



Message from the President

Colleagues,

My vision for the AOCD in 2018 can be summed up in two words: Connect and Inspire.

Connect: Let's continue to connect with one another as we did with record breaking attendance at our CME meeting in West Palm Beach, FL.

Connect: Let's reach out to our MD colleagues and invite them to our San Diego meeting. For the first time in our 60 year history they'll get full credit for the CME at our meeting.

Inspire: Our College has remained strong and growing for 60 years, and that foundation is the perfect platform for us to expand our influence and support dermatology over the next 60 years.

Inspire: A more dynamic lecture format has energized our CME delivery, inspiring our audience

at West Palm Beach. That positive energy will continue in San Diego.

Let's connect and inspire in San Diego!

Daniel Ladd, DO, FAOCD
 President, American Osteopathic College of Dermatology

Executive Director's Report by Marsha Wise, Executive Director



Hello Everyone,

It's hard to believe summer is here. Thank you to everyone who participated in our West Palm Beach conference at the Hilton, March 21-25, 2018. Over 500 attendees registered to attend this meeting, with 100 of those being walk-in registrations! The Florida requirements session held on Sunday, March 25, 2018 was a HUGE success! Plans are underway to again offer this in April 2019 at our meeting in Orlando.

This year marks AOCD's 60th anniversary. We had a fun and fantastic night at West Palm Beach with our Casino theme gala. Of course, the **BEST** news of the day was receiving word that the AOCD received provisional accreditation with the ACCME. The staff and I are so proud to be able to accomplish this for our members! There are no limits now to what the AOCD can offer its members!

On Friday, March 23, 2018, our annual election was held and Dr. Karthik Krishnamurthy handed the presidential gavel to Dr. Daniel Ladd.



In this issue...

Subspecialty Certification in Mohs Surgery
 The Controversy Continues...page 8

2018 AOCD Spring Meeting Highlights
 ...pages 9-39

DermLine

Newsletter of the American Osteopathic
College of Dermatology

Board of Trustees

PRESIDENT

Daniel Ladd, D.O., FAOCD

PRESIDENT-ELECT

John P. Minni, D.O., FAOCD

FIRST VICE-PRESIDENT

Reagan Anderson, D.O., FAOCD

SECOND VICE-PRESIDENT

David Cleaver, D.O., FAOCD

THIRD VICE-PRESIDENT

Amy Spizuoco, D.O., FAOCD

IMMEDIATE PAST-PRESIDENT

Karthik Krishnamurthy, D.O., FAOCD

TRUSTEES

Danica Alexander, D.O., FAOCD

Steven Brooks, D.O., FAOCD

Jonathan Crane, D.O., FAOCD

Jerome Obed, D.O., FAOCD

Peter Saitta, D.O., FAOCD

Michael Whitworth, D.O., FAOCD

SECRETARY-TREASURER

Steven Grekin, D.O., FAOCD

EXECUTIVE DIRECTOR

Marsha A. Wise, B.S.

Editorial/Public Relations Committee

CHAIR

David Cleaver, D.O., FAOCD

DERMLINE EDITOR

Danica Alexander, D.O., FAOCD

DERMLINE ASSOCIATE EDITOR

Marsha Wise

MEMBERS

Danica Alexander, D.O., FAOCD

Jason Green, D.O., FAOCD

Susun Kim, D.O., FAOCD

Albert Rivera, D.O., FAOCD

Lawrence Schiffman, D.O., FAOCD

Dustin Wilkes, D.O., FAOCD

Corporate Partners

DIAMOND

Galderma Laboratories

Pfizer

PLATINUM

Lilly USA, LLC

GOLD

AbbVie

Valeant Pharmaceuticals

BRONZE

Allergan

Dermatopathology Laboratory of Central States

PEARL

Aclaris Therapeutics, Inc.

Dermopath Diagnostics

Novartis

Sun Dermatology

Contribute to DermLine

If you have a topic you would like to read about or an article you would like to write for the next issue of *DermLine*, contact Marsha Wise by email at mwise@aocd.org or John Grogan at jgrogan@aocd.org.

American Osteopathic College of Dermatology
P.O. Box 7525

2902 N. Baltimore St.

Kirkville, MO 63501

Office: (660) 665-2184 | (800) 449-2623

Fax: (660) 627-2623

Web: <http://www.aocd.org>

<http://www.aobd.org>

2018-2019 AOCD Officer Lineup

President

Daniel Ladd, D.O., FAOCD

President-Elect

John P. Minni, D.O., FAOCD

First Vice-President

Reagan Anderson, D.O., FAOCD

Second Vice-President

David Cleaver, D.O., FAOCD

Third Vice-President

Amy Spizuoco, D.O., FAOCD

Secretary-Treasurer

Steven Grekin, D.O., FAOCD (2018-2021)

Trustees

Danica Alexander, D.O., FAOCD (2015-2018)

Peter Saitta, D.O., FAOCD (2015-2018)

Steven Brooks, D.O., FAOCD (2018-2021)

Jonathan Crane, D.O., FAOCD (2017-2020)

Michael Whitworth, D.O., FAOCD (2017-2020)

Jerome Obed, D.O., FAOCD (2018-2021)

Immediate Past-President

Karthik Krishnamurthy, D.O., FACOD



You may have noticed in our brochures lengthy disclosures regarding our CME activities and speakers. This notification is a requirement of the AOA and the ACCME. We continue to closely monitor any potential conflicts of interest to avoid any commercial bias during our CME activities per standard 6 of the Standards for Commercial Support. A conflict of interest exists when an individual has an opportunity to affect CME content about products or services of a commercial interest with which he/she has a financial relationship.

"An individual must disclose to learners any relevant financial relationship(s), to include the following information: The name of the individual; The name of the commercial interest(s); The nature of the relationship the person has with each commercial interest."

HELP WANTED

The Skin Cancer Center at the Oklahoma Cancer Specialists and Research Institute is seeking a Board Certified/Eligible Dermatologist to add to its practice of cutaneous oncology. Expertise and interest in melanoma and Mohs surgery required.

The Oklahoma Cancer Specialists and Research Institute is a joint venture with St. John and Tulsa Cancer Institute. For more than 40 years, St. John and Tulsa Cancer Institute have provided the community with innovative cancer treatment in the comfort of local surroundings. Our oncology network offers services at five cancer centers throughout Oklahoma with board certified physicians specializing in Medical Oncology, Radiation Oncology, Gyn-Oncology, Onco-supportive Dermatology and Cutaneous Oncology/Mohs Surgery.

Excellent opportunity to join a patient centered practice in a collegial clinical atmosphere with academic and research opportunities as well. Housed in a state of the art facility.

Benefits include base salary guarantee with production bonus, health insurance, vacation/CME.

For further information contact:

Edward H. Yob, DO

Edward.yob@ocsri.org or Call 918-307-0215

AOCD's decisions regarding CME activities are made free of the control of any commercial interest, and all decisions regarding the disposition and disbursement of commercial support are made by the AOCD. [Click here if you are interested in learning more about the Standards for Commercial Support.](#)

Save The Dates!!

2018 Fall Meeting will take place from October 9-13 at the Westin San Diego, Gaslamp Quarter, 400 West Broadway, San Diego, CA 92101.

2019 Spring Meeting will take place from April 7-13 at the JW Marriott Orlando, Grande Lakes, 4040 Central Florida Pkwy., Orlando, FL 32837.

2019 Fall Meeting will take place from September 24-28 at the Omni Nashville Hotel 250 5th Ave. South, Nashville, TN 37203.

Spring 2020 Meeting will take place from February 17-22 at the Hilton West Palm Beach at 600 Okeechobee Blvd., West Palm Beach, FL 33401.

Fall 2020 Meeting will take place from October 8-11 at the Hyatt Centric Magnificent Mile at 633 North St. Clair St., Chicago, IL 60611.

Spring 2021 Meeting will take place from February 22-27 at the Hilton West Palm Beach at 600 Okeechobee Blvd., West Palm Beach, FL 33401.

Fall 2021 Meeting will take place from October 7-10 at the Westin Denver Downtown at 1672 Lawrence St., Denver, CO 80202.

Foundation News



The Foundation for Osteopathic Dermatology recently approved a grant application on *“Frontal Fibrosing Alopecia: and Relationship to Sunscreen Use: A Cross-Sectional Survey Study.”* conducted by Dr. Naeha Gupta, a resident with the Lehigh Valley Health Network and Advanced Dermatology in Allentown, PA.

Click here to check out the Foundation page on our website, to learn more about the Foundation and how you can contribute.

Thank you for your continued support of the AOCD. Please call or email the AOCD office at dermatology@aocd.org if you need assistance.

Should you have questions pertaining to Board Certification, recertification, or Osteopathic Continuous Certification (OCC), please refer to www.aobd.org. You may also contact Libby Strong with the AOA/AOBD at 312-202-8112.

taltz
(ixekizumab) injection
80mg/mL



NOW AVAILABLE.

Visit Our Booth
to learn more about Taltz

Discover more at taltz.com

If you are a US medical doctor with an active state license number, the value of the food, beverage, and/or educational item that you receive when attending this program may be disclosed on Eli Lilly and Company's Physician Payment Registry and/or the National Physician Payment Transparency Program (NPPTP) Open Payments report under the federal Sunshine Act as a transfer of value made to you by Lilly. As a result of enacted state regulations, food and beverages will not be provided to healthcare professionals licensed in the states of Minnesota, Massachusetts, and Vermont. Additionally, educational items will not be provided to healthcare professionals licensed in Minnesota. Federal Veterans Affairs (VA) regulations and several states also prohibit state/government employees from receiving or being provided gift items, which may include educational materials and meals. Please consult your state regulations and ethics laws to see if such prohibition would apply to you. This medical presentation is intended only for invited healthcare professionals for whom the information to be presented is relevant to their practice. We regret that spouses or other guests cannot be accommodated. This is a promotional program and no continuing medical education (CME) credits are offered.

Taltz is a registered trademark of Eli Lilly and Company.
PP-N-US-0377 03/2016 ©2016, LILLY USA, LLC. ALL RIGHTS RESERVED.

Lilly



Corporate Sponsors Support 2018 AOCD Spring Meeting, West Palm Beach

I appreciate having had the opportunity to thank several of our corporate sponsors for their continued support of the College and to welcome new exhibitors at the 2018 AOCD Spring Meeting. The AOCD is very fortunate to have corporate sponsors who join us as partners with a commitment to medical excellence. Our corporate sponsors remain committed to the College and continuing medical education (CME). It goes without saying that our corporate sponsors are critical to helping us accomplish our mission.

New and returning corporate sponsors are as follows:

- Galderma, Pfizer (Diamond Level)
- Lilly USA, LLC (Platinum Level)
- AbbVie, Aclaris Therapeutics, Ortho Dermatologics (Gold Level)
- Allergan (Bronze Level)
- DermPath Diagnostics, Novartis, Sun Dermatology (Pearl Level)

Once again, a thank you to Sagis Diagnostics for sponsoring our meeting lanyards.

Lilly USA, LLC sponsored the Resident Research Paper Competition. Annual awards were presented to recognize the osteopathic dermatology residents' papers which were judged as the best in the competition. All papers submitted were reviewed by the AOCD Resident Research Paper Competition Committee. Papers were judged for originality, degree of scientific contribution and thoughtfulness of presentation. Lilly has been a corporate sponsor and supporter of the AOCD for the last couple of years. We appreciate all Ginger McWilliams, Tara Burke and Lilly do for the AOCD.

The AOCD also appreciates Lilly USA, LLC, SkinCure Oncology, Regeneron, and Genentech for providing product theaters for our physicians.

Exhibitors for the 2018 Spring Meeting were as follows: 3Gen, Inc., AbbVie, Aclaris Therapeutics, Inc., Aurora Diagnostics,

Biofrontera, Celgene, Cutanea Life Sciences, Inc, DermPath Diagnostics, DermPath Lab - Central States, Encore Dermatology, Galderma Laboratories, Genentech, Help Hair Inc., Janssen Biotech, Inc., Kroger Specialty Pharmacy, Leo Pharma, Lilly USA, LLC, Mayne Pharma, Novartis, Ortho Dermatologics, Pfizer, Pharmaceutical Specialties, Inc., Promius Pharma, ProPath Services LLP, PruGen Pharmaceuticals, Ra Medical Systems, Inc., Regeneron Pharmaceuticals, Sagis Diagnostics, Script Solutions, Sensus Healthcare, the Shade Project, SkinCure Oncology, LLC, Strata Skin Sciences, Sun Dermatology and Syneron Candela.

We hope that many of you had an opportunity to express your appreciation to our sponsors and exhibitors while you were in West Palm Beach. The fact that they continue to support the College, many of them doing so for several years, speaks volumes about the value of their commitment to our organization.

We asked attendees to let us know who provided the best customer service, who was the most informative, and who had the best display. The companies and booth attendees are listed below. Congratulations to these companies and booth attendees.

Most Informative Exhibit Booth & Best Customer Service Exhibit Booth

Lilly USA, LLC was voted on by the attendees for being the most informative and providing the best customer service booth. Booth attendees for Lilly USA, LLC are Steve Larson, Craig Brittingham, Michelle Haley, Kaley Page, Michelle Thompson, and Tracey Richardson. Attending the meeting from Lilly USA, LLC was Nick Bires, Todd Houtman, Roberto Marrero, Terri Ridenour, Jackie McPeake, and Lidia Guallar.

Best Exhibit Booth Display

3Gen, Inc. was voted by the attendees as having the best exhibit. The booth attendee for 3Gen, Inc. was Sandy Siegel.

Corporate Spotlight – Pfizer

Pfizer has been a Diamond Level Corporate Member with the AOCD for the past couple of years. Pfizer's defines their corporate

responsibility as bridging the gap to access for patients in need. Pfizer believes everyone deserves access to quality healthcare and the opportunity to lead healthy lives. Pfizer's resources, along with their partnerships with nonprofit organizations, governments and foundations, help them work to identify and allocate the most appropriate resources to help the underserved communities around the world. Pfizer also strives to develop programs to help expand global access to medicines by providing direct assistance to underserved populations. Pfizer is focused on finding a foundation to advance public health and build programs that help communities in need. The Pfizer Foundation provides colleagues opportunities to help strengthen their communities.

Pfizer is committed to protecting their environment. Their commitment to be environmentally sustainable allows Pfizer to do more for people because of their unmatched resources. Pfizer will use their global presence and scale to make a difference in local communities and the world.

One article that stood out for me was "When Eczema Leads to Bullying". Bullying is such an issue within our schools, communities and lives. This article written by Kelly Whalen is inspirational and helps open doors to discussing eczema with teachers, peers, colleagues, school and employer. I hope you enjoy this article.

When Eczema Leads To Bullying **by Kelly Whalen**

Millions of people around the world have eczema, a chronic inflammatory skin condition, which is characterized by dry, red, or scaly skin. Eczema often impacts visible skin, such as the face and arms, and can cause extreme itchiness. Unfortunately, misinformation about the condition can also result in bullying.

According to a study from the National Eczema Association, 1 in 5 children with eczema are bullied or teased about their appearance. The study polled over 400 parents and caregivers of children with eczema.

Bullying reports include comments about the person's appearance, refusing to play

with the child, and name calling. This can affect a child's self-esteem, lower their confidence, and cause issues with socializing with peers.

WHAT IS ECZEMA?

If you are not familiar with eczema it is a skin condition that has eight different types including atopic, contact, and hand among others. Eczema is believed to be caused by a combination of genetic and environmental triggers, however there is no known cause. Eczema is not curable and is not contagious, but treatments are available. Some of the treatments include a daily skincare routine, over the counter or prescription medications, and learning triggers that cause eczema to get worse. Triggers can cause symptoms to get worse and may include things like encountering pet dander, certain foods, or environmental allergens.

It's important to know more about eczema so that you can help combat bullying of children and adults who have eczema.

INFORM: Information is a powerful tool. Share information with your daycare, school, parent/teacher association, coaches, clubs, and any place your child spends time. For adults share information with workplaces, schools, or other people you come into contact with regularly. Be open to questions you may receive and share resources, such as websites, that can help provide additional resources.

ADVOCATE: Being an advocate means publicly support yourself or your child. For young children it's important that parents or caregivers advocate for information to be shared in school and care settings. Preschool or elementary school aged children would benefit from teachers sharing age-appropriate information and parents receiving information via email or pamphlets. Older children may

want to advocate for themselves through several means such as talking to those who are teasing or bullying with a teacher present, talking openly about their eczema, or sharing a talk or information with students and teachers. Adults can advocate for themselves by being open and public about their eczema.

TALK: Keep communication open. For parents, it's important to check in with children regularly, but also keep an open door policy to discuss anything and everything related to their eczema. Talk to teachers, coaches, and other adults who interact with them regularly.

For adult eczema sufferers, it's important to find support as well. Look for local or national groups that have meetings or online forums. Having a safe person or group that understands the challenges you face can help you cope better.

CARE: Proper care is key to managing eczema, so ensuring caregivers, teachers, coaches, and other adults know how to help a child is key. After all many children spend more time in the care of others than in the care of their parents.

Providing your child's school with medications and information that are necessary is a great first step, but it can be helpful that kids learn how to manage themselves as early as possible.

Avoiding triggers can also be key, and ensuring a child learns early what their triggers are and how to avoid or minimize their impact is incredibly helpful.

For more information and supportive resources, visit National Eczema Association: <https://nationaleczema.org/school/>



RESIDENT LIAISON UPDATE BY BRITTANY HEARN, D.O.

Dear Colleagues,

I hope everyone was able to attend the 2018 AOCD Spring meeting and 60th anniversary celebration! The new format was well received, and attendance was at an all-time high! Special congratulations to the winners of the Sagis Diagnostics dermpath bowl, Sampson Regional Medical Center and St. Barnabas Hospital! If residents have any specific feedback regarding the lectures they attended or have input on the types of lectures they would like to see more of in the future, please let us know!

The academic year is quickly coming to an end. Third years, congratulations on your upcoming graduation! Whether you have a job or a fellowship waiting for you this summer, we all have the boards hurdle to jump over first! For those graduating from ACGME accredited programs, you may opt to take either the ABD, AOBD, or both exams at the end of this year. For those graduating from AOA accredited programs, you will be eligible to sit for the AOBD exam. Registration for the ABD has closed, but registration for the AOBD will remain open until August 1st. The AOBD primary certification will take place October 12th, 2018 in conjunction with the AOCD fall meeting in San Diego, CA. To register, please click the following link: <https://docs.google.com/forms/d/e/1FAIpQLSeapAagQhpewihYrsOf2p15TCbw75M63CpXuw39DHLyYoJQA/viewform>. Any questions can be directed to Libby Strong by email at lstrong@osteopathic.org and by phone at 312-202-8112 or Renee Herron at aobderm@gmail.com.

