystrophy was improved by at least one grade in 82% of subjects and two grades in 27% of subjects. Subject observations included edema, erythema, and tingling in the procedure area.
Conclusion: RFR is a safe and effective treatment for improving submental contour with a high subject satisfaction rate.

Poster # 120
Selphyl (PRFM) and Viviscal PRO Combination Therapy Provides Improved Results for Androgenetic Alopecia Treatment
Sponsoring / Presenting Company: Viviscal™, a Subsidiary of Church & Dwight Co., Inc.
Author(s): Richard M. Goldfarb, MD, Hair Restoration of Philadelphia
Co-Author(s): Aaron Shapiro, MD, Hair Restoration of Philadelphia
Objective / Purpose: Affecting 50% of men and 20-53% of women by the age of 50, Androgenetic Alopecia is the most common cause of hair loss. Together, Selphyl (PRFM) and Viviscal PRO will have a synergistic relationship for Androgenetic Alopecia treatment results.
Design: Eight cc’s of Selphyl (PRFM) were injected into the scalps of 100 patients. These injections consisted of three treatments that were held six weeks apart. During this time, patients also ingested Viviscal PRO tablets twice a day for six months. All patients were photographed before and after these treatments for documentation and later comparison.
Results / Summary: The combination therapy results were compared to all documented outcomes regarding the use of Selphyl (PRFM) and Viviscal PRO separately. Early results demonstrated major improvements in Androgenic Alopecia conditions, the segment of 25 patient’s results will be presented.
Conclusion: The authors concluded that the combination of these two products enhances the treatment of Androgenetic Alopecia over either treatment alone.

Poster # 121

Treatment of Hyperpigmentation on Skin of Color Using a 650 Microsecond Pulsed 1064nm Laser

Sponsoring / Presenting Company: Aerolase

Author(s): Michelle Henry, MD

Objective / Purpose: Hyperpigmentation is a common cosmetic concern in skin of color, with the underlying cause often linked to melasma or PIH (Post-Inflammatory Hyperpigmentation) from existing or past presence of conditions such as acne or pseudofolliculitis barbae (PFB). Clearance of hyperpigmentation in skin of color is a challenging application, as many modalities used in aesthetic medicine can exacerbate such conditions rather than clearing them.

Design: Subjects of Fitzpatrick Skin Types V-VI were enrolled to be treated using a 650 Microsecond 1064nm laser with a single handpiece (LightPod Neo, Aerolase, Tarrytown, NY). No anesthetics, cooling or gels were needed. Subjects were treated three to six times with a treatment interval of three to four weeks. Using fluences ranging from 14-21 J/cm², the laser energy was applied with a combination of painting techniques and spot treatments.

Results / Summary: The laser treatment was well tolerated with no adverse effects noted. Patient self-assessment revealed that the single therapy resulted in significant clearance with high rates of satisfaction.

Conclusion: A 650 Microsecond 1064nm laser provides patients with skin of color (Fitzpatrick Skin Types IV-VI) a safe, effective, and tolerable treatment for clearing hyperpigmentation, such as melasma and PIH, with no adverse effects.

Poster # 122

Rejuvenation of the Face, Neck and Décolletage Using a 650 Microsecond Pulsed 1064nm Laser

Sponsoring / Presenting Company: Aerolase

Author(s): Michael Gold, MD, Bruce Katz, MD, Kevin Pinski, MD, Jason Emer, MD

Objective / Purpose: Skin rejuvenation is a multifactorial treatment to address treatments that patients can present as any one or more conditions including sun damage (skin tone and texture), facial redness and veins, wrinkles, age spots and/or melasma and brown patches. Numerous energy-based devices have been tested to address skin rejuvenation including laser, light-based devices, and radiofrequency with several devices needed in order to address patients presenting with multiple conditions. This study aims to evaluate the efficacy of a single 650 Microsecond 1064nm laser (LightPod Neo, Aerolase, Tarrytown, NY) in addressing skin rejuvenation with patients presenting with more than one condition.

