Message from the President

Dear AOCD members and friends,

The New Year brings new beginnings and resolutions. The Board of Trustees is working behind the scenes on many important initiatives that I would like to share with you. First, the AOCD is exploring ways to reinvent ourselves in the upcoming era where our osteopathic specialty organizations no longer proctor residency training, under the ACGME “merger”, formally known as the Single Accreditation System. While overall, there are benefits to streamlining the education of future dermatologists, many fear that our osteopathic uniqueness will be lost. I believe that the osteopathic core principles will survive the house of medicine during this merger (it’s a two-way street, right), however it takes each and every one of us to remember our roots and practice Dr. Still’s principles every day. It’s not just about manual manipulation, it’s also about the philosophy; the philosophy that makes the “DO Difference”. We must actively share as many of these values with our allopathic colleagues as we can, so that these principles permeate; it is about improving patient care and outcomes, after all. I encourage all of us to remember our roots and spread our knowledge, as this is the only choice we have to keep our specialty alive.

The AOA is also exploring options for survivability, many of which include taking over administration of struggling specialty colleges membership and finances. The AOCD opposes this course of action, as we have made great strides in improving our CME offerings tailored to the practicing dermatologist and in no way view our college as struggling! The AOCD Board will be meeting later this month to discuss the new avatars of the AOCD. The foci will be creating the best CME meeting out there (get ready for the unveiling of TED talk style CME lectures) and community services. In these times, it’s best not to reinvent the wheel and divide resources. Instead the AOCD will actively partner with our sister organizations like the AAD, state societies, etc, on initiatives that they are already doing well such as advocacy and PAC’s. Most recently, the AOCD partnered with the AAD, FSDDS, ISHRS, and the ASDS to oppose legislation allowing electrologists to perform laser hair removal without physician supervision. We also joined the AOA and the NY State Osteopathic Society in supporting legislation banning the use of tanning devices in minors. These are the types of relationships I hope to continue building as there is a stronger voice in numbers and solidarity, and we all have something to offer each other, our members, and our patients. If you’re interested in seeing our advocacy projects, click here to browse our archive of letters from 2013 to present.

I encourage you all to attend the upcoming meeting in West Palm Beach, marking our 60th Anniversary Celebration, to be commemorated with a Casino-themed night. Dressing the part is absolutely a must! Also, I believe the CME offerings and debut of the TED talks style will be out of this world. Finally, we will be offering the Florida required hours on Sunday. Hope to see you all there!

Karthik Krishnamurthy, DO, FAOCD
Happy New Year Everyone!

2017 is behind us and 2018 is here. It is AOCD’s 60th Anniversary year and we have some new, fresh, and exciting changes and events happening this year. Join us in West Palm Beach for our Spring Meeting, March 21-25 and help the AOCD celebrate. Our Celebration Gala on Friday, March 23 will be a “Casino Night”. Try your luck at the tables and take home your own Casino Night Survival Bag sponsored by Aurora Diagnostics. If the game tables aren’t your thing, have your palm read, enjoy the DJ and live music, or grab your friends and colleagues and visit the Photo Booth.

Of course this meeting isn’t just for having fun. We have some serious CME sessions taking place, which includes the Florida Requirements Course on Sunday, March 25.

Take home your copy of the Anniversary book which you can pre-order now. In the next few pages, you will find a little sneak peek.

May this New Year brings you a peace filled life, warmth and togetherness in your family and much prosperity! Happy New Year!

In Memoriam:

Tracy Favreau, DO, FAOCD

The American Osteopathic College of Dermatology was deeply saddened to learn of the passing of Tracy Favreau, DO, FAOCD. Dr. Favreau passed away the morning of December 11, 2017 in Fort Lauderdale, FL. Dr. Favreau earned her medical degree from NOVASE in 2001. She completed her dermatology residency at NSUCOM/North Broward Hospital District, eventually serving as the director of the program from 2013 to 2015.

Dr. Favreau was an active member of the AOCD, serving on a number of committees, including the Board of Trustees from 2013 until 2017. Her service also included a terms on the Nominating Committee (2009-2010), the Program Director’s Committee (2013-2015) and the Public Relations Committee (2010-2017). In addition, she was a member of the Foundation for Osteopathic Dermatology’s Ulbrich Circle.

A blood drive will be held in her honor at the 2018 Spring Meeting on Friday, March 23 from 10:30 a.m. - 4:00 p.m. [Click here to reserve a time slot if you would like to donate].

Our thoughts remain with her family, friends, past residents and colleagues during this difficult time. She is missed.
YOU MAKE A DIFFERENCE... DONATE BLOOD

Friday, March 23, 2018
10:30 AM - 4:00 PM
The American Osteopathic College of Dermatology - Spring Conference - WPB

The blood drive in honor of Tracy Favreau, D.O., FAOCD
All donors will receive OneBlood T-shirt, Improv Comedy Club ticket for two and free wellness checkup including blood pressure, pulse, temperature, iron count and cholesterol screening. Donate blood and help save lives!

Help us better serve you! Make an appointment online at www.oneblooddonor.org and use sponsor code #38618

ID REQUIRED
ID required. Donors must be at least 16 years old. Those who are 16 years old need parental permission. See website for more details. *One offer per donor, per donation. No cash value. Not-transferable. If you have recently donated, thank you. Please visit us when you are eligible to donate again.
1957  An American Osteopathic College of Dermatology (AOCD) organizational meeting was held. Dr. A. P. Ulbrich was elected president.

1958  The new American Osteopathic Board of Dermatology (AOBD) gave their first certification exam in the fall of 1958, in Washington, DC. Eight applicants took the exam and all passed. There were twenty-one board-certified members.

1959  July: Only preceptorships were available to osteopathic physicians for training. Cash in bank, $732.23.

1960  July: It was voted to move annual meeting to be held in conjunction with the American Osteopathic Association (AOA).

1961  January: The By-Laws Committee was created.

1962  January: College newsletter planned to be written on quarterly basis.

1963  January: Twenty-four active members. Cash, $1,271.97. October: Meetings began to be held twice a year. Dr. Daniel Kop prince was elected as secretary-treasurer.

1964  October: Dr. Kop prince and Dr. Elmets were both elected to the AOBD for three-year terms.

1965  September: Members were divided into two membership categories: Active and Affiliate.

1966  November: Member recruitment was the hot topic.

1967  October: AOA control over the osteopathic profession was discussed. The board exam fee was $200. Cash on hand, $2873.19.

1968  February: The AOCD began the process of attaining 501(c)(3) non-profit organization status. October: Cash on hand, $4534.87.
MILESTONES OF THE AMERICAN OSTEOPATHIC COLLEGE OF DERMATOLOGY

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February: The AOCD began the process of attaining 501(c)(3) non-profit organization status.

October: Cash on hand, $4,534.87.

The AOCD begins work to gain 501(c)(3) status.

U.S. TREASURY DEPARTMENT
INTERNAL REVENUE SERVICE

February 7, 1968

Dr. Daniel Koprince
723 North Main Street
Royal Oak, Michigan 48073

Re: Application for tax exemption
American Osteopathic College of Dermatology

Dear Dr. Koprince:

From our telephone conversation of February 6, 1968, it appears your organization qualifies for tax exemption under Section 501 (c)(3) as an educational organization rather than under Section 501 (c)(6) as a business leagues under which you previously applied.