I would like to thank you all for a great year as AOCD resident liaison. Your collective input has really been invaluable to the College. Please continue to stay involved as residents and as new attendings!

Have a great rest of the year and feel free to reach out to me anytime,

Brittany



Hello everyone,

I hope each of you have enjoyed the spring season and summer is off to a great start! It was great to see all of you while attending the Spring Meeting in West Palm Beach. I hope you all enjoyed the lectures and your time in South Florida.

Annual Reports

It is now time for annual reports to be turned in. All forms can be downloaded from our website at <http://www.aocd.org/?page=ResidentReports>.

It is important for everyone to remember that handwritten reports and older versions of the report forms are not accepted. If old versions of the reports or handwritten reports are received, they will be returned to the resident to resubmit in the approved format. The resident's annual report is due to the AOCD office within 30 days after the end of each training year. Reports should not be sent prior to the end of the training year. Residents are encouraged to keep a copy of the report for their records. One original copy of the report should be sent. The signature page must be signed by the resident, program director and director of medical education. It is an affirmation of complete and accurate reports. All signatures on all report documents must be hand signed and original. Photocopies of these documents cannot be accepted and will be returned with a request for the original documents. If signatures are not legible or missing, the report will be returned for revision.

Please do not staple the forms, bind them or use color paper. Please print single-sided only. Review your report before submitting it to ensure that it is complete.

Complete instructions and guidelines can be found in the annual report packet. Please review these for more information.

All reports submitted late are subject to a late fee penalty and will not be reviewed by the EEC until the fee is paid. The late fee schedule is as follows:

- \$100 for all reports submitted 30 to 365 days past deadline
- \$250 for all reports submitted 365 to 730 days past deadline
- \$500 for all reports submitted 731 days past deadline

Late documents will delay the approval of each year of training by the EEC and the AOA's Postdoctoral Training Review Committee.

Finally, report packets should be sent to the locations specified below.

If using the US Post Office, please send your reports to:

American Osteopathic College of Dermatology
P.O. Box 7525
Kirksville, MO 63501

If using any other parcel service, such as FedEx or UPS, please use the following address:

American Osteopathic College of Dermatology
2902 N. Baltimore Street
Kirksville, MO 63501

Spring Meeting Award Winners

Winners of two resident awards were announced for the first time at the 2018 Spring Meeting during the General Business Meeting. I would like to congratulate the following individuals who were selected as finalists for the 2017 AOCD Resident Research Paper Competition, sponsored by Lilly USA, LLC:

1st Place Winner: Greg Delost, DO, for his paper "Staph Aureus Carriage Rates and Antibiotic Resistance Pattern in Patients with Acne."

2nd Place Winner: Dawnielle Endly, DO for her paper "Oily Skin: A Review of Treatment Options."

3rd Place Winners (tie): Natalie Edgar, DO for her paper "Recurrent Aphthous Stomatitis: A Review" and Joseph Dyer, DO for his paper "Chronic Skin Fragility of Aging: Current Concepts in Pathogenesis, Recognition and Management of Dermatoporosis."

Dr. Delost is a 2nd year resident in the LECOMT/University Hospitals Regional Hospitals program under the direction of Dr. Jenifer Lloyd. Drs. Endly, Edgar and Dyer are graduates of the NSUCOM/Largo Medical Center program under the direction of Dr. Richard Miller.

The winner of 2017's Dermatology Surgery in the Outback Australian Surgical Paper Competition was J. Ryan Jackson, DO. The title of his paper was "Three-Stage Melolabial Interpolation Flap for a Nasal Defect." Dr. Jackson is a second year resident in the Still OPTI/Northeast Regional Medical Center program under the direction of Dr. David Cleaver.

Incoming Residents for 2018-2019

I would like to introduce the new residents who have joined our programs for the 2018-2019 year. The AOCD welcomed 43 new residents on July 1. The incoming residents (listed with their programs) are as follows:

- **PCOM/North Fulton Hospital Medical Campus**
 - David Lemchak, DO
 - Haley Martinez Lewis, DO
- **CORE/O'Bleness Memorial Hospital**
 - Brad Hammon, DO
 - Brian Wanner, DO
- **OMNEE/LewisGale Hospital-Montgomery**
 - Jared Brackenrich, DO
 - Tessa Mullins, DO
- **LECOMT/St. John's Episcopal Hospital**
 - Joanna Emilio, DO
 - Angela Kim, DO
 - Ann Lin, DO
- **NYCOMEC/HMH Palisades Medical Center**
 - Zachary Ingersoll, DO
 - Jeriel Kessel, DO
- **OPTI-West/Chino Valley Medical Center**
 - Anny Xiao, DO

- **OMNEE/Sampson Regional Medical Center**

- Luke Maxfield, DO
- Ashley Rice, DO

- **MSUCOM/SCS/Oakwood Healthcare System**

- Stetson Albertson, DO
- Erika Kettlehut, DO

- **PCOM/Lehigh Valley Health Network**

- Diana Rivers, DO
- Marc Mitton, DO

- **LECOMT/University Hospitals Regional Hospital**

- Erica Brotzman, DO
- Benjamin Farthing, DO

- **NYCOMEC/St. Barnabas Hospital**

- Sonya Zarkhin, DO

- **Still OPTI/Northeast Regional Medical Center**

- Elizabeth Young, DO
- Todd Troxell, DO

- **MSUCOM/SCS/Botsford Hospital**

- Amanda Nahhas, DO
- Jeffrey Globerson, DO

- **OPTI-West/Silver Falls Dermatology**

- Kelsey Ferrell, DO
- Lacey Roybal, DO

- **NSUCOM/Larkin Community Hospital**

- Sergey Arutyunyan, DO
- Simona Bartos, DO
- Jonathan Chan, DO
- Ashleigh Siegel, DO

- **LECOMT/Larkin Community Hospital Palm Springs Campus**

- Patrick Zito, DO
- Oben Ojeng, DO
- Gabriella Vasile, DO

- **NSUCOM/Largo Medical Center**

- Hassie Cooper, DO
- Shiva Kheradmand, DO
- Christopher White, DO

- **OMNEE/Park Avenue Dermatology**

- Cassandra Beard, DO
- Anne Harwood, DO
- Blake Robbins, DO

- **Texas OPTI/Bay Area Corpus Christi Medical Center**

- Christine Ku, DO
- Erez Minka, DO

- **MWU/OPTI/Affiliated Dermatology**

- Heidi Mullen, DO

Documentation needed for new residents

New residents beginning training in July 2018 should submit all of their application materials to the national office. Dues should be paid at this time, if payment has not been made this year. Those who have already paid student dues for the current year will owe a balance of \$25 when they begin training in their residency program. If you are uncertain if you have paid this year, please feel free to contact me.

All residents are asked to provide the following documents:

- A completed copy of the AOCD resident membership application
- A copy of your medical school diploma (and exact date of graduation)
- A copy of your internship diploma
- A copy of your state license
- 2 passport size photos
- A current CV

ACGME Accredited Residency Training Programs

Finally, I would like to congratulate all of the AOCD residency programs who recently earned ACGME accreditation. They are:

- CORE/O'Bleness Memorial Hospital
- LECOMT/St. John's Episcopal Hospital
- NYCOMEC/HMH Palisades Medical Center
- OMNEE/Sampson Regional Medical Center
- Still OPTI/Northeast Regional Medical Center
- NSUCOM/Larkin Community Hospital
- OMNEE/Park Avenue Dermatology
- Texas OPTI/Bay Area Corpus Christi Medical Center

I hope everyone has a great summer and 2018-2019 academic year. I wish all of the graduation all the best in their preparation for the certifying exam and their future endeavors beyond. It has been a pleasure working with each of you over the past three years.



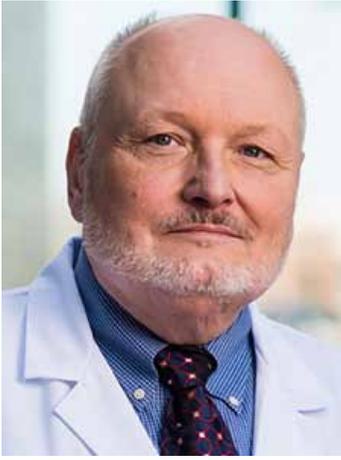
CONFESSIONS OF A DERMATOLOGY RESIDENT

By Laura Jordan, DO

Believe it or not, we are 3rd year dermatology residents! But with great excitement comes great responsibility...do we feel ready to be the leaders of our group? To be the mentors to our younger residents? To have the confidence it takes to make the final diagnosis for our patients?

Two years have flown by, and with them we have grown as clinicians and surgeons. Yet despite the lengthy differentials we can rattle off for unspecified dermatitis and the patience we have developed for neurotic excoriations, it will soon dawn on us that we will be out on our own before we know it. We will no longer have the safety net we refer to as "attendings."

If first year was the "warm up" year, and second year was the "getting into our stride" year, then third year must be the "let's hope we saved enough energy to reach the finish line" year. So now's the time to lock down those difficult topics, correct any poor surgical techniques, and...oh yes...find a job! But that's an entirely different column ☺



Subspecialty Certification in Mohs Surgery – The Controversy Continues

By Edward H. Yob, D.O.

During the last 30 years there have been unsuccessful attempts to develop a subspecialty certification for the technique of Mohs Surgery. These attempts have almost entirely been promulgated by members of the American College of Mohs Surgery. Others who are at the forefront of Mohs

Surgery, principally members of the American Society for Mohs Surgery, have opposed such certification. The American Osteopathic Board of Dermatology, sought certification in Mohs Surgery as a safety net fearing if certification went through the ABMS there would be a concerted effort to limit the procedure to only those certified by the ABD. While the ABD has failed in its attempt, the AOBDD was successful in being granted a “Certificate of Added Qualification” by the AOA.

The first ABD effort failed based on the premise that Mohs was a procedure and the ABMS does not certify procedures. Their most recent effort a few years ago, naming it Procedural Dermatology was met with the largest number of letters in opposition the ABMS had ever received in any comment period in their history. So, through all of these attempts the name has changed from Mohs Surgery, to Procedural Dermatology and now to Micrographic Dermatologic Surgery (MDS)

At the recent American Academy of Dermatology annual meeting, in separate presentations with official looking ABD power point slides, members of the American Board of Dermatology stated the ABD has not made any decision regarding moving forward with an application for certification in Mohs Surgery and Dermatologic Oncology. Literally within 2-3 weeks and within hours of the announcement of the results of the AAD election an announcement was made that the ABD had moved forward with the application March 5th, 2018 for Sub Certification now calling it Micrographic Dermatologic Surgery. The very next day the American College of Mohs Surgery put out its talking points for members to further their push for certification.

Mohs Surgery-related Board Certification
The ABD BOD has discussed the issue of certification in MSDO but has not made any decision regarding the details of an application to the ABMS and has, to date, not decided to move forward with an application.

Needless to say, this created a lot of discord within the house of dermatology. Members who oppose the certification felt deceived by the ABD and possibly members of the leadership of the AAD. If the intent for certification had come out before or during the meeting, there clearly would have been robust debate both pro and con of what is considered to be a monumental attempt to change the practice of dermatology for ever more.

Some of the reasons proffered by those in favor of subspecialty certification include:

- It will solidify the specialty.
- It will provide status for those who spend an additional year in fellowship.
- The public will demand it.
- It will aid in dialogue with insurers who seek to deny the procedure.
- It recognizes a “body of knowledge” In the field of Dermatologic Oncology.

Some of the reasons proffered in opposition to certification include:

- Dermatology is a small specialty dividing it even further minimizes its influence in the house of medicine.
- The goal is to reduce the number of dermatologists performing Mohs to minimize potential reduction in reimbursement. As one of its strongest advocates has stated publicly “we need birth control in Mohs Surgery”.
- Mohs Surgery is integral to the practice of Dermatology. Fellowships for further training are valuable but they in no way should be identified as the only way to learn the procedure.
- Dermatologic Oncology is a large and integral component of the practice of Dermatology and in no way should be confined to a “select group”.
- While the 5 year “grandfather period” would be open to all who practice Mohs, certification will have devastating effects on those who come after us essentially gutting a major part of their training and ability to practice.
- Insurers will have a built-in reason to deny coverage for both Mohs Surgery and Dermatologic Oncology.

A Pro and Con debate was held at the ASDS meeting, controversies session in 2017 featuring Brett Coldiron, MD in favor of certification and Darrell Rigel, MD against certification. You can see the debate at <https://www.youtube.com/watch?v=RXtmbFAzhO8>. Advance to the 26-minute mark for their part of the program.

So, what’s next? The public comment period is on the ABMS website at the following link: <http://asms.mohssurgery.org/i4a/etrack/track.cfm?rType=2&campaignID=371&contactID=1061&origURL=http://www.abms.org/news-events/call-for-comment-new-subspecialty-certification-in-micrographic-dermatologic-surgery/>. You can also view the application in its entirety including all attachments. As the comments come in the member boards of the ABMS will have an opportunity to review, comment and vote on the application. Then a decision will come.

What happens to AOBDD certified dermatologists who have a CAQ in Mohs? It is anticipated they will continue on for a while as the integration of AOA and ABMS specialty certification continues to evolve.

There will be an update presented at the AOCD Fall meeting in San Diego.

2018 AOCD Spring Meeting Highlights

BY CASSANDRA BEARD, DO; RACHEL GIESEY, OMS-IV & LAURA JORDAN, DO

Forging a Successful Practice: Utilizing PAs in a Busy Dermatology Office
John Minni, DO, FAOCD & Jeff Johnson, PA-C



- What is a physician assistant?
 - Physician assistants (PAs) are medical providers who are licensed to diagnose, treat and prescribe medication for patients
 - PAs work in offices, hospitals and clinics in collaboration with a licensed physician
 - At their core, PAs are dependent practitioners
 - Our daily function within the physician-led health-care team is directed solely by delegation from our supervising physician
- Physician assistants AKA:
 - Physician extenders
 - Mid-level provider
 - Advanced practice providers
 - Allied health providers
 - Limited license provider
 - Non-physician provider physician associate
- PA applicants
 - Greater than 3000 hours patient contact experience
 - 27 years of age on average
 - 66% female
 - Majority have bachelor's degree (not required)
- PA profession: Brief history
 - Take advantage of military trained combat medics
 - Training modeled the fast track for physicians WWII
 - Design was for PAs to "think like a doctor"
 - Work closely with physician
 - Duke University 1965 – First class of PAs
- PA Education
 - 27 continuous months equates to 3 academic years
 - 75 hours pharmacology
 - 175 hours behavioral sciences - 400 hours basic science
 - 580 hours clinical medicine - 100 hours Category I CME every 2 years
 - Pass national certifying exam every ten years
 - Master's degree by 2020 or lose accreditation
 - Modeled on physician education
 - One year basic medical sciences
 - Anatomy, pathophysiology, pharmacology, biochemistry
 - Clinical phase training
 - Family medicine, internal medicine, OB/GYN, ER, pediatrics, general surgery, psychiatry, ENT, dermatology, orthopedics, etc.
 - 2000 hours of supervised clinical practice
- "Scope of practice"
 - A PA's scope of practice is determined by their training and experience, state law, facility policy and agreed upon with their supervising physician
- Where PAs can practice medicine:
 - All states, the District of Columbia and all US territories except Puerto Rico authorize PAs to practice medicine
 - This is also true for prescribing privileges
 - Ability to prescribe controlled substances varies by state and PAs must obtain own DEA number
- PA-C
 - Physician assistant is "certified"
 - Pass national certifying exam
 - 100 hours of CME every two years
 - Pass recertification exam every 10 years
 - No dermatology specialty exam exists
- Current status of PA profession
 - Approximately 130,000 practicing PAs
 - 539 living abroad
 - 2800 in the field of dermatology
 - 225 accredited PA programs (270 by 2020)
 - 8900 new PAs every year
- PAs in the daily clinic
 - Allows the physician to focus on the items you want
 - PAs can play a supervisory role - education of staff
 - Patients offered appointment with physician first
 - Told they are seeing a PA when appointment made, at confirmation and when the patient is roomed
 - Mohs: more patients seen = more cancers treated
- Physician assistant: added benefits
 - Patient waiting times are decreased
 - Readily available for follow-ups/wound checks
 - Education programs for community
 - Minimize amount of time on call
 - Most importantly: quality patient care
 - Assist in hiring, training and managing the staff
- Patients' acceptance of PAs
 - Kaiser Permanente research shows patient satisfaction with PAs approaches 96%
 - Understanding of the patient's problems
 - Quality of personal care - confidence in the provider
- Comparable level of care
 - Berkeley Healthcare Forum report, a systematic review of 16 different studies revealed "no significant differences in patient satisfaction between NPPs versus physicians"
 - Kaiser Permanente Center for Health Studies has also shown NPPs score equally with physicians in terms of patient satisfaction
- Physician Assistants by Specialty
 - Family medicine 25.9%
 - Emergency medicine 10.5%
 - Internal medicine 15.6%