Design: More than 1,000 subjects (ages 18-65, Fitzpatrick Skin Types I-VI) with more than one of the conditions of sun damage (skin tone and texture), facial redness and veins, wrinkles, age spots and/or melasma and brown patches were treated at four clinics in this multi-center study. All treatments were performed using a novel 650 Microsecond 1064nm laser with a single handpiece. Laser energy was applied using a combination of a painting technique and spot treatments with fluences ranging from 21-255 J/cm² with fluence set based upon the condition addressed and subject’s Fitzpatrick Skin Type. Subjects were treated three to six times each with a treatment interval of three to four weeks. Subjects assessed the improvement, comfort, and satisfaction with the treatments. No anesthetics, cooling or gels were needed.

Results / Summary: All subjects responded to treatment noting marked improvement in overall skin tone and texture as well as clearance of targeted conditions. Patient self-evaluation revealed high rates of satisfaction with overall appearance and improvement of conditions. The laser treatment was well tolerated with no serious adverse effects reported. Slight erythema was noted in patients being treated with high fluence for facial vessels, which resolved no more than several hours post-treatment.

Conclusion: A single 650 Microsecond 1064nm laser and handpiece can reliably address and improve more than one condition (sun damage, skin tone and texture, facial redness and veins, wrinkles, age spots and/or melasma and brown patches) treating for skin rejuvenation of all skin types in a safe, effective, and tolerable manner.
Results / Summary: The mean injection volume (right and left midface combined) at the initial treatment was 3.0 mL (n=60); approximately half of the subjects (52%) were injected with a 27G cannula and the remaining subjects (48%) with a 25G cannula. Seventy-two percent of the subjects were injected with 1.5 inch cannulas and 28% were injected with 2 inch cannulas. Mean injection volume at the optional re-treatment was 1.6 mL (n=43). Of the 5 AEs reported during the study, 4 AEs were assessed as unrelated to the device and/or injection procedure and 1 AE (mild presyncope) was assessed as related. The majority of subjects (98%) reported at least one pre-defined common treatment reaction. Tenderness was most commonly reported (92%) followed by swelling (63%), pain (60%), redness (43%), bruising (30%) and itching (18%). The majority were tolerable and resolved within seven days. Midface function parameters were assessed as normal. The vast majority of both subjects and investigators reported improvement from baseline at all time points (91.5% - 100%) using GAISS. The MMVS responder rate (at least 1-point improvement from baseline) for right and left midface combined was never below 83%. There was a high level of subject satisfaction with treatment, with more than 90% of subjects agreeing with five of the six questions from the subject satisfaction questionnaire.

Conclusion: Midface treatment with Restylane® Lyft with Lidocaine using a small blunt-tip cannula was well tolerated for cheek augmentation and correction of age related midface contour deficiencies and provided visible aesthetic improvement. (ID ClinicalTrials.gov NCT03160716)

Poster # 125
Efficacy, Safety, and Patient-Reported Outcomes Following OnabotulinumtoxinA Treatment for Moderate to Severe Forehead Lines: A Pooled Analysis of Two Phase 3 Pivotal Trials

Sponsoring/Presenting Company: Allergan

Author: Koenraad De Boulle, MD

Co-Author(s): Steve Fagien, MD; Cheri Mao, MS; Garrett Shumate; Conor Gallagher, PhD

Objective/Purpose: Two pivotal, phase 3 studies were conducted to evaluate the safety and efficacy of onabotulinumtoxinA (onabotA) vs placebo (PBO) for treatment of moderate to severe forehead lines (FHL).

Design: In both studies, neurotoxin-naïve subjects were randomized to receive onabotA 40U (frontalis 20U, glabella 20U) or PBO. The second study included an additional treatment arm in which bilateral crow feet regions (CFL) were also treated for a total dose of 64U (FHL 20U, GL 20U, CFL 24U) or PBO. After day 180, all eligible subjects could receive up to 2 additional open-label onabotA treatments, with assessments to day 360. Dynamic and static FHL were assessed at all timepoints by both investigator and subject using the Facial Wrinkle Scale with photo numeric guide. Subject satisfaction with treatment was evaluated using the validated Facial Lines Satisfaction Questionnaire (FLSQ).