Accordingly, an enclosed copy of Form 1023 and the instruction sheet thereunder. This form must be filled in duplicate.

Page one is basically comparable to that of Form 1023 previously submitted. Questions on page 2 request copies of various documents. Non-applicable lines previously submitted will suffice and it is not necessary to resubmit new copies with this application.

To qualify under Section 501 (c)(3), it is necessary that an organization have a suitable disclaimer clause in its Articles of Incorporation. You have one in your By-laws (Article VIII). It will thus be necessary to amend your Articles of Incorporation to include such a clause. The wording of said Article VIII is satisfactory and, if you will, it may be used verbatim to satisfy this requirement.

Questions 10a and 9 request financial statements. Please submit those for 1967 to supplement those for prior years previously submitted.

For question 10b it would be helpful if, in addition to the statement previously submitted, you would describe in some detail your planned activities as to further establish the educational nature of your organization and its relationship to the American Osteopathic Association and its other specialty groups for our telephone conversation. If you have a copy (or a photocopy) of a convention program, please submit it, too, to illustrate the foregoing.

I am also enclosing a copy of document #5588 with the more detailed question free return envelope.

If you need to contact us, the telephone number is (312) 269-3339. Mail should be addressed to: 27 January Internal Revenue Service.

To summarize, the following documents are necessary to complete your application for tax exemption under Section 501 (c)(3):
1. Form 1023 (in duplicate) with appropriate attachment, if necessary;
2. Two copies of your Articles of Incorporation, as amended; and
3. Two copies of financial statements for 1967.

If the requested information is not received within 30 days of the date of this letter, we will not consider your application further and

Sincerely yours,

SIGNED: REFILED

SHERRY I. JACOBS
Internal Revenue Agent
1969 October: The AOCD donated $1,000 to the financially struggling AOBD to support the Certifying Exam Committee.

1970 October: The College’s membership in the AOA was discussed and tabled.

1971 November: The AOCD voted to reincorporate/reorganize and move headquarters from California to Illinois.

1972 October: The AOCD voted to stay in California. There were thirty-three active members.

1973 October: Membership dues increased to $40.

1974 September: There were forty-two members. Dr. Koprince served on the Program and Trainee Review Council (PTRC).

1975 November: Seven candidates took the AOBD exam.

1976 November: Holding a midyear meeting was discussed.

1977 November: Holding a midyear meeting seminar was approved. Cash on hand, $16,939.38.

1978 October: A Life membership category was created.

1979 November: Dr. James Bernard was elected secretary-treasurer. There were sixty-eight members.
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October: The AOCD donated $1,000 to the financially struggling AOBD to support the Certifying Exam Committee.

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The first annual AOCD residents' forum in 1978 included lectures from Drs. Howard S. Kessler, Laurie M. Woll, and Charles G. Hughes.

1983 October: Discussion began on hiring an executive director. There were eighty-three members.

1984 Minutes are missing from 1984.

1985 November: Executive Director Cathy Garris was hired for the AOCD.

The incoming president, Charles Hughes, DO, presents a plaque to the outgoing president, Roger Byrd, DO.

1983–1984 AOCD officers, left to right: Joel Harris, DO; William Heckert, DO; Dudley Goetz, DO; Charles Hughes, DO; and James Bernard, DO.

The AOCD’s first executive director, Cathy Garris, pictured with James Del Rosso, DO.
1983  October: Discussion began on hiring an executive director. There were eighty-three members.

The AOCD’s first executive director, Cathy Garris, pictured with James Del Rosso, DO.

1983–1984 AOCD officers, left to right: Joel Harris, DO; William Heckert, DO; Dudley Goetz, DO; Charles Hughes, DO; and James Bernard, DO.

1984  Minutes are missing from 1984.

1985  November: Executive Director Cathy Garris was hired for the AOCD.

1986  February: The AOCD was incorporated in the state of Georgia.

November: The Dr. Daniel Koprince Education Award was established. Dr. A. P. Ulbrich announced his intent to retire after fifty years.

Original letter from Dr. Steven Roberts selecting the winners of the first Koprince Awards in 1987.

The Koprince family, left to right: Janet Koprince, DO; Daniel Koprince, DO; and Mrs. Helen Koprince.
American Osteopathic College of Dermatology
60th Anniversary Commemorative Yearbook

Oh the places we've been and the places we’re going!

The AOCD is celebrating our 60th Anniversary in 2018. To honor this milestone, a special edition commemorative yearbook is being prepared. This book will be a tribute to AOCD’s past, filled with historical information and photos and will contain a membership directory. This hardcover edition will be dedicated to all members in recognition of their contribution to dermatology and osteopathic medicine. A true keepsake you will be proud to display in your home or office.

PRE-ORDER YOUR COPIES NOW!

• Pre-Order your copies now for 40.00* each by Feb 1, 2018
• Also available on our online store at www.aocd.org

* Price at meeting $50.00

ORDER FORM

Please fill out and return with payment

Organization/Name ________________________________
Address __________________________________________
City _____________________________ State ______ Zip ______
Phone ______________________________
Email ________________________________

Members and Corporate friends are also invited to take part in this historic event by purchasing ad space to place an ad or a congratulatory note.

Sizes available:
Business Card (3 ½” W x 2” H) $150.00
Quarter Page (3 5/8” W x 5 3/8” H) $250.00
Half Page (7 ½” W x 5 3/8” H) $400.00
Full Page (7 ½” W x 9 7/8” H) $800.00

Contact the AOCD office for more information on ad placement.

Please make checks payable to: AOCD

Quantity ____________
S&H $10.00 per copy ______________
Total Due ______________

Or order online at www.aocd.org
Corporate Sponsors Support 2017 AOCD Fall Meeting, New Orleans

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 2017 AOCD Fall 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, Valeant Pharmaceuticals (Gold Level)
• Allergan, DLCS (Bronze Level)
• Aclaris Therapeutics, Dermpath Diagnostics, Novartis, Sun Dermatology (Pearl Level)

The past couple of meetings, Sagis Diagnostics has sponsored our meeting lanyards. We would like to thank Dr. Cangelosi and his crew for this sponsorship.

The AOCD also appreciates Janssen Biotech, Inc., Lilly USA, LLC, Novartis, Allergan, and Pfizer for providing Product Theaters for our physicians.

Exhibitors for the 2017 Fall Meeting were as follows: 3Gen, Inc., AbbVie, Advanced Dermatology, Allergan, AOBD, Aurora Diagnostics, Bayer Healthcare, Biofrontera, Inc., Brymill, Celgene, Daavlin Company, DermOne, Dermpath Diagnostics, Encore Dermatology, EZDerm, Galderma Laboratories, Genentech, Janssen Biotech, Inc., Leo Pharma, Lilly USA, LLC, Novartis, Pfizer/Eucrisa, ProPath Services LLP, Sagis Diagnostics, Sensus Healthcare, Sun Dermatology, Tiemann Surgical, and Valeant Pharmaceuticals

We hope that many of you had an opportunity to express your appreciation to our sponsors while you were in New Orleans. 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.

This year we asked attendees to let us know who had the best customer service, was the most informative, and had the best display. We had several ties for these topics. The companies and booth attendees are listed below. Congratulations to these companies and booth attendees.