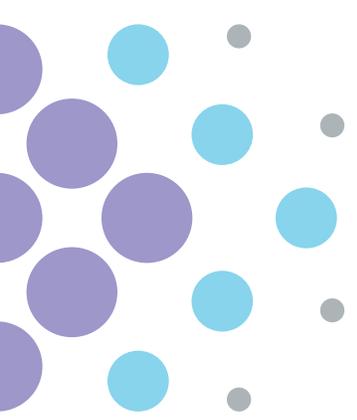
- Dermatology 3.6%
- Pediatrics 4.3%
- Occupational medicine 2.3%
- Surgery subspecialty 25.1%
- Other 10.4%
- How did we get to this point?
 - The number of dermatologists emerging from residency programs each year is thought to be insufficient to meet growing patient demand
 - Aging baby-boomers and increased number of insured patients through the ACA worsens that shortage
- Physician shortage
 - In 2015 the Association of American Medical Colleges (AAMC) forecasted the US will have 29,800 fewer primary care physicians than it needs which equates to 135 million ambulatory visits annually
- Demands will likely increase
 - AAMC projects a shortage of 130,600 physicians by 2025
 - AAMC also found in a separate study that 60% of patients would prefer an NPP rather than having to wait even a few days for a physician
- Why even consider adding a PA?
 - PAs allow doctors to adjust their roles to meet the needs of the clinic
 - Flexibility in dealing with emergencies
 - Excessive workloads
 - Offer off peak (nights and weekends) appointments
 - Help to train and manage the staff
- Understanding the risks
 - Obviously NPPs are not the cure-all
 - Strict guidelines outlining scope of authority
 - Writing prescriptions
 - Signing charts
 - NPPs sued for malpractice at lower rate
- How great is the risk?
 - Incorporating NPPs can increase liability risks
 - SPs often named as co-defendants in suits
 - Since physicians often own practice, suits that exclude the physician are rare
- Salary
 - Average annual salary: \$130,000
 - Cost to employ a PA: 30 cents on the Dollar Collected
 - Example: \$400,000 x .30 = \$120,000
- Example of salary breakdown
 - Base salary: \$85,000
 - To the house: \$250,000
 - 10% \$350,000
 - 15% \$450,000
 - 20% \$750,000
 - 25% over
 - \$500,000 = \$120,000 annual salary
 - Total cost of employment about \$150,000
- Benefits Package
 - “Competitive” salary
 - 401k
 - CME allowance (\$1500 - \$2000 annually)
 - State license
 - Professional fees (NCCPA)
 - Insurance (medical, dental, life, malpractice)
 - Uniform (scrubs)
- Professional organizations
- Maternity leave/holidays
- Vacation/personal days
- Third-party coverage
 - Nearly all private payers cover medical and surgical services provided by PAs
 - However, private health insurance companies do not necessarily follow Medicare’s coverage policy rules
- Medicare Reimbursement
 - Medicare pays the PA’s employer for medical and surgical services provided by PAs in all settings at 85% of the physician’s fee schedule
- Hiring a crucial member of your team
 - If you are considering hiring a PA, the success of the hire likely rests on a few simple questions:
 - What do you want the person to do?
 - What are you willing to let them do?
 - What amount of support will they receive?
- The hiring process: physician assistants
 - You need to be clear on how you’ll incorporate that person into the practice and really understand how you want them to perform
 - Defining the parameters of the job, especially during the interview, may eliminate future problems
 - The main reasons physician assistants leave is not because of the money, it’s the relationship with their supervising physician, the practice as a whole or the opportunity to grow
 - Background checks are vital for promising applicants
 - Include a license check
 - Ask applicant if they are under investigation
 - Are they under a Medicare audit?
 - Part of any pending liability litigation
 - Ask about convictions
- Hired a PA...what next?
 - Notify your malpractice carrier
 - Nominal premium increase
 - Verify credentials
 - Have written protocols – update regularly
 - Supervise appropriately
 - Be aware of state laws
 - Be approachable – encourage questions
 - Meet or talk regularly
 - Foster an environment of learning
 - Take an active role in development
- Consider training PA students
 - AAPA’s Data Services and Statistics Division reports that more than 1/3 of all PAs say they met their first employer through clinical rotations while attending PA school
- How to avoid these liability pitfalls
 - Hire experienced, well-trained PAs
 - Ensure one-on-one training
 - Establish guidelines for practice
 - Be a collaborator not just a boss
- Set the parameters of the job
 - Formalize a job description
 - Additional duties beyond patient care?
 - Will the PA be on call and if so, how often?
 - Will the PA be allowed to see new patients?
 - What is the level of supervision that will take place?
 - How independent they be?
 - Will the PA perform procedures; Assist with Mohs?



eucrisa[®]
crisaborole ointment 2%



Get to know EUCRISA



• Learn more at booth 1



Visit www.EucrisaHCP.com for more information

- Determine how the PA reacts to constructive tips
- **THE MOST IMPORTANT ISSUE IS DO THEY FIT!**
- Solo physicians who employ PAs experience:
 - Increased patient satisfaction
 - Improved patient care
 - Greater access to care
 - Greater efficiency
 - Improved quality of life
- “Optimal team practice”
 - Originally known as “full practice authority”
 - The newest name for a political movement underway in the PA profession
 - Just in its infancy, but discussions are heating up
 - There’s A LOT to be worked out before legislation occurs
 - May be asked for your professional input
- Are laws regarding PAs outdated?
 - State law requirements to have a supervisory agreement with a physician in order to practice were included in early PA practice acts
 - Fifty years ago, when the PA profession was new, these requirements were intended to ensure strict oversight of an untested profession
- OTP: What is it?
 - Member of a larger team of healthcare professionals
 - Would recognize limits of their knowledge and skill
 - Would understand when condition requires consultation or referral to other qualified healthcare providers
 - PAs would accept liability for the care they provide
 - Establish autonomous state board
 - Reimbursed directly from public/private insurance
- OTP: What it is not!
 - Independent practice: practice without the benefits of physicians or other qualified medical providers for collaboration, consultation, referral or team-based care
 - OTP – practice with access to physicians and other qualified medical professionals for collaboration, consultation and referral, as indicated by the patient’s condition and standard of care in accordance with the PA’s education, training and experience
 - Eliminates the requirement for assignment to a specific physician
- Advantages for the PA Profession
 - The creation of an autonomous medical board of PAs which oversee the licensing and discipline of the professional
 - Allow PAs more flexibility in the workplace
 - Eliminates regulations that PAs have to report to a specific supervising physician
 - Following the lead of the NP profession’s success
- There’s a lot to work out
 - Dependent practitioner is the hallmark of who we are
 - This would require legislative action in all 50 states
 - 54% of respondents to AAPA said they do not have the time or are opposed to lobbying activities
 - What happens if some states pass and others do not result in a patchwork of differing PA practice acts
- What drove OTP’s development?
 - Competition for jobs with nurse practitioners
 - Changing requirements of employers
 - What got us here ... won’t get us there!
- Changing landscape for everyone
 - 76.1% of physicians were practice owners in 1983
 - 47.1% of physicians were practice owners in 2016
 - 38% decrease from 1983 to 2016
- Is OTP better for everyone?
 - PAs must fulfill strict licensing requirements with includes 100 hours of CME every 2 years
 - The PA profession is so well-established, highly-trusted and essential to the US healthcare workforce
 - Study after study confirms PAs provide quality healthcare
 - Nevertheless, PAs are still required to enter into a supervisory, collaborating agreement with a specific physician
 - The PA profession remains fiercely committed to team practice with physicians
- Fiercely committed to collaborative practice
 - Some have suggested the profession is seeking independent practice – that PAs wish to work alone, without collaborating physicians
 - That is not the case - OTP policy includes two important parts that distinguish it from independent practice:
 - Optimal team practice reinforces PA’s commitment to team practice with physicians and explicitly states the PA/Physician team model continues to be relevant, applicable and patient-centered
 - OTP calls for a decision about the degree of collaboration between PAs and physicians to be made at the practice level, in accordance with the practice type and the education and experience of the practicing PA
 - It puts more control in the hands of the physician as the leader of the healthcare team
- Times are changing
 - When the PA profession began over 50 years ago, physicians were likely to be solo or joint practice owners
 - The increase in potential liability was offset by the financial and practice benefits of working with a PA
 - The day to day burdens of providing patient care and coverage of call were reduced, but the practice could also care for a greater number of patients at a lower cost than if another physician were added
- Is OTP Beneficial for You?
 - Today, however, physicians are more likely to be employees rather than practice owners and don’t realize the financial benefits of supervising a PA; They only take on the increased potential liability
 - Also, in larger groups as providers come and go it becomes increasingly more difficult to maintain the strict supervisory mandates





- Infantile malformations present at birth
 - Rapid proliferation
 - Slow involution over years
 - Common in girl, premature infants, twin pregnancies
 - GLUT-1, Lewis Y antigen-, merosin-, FcgRII +
- Vascular malformations present at birth
 - Slow expansion
 - Persist into adulthood
 - Negative for vascular markers
- Hemangiomas
 - Most common on head/neck
 - Superficial or deep
 - Combined, superficial and/or deep
 - Focal, segmental, diffuse, and/or plaque-like
 - Focal
 - 76.3%
 - Near embryonic fusion lines
- Hemangiomas of infancy
 - MC tumors of childhood
 - Occurs more frequently in Caucasians than other racial groups
 - Girls 3-5:1
 - 22-33% preterm infants weighing less than 1 kg
 - Increased risk with CVS and with twins
 - Pathogenesis
 - Not clearly defined
 - Hemangiomas cells can be of placental origin
 - Invading angioblasts?
 - Embolized placental cells?
 - Extrinsic factors
- Congenital hemangiomas
 - Rapidly involuting congenital hemangioma
 - Intrauterine proliferation
 - Fully developed at birth
 - Non-involuting congenital hemangioma
- Slightly more common at birth
- Both types stain differently from HOI
- GLUT-1 negative
- Involuting hemangiomas clinical course
 - 50-60% resolve incompletely leaving permanent changes
- PHACES syndrome
 - Posterior fossa malformations
 - Hemangiomas
 - Arterial anomalies
 - Coarctation of the aorta and cardiac defects
 - Eye abnormalities
 - Sternal cleft
 - Workup
 - MR/MRA/MRV, Echo, Ophtho evaluation, etc.
- Lumbar cutaneous hemangiomas
 - Tethered spinal cords despite normal neurologic status
- SACRAL syndrome
 - Spinal dysraphism
 - Anogenital
 - Cutaneous
 - Renal and urologic anomalies
 - Angioma
 - Lumbosacral localization
- PELVIS syndrome
 - Perineal hemangioma
 - External genitalia malformation
 - Lipomyelomeningocele
 - Vesicorenal abnormalities
 - Imperforate anus
 - Skin tags
- Diffuse hemangiomatosis
 - Rare
 - Onset at birth
 - Multiple hemangiomas (50-500) and may involve visceral organs
 - Liver MC, also GI tract, lungs, mouth/tongue
 - 60% die during first few months of life due to high-output cardiac failure, hemorrhage, or dysfunction of vital organs
- Benign neonatal hemangiomatosis
 - Multiple cutaneous hemangiomas
 - May involve mouth
 - Exclude visceral involvement
 - Benign course
- Hepatic hemangiomas
 - Most common clinical scenario
 - Present of multiple skin lesions may be asymptomatic
 - Glut-1 positive, resemble IH
 - Involution pattern similar to IH
 - Asymptomatic – observation versus symptomatic (shunt à CHF) – pharmacotherapy or embolization
- Diffuse hematic hemangiomas
 - Massive hepatomegaly, compartment syndrome, no CHF
 - Express type 3 iodothyronine deiodinase à hypothyroidism
 - GLUT-1 positive
- Regionally-significant hemangiomas
 - Orbital hemangiomas
 - MC on upper eyelid
 - Can cause visual deficits
 - Require ophtho evaluation
 - Tx depends on severity
 - Beard distribution
 - Preauricular, chin, anterior neck, lower lip
 - Can cause subglottic obstruction
 - May have parotid involvement
 - Prone to ulceration
 - May cause hearing loss
 - May have airway involvement
 - Workup
 - 10-20% subglottic become symptomatic
 - ENT involvement
- Cyrano nose
- Ear
- Breast/nipple
 - May cause breast development issues
- Hemangioma complications
 - Ulceration
 - Infants become irritable, feed poorly, can't sleep
 - Occurs during proliferative phases
 - Location
 - Head and neck greater than 50%
 - Hypothyroidism
 - Kasabach-Meritt syndrome
 - Thrombocytopenic coagulopathy
- Treatment
 - Observation
- Topical
 - Timolol
 - Can reduce size, color and reduce growth
 - Imiquimod
 - Antiangiogenic
 - PDGF
 - Reserved for ulcerated hemangiomas
 - Very expensive
- Systemic
 - Corticosteroids
 - 3-5mg/kg/d prednisolone/prednisone
 - Administered during proliferative phase
 - Responses vary
 - Interferon
 - IFN alpha 2a or IFN alpha 2b
 - Neurotoxicity

- Reserved for life threatening conditions
- Propranolol
 - Vasoconstriction
 - Decreased expression of VEGF and bFGF genes
 - Triggering apoptosis of capillary endothelial cells
 - 0.5 mg/kg/d up to 2-3mg/kg/d
 - Requires cardiac clearance
 - Contraindicated in airway disease, cardiac pathology, PHACE syndrome with neurovascular defects
 - Cardiac monitoring during rapidly increasing doses
 - Baseline BP, HY then post therapy BP, HR and glucose
- Pulsed dye laser
- Fractionated Non-ablative erbium laser
- Surgery
 - Useful for pedunculated hemangiomas (risk of scarring)
 - Refractory or ulcerated

Pediatric Dermatology: What's New
Anais Badia, DO, FAOCD



- Atopic dermatitis
 - Pruritus is the most disturbing aspect
 - Increased risk CVD, autoimmune disease, malignancies, and neuropsych disease
 - Improved disease control important for QOL
 - LEAP study showed peanut allergy could be reduced by introducing peanuts earlier
 - Study of high risk children suggest checking IGE antibodies to peanuts
 - If below 0.35 kU/L then peanuts can be introduced safely
 - If above, recommend specialist consultation
 - Melatonin may help with sleep and more
 - 3 mg melatonin at bedtime reduced SCORAD by 9.1 and sleep latency by 24 minutes
 - No correlation between decrease in sleep latency and decrease in SCORAD, so there may be an immunomodulatory effect of melatonin
 - Crisaborole (topical PDE4 inhibitor)
 - Approved for ages 2 and up
 - No black box warning
 - Dupilimab (IL4 alpha inhibitor)
 - Approved for adults in 2017
 - Phase II trials ongoing for pediatric 12-17 years
 - Studies underway for younger kids
 - JAK inhibitors being studied for topical and systemic use in

- AD and pediatric trials evaluating topical tofacitinib, a JAK 1 and 3 inhibitor, coming soon
 - Approved for dog eczema in 2013
 - Increased risk of malignancy and lymphoma in RA patients in JAK inhibitors
 - Increased risk of herpes zoster
- Probiotics decrease atopic dermatitis severity score and topical corticosteroid use in patients treated with oral probiotics
 - Pregnant women taking probiotics 2 weeks prior and up to 3 months after delivery decrease eczema risk by about 25%
- Psoriasis
 - Median age of onset in pediatrics is 7-10
 - When to choose systemic medication
 - Moderate to severe, non-responsive, impacting QOL
 - Phototherapy
 - NBUBV
 - Usage of systemics
 - MTX (69%)
 - Most commonly used
 - 34.1% achieved PASI 74
 - May take months to take effect
 - Retinoids (14.6%)
 - Cyclosporine (7.7%)
 - Biologics (27%)
 - Convenience of infrequent dosing with biologics
 - Significant side effects unusual, but unknown long-term risk
 - Etanercept approved 11/16
 - 36/211 w/ PASI 68 and 65%
 - Ustekinumab approved 10/17
 - Requires only 4 injections a year
- Hemangiomas
 - Usually appear at 4-6 weeks of life
 - Routine evaluation before starting propranolol controversial, may include EKG, detailed H&P
 - Length of treatment also controversial
 - Cannot start before 1 month of age
 - Given during growth phase, may be effective even beyond proliferative phase
 - No risk of developmental adverse effects or growth impairment at age 4 in patients with at least 6 months of propranolol
 - Recurrence rate 25%
 - Higher risk if stopped propranolol before age 1 in girls
 - Growth hormone treatments can result in recurrences in children later in childhood
- Vascular anomalies
 - Difficult to classify
 - Increased availability of genetic sequencing has led to reclassification by specific genetic mutations
 - Most have shown to be due to postzygotic mutation in oncogenes
 - Prevalence of cancer is low
- Acne
 - Incidence becoming younger and younger
 - Abnormal if occurs younger than age 7
 - Adherence to treatment always a challenge
 - Certain retinoids are anti-inflammatory effects by suppressing TLRs
 - Nitric oxide releasing agents may have anti-inflammatory, antimicrobial and antioxidant effects
 - Sebum inhibitors

- Inhibits acetyl coenzyme a carboxylase
- Probiotic project
 - *S. epi* can ferment glycerol to produce SCFA that kill *P. acne* and reduce levels of pro-inflammatory cytokines
- Vaccine to control growth of *P. acne*
- Isotretinoin
 - Some evidence linked to IBD
 - Controversial
 - Question of MDD
 - Large baseline incidence to about 11% in 2014
 - Inquire about PMH MDD, family history, etc.
 - Multiple studies show that there is less need for lab monitoring
 - Now recommended to check lipids and LFTs at baseline and then 2 months into therapy
 - CBC monitoring not necessary
- Verrucae Vulgaris
 - Benign neglect
 - 65% regress within 2 years
 - Topical agents
 - Salicylic acid
 - No significant difference between Verrugon daily versus LN2 at 12 weeks and 6 months
 - Cantheridin
 - SADRE (squaric acid dibutyl ester)
 - Trichloroacetic acid
 - ALA with blue light for verrucae planae
 - Imiquimod
 - Cidofovir
 - 5-FU
 - Tretinoin
 - Intralesional injections
 - Candida, Trichophyton skin test antigens
 - Bleomycin
 - IFN alpha
 - Photodynamic therapy
 - Systemic therapies
 - Cimetidine, zinc, retinoids, IV cidofovir
 - Lasers
 - Alternative treatment
 - Hypnosis, hyperthermia, propolis, garlic cloves, tea tree oil
 - HPV vaccines?
 - Whatever works!
- Teledermatology
 - Long waits and limited access to pediatric dermatology clinics make teledermatology a viable option
 - Good diagnostic correlation with live patient evaluation
 - Reimbursement continues to be an issue

Lasers on Latin/Ethnic Skin
Eduardo Weiss, MD, FAAD



- Key Points
 - Hispanics/Latinos are the fastest growing segment of the skin of color population in US
 - Use of lasers in persons with skin of color requires an understanding of laser physics and laser tissue interactions
 - Epidermal melanin acts as a competing chromosphere which can decrease the effect of the laser treatment and cause nonselective thermal injury to the epidermis
 - Proper selection of device, wavelength, and treatment parameters are essential for safety and efficacy
- Skin of color
 - Defining skin of color in the Hispanic/Latino population can be particularly challenging
 - Encompasses not only cultural aspects but historical ones as well
 - Composed of various ancestries, which include white, Native Indian, African, and European descents
 - Skin hues range from white to black
 - Skin of color has distinct reaction patterns to cutaneous disease and this must be taken into consideration when approach in treatment options
- Hispanic skin of color
 - The Hispanic population encompasses the range of phototypes and therefore one rule cannot apply to all Latinos/Hispanics
 - Dr. Leal of Monterey, Mexico deciphered a way to predict the propensity of white phototype Latinos to experience PIH based on palmar and digital creases
- Rates the color diversity of linear creases from 0 to 3, with the high number indicating a darker skin tissue response despite skin phototype
- Lasers in skin of color
 - When treating skin phototypes IV to VI the challenge is to deliver efficacious and reproducible results and minimize unwanted adverse reactions
 - Targeted chromospheres (water, hemoglobin, melanin)
 - Selective photothermolysis
 - If the target is heated for longer than its thermal relaxation time, there is ensuing diffusion of the thermal energy to the surrounding structures, causing unwanted non-targeted tissue damage
 - By choosing a pulse duration equal to or less than the thermal relaxation time of the target chromophore, one ensures that the heat delivered is confined to the target chromophore
 - Although there is no difference in the melanocyte density between Latino skin and lighter skin types, in darker skinned individuals there is an increase in the number of melanin granules within the basal layer
 - This large amount of melanin within the epidermis of Latino skin and darker skin types competitively absorbs laser light targeted for other chromophores
 - With the absorption spectrum of melanin ranging from 250 to 1200 nm, great care and diligence must be taken when using laser light on Latino skin
 - Laser parameters that suit skin of color in regards to safety include longer wavelengths, a long pulse duration, lower fluence, less passes-overlapping, lower densities (MTZ/cm²), smaller spot size, and efficient cooling (pre-, concurrent, and post-treatment)
 - Although there is no difference in the melanocyte density between Latino skin and lighter skin types, in darker-skinned individuals there is an increase in the number of melanin granules within the basal layer
 - This large amount of melanin within the epidermis of Latino skin and darker skin types competitively absorbs laser light targeted for other chromophores
 - With the absorption spectrum of melanin ranging from 250 to 1200 nm, great care and diligence must be taken when using laser light on Latino skin

For eczema-prone skin

TWO ADVANCED TECHNOLOGIES.