Results / Summary: This pooled analysis comprised 1178 subjects in the intent-to-treat (ITT) population (onabotA 40U n=608, onabotA 64U n=313; PBO n=257). At maximum eyebrow elevation, day 30 responder rates for those achieving 2-grade composite FHL improvement based on investigator and subject FWS were 53.1 (40U) and 53.0% (64U), respectively. Responder rates for those achieving 1 grade FHL improvement were 97.9 (40U) and 99.0% (64U). 92.3 (40U) and 94.9% (64U) of subjects achieved a score of none/mild FHL. Of those subjects with at least mild static FHL at baseline, 85.4 (40U) and 84.8% (64U) achieved a 1 grade improvement at rest. Efficacy and patient satisfaction were comparable across treatment cycles. Based on the FLSQ, 85.6 (40U) and 87.9% (64U) of subjects reported being mostly/very satisfied with the effect treatment had on their forehead lines at day 60. Across all treatment cycles over 12 months, 25.4% subjects had treatment-related adverse events; of note were brow ptosis (2.6%) and lid ptosis (1.8%). Most frequently reported treatment-emergent adverse events included headache (11.8%), injection site bruising (7.4%), nasopharyngitis (8.3%), and URTI (4.3%). No new safety signals were detected with repeated upper facial line treatments.

Conclusion: OnabotA significantly improved the appearance of FHL. Treatment of upper facial lines was well tolerated with efficacy and patient satisfaction maintained across repeat treatments.
Join the Conversation ...

Ask questions, share ideas and get solutions with these highly interactive sessions. Faculty will present interesting cases, challenges, techniques, pearls and more. Bring your questions — and then follow the conversations on Quest!

**Cosmeceutical Controversies**

**Friday, October 12**
**1:45 p.m. – 3 p.m.**
**Grand Saguaro West**

Sponsored by the Quest Cosmeceuticals Shared Interest Group (SIG) Discussion Group

**Faculty:**
Kavita Mariwalla, MD
Lauren Taglia, MD

This highly interactive session will address parabens, propylene glycol, sunscreens, peptides, skin lighteners, formulation therapy and more. New treatment therapies on the market for common skin problems will be discussed.

**Wrinkles, Folds and Volumizing Cases**

**Saturday, October 13**
**8 a.m. – 9:15 a.m.**
**Grand Sonoran K**

Sponsored by the Quest Wrinkles, Folds and Volumizing Shared Interest Group (SIG) Discussion Group

**Faculty:**
Derek Jones, MD
Kimberly Butterwick, MD
Amelia Hausauer, MD

**Body Contouring Cases**

**Saturday, October 13**
**1:45 p.m. – 3:15 p.m.**
**Grand Sonoran K**

Sponsored by the Quest Body Contouring Shared Interest Group (SIG) Discussion Group

**Faculty:**
Lisa Donofrio, MD
Bruce Katz, MD
Amy Taub, MD

All members welcome!

**How to access Quest:**

- ASDS members can seamlessly access Quest when logged into asds.net/Quest.
- Alternatively, go to quest-network.org (Chrome or Firefox preferred browsers).
  - Login User ID: (ASDS ID#) + (first letter of last name)
  - Password: (ASDS ID#) + (first 2 letters of last name)
Maximize your ASDS/A member benefits!

Booth #427

Explore the new ASDS website and learn how you can seamlessly connect to Society resources and benefits!

- Delve into ASDSA advocacy efforts and learn how to become a Top Advocate.
- Explore Quest features and SIG discussion groups.
- Learn about upcoming educational opportunities, mentoring programs and research grants.
- Discover new patient and public outreach tools.
- Renew or apply for membership.
- Check out ASDS products, including the new Cosmeceutical Compendium.