Best Customer Service Exhibit Booth
Galderma Laboratories was voted as the “Best Customer Service” at our Fall 2017 Current Concepts in Dermatology meeting in New Orleans, LA. Representatives from Galderma Laboratories in attendance were Chris Townsend.

Most Informative Exhibit Booth
Sun Dermatology received the most attendee votes as the “Most Informative Exhibit” at our Fall 2017 Current Concepts in Dermatology meeting in New Orleans, LA. Representatives from Sun Dermatology in attendance was Todd Bishop.

Best Exhibit Booth Display
Galderma Laboratories and AbbVie tied as the “Best Exhibit Display” at our Fall 2017 Current Concepts in Dermatology meeting in New Orleans, LA. Representative from Galderma Laboratories in attendance was Chris Townsend. Representatives from AbbVie in attendance were Tom Spooner, Kelley McWhirter, and Robin Berrett.

Conessions of a Dermatology Resident

By Laura Jordan, DO

We are now knee-deep in interview season. Sifting through piles of applicants, coaching our dermabees as it is their time to shine this year. Though it may have only been a few short years ago that we were in the same boat, it feels like decades. We were preoccupied with the idea of matching into derm so much that it became easy for many of us to lose perspective. Family, friends, our own health became secondary to this ultimate goal. How many holidays did we miss while interviewing, how many dental appointments postponed, and how much did Facebook seem like your arch nemesis as you saw other friends having fun?

We made so many sacrifices to be the ones who now sit on the other side of the table, asking those questions we dreaded hearing... “Tell us about yourself”—a.k.a. “Try to sound human, and don’t recite your resume or ramble on in a tangential fashion for hours.” Seems so easy thinking about it now, but how hard it was back then when it felt like your entire future was on the line.

So take a sip of that hard-earned cup of coffee as you sit before the incoming interview crew, and try to cut them a little slack remembering what it was like not so long ago 😊
Dear colleagues,

Happy holidays! I hope everyone has had a great first half of the academic year. Remember to enjoy this time before the new year. We will be back in the thick of things in no time!

Here are some updates for the upcoming year:

**AAD Annual Meeting**

The AAD annual meeting will be held in sunny San Diego, CA from Feb 16-20, 2018. Discounted registration is currently open for residents/fellows at a rate of $215.00. **Registration, housing & travel, and general information about this meeting can all be found at by clicking here.**

Remember to also register for Life After Residency: A Toolkit for Success! This popular program will take place Thursday, Feb 15, 2018 (the day preceding the annual meeting). It is geared towards 2nd and 3rd year residents. To attend, you must register separately from the AAD annual meeting, but registration is absolutely free! **Please click here for more information.**

**AOCD Spring Meeting**

The AOCD spring current concepts in dermatology meeting & 60th anniversary celebration will be held in sunny West Palm Beach, FL from March 21-25, 2018. Information regarding accommodations & meeting schedule can be found on the AOCD website. There will be a new format for this meeting which includes expert speakers, TED talk inspired lectures, and practice management revelations. **Click here for more details!**

**ABD's Exam of the Future**

For those of you in programs who are or are planning on becoming ACGME accredited, there is a new structure for the certifying exam. Many of you have had questions regarding this new structure. **Click here to learn more about the exam structure.** The BASIC Exam for 1st year dermatology residents will take place on Thursday, April 12th, 2018. The Online Practice Exam for 2nd & 3rd year dermatology residents will take place in a window between March 1-30, 2018. This exam can be either remotely or locally proctored. If there are any questions regarding the new format & how it will affect you, please e-mail me for more information.

If you are in a program that is not becoming ACGME accredited, the AOCD is planning on offering an In-Training Exam. Stay tuned for those details!

**Board Review**

Attention 3rd year residents! Whether you plan on taking the AOBD, ABD, or both exams, “board season” will soon be upon us. Remember to take advantage of the most popular board review sessions throughout the Spring. Registration is now open for the following:

- **Conquer the Boards: An Experiential Review-** San Diego, CA - Feb 16th, 2018 9:00 a.m. - 4:00 p.m. - $110 (You must be registered for the AAD Annual meeting to attend)
- **Barron Board Review-** Rosemont, IL - April 20th - 22nd, 2018 - $375
- **Florida Dermatology & Dermatopathology Board Review Course -** Tampa, FL - May 10th - 13th, 2018 - $800

As always, if you have any questions, comments, or concerns I can be reached at the AOCD resident liaison email account: aocdresident.connection@gmail.com. Have a happy holiday season & a great new year! See you all in 2018!
Hello everyone,

Happy New Year to all! I hope 2018 is off to a great start for each of you and you all enjoyed a happy and safe holiday season with family and friends.

It was great to see all of you who were able to attend the Fall Meeting in historic New Orleans. I hope you found value in the lectures presented and had a great time in the Big Easy. A special thanks to Cassandra Beard, DO; Shane Swink, OMS-IV; and Rachel Giesey, OMS-IV, our student ambassadors for the Fall Meeting. They each did an outstanding job, going above and beyond, to help put on a great meeting.

2018 Resident Membership Renewal
With a new membership year approaching, it’s not too early to begin thinking about renewing your annual dues. These can be paid online through your member account at www.aocd.org. You can quickly and conveniently renew your membership online using these five easy steps:
1. To get started, click sign in at the top of the homepage.
2. Enter your username and password, and click sign in. [Note: If this is your first time signing in, you will be taken to a screen prompting you to verify your member profile options. Make any desired changes, click the Save Settings button, and proceed to Step 3.]
3. Click the yellow *** Renew Your Membership Now *** banner
4. You will be prompted to update your contact information. If you have any changes, enter updated information in the appropriate field. When finished, click the Save Changes button.
5. Enter your billing and payment information, and click the Submit Securely button. If you have any problems logging in, please contact us and we will help you.

2018 Spring Meeting 2nd Year Resident Posters
Residents are required to submit a poster during the second year of training at the Spring Meeting. This year, posters are due February 14, 2018. A completed poster submission forms [www.aocd.org/resource/resmgr/annualreports/poster-abstract-info.pdf] must accompany your poster. A few things to keep in mind when preparing your poster:
• This poster is an individual submission, not a group project.
• If you are required to prepare a poster for your program, you may submit a copy of that poster to meet this requirement. If your program does not have this requirement, you should follow the poster guidelines for either the AAD or the AOA in preparing this poster.
• Please submit completed copies of the Poster Submission Form and Faculty Disclosure Form, along with your poster.
• Avoidance of Commercialism: All poster exhibits must avoid commercialism. No trade names should be used for drugs, devices and/or instrumentation, including lasers. Any medications or other substances referred to in the presentation material must be identified by their scientific names only. In addition, poster exhibits, the cost of which is underwritten to any extent by a pharmaceutical company or other commercial enterprise, should include a clear acknowledgment stating that a portion of its cost was underwritten and identifying the particular commercial company involved.
• Trade name violations or failure to disclose commercial support will result in the poster being denied acceptance for this AOCID requirement.
• The poster is to be submitted to the AOCID electronically, you do not need to print a copy of the poster to bring to the meeting. Simply submit the poster as a Powerpoint file.