ONE REPLENISHING REGIMEN.

Cetaphil® RestoraDerm® products are the first and only regimen with advanced ceramide and Filaggrin technology™

To help restore the skin barrier in dry, eczema-prone skin, recommend the Cetaphil® RestoraDerm® regimen.¹



Reference: 1. Simpson E, Trookman NS, Rizer RL, et al. Safety and tolerability of a body wash and moisturizer when applied to infants and toddlers with a history of atopic dermatitis: results from an open-label study. *Pediatr Dermatol.* 2012. doi:10.1111/j.1525-1470.2012.01809.x.



cetaphil.com

Galderma, Cetaphil and RestoraDerm are registered trademarks. © 2013 Galderma Laboratories, L.P.
Galderma Laboratories, L.P., 14501 N. Freeway, Fort Worth, TX 76177
CETA-619B Printed in USA 06/13

Cetaphil®
RESTORADERM®
Replenish. Restore. Rebuild.

- Laser parameters that suit skin of color in regards to safety include longer wavelengths, a long pulse duration, and efficient cooling
- Pre-treatment
 - In order to decrease the risk of PIH, I commonly use the following as a pre-treatment regimen
 - History: PMH of hyperpigmentation, recent sun tan, allergy to lidocaine, relevant diseases, herpes simplex, etc.
 - SPF 60/sun avoidance
 - HQ 4-8%
 - Miami Peel (modified Jessner's peel)
 - Kligman's formula
 - Heliocare
 - Test-spot with follow up in 2-4 weeks
 - Antivirals and antibiotics depending on the laser and location
 - Melanin
 - With the advent of lasers with longer wavelengths, longer pulse durations, and efficient cooling devices, all skin types can be treated with lasers for hair removal with reduced risk of adverse outcomes
 - Latinos and dark skin individuals can tan
 - Caution when performing treatments in persons with a tan
 - Ensure the hand piece is perpendicular to the skin surface
 - Avoid overlapping
 - The cooling device is functioning properly
 - Melasma/PIH
 - Very difficult and frustrating
 - Typical management
 - Heliocare, sunscreen, Miami peel, tranexamic acid, azelaic acid, kojic acid, Licorice, caffeine, Klingman's formula
 - QS-Nd:YAG is most widely used laser for the treatment of melasma
 - Fluence used is less than 5J/cm² spot size 6 mm, and frequency of 10 Hz
 - The number of treatment sessions varies from 5-10 at 1-week intervals
 - Rebound hyperpigmentation could be due to the multiple sub threshold exposures that can stimulate melanogenesis in some areas, and/or inflammation with secondary PIH
 - Energy-based treatment
 - IPL 570-580 nm
 - Low fluence, internal and external cooling, long pulse duration
 - Fraxel 150 nm (non-ablative, erbium)
 - Low fluence, few passes, more sessions
 - Density used varies from 2000 to 2500 MTZ/cm² and energy levels 6 to 10 mJ/mb
 - Tattoo removal
 - Start treatments at highest spot size and lowest fluence range
 - Decrease spot size/ increase fluence until the desired outcome achieved
 - When treating multicolor tattoos use 1064 nm wavelength for the first and second treatments
 - For additional treatments increase 0.05 J/cm² per treatment beyond 5 treatments
 - Select the best wavelength for each tattoo color
 - Laser hair removal
 - With the advent of lasers with longer wavelengths, longer pulse durations, and efficient cooling devices, all skin types can be treated with lasers for hair removal without side effects
 - The longer wavelengths penetrate deeper into the dermis where the hair follicle resides
 - Two lasers that are appropriate for use in Latino skin:
 - Diode laser 810 nm (up to phototypes V)
 - Nd:YAG 1064 nm (up to phototypes VI)
 - Intense pulsed light (IPL)
 - Keloids and acne scars
 - Keloids are a prevalent problem, particularly in individuals of African, Hispanic and Asian descent
 - While keloids do occur in all skin types there is a higher incidence in the Black and Hispanic populations
 - Larger and multinucleated fibroblasts
 - Several reports state that non-ablative lasers (585 nm, 1320 nm, 1064 nm, 1450 nm, 1550 nm) used to treat acne scars also provide an improvement in active acne, as a result of their collagen remodeling effect
 - We combine intralesional 5-FU/ Kenalog plus pixelated CO₂ laser in the treatment of keloids, if not responding we combine surgical excision and superficial radiation therapy
 - Skin rejuvenation
 - Skin rejuvenation principally includes collagen stimulation and remodeling to improve the texture of scarred or wrinkled skin, decrease pore and acne scars and tighten skin laxity
 - The objective of collagen stimulation and remodeling is to form new dermal collagen and to tighten up pre-existing collagen through dermal heating
 - Traditionally, ablative lasers, such as the carbon dioxide (CO₂) and Erbium:YAG, have been the gold standard
 - Delayed onset hypopigmentation, hyperpigmentation and transient erythema lasting months are common side effects
 - The increase in adverse effects when resurfacing patients with skin of color make these lasers mostly contraindicated in these patients
 - Laser skin rejuvenation procedures are challenging in patients with higher Fitzpatrick skin types due to potential dyschromia
 - More appropriate treatment options to improve laxity for darker skin types would be non-ablative infrared and the radio frequency lasers
 - The newer category of micro-ablative resurfacing lasers (fractional CO₂, fractional Erbium, and the 2790 nm Yttrium Scandium Gallium Garnet [YSSG]), offers a safer modality with which to treat Fitzpatrick skin type IV but until more studies are done, remain contraindicated in darker skin types (Fitzpatrick skin types V-VI)
 - Compared to the older generation resurfacing lasers the microablative lasers minimize the amount and duration of erythema and edema, which can last just three to four days
- Hemoglobin
 - The vascular lasers when used at appropriate settings can be used for the light and dark skin tones in the Latino population
 - The main vascular chromophore is oxyhemoglobin
 - Phototypes IV to VI have ore epidermal melanin that acts as a competitive chromophore against hemoglobin and oxyhemoglobin
 - Lasers that target vasculature
 - PDL
 - IPL
 - Nd:YAG
 - Long-pulsed alexandrite

- Long-pulsed diode laser
- Management of complications
 - Acute
 - Superficial erosions/bullae
 - Clean with mild soap
 - Silver sulfadiazine works well in these situations
 - Occlusion
 - Infections
 - Tx accordingly
 - Erythema/pruritus
 - Control inflammation with a short pulse of potent topical corticosteroid, also helps to prevent hypertrophic and keloidal scars
 - Intralesional 5FU/kenalog ASAP if suspect keloid formation
 - Chronic
 - Pigmentation
 - Hyperpigmentation
 - Decrease inflammation same as before
 - HQ 8-10%
 - Lasers: IPL or qsNd:YAG
 - Sunscreen
 - Hand holding
 - Hypopigmentation
 - Moisturization
 - Latisse
 - Excimer laser
 - One of the most common malpractice lawsuits is laser complications
 - Ensure all laser practitioners are certified and that you have reviewed laser laws in your state
 - Pre and post-treatment photos are essential
 - Document settings and informed consent
 - If an issue arises, make yourself available 24/7 and be ready for hand holding
 - The best treatment for complications is prevention
 - Specific lasers and their clinical applications
 - Pulsed dye laser (585, 595 nm)
 - Treatment of choice for vascular lesions such as port wine stains, facial telangiectasias and some superficial hemangiomas
 - The 585 nm wavelength pulsed dye laser penetrates to a depth of 1.2 mm
 - The longer 595 nm wavelength allows for a slightly deeper penetration; however, the absorption coefficient of oxyhemoglobin is 3 times higher at 585 nm than 590 nm
 - 585 nm pulsed dye laser is superior in treating the vascular lesions such as port wine stains
 - Both suitable for fair-complexioned phototype IV skin
 - For darker phototypes V and VI, longer wavelengths should be used
 - In addition, longer pulse durations are safer in darker-skinned Latinos
 - Treatment of choice for vascular lesions such as port wine stains, facial telangiectasias, and some superficial hemangiomas
 - Diode laser (800-810 nm)
 - 800 nm diode laser has a fluence range of 10 to 100 J/cm² and a pulse duration range of 5 to 400 milliseconds
 - Targets vascular structures such as leg veins or can be used for hair removal
 - Because hemoglobin has a small absorption peak in the 700 nm to 900 nm range the long-pulsed diode laser can be used to treat larger-caliber veins
 - Diode laser can be used to target the follicular melanin chromophore for use in hair removal
 - High fluences can be achieved when using long pulse durations
 - In darker phenotypes 75% to 90% hair reduction was reported after 8 to 10 treatments at 10 J/cm² and 30 milliseconds pulse duration
 - Intense pulsed light (IPL)
 - A large number of IPL devices are available
 - New generation of IPL devices are as safe and effective as lasers in the management of skin conditions
 - As IPL devices emit a spectrum of wavelengths, the three key chromophores can be activated with one single light exposure (reduced selectivity)
 - The patient's skin type and the skin condition present determine the choice of suitable cut-off filters and therefore the spectrum of wavelengths to be emitted
 - Pulse duration can be set in relatively wide ranges (depending on the particular device) in the millisecond range
 - Similar to laser devices, pulse duration should be lower than the thermal relaxation time of the target structure to prevent unselective damage to the surrounding tissue
 - Conditions treated with IPL: acne, pigmented and vascular lesions, unwanted hair growth, photodamaged skin, scars
 - Rosacea and telangiectasias
 - 515 nm with pulse duration between 12-15 ms or higher
 - Rosacea, telangiectasias, and pigmentation
 - 570 nm with pulse duration between 12-15 ms
 - 500-600 nm with pulse duration between 12-15 ms
 - ND:YAG (1064 nm)
 - Long-pulsed 1064 nm Nd:YAG laser has a multitude of uses in the Latino population with skin of color
 - Produces less interference with epidermal melanin because the longer wavelength penetrates deeper into the skin; however, the absorption by hemoglobin is less than that of other lasers
 - The long-pulsed 1064 nm Nd:YAG can effectively photocoagulate superficial and deep vessels up to a diameter of 3 mm
 - This laser can be used to target venulectasias, such as spider veins and blue reticular veins, in the deep reticular dermis
 - Considered to be the safest for hair removal in the darker pigmented population
 - It is suitable for use in all skin types I to VI
 - For phototypes V and VI the pulse duration is safest at 30 milliseconds or greater
 - Recent studies also show efficacy and safety in treating scars in darker skin types in addition to skin rejuvenation when used in combination with other treatment modalities
 - ER-YAG (29040 nm, 1550 nm)
 - Technologies include ablative, fractional ablative (Er:YAG 2940 nm fractional) and fractional non-ablative (1,550 nm Er:glass laser)
 - A recent retrospective study of Chinese patients treated with the 1,550 nm erbium-doped fractional laser (Fraxel 1550, Solta Medical) found that using fewer passes per treatment, but increasing the total number of treatments was associated with a lower risk of post-inflammatory hyperpigmentation without compromising efficacy

- CO₂ LASERS (10,600 nm)
 - CO₂ resurfacing and CO₂ microfractionated laser systems are reliable tools to improve different facial pathologic skin conditions but are associated with a high rate of complications specially in Fitzpatrick III, IV, and V skin phototypes, predominant in the Latin population
 - CO₂ lasers are associated with hyperpigmentation in 31 % of all skin types increasing to 50 % in type III Fitzpatrick skin phototypes
 - Fractionated use offers a quicker recovery time for patients and has a significant reduction in side effects compared to conventional resurfacing procedures
- SUMMARY
 - Use of lasers in persons with skin of color requires an understanding of laser physics and laser tissue interactions
 - Very important to be familiar with the laser device you are using, not all energy-based devices are the same!
 - The Hispanic population encompasses the range of phototypes and therefore one rule cannot apply to all Latinos/Hispanics
 - Proper selection of device, wavelength, and treatment parameters are essential for safety and efficacy

Asthma and Allergies in Dermatology

Michael Wein, MD



- Allergy is not forever
 - 80% of patients test negative for penicillin allergy 10 years after their reaction
 - 80% of milk allergic children tolerate milk within 3 years
 - 20% of peanut allergic children tolerate peanut within 4 years
 - 15% of adults are first diagnosed with food allergy after age 18
- Sensitization is not reactivity
 - Ara 2 specificity (0.92) PPV (0.94)
 - Peanut total IGE most sensitive
 - Understand test attributes, stepwise approach to testing, minimize the need for challenge
 - Lifelong reactivity is conferred by allergen-specific long-lived CD27+ memory B cells
- Acute generalized exanthematous pustulosis (AGEP)
 - Onset 2-11 days after drug exposure
 - Fever, numerous small, sterile pustules
 - Intertriginous zones (armpits and groin)
- What to think about fire ant bites?
 - Ask about systemic symptoms
 - May be at risk for future severe adverse reactions (life-threatening)
 - Risk of urticarial pigmentosa
- When to check tryptase
 - UP/mastocytosis- major RF for fatal sting
 - Diagnosis is often previously unknown
 - Test for tryptase level!
- Honeybee stings
 - Can reactions be prevented?
 - Immunotherapy is required if systemic
 - Please remember to check tryptase
- Penicillin allergy
 - Most are not truly allergic when skin tested
 - Restricts choice of antibiotics
 - Increases medical costs
 - Cannot be detected by blood tests
 - Severe cutaneous adverse reactions (SCAR)
 - NOT IGE mediated
 - Can be predicted by HLA in some cases
- DRESS – lymphocytic infiltrate
 - 2-6 weeks after drug exposure
 - Fever, lymphadenopathy, influenza-like
 - Liver – 80% of patients
- Scombrod
 - Scombrod poisoning may mimic food allergy
 - Bacteria in the fish contain a decarboxylase
 - Enzyme converts histidine to histamine
- No response to antihistamines? Consider bradykinin
 - C1 inhibitor deficiency with normal C1Ei level?
 - ACE inhibitor after 1 year?
 - Both involve bradykinin
 - Bradykinin not involved if urticarial angioedema responds to antihistamine
- Physical urticarial
 - Associated with mutant ADGRE2
 - Mast cells degranulate easily after vibration
 - Alpha and beta subunits less tightly bound
- Treatment of cold urticaria
 - LT blocker
 - Cyclosporine
 - Corticosteroids
 - Anti-IgE treatment
 - High-dose PCN/doxy
 - Tolerance induction
- Treat physical urticarial
 - Omalizumab 300mg
 - Reduces free IgE, not total IgE
 - FcεRI expression downregulated
 - Lower mediator release: mast cell/basophile/dendritic cell
 - Onset of action in 1 week, often complete
- Food allergy
 - Broad range of “food allergy”
 - Anaphylactic
 - Oral allergy syndrome (pollen food syndrome)
 - Delayed (meat) galactose-a-1,30galactose [a-gal]
 - Food-dependent exercise-induced (wheat, celery)
 - FPIES (not IGE) Food protein induced enterocolitis
 - Celiac sprue – HLA-DQ2 (DQA1*05 and DQB1*02)
 - Latex and fruit allergies
- IGG to food
 - Don't order this!
 - No proven role in the diagnosis of food allergies