Live Social Media Wall
Post on Facebook, Twitter and Instagram
Use #ASDSMeeting

Game On!

Earn the most points in the ASDS Annual Meeting App to win prizes!

- Upload a profile photo: 5 points
- Complete a poll: 10 points (Controversies in Dermatologic Surgery, Iron Surgeon Competition and Resident Lunch sessions)
- Complete the overall ASDS meeting evaluation: 25 points
- Complete the Scavenger Hunt: 5 points each
- Ask a question in a session: 5 points each
- Download a Resource Center document: 2 points each

Grand Prize . . . . . . . . . . . . . $200 gift card + $1000 ASDS Bucks
2nd place . . . . . . . . . . . . . $100 gift card + $500 ASDS Bucks
3rd place . . . . . . . . . . . . . $50 gift card + $250 ASDS Bucks
Honorable mention (4th place) . . . . . . . $25 gift card + $100 ASDS Bucks
Honorable mention (5th place) . . . . . . . $25 gift card + $100 ASDS Bucks

Winners will be announced at the ASDS/A Resource Center on Saturday, Oct. 13 at Noon. If attendees have tied points, the winner will be decided by random drawing. Winners do not need to be present to win and will be notified via email. ASDS bucks are redeemable on ASDS registration, membership dues or products. No cash redemption is allowed on ASDS bucks; ASDS bucks expire Dec. 31, 2019. All taxes on prize are the sole responsibility of the winner.
EXHIBITING COMPANIES (ALPHABETICAL) — Full exhibitor descriptions and contact information can be viewed on the ASDS Annual Meeting Mobile App. (See page 9 for download instructions.)
Exhibit Hours:

**Thursday, Oct. 11** .... 10 a.m. – 6:30 p.m.
Lunch Provided .... Noon – 1:45 p.m.
Beverage Break .... 3:15 – 4:15 p.m.
Welcome Reception .... 5:30 – 6:30 p.m.

**Friday, Oct. 12** .... 10 a.m. – 6:30 p.m.
Beverage Break .... 10 – 10:45 a.m.
Lunch Provided .... Noon – 1:45 p.m.
Beverage Break .... 3 – 4 p.m.
Networking Reception .... 5:30 – 6:30 p.m.
& Silent Auction

**Saturday, Oct. 13** .... 9 a.m. – 2 p.m.
Beverage Break .... 9:15 – 10 a.m.
Lunch .... Noon – 1:45 p.m.

**NOTE:** Exhibitors in orange are participating in the Sample Saturday event.

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**Exhibit Company Listing:***

- Neutrogena
- PCA Skin
- Obagi Medical
- Quill - Surgical Specialties Corporation
- Allergan
- Merz
- NIA24
- Medicis Skincare
- U.S. Dermatology Partners
- Merz/Aesthetics
- Strategic Medical
- Medical Specialties
- NeoStrata
- Sientra
- Procter & Gamble
- Amgen
- Solta Medical
- Innovation
- Aesthetics
- Xcell
- TIZO
- Tewksbury

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**Food & Beverage:**

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**Beverage Break & Networking Reception:**

- Noon – 1:45 p.m.
- 3:15 – 4:15 p.m.
- 5:30 – 6:30 p.m.
- 9:15 – 10 a.m.
- 9:15 – 10 a.m.
- 10 a.m. – 6:30 p.m.
- 3:15 – 4:15 p.m.
- 5:30 – 6:30 p.m.
- 9:15 – 10 a.m.

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**Networking Reception & Silent Auction:**

- 5:30 – 6:30 p.m.
- 3:15 – 4:15 p.m.
- 5:30 – 6:30 p.m.
- 9:15 – 10 a.m.
- Noon – 1:45 p.m.
## EXHIBITING COMPANIES (BY PRODUCT CATEGORY) — Full exhibitor descriptions and contact information can be viewed on the ASDS Annual Meeting Mobile App. (See page 9 for download instructions.)

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