2018 Dermatology Grand Rounds Schedule
Each residency program, once again, is asked to provide a case for the Grand Rounds website. Click here to visit the Dermatology Grand Rounds on our website. Please contact me for the sign-on information to submit a case. The 2018 schedule is as follows:
- **January 5, 2018**
  - OPTI-West/Chino Valley Medical Center
- **February 5, 2018**
  - Still OPTI/Northeast Regional Medical Center
- **March 5, 2018**
  - PCOM/Lehigh Valley Health Network
- **April 5, 2018**
  - CORE/O’Bleness Memorial Hospital
  - SCS/MSUCOM/Botsford Hospital
- **May 5, 2018**
  - LECOMT/Larkin Community Hospital Palm Springs Campus
  - SCS/MSUCOM/Oakwood Southshore Medical Center
  - CEME/Palm Beach Consortium for GME
- **June 5, 2018**
  - NYCOMEC/St. Barnabas Hospital
  - LECOMT/St. John’s Episcopal Hospital
- **July 5, 2018**
  - NSUCOM/Largo Medical Center
  - Texas OPTI/UNTHSC
- **August 5, 2018**
  - PCOM/North Fulton Hospital Medical Campus
  - OMNEE/Sampson Regional Medical Center
  - NYCOMEC/Palisades Medical Center
- **September 5, 2018**
  - MWU/OPTI/Advanced Desert Dermatology
  - MWU/OPTI/Affiliated Dermatology
- **October 5, 2018**
  - Texas OPTI/South Texas Osteopathic Dermatology
  - NSUCOM/Larkin Community Hospital
  - Texas OPTI/Bay Area Corpus Christi Medical Center
- **November 5, 2018**
  - OPTI-West/Aspen Dermatology
  - SCS/MSUCOM/Lakeland Regional Medical Center
- **December 5, 2018**
  - OMNEE/LewisGale Hospital – Montgomery
  - OPTI-West/Silver Falls Dermatology
  - RMOPTI/Colorado Dermatology Institute
  - OMNEE/Park Avenue Dermatology

I look forward to seeing you all in West Palm Beach for the 2018 Spring Meeting.
For eczema-prone skin

TWO ADVANCED TECHNOLOGIES.

HYDRATE

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


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G726-6118 Printed in USA 06/13
2018 Fall Meeting Venue Offers Numerous Amenities, Entertainment and Shopping Options

by Kristin Ayer

Welcome back to our latest edition of DermLine! We have a few upcoming meetings in excellent locations, where you can come to earn your CME credits during the day and then venture out into the city for fun evenings of dining, shopping and events.

Our Midyear Fall Meeting will be held in San Diego, CA at the Westin San Diego, Gaslamp Quarter. Their contact information will be listed below for your convenience. Be watching our Facebook page and your Thursday Bulletin emails for the group code to use when booking your hotel stay to ensure you get our discounted rate.

The Westin San Diego looks to be a modern, luxurious beach hotel with a slew of amenities. There is a high-end fitness studio open 24/7, with cardio equipment, free weights and iPod stations for the best workout away from home. The Pure Body Spa features an outdoor pool and whirlpool, and professionally trained body care specialists offering an array of treatments for your relaxation. However, if you are looking to get some work done, the Tangent at Westin is a 24/7 business center can be booked to make your stay a bit more productive.

For attendees wanting to spend some time away from the hotel in the evenings, the Westin is located near incredible dining and shopping experiences. The Westfield Horton Plaza is a shopping spot that has something for everyone. Their website is a great tool for planning out your trip to the Westfield Horton Plaza and lists the open hours and also movies they have playing. Whether you are searching for new luggage, a new bedding set or a new pair of blue jeans, the Westfield Horton Plaza is the place to start.

Another great spot to spend a few hours at would be the Seaport Village. It has 45 shops and stores right on the beach, as well as a carousel and other family-friendly attractions. This is definitely the type of place to check out if you are wanting to venture somewhere a bit less conventional than the mall atmosphere. Fresh ocean breeze, tons of souvenir shops, cafes, coffee shops, burger eats, a wine tasting room and even a cupcake shop—who doesn’t love cupcakes? What else could you possibly ask for to create a wonderful, relaxing, yet exciting adventure after a long day sitting in the classroom?

Hopefully this has gotten the gears turning with a few ideas for things to keep you busy during our Midyear Fall Meeting in October 2018. The AOCD staff is working very diligently to enhance your CME experience and also to make AOCD meetings the meeting you look forward to attending. We are always open to suggestions and constructive feedback. Email Kristin at dermatology@aocd.org if you have anything you would like us to hear. Until next time!

Westin San Diego, Gaslamp Quarter
910 Broadway Circle
San Diego, CA 92101
(619) 239-2200

CME Cycle News

Since 2018 is the last year in the current CME cycle, members should check their CME reports regularly!!

To verify the CME requirement for your state, visit the Federation of State Medical Boards, which was updated January 1, 2018.

The 2018 Spring Meeting in West Palm will have 28 in person CME, with up to two extra credits available for completing a post-test and outcomes survey, for a grand total of 30 Category 1A CME credits available for didactics held March 14-17.

Fall 2018 in San Diego will have 25 in person CME, with up to two extra credits available for completing a post-test and outcomes survey, for a grand total of 27 Category 1A CME credits available for didactics held October 11-13.

There will also be a joint session at OMED in San Diego on October 9, 2018. Please note you must register separately with AOA to get this. The number of CME credits offered for this joint session have not yet been finalized. Details will be forthcoming.

A maximum of 62 Category 1A CME will be offered in 2018. To receive the maximum amount of CME attendees must be present for all didactic sessions and participate in the post-test and outcomes evaluations after the meetings.

Additionally, the AOCD offers Category 1B credit for reading the JAOCD and taking the quiz. Click here to view all available quizzes.

The AOCD is exploring a potential partnership with the skin cancer prevention non-profit, The Shade Project. This organization helps to educate the public on skin cancer prevention, encourages annual skin checks by a dermatologist and promotes physical shade structures in schools and parks.

For more information please contact Interim Executive Director Diane Morgan at diane@theshadeproject.org
Las Vegas is often thought of as a land of gambling, nightlife and bright lights. But for Saul Schreiber, DO, it has served as the perfect place to shape future medical professionals. Located just one mile off the Las Vegas Strip, Dr. Schreiber’s practice, Advanced Dermatology, offers opportunities for high school, pre-med, medical assistant, medical and physician assistant students to gain experience in a medical setting. In practice for 31 years, Dr. Schreiber has valued helping students from the beginning.

“There are maybe 10,000 dermatologists in the United States, and only 250 are entering the field each year,” says Dr. Schreiber. “Real knowledge of dermatology is essentially esoteric and something that only a small group of people have. Why wouldn’t I want to share that?”

Today, Dr. Schreiber’s student program has grown to become an essential part of his practice, with anywhere from five to ten students in the office on a given day. High school students often assist with front- and back-office responsibilities, while pre-med students often help set up for surgeries. Medical students are given a high level of responsibility as they assist with surgeries, provide on-the-spot medical research during appointments, and gain extensive documentation training. Additionally, Dr. Schreiber has didactic sessions and delivers lectures to medical students whenever there is a spare moment in the busy day.

“I feel honored and privileged if a student wants to be in my office,” says Dr. Schreiber. “I definitely notice the days when there are fewer students.”

Dr. Schreiber and his staff are not the only ones who appreciate having students in the office. His patients do, too. Because Las Vegas has a very large Hispanic population, Dr. Schreiber often sees patients who speak little English. And typically, students who come to Dr. Schreiber from the Vegas area are bilingual.