- Introduction
 - 5-8% of all ED visits are due to dermatologic complaints
 - Imperative to recognize life-threatening and almost life-threatening conditions that require immediate attention to improve overall prognosis
- Emergent conditions:
 - SJS/TEN
 - Life-threatening mucocutaneous eruption
 - Both SJS and TEN are regarded as variants on a continuous spectrum of adverse drug reactions
 - Mortality rate for SJS is 1-5%
 - Mortality rate for TEN is 25-35%
 - Pathophysiology: fulminant immune dysregulation resulting in apoptotic keratinocytes
 - Etiology: greater than 1000 causative agents
 - Most common include allopurinol, NSAIDs, sulfonamides, anticonvulsants
 - May sometimes be precipitated by viral illness
 - Timing: occurs 1-3 weeks after starting causative drug (aromatic anticonvulsants may take up to 2 months)
 - Initially fever and URI symptoms, painful skin → dusky, atypical targeted skin lesions → painful mucosal erosions → progresses to epidermal detachment → bullae and sloughing
 - Histology
 - Full thickness epidermal necrosis with subepidermal bulla formation
 - Diagnosis
 - Clinicopathological correlation
 - + Nikolsky sign: epidermal detachment with pressure on area adjacent to blister
 - + Asboe-Hansen sign: pressure on bulla causes spreading to uninvolved skin
 - Skin biopsy: full thickness epidermal necrosis
 - Prognosis
 - Depends on EARLY diagnosis
 - Age greater than 40, HR greater than 120, cancer or hematologic malignancy, serum urea level, serum bicarbonate level, serum glucose level
 - EM
 - Acute, self-limited eruption
 - Seen in 0.01 and 1% primarily in young adults and children
 - EM major (mucosal) and EM minor (no mucosal involvement)
 - Etiology
 - Most common cause: HSV
 - Other infections, i.e. Mycoplasma; rarely drugs
 - Does NOT progress to TEN versus SJS
 - Now considered separate entity from SJS/TEN
 - Clinical features
 - EM Major
 - Targetoid lesions, atypical targets, +/- bullae
 - Extremities, face
 - Severe mucosal involvement, + systemic symptoms
 - EM minor
 - Targetoid lesions, extremities – elbows, knees, wrists, hands, face
 - Minimal mucosal involvement, no systemic symptoms
 - Histology
 - Vacuolar interface dermatitis with a perivascular lymphocytic infiltrate and necrotic keratinocytes
 - Management
 - Management
 - STOP the offending agent
 - Transfer to burn unit
 - Supportive therapy, wound care nutrition, fluids
 - Consult ophthalmology, OB/GYN/urology
 - Adjuvant therapy options remain controversial
 - No established guidelines
 - Systemic steroids: recent literature shows INCREASE in mortality with use of systemic steroids as sole therapy
 - Promising data with IVIG and cyclosporine
 - Etanercept
 - Case series of 10 patients with biopsy proven TEN treated with single dose of etanercept 50 mg
 - All responded to treatment, reaching complete re-epithelialization, with median time to healing of 8.5 days
 - Check mycoplasma serology
 - Treat precipitating factor if identified
 - If recurrent HSV-associated EM, consider prophylaxis with Acyclovir or Valacyclovir x 6 months
 - EM Major: prednisone, dapsone, mycophenolate mofetil
 - EM minor: symptomatic, prescribe oral antihistamines
 - Apremilast
 - Recurrent EM defined as at least two episodes, 6 episodes in one year over a course of 6-10 years
 - Apremilast has been tried in 3 patients (30-60mg daily)
 - Has been used to treat Behcet's disease
 - Mycoplasma Induced Rash and Mucositis (MIRM)
 - Previously thought to be a variant of EM/SJS
 - Etiology: Mycoplasma pneumoniae
 - 25% of patients experience extra-pulmonary complications
 - Clinical features
 - Young patients
 - M > F
 - Prodrome fever, cough preceding rash x1 week
 - Prominent mucositis: oral mucosa > urogenital, conjunctival
 - Cutaneous involvement less common, usually acral distribution
 - Polymorphic lesions: vesiculobullous, targetoid, macules, papules
 - Mortality 3%
 - How to differentiate from SJS/TEN
 - Negative Nikolsky sign
 - Cutaneous lesions usually acrally distributed
 - Less than 10% BSA affected
 - Absence of drug exposure
 - Evidence of atypical pneumonia i.e. symptoms, CXR, M. pneumoniae serology
 - Milder clinical course
 - Management
 - Serology for M. pneumoniae, CXR
 - Skin biopsy: lesser degree of epidermal necrosis versus SJS/TEN
 - Supportive care, magic mouthwash



- Ophthalmology, GYN/urology consults
- Treatment is controversial; no evidence-based guidelines
- Anecdotally, treatment with steroids, antibiotics or both; IVIG in some cases
- Antibiotic therapy helps prevent pulmonary/neurologic complications; unclear if helps with mucocutaneous eruption
- Conclusion
 - Early identification if dermatologic emergencies is critical
 - Steroids are NOT always the answer
 - Time is key in order to improve prognosis
 - If clinical suspicion is high, treat empirically
 - Do not wait for diagnostic testing

Lasers and Lifestyles

Shino Bay Aguilera, DO, FAOCD



- Generation X has a population of 50 million, ages 31-45
- Though their numbers are fewer than Boomers, they lead in cosmetic procedures
- They account for almost 4 million or 42.9% of procedures performed in 2011
- Gen X is more accepting of cosmetic procedures than past generations
- Many consider these procedures simply part of their budget, for personal 'maintenance' = easy retention
- Dermatoheliosis
 - UVA penetrates deeper into dermis affecting collagen
- Solar Elastosis
 - Collagen breakdown → new collagen synthesis → imperfect repair → cumulative solar scar → photoaging
- SmartSkin CO2 LaserSkinRenewal
 - Great option for solar elastosis
- Combination of CO2 and micro-ablative technologies
 - Old CO2 lasers are comparable to a blow torch, burning everything in the path
 - Messy, wet, high risk of infection
 - More likely to cause pigmentation changes
 - Fractional CO2 allows some areas to remain unharmed, reducing downtime and discomfort
- How does it work?
 - Spot pitch – influences how much tissue is ablated
 - How close the spots are on the grid
 - Closer "grid" = more similar to standard non-fractional CO2 laser
 - Power – determines the ablation depth
 - Dwell time – defines lateral thermal effect
 - Can alter the amount of lateral displacement
- Comparison of Affirm, Fraxel, and Lux 1540
 - 1440 nm wavelength is absorbed about 2-2.5 times better than 1540 nm in water
 - 1440 nm confines effect to the zone of photodamage about 300 nm thick
 - Less energy is required for effective treatment
 - Less pain
 - Greater safety in peri-orbital area
- Non-ablative skin rejuvenation
 - 1440 nm Nd:YAG
 - 1320 nm Nd:YAG
 - 560 – 950 nm Pulsed Light
- Service offerings
 - Wrinkle reduction
 - Coagulation resulting in tissue tightening
 - Scar and striae treatment*
 - Treatment of pigmentation and redness
- CAP technology
 - CAP technology produces varying levels of heat distribution in the skin:
 - Apex pulses create high intensity lesions remodeling collagen
 - Low level heating surrounds the apex pulses creating collagen stimulation
- Histology outcomes
 - Fibrosis creates inflammation
 - Inflammation in simple terms does the following:
 - Inflammatory mediators induce fibroblast and cytokines activity
- Market Opportunity
 - Skin rejuvenation is one of the leading growth drivers in aesthetic medicine
 - Over nine million procedures are performed each year, generating more than four billion dollars in fees for physicians
 - The category is forecasted to grow to 11 million annual procedures within five years
 - Baby Boomers account for 51% of the US population with an ample disposable income available
- Trends are favorable ...
 - Large number of aging baby boomers in the US, Europe and Japan
 - Skin rejuvenation is now the most popular energy-based aesthetic procedure
 - Skin rejuvenation is the second most common procedure after LHR
 - Skin rejuvenation will experience market-beating growth in procedure volume (4% CAGR) and will be roughly equivalent to LHR by 2017
 - Skin rejuvenation has very good procedure fees and account for roughly half of all worldwide procedure fees for energy based aesthetic treatments
- Who else purchases aesthetic procedures?

- Fibroblasts start tissue repair and enhance new collagen production
- So, the fibrosis causes a wound healing response that leads to delayed tissue contraction because of the inflammation created
- 1540 fractional clinical results
- Well-tolerated treatment
 - Mild tolerated pain, no need for anesthetic
 - Effective collagen shrinkage
 - FDA-cleared for soft tissue coagulation
 - Long term collagen growth
- Rapid healing
 - 3 to 5 treatment intervals of 14 days apart or more
 - No infections, bleeding, oozing
 - No down time – can shave or wash face immediately
 - Mild erythema
 - Mild edema 1-2 days
- Icon – 1540 specifications
 - Applications
 - Skin resurfacing
 - Soft tissue coagulation
 - Acne scars and surgical scars
 - Melasma
 - Striae (stretch marks)
- 1540 fractional laser microlenses
 - XF microlens
 - Extra fast
 - High speed with increased surface coverage
 - Allows for a full face, one pass treatment in
 - XD microlens
 - Extra Deep
 - Uses unique lens design to allow for maximum depth of penetration, up to 2 mm depth
- Fraxel DUAL 1550/1927 treatment overview
 - Predictable, reproducible results
 - Safe on
 - All skin types
 - Anywhere on the body
 - Advanced continuous motion handpiece for consistent, even treatment
 - The Fraxel DUAL 1550/1927 laser is safe and easy to delegate to a trained professional
- Clear + Brilliant overview
 - Integrated skincare +
 - Managing patient expectations
 - Treatment experience
 - Multiple treatments are ideal
 - Spaced 2-4 weeks apart
- Maintenance treatments, as desired
- Appointment will take approximately 35-60 minutes depending on treatment area(s)
 - Topical anesthetic agent: 15-30 min
 - Procedure time: 20-30 min
 - Most patients describe an increased sensation of heat or “prickling” during treatment
- Results
 - Uniform skin tone
 - Improved texture
 - More radiant skin
 - Minimized pore size appearance
 - Skin that looks and feels clear and brilliant
 - Immediate and progressive – improves over multiple treatments
 - In a clinical study, 100%* of patients reported improvements in their skin
- PicoSure product overview
 - 755 nm, 532 nm, 1064 nm
 - 550-750 picosecond pulse duration
 - Boost for 70% pressure increase
 - FOCUS lens array
 - No other pico laser has all this!
- Broad US FDA clearances:
 - PicoSure 755 and 1064 are FDA cleared to treat tattoos and pigmented lesions in skin types I-VI
 - PicoSure 755 with Focus is FDA cleared to treat pigmented lesions in skin types I-VI and acne scars and wrinkles in skin types I-IV
 - PicoSure 532 is FDA cleared to treat tattoos in skin types I-III
- Focus Lens Array
 - Diffractive lens redistributes and delivers 755 nm energy
 - Low and high intensity energies lighten unwanted pigment
 - High intensity energy leads to LIOBs, pressure waves, cell signaling and dermal remodeling
 - Only PicoSure’s unique injury can trigger temporary cell membrane permeability, enhanced inflammation, increased collagen & elastin, with virtually no downtime
 - Focus uniquely creates intra-epidermal injuries activates pressure waves and cell signaling
- How does Focus compare histologically?
 - Elegant injury limited to the epidermis, no open lesions, and virtually no downtime
- Collagen & elastin about 6 months after 4 focus treatments
 - Increased collagen deposition
 - Increased density of elastin fibers
- The challenge – non-ablative versus ablative
 - Non-ablative
 - Look refreshed
 - Progressive results
 - No-to-minimal downtime
 - Operator: NP, PA, or DO, DM
 - Ablative
 - Look years younger
 - Immediate results
 - 2-5 days downtime
 - Operator: MD, DO

Facial Plastic and Reconstructive Surgery
Jean-Paul Azzi, MD



- Bilobed flap
 - Great option for the nose
- Debate about use outside the caudal region of the nose and in the alar region
- Azzi, JP. “Bilobed Flaps for Nasal Reconstruction: A Single Surgeon’s Experience with 50 Consecutive Patients”
 - Results: good flap viability with bilobed flap method regardless of smoking status, age, and size
 - Tips to minimize distal flap necrosis (2/50 patients): limit bipolar, counsel on DM control and nicotine exposure, consider plane of flap (always use full thickness in smokers)
 - Tips if develop nasal obstruction: low dose Kenalog, massage and nasal steroid sprays, cartilage grafts when appropriate
 - Tips to fix retraction - local flaps and grafts (composite most common, or V to Y paired with a composite graft)



- Opportunities in cosmetic dermatology more frequently than \$30 billion annually
 - The Global Medical Aesthetic Market is expected to post growth of 12.1% per year from 2014 to 2019
- Dermatology leads as a specialty in non-surgical cosmetic procedures
- Why solely cosmetic dermatology?
 - Scheduling
 - Insurance reimbursement
 - Staff responsibilities and personalities
 - Reducing liability
 - IQ & EQ
 - Artistic purposeful practice
- Who or what defines beauty?
 - Evolution dictates our perception of beauty as a way of improving offspring viability
 - Attractiveness are “hard wired” into our brains beauty is not defined by popular culture
 - Features that are regarded as beautiful in all cultures:
 - Clear skin may connote a healthy, clean, parasite-free body
 - In females, a waist to hip ratio of 0.6 implies fertility and well-nourished bodies
 - Proportionate facial symmetry is a universal feature deemed attractive
 - The impact of cosmetic dermatology on our patients
 - Research has documented that in our society, physical appearance has a large impact on how individuals are perceived by others
 - Attractive individuals receive preferential treatment
 - In education, employment, medical care, legal proceedings, and romantic encounters that often result in their being happier, more successful, more socially adept, and more sexually fulfilled than others
 - Above average in attractiveness earn more money
 - Attractive appearance promotes psychological well-being
 - The subliminal difference: treating from an evolutionary perspective
 - Beauty serves as a subconscious form of communication, signaling our health, vitality, and ability to reproduce
 - Processed in primitive neural pathways in the amygdala and posterior cingulate cortex
- Most appropriate treatments?
 - Surgical treatments versus nonsurgical versus nothing at all
 - Obvious cosmetic interventions may be counterproductive
 - Interfering with the subconscious message
- Patient’s motivation for treatment
 - The face is the focus of human interactions and emotional expressions
 - Their appearance is not communicating their emotions, age or health status properly
 - It’s for those who simply want to look their best
 - Appearances profoundly affect self-esteem
- You are the doctor, treat like it
 - Diagnosis and treat
 - Faces and bodies are 3D
 - The mirror is 2D, use photos as a 3D tool to be educated
 - Don’t treat for the mirror symptoms
 - Use photos of frontal view, 45° view, side view, and animation for face to decide treatment plan and patient education
- Treatment plan goals
 - Improve skin quality and texture
 - Reduce uneven pigment and “age spots”
 - Reduce wrinkles (rhytids)
 - Reshape for lost volume
 - Reduce sun damage
 - Reduce benign tumors
 - Reduce scars
- Understanding the aging face
 - The shape of the aging face shifts from a triangle to a pyramid
 - Full understanding of anatomy is imperative for proper evaluation, treatment and safety
 - Facial soft tissue deterioration most dramatic between the ages of 30 and 60
 - Soft tissue augmentation and volume correction in these areas is strategic for aesthetic treatment
- Golden Ratio, Phi
 - 1.618:1: 0.618
 - Nature’s mathematical artistic brush stroke
- Non/minimally invasive cosmetic procedures tools
 - Botulinum toxin – for rhytids (wrinkles) and hyperhidrosis
 - injectable fillers
 - Hyaluronic acids
 - Calcium hydroxyapatite
 - Poly-L-lactic acid
 - Noninvasive fat removal/cellulite treatment
 - Cryolipolysis
 - Deoxycholic acid
 - Absorbable Suture “thread lifting”
 - Chemical peels
 - Lasers/energy devices
 - Hair transplantation
 - Sclerotherapy
- Natural appearing treatment
 - “Patient Satisfaction and Efficacy of Full-Facial Rejuvenation Using a Combination of Botulinum Toxin Type A and Hyaluronic Acid Filler in Dermatologic Surgery 2015” by M. Beatriz MD et al.
 - Treatment of a single facial area may often be suboptimal
 - Greater than 96% of subjects were satisfied with the full-facial aesthetic outcome at 3 weeks and approximately 93% at 6 months

- 95% of subjects reported that they would recommend injections to family or friends and that they would like to receive the same treatment again
- Injections combined approach
 - Neurotoxins - relaxes muscles lasts 3-4 months usually used in upper 1/3rd of the face, but excellent for neck and less often used in lower 1/3rd of face
 - Hyaluronic acids- multiple types available that fit many uses to manipulate shapes and wrinkles, huge advantage is it is reversible
 - Poly-L-lactic acid- causes tissue growth stimulation also used to manipulate global shapes and wrinkles, more advanced techniques
 - Calcium hydroxyapatite - implant like material
- Neurotoxins
 - Currently 3 FDA approved Neurotoxins
 - OnabotulinumtoxinA
 - AbobotulinumtoxinA
 - IncobotulinumtoxinA
 - Long history of safe and effective treatments, both in cosmetic and medical treatments
 - Has been a gateway drug to other cosmetic treatments
 - Relaxes muscle action and sweating to targeted treatment area for approximately 3-4 months in the cosmetic arena
 - Awaiting FDA approval for longer lasting toxins
- Hyaluronic acids (HAs)
 - Most commonly FDA Approved filler used today in the US
 - Hyaluronic acid is a type of sugar (polysaccharide) that is present in body
 - Combines with water and swells when in gel form, causing a smoothing/filling effect
 - Chemically modified (crosslinked) to make it last longer in the body
 - Most available HAs have lidocaine added to reduce discomfort
 - The effects of this material last approximately 6 - 12 months
 - Peak at 9 months
 - Huge advantage is its safety and reversibility
 - More unique properties for different approved brands allowing for better treatment options and outcome
 - Lifting ability
 - Flexibility in dynamic motion
 - Duration
 - Tissue integration
 - Swelling ability
 - Softness of textural changes
- Hyaluronidase – How to treat SEs
 - Rescue
 - Used as a rescue injection in large quantities (200 units plus) if HA is accidentally injected into a vessel causing an occlusion which lead to tissue necrosis and/or even potentially blindness
 - Small HA papules
 - Used in smaller doses (20 units) it can be used to correct small quantities of HA that may be creating an abnormal or unattractive outcome
- Poly-L-lactic acid (PLLA)
 - Poly-L-lactic acid (PLLA): PLLA is a biodegradable, biocompatible man-made polymer
 - This material has wide uses in absorbable stitches and bone screws
- PLLA is a long-lasting filler material that is given in a series of injections over a period of several months
- The effects of PLLA generally become increasingly apparent over time (over a period of several weeks) and its effects may last up to 2 years
- Tissue Stimulator (collagen synthesis) giving a global filling
- Effects are not reversible
- Good product for the perimeter of the face as opposed to the center of the face due to the resulting stiffness of the end product
- Calcium hydroxylapatite
 - Calcium hydroxylapatite is a type of mineral that is commonly found in human teeth and bones
 - FDA approved for wrinkle filling in the face or for the hand
 - The effects of this material last approximately 18 months
 - While in the body, calcium hydroxyapatite will be visible in x-rays and may obscure underlying features
 - Not reversible
 - Think of it as an implant-like filler
- Deoxychoin acid
 - Naturally occurring molecule in the body that aids in the breakdown and absorption of fat
 - When injected into targeted fat, destroys fat cells
 - Once destroyed, these cells can no longer store or accumulate fat, so further treatment is not expected once you reach your desired aesthetic goal
- Thread lifting
 - PDO absorbable suture
 - Synthetic absorbable surgical suture composed of polydioaxanone
 - Used to perform cardiothoracic surgery
 - One of the safest materials to be implanted in the body
 - Very user dependent
 - Fully absorbs within 4-6 months
 - Can sometimes see the thread in thinner-skinned individuals
- Needles versus cannula
 - Previously fillers were injected with sharp needles producing various undesirable effects such as pain, bleeding, hematomas, edema and inflammation
 - Cannulas are tubes that can be used to administer products into the body and have blunt tips
 - Cannula use allows for a significant reduction in these undesirable effects
 - There is now a FDA approved HA filler used of lip enhancement using a cannula
- Energy-based devices & body contouring
 - Devices are the costliest investment in a cosmetic practice and serve very specific goals
 - Lasers, Radiofrequency, Ultrasound are the most common devices
 - The goal is to target specific tissue parameters to even out the surface irregularities, skin and aging discolorations and to tighten tissue
 - Excellent necessary modalities for a cosmetic practice
 - Very operator dependent and results tend to vary based on downtime
 - Fat reduction and cellulite treatments
- Focused ultrasound non-invasive therapeutic focused ultrasound for lower face
 - Non-invasive therapeutic focused ultrasound for lower face