“We speak Spanish in the office a good portion of the day so that we can provide a quality experience to all patients,” says Dr. Schreiber. “I really need to have bilingual employees and students in the office to make sure that happens.”

Providing hands-on experiences to students is not the only way that Dr. Schreiber is giving back to the medical community. He recently went on a medical mission with the WE Charity to Maasai Mara, Kenya. While there, he and 17 other practitioners treated over 400 patients at a clinic and screened over 700 children from two schools.

“I think I’ve had an amazing career in medicine,” says Dr. Schreiber. “It gives you a really good feeling to do good with the knowledge and skills that you have. And when you’re at a point in your life when you have more yesterdays than tomorrows, what’s the point in keeping that knowledge to yourself?”

Innovation Spotlight is a new DermLine column focusing on projects AOCD members are developing. If you have a new and innovative idea or project, such as an app, device or research that you would like to feature in the column, please contact dermatology@aocd.org. This column is for informational purposes only. AOCD does not endorse any products featured by Innovation Spotlight and receives no payment in exchange for inclusion. All projects submitted for consideration are subject to review and approval by the AOCD editorial committee.

This story originally appeared in the Summer 2017 issue of PCOM Digest Magazine. Republished with permission, courtesy Philadelphia College of Osteopathic Medicine and PCOM Digest Magazine.

Opportunity in Delaware

Busy dermatology office with four great locations. Seeking full time Dermatologist to join our practice for any of our locations. For more information on the opportunity and to learn how to apply please contact Burke Dermatology by phone at (302) 230-3376 or by email at tjbture@comcast.net.
Practical Pearls in Dermatologic Surgery
Edward H. Yob, DO, FAOCD

- Q-Tips
  - Can point in pictures
  - Can dab in surgeries
    - When saturated, squeeze with gauze and reuse to reduce time
- Suction
  - Complicated cases where a need may be anticipated
  - Helps visualization
- Stationary thermal cautery unit
  - Safe for defibrillators or implants
- Delasco skin marking ink
  - Poured into medicine cup on table and used to mark specimens
- Sewing magnet or other magnet
  - Helps find needles when lost in a field, on the floor, on a tray, etc.
- Grip-it pen holder
  - Placed on the side of microscope to always keep pen nearby
- Distraction technique
  - Some sort of vibrating device to negate the pain of anesthesia injection
- Shaking hands at end of meeting
  - If hand is wet and clammy, to know if they are about to pass out
  - Keep ammonia inhalants nearby! Tape them to the paper towel dispenser
- Ice packs
  - Wet towel, place in plastic bag, and freeze for quick ice packs
- Topical anesthesia following cryo
  - Dabbed on immediately after freezing takes away pain in about 75% of cases
  - Lidocaine cream or 2% lidocaine in a bottle applied with Q-Tip
  - Useful for kids with warts
- Lollicaine
  - When injecting fillers
  - When doing intraoral blocks to reduce pain
  - 20% benzocaine
- Works on intact mucous membranes
- Syringe with protective barrel
- Can reuse if not clicked into place
- Lidocaine shortage
  - Factory in Puerto Rico hit by hurricane
  - Does not appear to be a shortage of dental cartridges; can buy dental administrators from Amazon for about $6
- Magnification
  - Can be useful for surgeries
  - Can also be used by medical assistants to help remove sutures
- Eye shields
  - Do not use metal shields during surgeries requiring cautery
  - Yellow plastic shields protect patients’ eyes yet allows them to see; come with knob on outside to easily remove them
  - Use lubricant, do not use if contacts in place
  - “I use these in the case that if you may jump during surgery, I won’t poke you in the eye”
- Laundry
  - Easier than doing inventory and dealing with outside business
  - Bosch condensation dryer
- Hypafix tape
  - Stays in place very well
  - Can be cut into desired shape
- Co-flex
  - Coban
  - Almost always latex free anymore
  - Remember to pad both ears if wrapping head
- Glass-cocked ear dressing
  - Used by plenty of ENTs
  - Held on with Velcro
  - Put over bandage to protect ear while sleeping
- Sling
  - After hand and arm procedures
  - Prevents people from bumping into patient post-op
  - Prevents patient from swinging arms and hitting it on something
- Telfa dressings with adhesive tape
  - Doesn’t require tape
  - Good for simple dressings
- Dental Rolls
  - Shield sharp instruments
    - Prevents sharp instruments from poking holes in peel packs
    - Pressure points within dressings
    - Reinforce pressure on flaps as opposed to periosteal suture
- Nasal packing
  - When sending a through-and-through nasal case to plastic surgeon for repair
- Nasal probe
  - When taking stages from nasal area in hard-to-reach concave lesion
- Bolsters
  - When using bolster for graft with two sutures to hold it into place
- Xeroform bolster
- Rolled xeroform held in place with horizontal mattress suture
- Silastic drains
- Pediatric IV tubing, 8 French drain
  - Cut into pieces for use in surgical sites if drain is required
- Sewn into place so drain doesn’t migrate up into the wound
- Stabilize helical sulcus
  - Sewn into place, kept in place for 4-5 days
  - Maintains divot of helical sulcus, also prevents hematoma formation
- Button bolsters
  - Distribute tension on a wound
  - Hold graft in place
    - Reduces bulk, can get wet, very comfortable for patient
- Hold flap in place
  - Minimized hematoma formation
  - When using buttons on ear, make sure to use button on other side of ear to prevent tissue necrosis or tissue tear from suture
  - Leave in place 4-5 days
- Duoderm in post-op wound care
  - Used in double skin graft at suture removal
  - Used on most patients at suture removal
  - Do not use ointments underneath or it will slide out of place
  - Keeps moist environment for healing
  - Protects patients from scratching and disturbing surgical site
- Duoderm gel in secondary intention healing
  - Gel prevents air pocket under duoderm patch
- Bilateral fenestrated advancement flap
  - Pull with skin hooks to determine where skin stretch is desired
  - “Poke holes” with scalpel to allow for stretch
  - Close and remove dog ears
  - Fully ambulatory without casting for splinting
  - No need for grafting
- Friable skin
- Steri-strip parallel to wound edge, suture through steri-strip to reinforce wound edges
- XRT
  - Radiation tattoo ink to help identify lesion for easy follow up
  - Drop tattoo ink, puncture skin with tattoo ink for a small mark
  - Used in select cases where excision will remove the tattoo spot in hard-to-identify lesion

Updates in the Medical & Surgical Treatment of Hair Loss
Nicole Rogers, MD

- Hair naturally grows in groupings of 1-4 hairs, not individual follicles
- Non-scarring
  - Androgenic alopecia
  - Shrinking and shortening of the hair growth cycle
  - Occurs in both MPHL and FPHL
- FPHL
  - Runs in families
  - Can be progressive
  - Frontal hairline remains intact
  - Loss of fullness or density in frontal 1/3-2/3 scalp or thinning on the sides only
- MPHL
  - Runs in families
  - Can be progressive
  - Variety of patterns
    - Anterior thinning/recession
    - Vertex (crown) thinning
- FDA approved medications
  - Finasteride (propecia); Rogaine 2% BID for females, 5% BID for men; Low-level light therapy; PRP; Spirinolactone; OCPs; Dutasteride
- Primary scarring
  - Lymphocytic
    - Lichen planopilaris
      - Women >> men, usually 40 years old, ethnicity
    - ROS: itching, burning
    - Band-like lichenoid inflammation at infundibulum or hair follicle and attached sebaceous gland
    - May burn out over 2-6 years
  - Frontal fibrosing alopecia
    - Similar path to LPP
    - Women >> Men
    - Hairline recedes 1-5mm
- Skin changes include facial papules, cobblestone-appearance of forehead, chin
- Destruction of the pilosebaceous unit, loss of function of PPAR-g receptors
- Upregulation of aryl-hydrocarbon receptor
  - Central centrifugal cicatricial alopecia
  - Loss of hair in vertex
  - Genetic etiology >> grooming techniques
  - Complaints of itching, burning early on
  - Later follicles are replaced by scar tissue
  - Seen frequently with traction alopecia
- Post-finasteride syndrome
  - Rare condition reported in a small number of men after discontinuing finasteride
  - Loss of libido, brain fog, depression, suicidal ideation
  - Data remains limited and controversial (recall bias, selection bias, no control for other causes of ED)
  - Rogaine 2% BID for females, 5% daily, 5% BID for men
  - Low-level light therapy
  - PRP
    - First described for hair growth in 2006
    - Safe (autologous treatment)
    - No side effects
    - No drug interactions or lab monitoring
    - PDGF, TGF, VEGF, IGF, EGF
    - Increased proliferation of dermal papilla cells
    - Increased ERK and Akt signaling pathways
    - Upregulation of PFG-7 and beta-catenin
- FDA approved medications
  - Finasteride (propecia)
    - 1mg/daily
  - Available as a generic
  - Monthly cost $22-60
  - Women >> Men, usually 40 years old, ethnicity
  - Low-level light therapy
  - PRP
  - First described for hair growth in 2006
  - Safe (autologous treatment)
  - No side effects
  - No drug interactions or lab monitoring
  - PDGF, TGF, VEGF, IGF, EGF
  - Increased proliferation of dermal papilla cells
  - Increased ERK and Akt signaling pathways
  - Upregulation of PFG-7 and beta-catenin
• Centrifuged based system with subsequent injection of plasma into areas of hair thinning
• Limitations
  • No multicenter placebo-controlled trials
  • Wide variety of protocols and techniques
  • One time treatment vs. ongoing treatment
  • Role of additives in activation (calcium chloride, matrisen micromatrix)

• Spirinolactone
  • Off label for hair loss, acne, hirsutism
  • Diuretic and anti-estrogen effects
  • Pregnancy category C
  • Should be on alternative birth control
  • 50-200mg daily
  • Monitor increased K and decreased Na, menstrual irregularities, breast tenderness

• Dutasteride
  • Only FDA approved for hair loss in South Korea
  • Longer half-life than finasteride
  • Can be added to long term finasteride if at plateau

• Oral minoxidil
  • Used for recalcitrant HTN in the 1970s
  • ADE: hypertrichosis, fluid retention, lower extremity edema, light headedness
  • Contraindication in a-fib
  • 2.5 mg pill cut in ¼

• JAK-STAT pathway inhibitors
  • Oral tofacitinib for scalp psoriasis
  • Complete regrowth in one patient in 5-8 months
  • Open label clinical trial
    • 5mg BID for AAm AT, AU
    • 2/3 say some regrowth by three months
    • Very high rate of relapse
  • Baseline lab monitoring required
  • Avoid in history of malignancy, TB
  • Cost $2000-5000 per month
  • Topical JAK inhibitors for pediatric AA
  • Promising results

• LPP & FFA Treatment
  • Topical/IL steroids
  • Tetracycline Abx
  • Hydroxychloroquine
  • Finasteride, dutasteride
  • Eyebrow tattooing

• Hair transplantation
  • FPHL, MPHL, traction alopecia, radiation induced hair loss, scars
  • Timeline for regrowth
    • Graft sheds 2-6 weeks later
    • 2-3 months looks like it did at baseline
    • Significant growth at 7-9 months
    • Full result in 12-18 months
    • Can be enhanced with medical therapy
    • 2nd procedure earliest 10 months
  • Two techniques for harvesting
    • Donor ellipse (strip)
    • Follicular unit transplant (FUT)
    • Least amount of trauma to follicles
    • Shorter harvest timeline
  • Follicular unit extraction (FUE)
    • Removal of individual follicular units
    • Hair regrows quickly to recover
    • Caution to avoid overharvesting the donor area
    • Robotic hair restoration
    • Computerized system for FUE harvest

How to Turn Your Acne, Rosacea, and Skin Checks into a Robust Aesthetic Business
Kate Holcomb, MD

• EOB United Health
  • Cash pay alternatives for medical dermatology
  • Finding happiness and pleasure in our work
  • Steps to developing 6 P’s
    • Perfect
    • Aesthetics is an art
    • Delegation removes EXPERT!
    • We have years of training on anatomy and subtle skin changes

• We are the major influencers of patients in making a decision about treatments
• Participate
  • Patients want to know your experience—You can relate
  • Office staff are best advertisement and support
  • Treating patients not friends
  • Photos
  • Expand social circle
• Products
  • Too many choices for patients
  • They are coming to us for guidance
  • Control of outcomes
• Purge
  • Comparison of tiered pricing
  • Products that don’t move
  • Poor support
  • Single company OK
• Partner
  • Local versus national companies
  • Events
  • Samples
  • Help selling
  • Speaking/Ad boards
• Promote
  • Branding
  • Social media
  • Advertising by area
  • Teaching and lecturing
• How to convert medical patients into cosmetic patients
  • Identify patients who are candidates for cosmetic procedures
  • Take pictures
  • Recommend and pair procedures and proper skincare
  • Give patients written information
  • This will:
    • Differentiate you; Lead to better outcomes; Establish patient trust; Lead to referrals and cosmetic procedures
  • Identify patients interested in cosmetic procedures
  • Statistics on acne
    • 40-50 million Americans
    • 1 out of 3 women in 30’s
    • 1 out of 4 women in 40’s
    • #1 complaint in skin of color, #2 in Caucasians
    • 13 products tried before coming to dermatologist
  • Statistics on rosacea
    • 16 million Americans
    • 5% in 30’s and 40’s
    • >50% over 50
• Use photography
  • Builds trust—“being objective”
Improved outcomes for acne, pigmentation, rosacea
Easy conversation to additional procedures when looking at face
Patients want to know our experience
  You can relate
  You have patients who look like them
Office staff are best advertisement and support
  Photographic release
  Expand social circle
  Treat patients, not friends
  May tend to be unreliable with follow up, not ideal results, but will recommend you

Acne Patient
  Follow up acne
  Not sure if better
  Concerned about scarring
  Atopic
  Retinoid intolerant
  Fragrance intolerant
Multiple medications
  Not remembering to take birth control
  Yeast infections with antibiotics
Before and after pictures proved improved appearance of acne and scarring
  Led to patient and patient’s mother purchasing laser treatments because they were impressed with results proven in photographs