Protecting Your Practice: Not Usually Part of Your Medical School Curriculum

Lawrence Klitzman, JD

- Practice planning goals: limit bad result from lawsuits, structure asset protection, minimize tax burden
- Suggestions for nonexempt assets: buy insurance, strategic titling of assets, trust planning
 - DAPT (Domestic asset protection trusts), Double LLC structure with a side of DAPT, FAPT (Foreign asset protection trusts)
 - General rule: do not transfer more than 50% of assets to an asset protection trust
- Tenants by the Entireties- protection from individual creditors
 - Does not work well in event of divorce, death, or joint debt
- LLC (limited liability company): Generally better practice to have multi-member
- Don'ts: Have all assets owned under the practice roof
- Dos: Separate as many of the practice assets possible (e.g. property, equipment, management services entity, family asset protection entity, assignment of accounts receivables with bank loan)



- Pre-practice sale strategies: gifts to family members (outright or in trust), GRAT (grantor retained annuity trusts), installment sales to defective grantor trusts

A Multifactorial Case-Based Approach to Medical Dermatology

Suzanne Sirota Rozenberg, DO, FAOCD

- VZV/post-herpetic neuralgia alternative treatments: manuka honey, topical capsaicin (careful with irritant contact dermatitis), lidocaine 5% patch, OMT (suboccipital release, muscle energy to upper thoracic and cervical regions, rib raising)
- Brachioradial pruritis treatment options- cervical nerve block, acupuncture, Botox, amitriptyline-ketamine, gabapentin, OMT (cervical manipulation: C5-8)
- Nostalgia paresthetica treatment options - Botox, topical capsaicin, OMT (T2-6)
- Vulvodynia OMT- pelvic diaphragm release (make sure to have a chaperone/ thoroughly explain the procedure), trigger points of levator ani muscle
- Stasis dermatitis OMT- lymphatic pump, effleurage



- Hyperhidrosis OMT- T2-3, rib raising, occipital decompression, cranial manipulation
- Mucocele, chelitis, verruciform xanthoma OMT- sphenopalatine ganglion release

Medical Management of TEN and Update on Therapy

Carlos Ricotti, MD

- 1997 survey of inpatient dermatology
 - 35% of dermatology programs with dedicated dermatology beds
- Ancillary dermatology inpatient services
 - Whirlpool, photopheresis, light therapy, close observation, etc.
- Inpatient training benefits
 - "Done it all, seen it all"
 - Provides confidants, do away with fear factor
 - Implementation of novel therapies that could be only given in a hospital setting
- Working in a medical team
- Responsibility
- TEN
 - Background
 - Proposed classification used to include EM major, SJS, TEN with spots, TEN without spots, overlap SJS/TEN

AMERICAN OSTEOPATHIC COLLEGE OF DERMATOLOGY
AOCDFD
 FOUNDED 1958

SHADE PROJECT

PARTNERING FOR SKIN CANCER PREVENTION

- General information
 - Incidence 0.5-1.2 million/ year
 - F:M 1.5-2:1
 - Affects older children and adults
 - Average age 63 years
 - Etiology: usually drugs (2-21 days after ingestion)
 - Special setting
 - Graft versus host disease
 - HIV infection
 - Radiation therapy
- Clinical presentation
 - Skin lesions
 - Erythema/edema à bullae à exfoliation
 - Pain – burning sensation
 - + Nikolsky sign
 - Symmetrical
 - OCC photodistribution
 - Anonychia
 - Scalp spared
 - Mucosal lesions
 - All mucosal surfaces may be involved
 - Involvement of oropharynx may precede skin lesions
 - Foreign body sensation in eyes
 - Fever
 - Persistent - up to 6 weeks after the start of TEN
 - May precede skin lesions
 - May be a concerning sign of sepsis
 - Anxiety, agitation, confusion
 - May precede skin lesions by 1-3 days
 - DDX
 - SJS/TEN
 - SSSS
 - TEN with hypersensitivity syndrome/DRESS syndrome
 - AGEP
 - Histology
 - Detachment of the epidermis from the dermis as a result of keratinocyte death
 - Viable cells within the sloughed off epidermis intermixed with necrotic cells
 - Minimal inflammation differentiates from 3rd degree burn or vasculitis
 - Laboratory findings
 - Blood
 - Neutropenia, lymphopenia or leukocytosis, anemia, thrombocytopenia
 - Increases transaminases
 - Decreased albumin
 - Hypophosphatemia
 - Pre-renal azotemia
 - SCORTEN: a severity of illness score for TEN
 - Seven independent risk factors or death identified
 - Scored from 1-7
 - Score of 3 à mortality risk 35.3%
- Medical Management of TEN
 - Focus on supportive care
 - This is not a burn
 - Less edema
 - Minimal vascular damage
 - Less damage to regenerative tissue
 - Supportive management >> IVIG for final outcome
 - Simplified
 - Identify and discontinue potential offending medications/drugs
 - Calculate SCORTEN score on days 1 and 3
 - Transfer patient to an appropriate level of care
 - Wound care:
 - Acute skin failure
 - Fluid loss, infection, thermal regulation, altered immunity
 - Overview
 - Consensus on the therapeutic approach controversial
 - Supportive care best approach
 - Medical ICU or burn unit
 - Air mattresses with pressure ulcer prophylaxis
 - Non-stick sheeting and heating blankets
 - Room temperature 30-32 degrees
 - NG Dobhoff tube or TPN feeds
 - Foley catheter
 - Peripheral venous access x2 (18 gauge)
 - Avoid CVP catheters if possible (most have triple antibiotic coatings)
 - Pain control
 - Pan culture
 - Legionella and mycoplasma serology on admission
 - Wound cultures on admission and every 3 days
 - Staphylococcus early
 - Pseudomonas late
 - Viral
 - No need for cultures unless suspect HSV/VZV (keep an eye on it)
 - DVT/anticoagulant prophylaxis
 - GI prophylaxis
 - Fluid management controversial
 - No fixed fluid resuscitation, fluid requirements are lower than the volumes required for burns
 - Conservative wound management
 - NO debridement
 - Skin management
 - Non-adherent, SofSorb dressings applied
 - Silver nitrate q 8 hours
 - Ionized nanocrystalline silver dressing to localized denuded areas
 - Decreases the number of dressing changes required, thus reducing trauma to the skin and pain
 - By days 6-10 of admission most erosions and areas of sloughed skin have significant re-epithelialization
 - Adjuvant therapy
 - Cyclosporine
 - Studies show positive outcomes
 - Reduced mortality when compared to IVIG
 - Contraindicated with HIV positive, immunocompromised, liver failure
 - Systemic corticosteroids
 - May delay start of TEN but does not halt the progression of the disease
 - Does not alter overall mortality

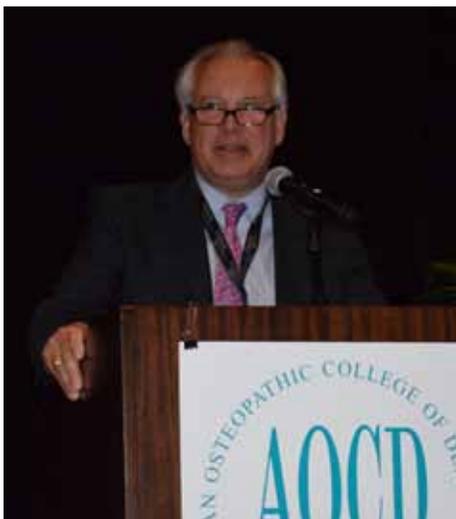
- Thalidomide
 - Don't use it
- Biologics
 - May consider on a case by case basis
- IVIG
 - Controversial
 - Average dose in current studies frequently too small for appropriate response
 - Many studies of patients receiving IVIG had higher initial SCORTEN scores or initially received the drug at a later start date than desired
- Causative medication
 - Improved prognosis for patients in which the causative medication was rapidly withdrawn
- Special circumstances
 - Involvement of bronchial epithelium
 - When dyspnea, bronchial hypersecretion, marked hypoxemia
 - May develop pulmonary edema, atelectasis, bacterial pneumonitis, may be required mechanical ventilation, can be fatal
- Cutaneous infections, pneumonia, sepsis
 - Refrain from using empirical antibiotics

- 1/3 have family history Linked to chromosome 1p21.1-1q25.3 (gamma-Secretase complex) (NCSTN, PSEN1, PSEN2 genes)
- Obesity and smoking - risk factors
- May present in patients with Crohn's, PG & arthritis
- Elevated inflammatory markers in patients with severe disease
- Diagnosis and Associated Symptoms
 - Apocrine gland folliculitis, pain, draining fistulae, fever, chills, lethargy, comedones, scarring and tissue damage
 - Compromised integrity of skin may lead to bacterial colonization
- HS comorbidities
 - Follicular occlusion tetrad, metabolic syndrome, inflammatory bowel disease, spondyloarthritis, depression, pyoderma gangrenosum
- Hurley Staging
 - Stage I - lesion formation, single or multiple without sinuses or scarring
 - Stage II - recurrent lesions with sinuses and scarring, widely separated
 - Stage III - diffuse involvement of entire area
- Clinical Scores
 - Sartorius sore – (+/- modified) counting individual lesions and distances between them, extra points for Hurley stage III
 - Physician global assessment – clear to very severe depending on number and type of lesions
 - Hidradenitis suppurativa severity index – lesions, pain, dressing changes and affected area
 - Hidradenitis Suppurativa Clinical Response – 50% reduction in nodules with no change in abscesses or fistulas
- Underlying Mechanism and Treatment Strategies
 - Mechanism
 - Follicular gland occlusion followed by an inflammatory response versus apocrine gland primary target followed by follicular duct pathology
 - Treatments
 - Hygiene, weight and friction reduction
 - Cessation of smoking, topical antibiotics and cleansers
 - Systemic antibiotics (minocycline, clindamycin/ rifampicin)
 - Topical and systemic corticosteroids
 - Cyclosporine, anti-androgens, retinoids

- Local radiation
- Photodynamic therapy, hyperbaric oxygen
- Surgery
- Laser
- Biologic therapy (anti-TNF)
- Rationale for Using Anti-TNF-alpha Agents
 - Indirect Evidence
 - Anti-TNF-alpha drugs are efficacious in the treatment of other diseases associated with an inflammatory process (psoriasis, rheumatoid arthritis, ulcerative colitis, pyoderma gangrenosum, and acne conglobata)
 - Direct Evidence
 - Anti-TNF-alpha drugs are effective in treating HS
 - Infliximab Sullivan T, et al. *Br J Dermatol* 2003;149:1046
 - Etanercept Giamarellos-Bourboulis EJ, et al. *Br J of Dermatol* 2008;158:567-72
 - Adalimumab Blanco R et al. *Arch Dermatol* 2009;145:580-584
- Infliximab therapy for patients with moderate to severe hidradenitis suppurativa: a randomized, double blind, placebo- controlled crossover trial Grant A, Gonzalez T, Montgomery M O, Cardenas V, Kerdel FA. *J Am Acad Dermatol* 2010; 62: 205-217
 - Study design
 - HS severity index score (HSSI)
 - Inclusion Criteria
 - HSSI ≥8
 - HS greater than 1 year with multiple ER/doctor visits
 - Failed topical/systemic therapy
 - Failed surgery
 - Age greater than 18 years
 - Adequate birth control
 - Negative history for TB, PPD and CXR
 - Demographics and baseline disease severity
 - Primary endpoint: proportion of patients with ≥50% reduction from baseline in HSSI at week 8
 - Decrease from baseline in HSSI at week 8
 - Mean improvement from baseline to week 8 in patient-reported pain VAS
 - Improvement from baseline in DLQI component scores
 - PGA at week 8
 - Mean ESR and CRP at baseline and week 8

Medical Treatments in Hidradenitis Suppurativa (H/S)

Francisco Kerdel, MD



- Hidradenitis suppurativa (HS)
 - 1% prevalence
 - Commonly presents early second decade
 - Declines after age 50

- Mean improvement in HSSI scores in double-blind and open label phases
- Mean PGA scores in double-blind and open label phases
- Etanercept in HS
 - Open label phase II
 - 10 patients
 - 12 weeks therapy: 50 mg SC once weekly
 - Endpoints:
 - Disease activity score
 - Sartorius score
 - VAS (cm)
- Changes in visual analogue scale (VAS)
- Treatment of Hidradenitis Suppurativa with Etanercept Injection Adams D R et al *Arch Dermatol* 2010;146:501-504
 - Double blind placebo- controlled trial
 - 20 patients
 - Etanercept 50mg BIW
 - 12 weeks double blinded, 12 weeks open label
 - No significant efficacy
- Adalimumab in Hidradenitis Suppurativa Open-Label Study Dose: same as Crohn's 160- 80-40qow Amano M. et al *Int J Dermatol* 2010;49:950
 - HSSI preliminary data
 - HSSI
 - VAS score
 - DLQI
- Efficacy and Safety of Adalimumab in Treatment of Moderate to Severe Hidradenitis Suppurativa: Results from the Placebo-Controlled Portion of a Phase II, Randomized, Double-Blind Study AB Kimball1 , Y Gu2 , M Okun2 , G Jemec3 1Harvard Medical School, Boston, MA; 2Abbott Laboratories, Abbott Park, IL; 3Roskilde Hospital, Roskilde, Denmark; Presented at the 69th Annual Meeting of the American Academy of Dermatology, February 4-8, 2011, New Orleans, LA
 - Study design
 - HS-PGA scale
 - Baseline demographics and clinical characteristics
 - Proportion of patients achieving clinical response at weeks 2, 4, 8, 12, and 16 during period 1
 - Proportion of patients achieving an HS-PGA of clear, minimal, or mild at week 16
 - Mean change in HS-CRP from baseline to week 16
- Phase 3 Adalimumab: PIONEER I, II, and OLE
 - Main inclusion and exclusion criteria
 - Inclusion criteria
 - Adults with a diagnosis of HS for at least 1 year prior to baseline
 - HS lesions in at least two distinct anatomic areas, one of which must be at least Hurley stage II or Hurley stage III
 - Stable HS for at least 2 months prior to screening and also at the baseline visit
 - Inadequate response to at least a 3-month trial of an oral antibiotic for treatment of HS (or intolerance to, or have a contraindication to, oral antibiotics for treatment of their HS)
 - Total abscess and inflammatory nodule (AN) count of greater than or equal to 3 and draining fistula count of less than 20 at the baseline visit
 - Exclusion criteria
 - Prior treatment with adalimumab or other anti-TNF therapy, or participation in an adalimumab trial
 - Subject received oral concomitant analgesics (including opioids) for HS-related pain within 14 days prior to the baseline visit
 - Subject received prescription topical therapies for the treatment of HS within 14 days prior to the baseline visit
 - Subject received systemic nonbiologic therapies for HS less than 28 days prior to baseline visit
 - PIONEER I only: subject received any oral antibiotic treatment for HS within 28 days prior to the baseline visit
 - Efficacy Endpoints^{1,2}
 - Primary endpoint
 - Proportion of patients achieving Hidradenitis Suppurativa Clinical Response (HiSCR) at week 12
 - HiSCR defined as $\geq 50\%$ reduction from baseline in AN (total abscess and inflammatory nodule) count and no increase in abscess or in draining fistula counts
 - Three ranked secondary endpoints
 - Proportion of patients achieving AN count of 0, 1 or 2 among patients with HS severity of Hurley stage II at week 12
 - Proportion of patients achieving at least 30% reduction and at least 1 unit reduction from baseline in Patients' Global Assessment of Skin Pain numerical rating scale (NRS) based on 24-hour recall of worst pain at week 12, among patients with baseline NRS ≥ 3
- Change from baseline in modified Sartorius score
- Hidradenitis Suppurativa Clinical 50 Response (HiSCR)
 - HiSCR requires:
 - At least a 50% reduction in the total abscess and inflammatory nodule count (AN count) relative to baseline, AND
 - No increase in abscess count, and no increase in draining fistula count
 - HiSCR at Week 12; Primary Efficacy Endpoint
 - Ranked Secondary Endpoints Results at Week 12,2
 - Reduction in DLQI from Baseline at Week 12
- Experience with ustekinumab for the Treatment of 54 Moderate to Severe Hidradenitis Suppurativa Gulliver W P et al *J Eur Acad Dermatol* 2011
 - Three patients
 - Significant improvement (patient #1)
 - No adverse events
- An Open 55 -Label study of Anakinra for the Treatment of Moderate to Severe Hidradenitis Suppurativa Leslie K S et al *J Amer Acad Dermatol* 2014;70:243
 - 5 Patients
 - Anakinra 100 mg SC daily
 - At 8 weeks modified Sartorius score decreased by 34.8 points
 - Physician/patients VAS decreased by 45.8 & 35.6 points (8 weeks)
 - DLQI decreased by 8.4 points (8 weeks)
 - C reactive protein decreased by 16.7 points
- Canakinumab 56 for Severe Hidradenitis Suppurativa Preliminary Experience in 2 cases Hournet C et al *JAMA Dermatol On Line* Aug,2017
 - Canakinumab an IgGk anti IL-1 β monoclonal antibody
 - Two patients, Hurley stage III
 - Positive response in both patients
 - No reported adverse events
- MABp1 Targeting Interleukin 57 -1alpha for Moderate to Severe Hidradenitis Suppurativa Not Eligible for Adalimumab: A Randomized Study. Kanni T et al *J Invest Dermatol*, accepted for publication
 - Double-blind, placebo-controlled study