Rosacea patient
  Follow up 2 weeks
  Patient in a Mardis Gras ball mid-December
  Presented mid-October
  Hormonal vs isotretinoin
  Not on OCP
  Periods irregular
  Scarring
  Started laser therapy and topical medical management
  Photographs proved clinical response
Always take multiple pictures before and after cosmetic treatments without makeup
  Especially with various angles and facial expression
  Photos of various age groups for demonstration
  Also show what to expect immediately after injection
Recommend and pair procedures and proper skin care
  If you don’t talk to patients about products, patients will go to the wrong places for information
  Gives better control of outcomes
  Too many options for patients
  Cash pay revenue streams
Be able to give specific products to avoid confusion within large brands
Selling products in the office helps to control outcomes
16 Baumann Skin types based on the 4 “barriers to skin care”
  Gives product recommendations based on results
  Saves physician time
  Can choose which to carry in the office
  Can also offer online webstore for other products
Average patients pick 2-3 skin concerns they want to discuss as a result of filling out questionnaire
  Clear written instructions are the key to patient compliance
  Also provide instructions to MAs to discuss with patients
  Great for long-term positive outcomes
ASDS Consumer Survey 2017
  The percent of consumers considering a cosmetic medical procedures has doubled in the last five years
  Patients want to know what we recommend
  Average acne patient tries 13 products before coming to dermatologist
7/10 respondents said they are considering a cosmetic treatment
  Dermatologists ranked as the #1 influencer on the decision to have a cosmetic procedure each year
  Dermatologist 50%
  Friends 49%
  Primary Care Physician 34%
  Injectables and laser treatments continue to increase 2-4% since 2015
Exceptions
  Laser hair removal
  Non-dissolvable fillers (PLLA, CaHA, etc.)

The 5th Dimension: All Inclusive Aspects of Osteopathic Medicine in Dermatology
Suzanne Sirota Rozenberg, DO, FAOCD
Amy Spizuoco, DO, FAOCD
Burning mouth syndrome
  Chronic pain syndrome characterized by burning or stinging feeling affecting the oral mucosa in the absence of clinically detectable signs
  Triad: chronic, unremitting pain, dysgeusia and xerostomia
  Trigeminal nerve dysfunction or hypo-functioning of the PNS may be possible areas of treatment
  Current treatments include antidepressants, antipsychotics, anti-epileptics and analgesics
  Tricyclic antidepressants, benzodiazepines, anticonvulsants, capsaicin
DDX
  Pemphigus vulgaris
  80% of pemphigus cases
  Autoantibodies to DSG3
  Suprabasal bullae with acantholysis
  Tombstone appearance of basal layer
  Clefting down adnexal structures
  DIF- IgG intercellular pattern
Get to know EUCRISA

Learn more at booth 1

Visit www.EucrisaHCP.com for more information
• Mucocele
• Ruptures salivary gland duct
• Common on lower lip, buccal mucosa tongue
• Cystic space
• Poorly defined cystic lining
• Granulation tissue, mucin, macrophages, salivary glands
• Cheilitis
• Hyperkeratosis of SC
• Acanthosis of epidermis
• Spongiosis
• No cellular atypia
• Verruciform xanthoma
• Tongue, genitals
• Hyperkeratosis of SC
• Focal “triangular” parakeratosis
• Foam cells in papillary dermis