- 20 patients, Hurley II/III
- Primary end point at 12 weeks
- Patients ineligible for adalimumab
- Concomitant antibiotic allowed
- HiSCR (50% decrease inflammatory lesions) in 60% compared to 10% in placebo
- Decrease in IL-8 and ultrasound improvements in treated patients
- Apremilast 58 in the Treatment of Moderate to Severe Hidradenitis Suppurativa: A Case Series of 9 Patients Weber P et al *J Am Acad Dermatol* 2017;76:1189
 - 9 patients
 - 3 patients failed
 - 6 patients showed promising response
 - Sartorius from 73.17+/- 67.76 to 56.17+/-44.89
 - VAS from 7.17+/- 0.98 to 2.00+/- 2.10
- Phase Two Open Label Single Center Study to Evaluate the Efficacy of Apremilast for the Treatment of Moderate Hidradenitis Suppurativa. Kerdel F, Azevedo F, Lynn A, Don F A, Kerdel Don C, Fabbrocini G, Kerdel F A
 - Study Design
 - 20 patients
 - Open label
 - Hurley I and II (III excluded)
 - Primary endpoint (HiSCR 30) week 16
 - Length of study 28 weeks
 - Clinical scores: HiSCR, modified Sartorius, PGA, DLQI,
 - Statistical analysis
 - Primary endpoint: proportion of patients with HiSCR (30% reduction in abscesses and nodules) at week 16
 - 50% reduction was an exploratory endpoint
 - Both 30% and 50% reductions were analyzed at weeks 16 and 24
 - LOCF was used for missing data
 - Responder analysis
 - Non-responders/failures were any patient who discontinued due to an adverse event or lack of efficacy
 - LOCF was implemented in an ITT analysis for all continuous variables (Sartorius, PGA, VAS pain, DLQI)
 - An “As Treated” analysis, which included all available observations for all treated patients (no missing data imputed), was also performed
 - Patient Disposition
 - HiSCR: 30% reduction in abscesses and nodules

- HiSCR: 50% reduction in abscesses and nodules
- Responders analysis based on treatment failures*
- Modified Sartorius score: change from baseline
- PGA score: change from baseline
- VAS pain score: change from baseline
- DLQI score: change from baseline
- Proportion of patients with PGA and VAS pain reductions

When the Wi-Fi Goes Down: The EMR Doomsday Scenario Isn't That Bad

John Coppola, DO, FAOCD

- Understand what type of system/ connection/service you have (cloud versus server based, cable/DSL/satellite/ fiber, connection speeds)
- Have a direct contact/emergency phone number for internet provider and IT team
- Know how/where to reset router
- Who is responsible for tracking power/ internet capability after storms?
- If Wi-Fi goes down: have several iPads 4GLTE capable, Wi-Fi hot spot devices, 5G on the horizon
- Or in a pinch...paper: back to the template forms, input back into EMR at lunch or the end of the day

Recruit & Select the Best Talent

Lisa Hackney &

Steven Grekin, DO, FAOCD



- Three simple truths:
 - If you begin with “who” rather than “what,” you can more easily adapt to a changing world
 - If you have the right people on the bus, the problem of how to motivate and manage people goes away
 - If you have the wrong people, it doesn't matter if you have the right direction – you still won't have a great company
- Only 25% of departing employees express dissatisfaction before quitting
 - 75% of people are leaving for unknown reasons
- The cost of turnover
 - 16-20% of annual salary for high turnover positions
 - 20% for midrange positions
 - Up to 213% of annual salary for highly educated positions
 - Source – Zane Benefits, February, 2016
- Plus ...The Real Cost ...
 - Screening costs
 - On-boarding
 - Lost productivity
 - Lost engagement
 - Customer service & errors
 - Training costs cultural impact
- Where to begin sourcing
 - Referrals
 - Best source ever
 - Formalize the process
 - Online sources produced 86% of interviews and 72% of hires in 2016
 - Track where your best are coming from and measure the outcomes
- Screen
 - Use peer interviewing
 - Use a validated tool
 - Ask for references
 - Background checks
 - You can train skills, but you can't train attitude
- What makes employees stay and work hard for your company?
 - Employees join a company for rational motives:
 - Better compensation
 - Benefits
 - Career opportunities
 - They stay and work hard for emotional ones
- People
 - “The organization will never be what the people are not.”
 - Price Pritchett “The Ethics of Excellence”

Compliance Starts with a Voice That Smiles and a Sincere Handshake

Reagan Anderson, DO, FAOCD

- Compliance starts with a voice that smiles and a sincere handshake
 - Almost everyone has experienced a situation where the physician was unprepared to see patients, where patient's voices don't matter, or where office staff does not perform at the expected level
- Compliance starts with the physician "showing up"
- Developing, measuring, making reproducible your brand via yourself and your staff
 - Set an example
 - Be the first to arrive at the office
 - Groom yourself appropriately
 - Smile genuinely
 - Be the voice that cares (about patients, staff, vendors, etc.)
- Consistency of message, of medicine, of intent
 - Among practitioners with treatment modalities
 - Stay up to date with current literature
- Policies and procedures in place
 - Need to be spelled out and followed
 - Must be a cohesive policy that wraps around the thoughts and beliefs of all employees of the practice
 - Must be up to date medically and legally

Patient Communication & Physician Burnout

Neha Sangwan, MD

- Patient Awareness Rx
 - Physical: on a scale (1-10) rate your self-care in each of these areas (food, sleep, movement, energy)
 - Mental: where are the top (3) repetitive thoughts occupying your mental real estate?
 - Emotional: what aspects of your life cause the most stress (significant other, family, health, social, work, money)
 - Social: who are the top (4) people you spend the most time with? Which relationships give you energy? Which drain you of energy?
 - Spiritual: what do you value about your work? What matters most in your life? Can you describe a time in your life when you felt a deep sense of connection and belonging?
- Now ask patient... Given these new awarenesses, what might be contributing to your symptoms? What's the next step you can take to feel better?

- Burnout Awareness Rx
 - Physical: on a scale (1-10) rate your self-care in each of these areas (food, sleep, movement, energy)
 - Mental: where are the top (3) repetitive thoughts occupying your mental real estate? When does your pursuit of perfection lead to diminishing returns?
 - Emotional: In what areas of your life are you avoiding conflict or difficult emotions?
 - Social: In what setting and in whose presence do you feel empowered, powerless, and find yourself acting passive-aggressively?
 - Spiritual: what first inspired you to become a health professional? Can you describe a time you felt deeply appreciated and valued? What brings purpose and meaning to your life?
- Now ask yourself... Given these new awarenesses, what's one step you can take to reinvest in your self-care?

Trust, But Verify: The Golden Rule for Every Physician's Practice

John Coppola, DO, FAOCD



- Prescriptions & notes
 - MAs and desk nurses input into my que in the EMR and I always review prior to sending
 - MAs input data for all of my notes, but MD/DO always should review content and billing level prior to finalizing
- Statistics
 - US Chamber of Commerce
 - 75% of all employees steal at least once
 - Med samples, cosmetic products, cash, hours worked

- Average time it takes an employer to catch a fraud scheme is 18 months
- The average small business loses up to 20 cents per dollar to theft/fraud
- Keep track of your cosmetic inventory
 - How are return items handled?
 - Does everything stay locked up?
 - Pull out what you need for the day & account for what you use
- Develop a system to track cash co-pays/cash-only patients coming into your office
 - Paper super bill?
 - Establishes a paper trail for easier tracking and accountability for checkout process
- Audit, audit, audit
 - Office managers regularly audit front staff collections/MA supervisors
 - Practice manager regularly audits your office managers
 - Accountant audits your practice manager
 - Change your accountant every 5 years?
 - Not unusual for accountants to steal from practices
 - Use someone external from your accountant annually
 - We use Allergan's practice consultants for financial benchmarking
- Items you should always verify
 - Confirmation of:
 - Medical license renewal
 - Taxes submitted and paid
 - Rent/mortgage
 - Insurance contract renewals
 - AOA/AMA CMEs submitted
- Cameras
 - Very little pushback, easy to implement
 - Break room
 - Near storage closet
 - Front desk/check out area

Reputation Management - Combat the Digital Footprint

Lisa Hackney & Steven Grekin, DO, FAOCD

- Happy customers tell 2-3 people about their experience
- A dissatisfied customer will tell 9-15 people about their experience
- People are 2 times as likely to talk about bad customer experiences than good ones
- 93% of customers will refuse to do business with a company after 3 or fewer bad experiences

- Net promoter score (NPS) = % promoters - % detractors
- What can you do?
 - Ask patients to leave positive reviews
 - Use feedback to improve
 - Ask new patients how they heard about you
 - Begin a systemized process of surveying
 - Find someone who can help you

You Have to Earn the Right to Be Heard

Reagan Anderson, DO, FAOCD

- You have to earn the right to be heard
 - Be on time
 - Be presentable
 - Be groomed
 - Know your trade and be able to communicate that trade
 - Do your exam rooms reflect a message that you wish to reflect?
- Having the title “doctor” only gets you into the room
 - Having a degree is not enough
 - Being a doctor is prideful, but means nothing if you don’t take care of yourself to fully allow you to take care of your patients
- Being a “doctor” means nothing outside of medicine
- Be “osteopathic” in all aspects of medicine, life, and business

Five Steps to Honest Conversations that Create Connection, Health and Happiness

Neha Sangwan, MD



- Big idea
 - Break up intuitive intelligence into 5 categories
 - Physical
 - Cognitive
 - Emotional

- Social
 - Behavioral
- Body
 - Where we pick up data
 - Patient interactions, conflicts, emails, etc.
 - What are the external data points?
 - What can be observed
 - What are the internal data points?
 - Heart racing, chest tightness, sweating, stomach turning, headaches, muscle tightness, jaw clenching
- Thoughts
 - What story do you make up based on the data collected?
- Emotion
 - What emotion do you feel based on the story you created?
 - Benefits to positive emotions
 - Increased longevity, creativity improved decision making, etc.
 - If there are so many benefits to positive emotions, why not create a positive story based on data collected until you know the answer?
- Desire
 - What do you want in the short term based on this emotion?
 - What do you want in the long term based on this emotion?
- Action
 - Integrate all the other pieces into a clear and concise conversation
 - Take action
 - Have the honest conversations and take action

“Average” Staff is Your Achilles Heel

John Coppola, DO, FAOCD

- Average employees: more likely to leave and cost you turnover, decrease morale, make more mistakes
- Hire smart
 - Have a set and defined hierarchy of responsibility for your managers and supervisors
 - Don’t micromanage your managers
 - Well-defined system for reviewing your employees
 - Organized and regularly updated employee manual
- Reduce turnover - 16% of annual salary for high-turnover, low-paying jobs and 20% of annual salary for midrange positions
 - Clearly defined job description (Driving? Switching positions?)
 - Background and drug testing up front

- Check social media first
- Working interviews
- Personality profiling
- 90-day probationary period
- Hire the right personality, not the right experience!

Service Excellence Standards

Lisa Hackney &

Steven Grekin, DO, FAOCD



- Ask patients what they prefer to be called
- Show enthusiasm in body language, tone and facial expressions
- Put yourself in your patients’ shoes (sit in your waiting room/exam rooms, put the gowns on...)
- Conduct a successful huddle: be consistent, less than 10 minutes, review a patient experience standard daily, talk about the “why,” rotate leaders, bring real time examples, celebrate the victories, communicate daily to do’s, build relationships, start the day off together

Hypnosis

Reagan Anderson, DO, FAOCD

- Structure and function are reciprocally interrelated
- Sticks and stones
- Victimhood is a daily choice
- “Be the change you wish to see in the world” Ghandi
- “The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy.” Dr. Martin Luther King, Jr.

Setting Limits in Your Practice: 3 Lines in the Sand to Draw Tomorrow

John Coppola, DO, FAOCD, FAAD

- Set rules for your patients and stick to them (late, no shows, verbally abusive patients)
- Drug/device reps: set limits to how many per day, time restrictions before lunch and end of day, limit visits from those not sampling products unless new information available
- Try to negotiate into your contract employer obligation to provide monthly statements of a breakdown of assigned overhead to you unless you are on a fixed percentage of collections, if you are find out what their rate of collections are

Develop Your Team Around You

Lisa Hackney &

Steven Grekin, DO, FAOCD

- The strengths of physician leadership
 - You are already a leader
 - You have a large capacity for complexity
 - You are naturally process improvement “engineers”
 - You know how to leverage expertise
 - You want to remain relevant
- Me and my strengths
 - Concept
 - What do I believe my strengths to be?
 - Reality
 - What would my team perceive my strengths to be?
- Human investment planning
 - Rank the people you manage/work with starting with your best performer first and concluding with your least effective performer
 - Rank the people you manage/work with starting with the person with whom you spend the most individual (one-on-one) time and concluding with the person with whom you spend the least of your time
 - Managing means making the strengths of people effective
 - Neither the welfare approach, nor the personnel management approach, nor the control-and-firefighting approach address themselves to strength, however
 - People are weak; most of us are pitifully weak
 - People cause problems, require procedures, create chores, and people are a cost and a potential “threat”
 - These are not the reason why people are employed, the reason is their strength and their capacity to perform
- Three Key Principles of Strength Development
 - Discover the activities that people do well, are interested in pursuing, and are passionate about; and encourage them to do more
 - Discover the activities that people do poorly, cannot change, or with great effort only change slightly; and draw up a strategy to manage these limitations
 - People’s strengths flourish when they experience the benefits of good relationships
- Challenges of managing highly talented people
 - Talk about your mission
 - Manage individually
 - Understand uniqueness
 - Know goals, aspirations and needs
 - Accommodate “prima donna” behavior

- Empower them
 - Let them make choices, decisions
 - Don’t stifle them or slow them down
 - Don’t believe that you must stay out in front of them
 - Equipment and structure
- Feed their ego
- Key leadership questions
 - Do we make improving our talent pool and retaining talent one of our top three daily priorities?
 - Have we compromised our standards?
 - Have we strategically created a reputation for treating each employee individually, treating them fairly, and treating them well?
 - Have we branded our environment as one of a high-performance work team that celebrates winners and where work is fun?
 - Does each employee know they are appreciated and valued every day?

Success Without Fulfillment is the Ultimate Failure

Reagan Anderson, DO, FAOCD

- Near impossible to be filled with hate and gratitude at the same time
- Have conviction behind what you tell yourself (e.g. I am NOT a smoker, I AM fit...)
- Celebrate your daily victories and tally what you do well
- Fulfillment is about us personally striving and growing- “if/when, then statements”

Mastering the Most Challenging Personalities at Work & Home

Neha Sangwan, MD

- 5 levels of listening
 - 1: Distracted, already know, don’t care (classic teenagers)
 - 2: In your head, listening to your own thoughts instead of who’s talking (when want to impress someone)
 - 3: Ears only, misses out on the emotional aspect (the problem solvers, the advice givers)
 - 4: Heart listening (content AND emotion)
 - Meet them on an equal emotional level
 - Use “You seem...” or if ever unsure how the speaker is feeling, can say “I can see how important this is to you.”
 - 5: Open listening = words + emotions + values

Non-Invasive Cutaneous Oncology, Part 1

Frank Armstrong, DO, FAOCD

- Non-surgical candidates: lower risk tumors, higher risk surgically, cosmetics, refusal



- Most useful stratification of BCC's- NCCN guidelines
- Universally accepted staging system for risk stratification of SCC not yet available (Brigham and Women's classification commonly used)
- Topical 5-FU: FDA approved for superficial BCC
 - Caution with pets (very toxic)!
 - Careful is patient has DPD enzyme deficiency (0.2% of population has complete deficiency)
 - Penetrates thicker lesions poorly
 - Apply BID for 3 to 6 weeks (but when used up to 12 weeks- 90% success rate)
 - Pregnancy category X
- Imiquimod
 - Induces cytokine production via toll-like receptor 7
 - Pregnancy category C
 - Once daily x 5 days/week for 6 weeks (up to 16 weeks), but tailor to individual patient's response and ability to tolerate
 - Limit size of area treated to less than 25 square cm
 - Avoid topical steroids (cytokine dermatitis is therapeutic)
 - Resiquimod same family, more potent than imiquimod...future?
- Photodynamic Therapy (PDT)- blue light sufficient for epidermal lesions such as actinic keratosis, red light penetrates deeper
- Success rates (at 1 year) for sBCC's: 83% imiquimod, 80% 5-FU, 73% MAL-PDT
- PDT pearls:
 - Skin prep: degrease and debride
 - Occlusion to enhance penetration
 - Heat the skin to increase porphyrin production
 - Incubate long enough
 - Make sure light is close enough to the patient
 - If redness immediately, think propylene glycol reaction
 - Do not use topical steroids to rescue
- Intralesional options for non-melanoma skin cancers
 - 5-FU, methotrexate and bleomycin all reasonably priced and good efficacy versus interferon alfa more expensive and less effective
 - Nothing FDA approved but studies support the use, excellent efficacy for right lesions
 - Best with SCC-KA type, especially legs
 - Suggests 0.2-0.3cc weekly or bi-weekly until resolution

- Tip- inject lidocaine first (5-FU very painful when injected)
- Transplant patients high risk for non-melanoma skin cancers: cyclic PDT done every 4-8 weeks, combination topical with imiquimod and 5-FU, Soriatane (limited by \$ and side effects), educational prevention, field therapy
- Sun protection tips: Niacinamide or Nicotinamide 500mg BID (Australian Study), antioxidant topical before sunscreen, Photozyme (photolyases), Heliocare

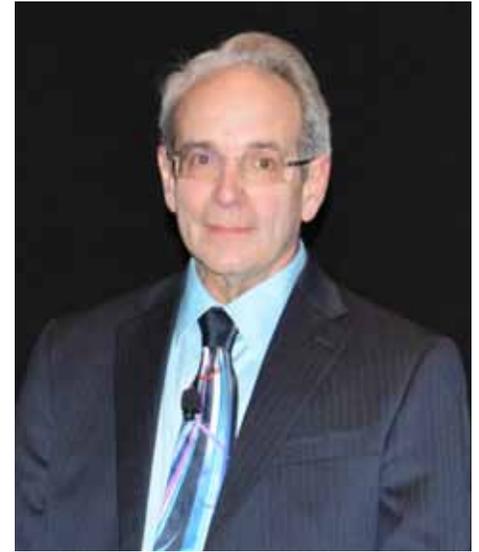
Non-Invasive Cutaneous Oncology, Part 2 Josh Swindle, RTT

- Risks of superficial radiotherapy
 - Acute: erythema and mild discomfort
 - Latent: hypopigmentation or hyperpigmentation, Secondary BCC from radiation delivery: 30-40 year latency (5-7% risk), skin atrophy, telangiectasias, ulceration or necrosis (rare)
- Ensure appropriate setup and delivery
- Future needs
 - Image-guided biopsies (ultrasound) allowing correlation with pathology, protocol and progress
 - Development of new technology with increased purity of beam
- Good option for large/complicated ear lesions
 - "Wet Gauze" technique (when have lesions on multiple surfaces of ear): place gauze soaked in tap water behind ear, draws radiation to area



behind the ear so only have to radiate from one direction

How to Hit a Homerun with MACRA! Cliff Lober, MD, JD



From *ASDS Currents* January/February 2018:
Hit a home run with MACRA in 2018

Dermatological Emergencies: The Eschar Ted Rosen, MD, FAAD

- What constitutes emergency?
 - Objective characteristics of emergency
 - Acute onset usual
 - Associated with symptoms typically
 - Risk of morbidity and/or mortality
 - Morbidity (impaired normal function)
 - Mortality (death)
 - Requires timely diagnosis to avoid serious morbidity or mortality; a sense of immediate necessity for intervention
- Uncle Teddy's rules
 - The severity of visible pathology (deviation from normal) does not always correlate with the degree of seriousness of disease process
 - Given pathology of similar visible severity, you may need ancillary information to decide what is or is not life-threatening
 - Given truly life-threatening disorders, the real need for rapid intervention may differ greatly
 - You don't always need to know the precise diagnosis immediately, but a skilled clinician can identify emergent situations
- Emergent infections (with skin manifestations)
 - Gr+ sepsis (Staph, Strep)
 - Gr- sepsis (enteric microbes)

- Meningococemia
- SSSS, TSS
- Spotted fevers (RMSF, MSF)
- Anthrax, tularemia, plague
- *Vibrio vulnificus*
- Typhus
- Necrotizing fasciitis
- Disseminated VZV, HSV
- Hemorrhagic fevers (ebola, lassa, marburg)
- Smallpox
- Rubella, rubeola
- CMV
- Arboviruses
- HIV
- HHV-8 candidemia
- SA and NA blastomycosis
- Histoplasmosis
- Cryptococcosis
- Coccidioidomycosis
- Disseminated sporotrichosis
- Zygomycoses
- Fusariosis
- Aspergillosis
- Chagas disease
- Amebiasis
- Mucocutaneous leishmaniasis
- Onchocerciasis
- Schistosomiasis
- Loxoscelism
- Lepidopterism
- Dog, cat & snake bites
- “The eschar”
 - Cutaneous necrosis
 - Characterized by the formation of a black, adherent crust
 - Even though may be localized at time of presentation, represents a systemic (or potential for systemic) disorder
 - Often infectious in nature, but may be toxic, embolic, vasculitic
 - Context is important in decision making
- Ecthyma gangrenosum
 - Manifestation of bacterial sepsis
 - *Pseudomonas*, *Klebsiella*, *E. Coli*, *Serratia*, rarely *S. Aureus*
 - Solitary, painless, red swelling, may develop bulla, but rapidly forms painless eschar-covered ulcer
 - Process only takes 12-24 hours
 - Patient febrile and toxic-appearing
 - Immunocompromised, neutropenic
 - IV antibiotics for presumed *Pseudomonas*
 - Culture skin, culture blood, look for focus of infection
- Ecthyma Gangrenosum Revisited
 - Meta-analysis of 167 cases in literature 1975-2014
 - *Pseudomonas* 73.65% • Other bacteria 17.35%
 - Fungi 9%
 - Sick but not immunocompromised (55/167 = 33%)
 - May be totally healthy (7/167 = 4.2%)
- Mucormycosis
 - Due to one of several non-septate fungi
 - *Mucor*, *rhizopus*, *absidia*
 - Acute onset pain and swelling on or near eye or nose (sinus)
 - DIABETES
- Develops ischemia, then eschar
- Rx: Amphotericin-B (7-10mg/kg, high dose)
- Posaconazole (400mg BID, PO or IV)
- Isavuconazole Available PO or IV (372mg BID x 2 days, then QD) C
- Serum 1,3-β-D-Glucan Assays
 - Sensitivity 98-100%, specificity 97-98%
 - Detects serum 1-3-β-D-glucan (fungal cell wall)
 - Normal in human serum = 10-40 pg/ml
 - Negative less than 60 pg/ml
 - Indeterminate 60-80 pg/ml
 - Positive greater than 80 pg/ml
 - Test requires only one hour
 - Detects: *Candida* spp, *acromonium*, *aspergillus*, *fusarium*, *histoplasmosis*, *coccidioidomycosis*, *sporothrix schenckii*,
 - Does not detect: *cryptococcus*, *zygomycetes*
- Spider Bite: Brown Recluse
 - *Loxocles reclusa* (and related species)
 - Painless; 8 hours later pain, erythema, swelling; progresses to ischemia and then eschar; sloughs forming ulcer
 - 67-90% remain localized phenomenon
 - Viscero-cutaneous form in 10-30%
 - 2-4 days after bite: sequential signs/Sx
 - Morbilliform rash, fever, nausea, vomiting
 - Hemolysis, thrombocytopenia, hematuria
 - Shock, DIC, acute renal failure: death
- Brown Recluse Bite
 - Rest, elevation, ice packs (NOT HEAT)
 - NSAIDs to relieve pain and swelling
 - ? Tetanus prophylaxis (debatable)
 - Antibiotics: not typically appropriate
 - ? Nitroglycerin patch: conflicting data
 - Systemic steroids: only severe cases
 - Dapsone: Variable benefit; may prolong healing time and worsen scar formation
 - ? Anti-venom (contact local zoo)
 - Surgery: Only late, as reconstruction
- Plague
 - Highly contagious: Rx before lab results
 - Streptomycin or gentamicin primary Rx
 - After afebrile: tetracycline/doxycycline
 - Alternate agents: fluoroquinolones
 - Prophylaxis following rodent contact in endemic area: levofloxacin, doxycycline
 - MDR plague: Madagascar
 - Subunit vaccine in development (capsular antigens)
- *Vibrio vulnificus* infection
 - Most virulent food-borne infection in USA
 - Consumption of raw or under-cooked oysters or shellfish from Gulf of Mexico (more often during summer)
 - Also occurs with skin wound exposed to contaminated water or related to injury by contaminated marine life (shrimp, fish)
 - Liver insufficiency predisposes!
 - Most common in summer (more microbes)
 - Ceftriaxone + doxycycline or minocycline
 - Debridement if indicated
 - Fatality rates: greater than 50% food-borne; 20% for wound related
 - Hemorrhagic bullae and fever and history
 - Progresses rapidly to necrotizing fasciitis

- Limb loss risk
- Dermatological Emergencies
- Learn to recognize key sign and symptom patterns which signify emergency
- Stop and consider that patient more carefully; don't put that patient off or wait for loads of lab tests
- Consider hospitalization, because many of these clinically deteriorate rapidly and unpredictably
- Such patients almost always require team care!

Realizing the Vision: Excellence in Dermatology



Ted Rosen, MD

- Representing all of Dermatology members
 - *Aesthetic*Medical*Surgical
 - 20,000 members
 - Representation in AMA House of Medicine
 - Media representation and messaging
 - Assistance navigating changing practice environment
 - Leadership on a global level
 - Public education on all dermatologic conditions (greater than 2 billion media impressions/year)
- Guiding principles #1: To be proactive strengthening our specialty
- President's priority: To Enhance Our Standing in the House of Medicine
 - Dermatology Specialty Summit - May 6, 2017
 - Topics discussed:
 - Improving dermatology's profile in the House of Medicine
 - Role of specialty societies in improving access to care
 - Demonstrating value across the specialty
- AMA Dermatology Section Council (6/10-13/17)
- AMA House of Delegates: over 30 dermatologists
- The Dermatology Section Council Delegates have played a key role in passing resolutions:
 - MACRA: Led the effort to call for additional flexibility in implementation and to provide an exemption for small practices
 - Compounding: Called for the continuation of in-office compounding
 - PAs: Practice under supervision of physicians
 - Anthem/Modifier 25: helped coordinate response
- President's Priority: To Increase URM* in dermatology
- AAD Diversity Conference – August 5, 2017
 - AAD Leadership
 - AAD Diversity TF
 - Representatives from:
 - Association of Professors of Dermatology, Society for Investigative Dermatology, Skin of Color Society, ADA, Medical students
 - Action Steps
 - Written report on conference proceedings to be submitted to JAAD for publication = dissemination
 - Prioritize recommendations from conference for further development
 - Collaboration with APD, SID, SOCS
 - AAD Diversity Champion program
 - Outreach via student organizations (e.g., SNMA)
 - Expand mentorship program
- AAD and the Media: 2017
 - 8.8 billion media impressions (online, broadcast, print): Like reaching every American 26 times
 - Responded to 600 media requests (acne, skin cancer)
 - Media stories equivalent to more than \$300 million in paid advertising
 - News releases and emails highlighting research in JAAD
 - News release highlighting dermatologists' expertise
 - PSAs regarding early skin cancer detection and tanning
- AAD Website
 - 32,000,000 visits in 2017
 - More than 26,000,000 public education site visits
 - More than 5,000,000 member visits
- Guiding Principle #2: To act promptly on members' concerns and on changes in health care environment
 - Acting promptly: Scope of practice truth in advertising
 - Advocacy priority: Scope of practice
 - AMA SOPP*
 - Steering committee members
 - \$1.5 million grants awarded
 - Messaging and advocacy
 - Non-physician
 - Nurses, optometrists, physician assistants, aestheticians, naturopaths
 - Medical Spas
 - Model legislation
 - AAD position statement on medical spa standards of practice
 - Advocacy priority: truth in advertising
 - Model TIA legislation
 - Enacted in 20 states
 - Introduced in 36 states
 - Board certification
 - Legislation restricts claims of "board-certification"
 - Partnership with ASDA, AMA and other specialties
 - AADA TIA Toolkit
 - Data, resolutions, model legislation
 - Comment letters, media outreach template
- Actions to date
 - Triage team e-mail and intake form
 - Completed review and plans of action to tackle more than 175 cases of potential SOP/TIA violations, including working with state dermatology societies
 - New infographics:
 - "Why See a Dermatologist"
 - "What is a Board-Certified Dermatologist?"
- Acting promptly: The practice management center
 - The Practice Management Center
 - Opened March, 2017
 - As of annual meeting: about 50% of members have visited at least once, and use is steadily increasing!
 - 430,000 page views to date
 - Prior authorization appeal letter template
 - As of the annual meeting, over 2500 members have downloaded more than 21,000 letters

- MOST popular feature of Practice Management Center
- MACRA Resource Center
 - Visit the MACRA tools to help you determine how to avoid a penalty and earn an incentive
- Acting promptly: DataDerm
 - DataDerm
 - A robust clinical data registry
 - Created by dermatologists, for dermatologists
 - Improves outcomes from registry feedback
 - Informs advocacy efforts
 - Provides opportunity for quality measures assessment
 - Helps dermatologists with quality reporting requirements
 - Validates guidelines
 - Dermatology data
 - Interoperability is critical for all clinical registries
 - Connects data on millions of patients from thousands of dermatologists
 - Our dermatologists utilize over 60 EHR vendors, with varying levels of automatic integration with DataDerm
 - DataDerm specialists work directly with each practice individually for EHR integration
 - Data is mapped and practices approve that the reports reflect their records
 - There is a manual (web portal) entry option for those on paper records
 - DataDerm by the Numbers
 - 965 active practices
 - 2,700 providers submitted data in the last 12 months
 - 5 million unique patients
 - 11.7 million patient visits
- Acting promptly: Pulse of the profession
 - MOC poll
 - Poll Results: Released Oct 2017
 - Do you support a process that evaluates ongoing professional competence to maintain your dermatology board certification?
 - 72% of those who have to participate in MOC support a process that evaluates professional competence to maintain board certification
 - The ABD/ABMS board certification should be...
 - Half of respondents who are required to participate in MOC said certification should be time-limited with CME only
 - Those not required to participate in MOC favored once in a lifetime milestone, followed by CME
 - Results have been shared with ABD and American Board of Medical Specialties (ABMS)
 - ABMS has recently announced the formation of a commission to critically examine the re-certification process (? Step in right direction)
 - Visioninitiative.org
 - Commission from ABMS is running a survey monkey through the end of April to solicit opinions on the process of maintenance of certification
 - AAD leaders met with ABD and vigorously advocated for new MOC processes which correspond to members' desires
 - Acting promptly: Modifier 25 reduction
 - When an evaluation and management (E&M) code with modifier 25 are billed by the same provider for the same date of service, plan will compensate the E&M service at a reduction of the otherwise allowed amount
- 25% Reduction
 - Anthem
 - Change in originally announced policy
- 50% Reduction
 - Blue Cross Blue Shield Rhode Island
 - Harvard Pilgrim Healthcare
 - Independence Blue Cross
 - Tufts Health Plan
- Modifier 25 Advocacy
 - Led coordination and development of coalition bringing together state dermatology, state medical, and national medical societies impacted by a reduction
 - Introduced and developed broad support for resolution at AMA House of Delegates urging action
 - AMA-AADA coordinated efforts led to amendment of Anthem reduction to E&M from 50% to 25%
 - Advocacy continued, and Anthem rescinded entire proposed Modifier 25 reduction
- Acting promptly: Advocacy
 - Federal legislative advocacy wins
 - IPAB repeal
 - Stopped extension of misvalued "codes" policy
 - MACRA Relief
 - MIPS adjustment
 - EHR standards
 - Access to care
 - Telehealth
 - Community Health Centers funding
 - Alex Azar, HHS Secretary 2-15-2018
 - "What we're doing is taking a whole host of physicians who not only will have reduced reporting burdens but maybe none under the MIPS part of that program."
 - Regulatory Relief Advocacy Successes
 - Months of advocacy with the HHS Secretary, CMS Administrator and House Ways and Means Committee
 - Fewer penalties and less Medicare paperwork in 2018
 - 2,900 pages of jargon = we cut the red tape!
 - Advocating for access to compounding
 - Office-use compounded medications
 - The FDA has prohibited Section 503A traditional compounding pharmacies from distributing office-use compounded medications to physician practices without a patient specific prescription
 - In-office compounding
 - Dermatologists are under threat of being held to strict FDA guidelines for buffering lidocaine and reconstituting Botox in the office
 - Access to Compounding: Progress
 - Urging passage of HR 2871, the Preserving Patient Access to Compounded Medicines Act
 - Educate high level FDA officials on low-risk compounding in dermatology
 - Successfully place dermatologist on FDA Pharmacy Compounding Advisory Committee
 - Seemal Desai, MD
 - Successfully place dermatologist on US Pharmacopeia (USP) Expert Committee on Compounding
 - Allison Vidimos, MD

Shared Leadership

James Warrick & Daniel Ladd, DO, FAOCD



- Leadership is not defined by what you do, it is defined by what others do in relation to you
- The skills to influence what others do are different than how we control our own behavior
- Shared vision + shared responsibility = shared leadership

Non-Invasive Modalities in Lipolysis

Michelle Foley, DO, FAOCD



- Why this Market Matters
 - According to the American Society for Aesthetic Plastic Surgery:
 - Americans spent 13.5 billion in 2015 on both surgical and non-surgical aesthetic procedures, 42% of that was non-surgical
 - Due to the risks associated with invasive body contouring, non-invasive procedures have increased 521% from 1997 to 2013
 - Non-surgical fat reduction saw an increase from 2015-2016 of 18.7%
- Reasons for this growth
 - Aging population
 - More men seeking treatments
 - Avoidance of surgical procedures: cost, downtime, fear
 - Technological breakthroughs and scientific advancements
 - Media, social media, celebrity culture
- The technology: FDA cleared
 - Cryolipolysis

- Radiofrequency
- Low-level laser therapy
- High-intensity focused ultrasound
- Cryolipolysis
 - Exploits temperature sensitivity of adipocytes as compared to other water-rich cells
 - Between 1940-1970, case reports showed gradual fat reduction in the lower cheeks of children that sucked on popsicles - "Popsicle panniculitis"
 - Cold necrosis
 - Gradual reduction over 3 months
 - Erythema, numbness and bruising most common
 - No change in lipids, LFTs
- Radiofrequency
 - Electromagnetic wave that can increase deeper skin temperature and lead to adipocyte damage
 - Effective in skin tightening and fat reduction in repetition
 - Exact protocols unknown and vary with each device
 - Smoothing cellulite noted
- Low-level laser therapy
 - 635 nm and 532 nm
 - Cold red laser
 - Reduces size of adipocyte via photoexcitation and release of FFAs, not cell necrosis
 - SculpSure* - 1060 nm - hyperthermic apoptosis of fat cells
- High intensity focused ultrasound
 - Used since the 1940s to treat organ tumors, uterine fibroids, kidney stones
 - External transducer
 - Ultrasonic energy to focal areas making molecular vibrations that increase temperature causing coagulative necrosis
 - No change in LFTs or lipids
- Minimally invasive
 - Kybella/deoxycholic acid
 - FDA approved for the treatment of submental fat
 - Series of injections done 4-6 weeks apart
 - MANY off-label applications:
 - Back fat, bra fat, knee fat, banana rolls, abdomen, jowls, lateral neck
- In practice
 - These modalities can operate as standalone or adjunct therapies for treating unwanted fat, loose skin, and cellulite of both face and body
 - Many of the non-invasive modalities discussed do not have to be operated by a physician on PA/NP
 - Most treatments take at least 30 min of face to face time and this builds relationships, rapport, and brand loyalty
 - You can offer the patient something they have already read about or watched on Dr. Oz, The View, The Doctors
 - Part of a multi-modality, all-encompassing aesthetics practice
- Possible pitfalls and perils
 - Knowing your contraindications
 - Hernias, metal, old scars, pacemakers, cold-sensitive disorders
 - Be aware of side effects
 - Pain, swelling, bruising, numbness
 - Nerve damage (marginal mandibular, etc.)
 - Patient selection must be appropriate
 - Patient expectations must be reasonable
 - Remaining fat can always hypertrophy