• OMT
• Sphenopalatine ganglion release – using Myofascial release
• Relaxing of contracted muscles stimulates stretch reflex and increases salivary gland secretions
• Herpes Zoster Infection
• Viral infection due to Varicella Zoster Virus (HHV3)
• Airborne droplets are the usual route of transmission; the incubation ranges from 11-20 days
• The virus replicates in the affected dorsal root ganglion and produces painful ganglionitis; neuronal inflammation and necrosis can result in a severe neuralgia that intensifies as the virus spreads down the sensory nerve
• Typically resolves without sequelae; however, the most common complication is post-herpetic neuralgia that persist after the skin lesions have healed
• Herpes Zoster histopathology
• Vesicular
• Ballooning degeneration
• Acantholysis
• Slate grey nuclei
• Homogenous/Eosinophilic cytoplasm
• 3 M’s
  • Molding, Multinucleation, Marginaton
  • Intranuclear inclusion bodies
• Clinical findings related to dermatome involved
• Hutchinson’s sign
  • Include ophthalmology when ocular involvement occurs
  • May result in ocular scarring and loss of vision
• Cervical spine
• Peripheral neuropathy of the arm
• Diaphragmatic weakness
• Thoracic spine
• Abdominal wall weakness
• Abdominal wall pseudoherniation
• Lumbar spine
• Ramsay Hunt Syndrome
• Geniculate ganglion to the facial nerve
• May affect eternal auditory canal
• May have tinnitus
• Herpes Zoster
• Folliculitis histopathology
• Superficial and deep infiltrate
• Bottom heavy
• Necrotic follicle
• Outer root sheath ballooning degeneration
• Current pharmacologic therapy
• Antiviral agents
• Acyclovir, valacyclovir, famcyclovir
• Oral corticosteroids
• Anti-inflammatory agents
• Oral and topical options
• Opioids
• Botulism Toxin injections
• Complementary treatment including honey, capsaicin, and lidocaine
• Anti-depressants
• Tricyclic, anticonvulsants
• Alternative treatment options
• IV vitamin C for herpetic neuralgia
• Acupuncture in acute herpes zoster as adjuvant treatment
• In vitro antiviral activity of honey against varicella zoster virus
• Topical capsacin: a review of pharmacologic properties and therapeutic potential in post-herpetic neuralgia, diabetic neuropathy and OA
• Not used in vesicular phase of outbreak
• Not used long-term
• Review of lidocaine patch 5% studies in treatment of postherpetic neuralgia
• OMT in VZV
• Can be used as adjuvant therapy after acute phase to help prevent post herpetic neuralgia
• Suboccipital decompression to normalize the PNS
• Muscle energy to upper thoracic and cervical regions
• Direct treatment requiring patient involvement
• Results in direct inhibition of agonist muscles
• Rib raising to normalize the sympathetic nerves
• Brachioradial Pruritus
• Neurogenic pruritic condition between the wrist and elbows
• Unknown etiology
• Unilateral or bilateral excoriations
• Common in fair skinned, affluent, and middle-aged people in sunny climates
• Scratching makes the symptoms worse
• May increase in incidence with increased popularity of spin classes
• Brachioradial pruritus treatment
• Cervical nerve block
• Acupuncture
• Injections with botulinum toxin A
• Topical mixture of amitriptyline hydrochloride 1.0%, ketamine hydrochloride 0.5% and vanicream applied 2-3 times per day
• Aprepitant, a neurokinin-1 inhibitor
• OMT
• Patients have altered sensation in the distribution of the posterior cutaneous nerve of the arm that supplies the skin over the brachioradialis muscle
• Corresponds to C5-C8
• Remember to palpate the cervical spine on PE
• Presence of a cervical rib or cervical nerve root impingement may contribute to altered cutaneous sensation
• Treatment of cervical arthritis and cervical spine manipulation provides relief
• Muscle energy of cervical spine
• Flex neck +/- rotation
• Counterstrain
• Tender point arises when abnormal muscle tone is maintained through an inappropriate strain reflex
• Passively placing the patient into a position of ease, allows for resetting of the neural components involved in the strain reflex
• Normal resting tone is achieved, resulting in balance in the muscular system, skeletal system, neural and vascular systems
• Notalgia Paresthetica
• Uncommon pruritic condition seen most commonly in middle aged women
• Unknown etiology
• Affecting mainly the interscapular region (especially the T2-T6 dermatomes)
• Usually unilateral
• OMT may decrease the sensation of neuropathic pain/itch
• Macular amyloid
  • Acanthosis of epidermis
  • Small globular deposits of amyloid
• Hyperkeratosis
• Complementary Treatments
  • Botulinum toxin type A
  • Topical capsacin
• OMM techniques
  • Muscle energy
  • HVLA
  • Chapman's points
  • Counterstrain
• Vulvodynia
  • Burning vulvar discomfort, with increased pelvic floor muscle tonicity
• Irritation, itching, pain, rawness, allodynia, hyperalgesia and dyspareunia
• Possible due to nerve compression and/or myofascial hypertonicity
• DNA polymorphisms, peripheral and central neuropathic processes, nerve compression, increased density of C-afferent nociceptive fibers in the vestibular mucosa as possible pathogenesis.
• Treatment options
  • Topical medications such as lidocaine ointment
  • Drug therapy; pain relievers, antidepressants, or anticonvulsants
  • Biofeedback therapy
  • Physical therapy to strengthen the pelvic floor musculature
  • Kegel exercises
  • Injections of steroids or anesthetics
  • Surgery to remove the affected skin and tissue in localized areas
  • Relaxation techniques, massage therapy, homeopathy, acupuncture
• OMT
  • Trigger points of the levator ani muscles
  • Pelvic diaphragm release
  • Make sure to have chaperone or to thoroughly explain procedure
  • Counterstrain
• DDX
  • Condyloma acuminate
    • STD, HPV 6, 11, 16, 18, 31, 33, 35, 39, 41-45, 51, 56, 59
  • Acanthosis of epidermis
  • Papillomatosis
  • Hyperkeratosis of SC
  • Vacuolated koilocytes
  • Verruciform xanthoma
  • Bowenoid papulosis
  • Resembles Bowen's disease
  • HPV 16, 18, 31, 33, 35, 41-45
  • Full-thickness epidermal atypia
  • Dyskeratosis cells, mitoses
• Stasis Dermatitis
  • Common condition seen in older patients with cardiac insufficiency and venous incompetence
  • Due to gravity and increased hydrostatic pressure leading to leaky vessels
  • Hemosiderin deposits in the skin of lower extremities causing hyperpigmentation
  • Lymphatic pump/effleurage may decrease edema and thus improve condition and decrease the incidence of venous stasis ulcers
• Medical management
  • Support stockings (knee high, 20-30 mmHg pressure)
  • Leg elevation
  • Topical steroids
  • Compresses if weeping
  • Unna boot
  • Surgery
• Histopath
  • Impaired venous drainage
  • Spongiosis of epidermis
  • Proliferation of superficial vessels in papillary dermis
  • Nodular vascularization
• Osteopathic manipulation in elephantiasis nostras verrucosa
  • Marked edema of affected extremity secondary to severe lymphedema or venous insufficiency
  • Results in cutaneous changes: hyperkeratotic verrucous plaques
  • Treatment is challenging
  • Patients benefit from lymphatic pumping and effleurage
• Lipodermatosclerosis
  • Also known as sclerosing panniculitis
  • Acute phase – painful, symmetric, red to purple, poorly demarcated, indurated plaques in a stocking like distribution
  • Exact pathogenesis remains unknown, possible static blood in lobular capillaries ultimately leading to pannicular ischemia, fat necrosis and fibrosis
  • Treatment similar to stasis dermatitis, can add manual stretching to help the fibrosis
• DDX
  • Morphea profunda
  • Scleroderma
  • Acrodermatitis chronica atrophicans
• Medical Management
  • Compression therapy
  • Stanozolol
  • 5mg BID with compression shown to reduce induration, pain, hyperpigmentation
  • Pentoxifylline
  • Superficial venous surgery
  • Antibiotics
  • ILK
  • Foam sclerotherapy
  • Danazol
• Histopath
  • Infarction of fat lobules
  • Fibrosis replaces subcutis
  • Lipomembranous change
• Complementary therapies
  • Intraleisonal platelet-rich plasma can be considered for refractory LDS
• OMT
  • Effleurage
  • Pedal pump
  • Be sure to get a good stretch to the calf muscles
• Hyperhidrosis
  • Affects 0.6 to 1% of western population
  • Excessive function of the sweat control system typically affecting palms, axilla and soles
• Primary
  • Inherited, AD with variable penetrance
• Secondary
  • Cancer, endocrine dysfunction, infections and medications
• OMM Findings:
  • T2-T3 dysfunction
  • OMT
  • Topical aluminum chloride hexahydrate
  • TOPICAL anticholinergics
  • Oral anticholinergics
  • Iontophoresis
  • Botulinum A neurotoxin
  • Liposuction and surgical excision (axilla)
  • Sympathectomy
• OMT
• Rib raising
• Occipital release
• Cranial manipulation
• Conclusions
• Multifactorial approach to medical dermatology
  • Think “outside the box”
• Osteopathic manipulation has definite benefits to our dermatology patients

*Hansen’s Disease in the United States Today*

**Epidemiology & Microbiology of Leprosy**

**Richard W. Truman, Ph.D**

- Today primarily in tropics and sub-tropics
- Largest incidence currently in Brazil
- Approximately 200 new cases in U.S. per year
- In U.S. most prevalent in California and surrounding Gulf of Mexico
- Typical U.S. case: 35-52 y/o, male:female 60:40, symptomatic >1 year before diagnosis
- 1 in 3 still suffer nerve damage even after cured “bacteriologically”

**Transmission**
- Mostly direct long-term close contact; conjugal (5%), missionaries (1.3%)
- Probably transmitted by respiratory routes
- CAN use normal hospital sanitation measures and do not have to take extreme caution
- Large occult reservoir
  • 80% report no known contact
- Cooler areas of body
  • Nine-banded armadillo (very cool internal body temp) main reservoir
  • Potential but very low risk from contact with armadillos
- Strong genetic susceptibility - >95% of population naturally immune
  • Specific risk factors unknown
  • HLA I & II, MICA/MICB, TLR, Killer-Cell Ig receptors, TNFa, IL-10, NRAMP1
  • 2-8% of normal population are nasal carriers
  • Long incubation period (3-5 years)
  • Spontaneous self-healing possible
  • No early diagnostic tests, inability to culture *M. leprae* → clinical diagnosis
  • Uniformity of armadillo strains suggests recent introduction and inefficient interspecies transfer

**Clinical Hansen’s**

**Barbara M. Stryjewska, MD**

- Chronic, infectious disease that primarily affects peripheral nerves, skin, eyes, mucous membranes
- Discovered in 1873 in Norway by Gerhard A. Hansen
- Stigma huge problem
- Wide variety of clinical presentations
  - Uncomplicated- insidious onset, indolent infection, little or no malaise, no fever, no complaints except ‘rash’
  - Paucibacillary (tuberculoid)- larger, solitary, asymmetrical, hypopigmented, may spontaneously resolve, loss of sensation may occur at some lesions
  - Borderline- moderate sensory loss
  - Multibacillary (lepromatous)- small, symmetrical, diffuse, early sensory loss
  - Other sequelae- diffuse thickening of skin, ocular lesions, digits get absorbed, motor weakness, paralysis and disability, hypogonadism, gynecomastia
- Diagnosis- punch biopsy, 3-4mm deep to reach
- Treatment- early treatment very effective!
  - Paucibacillary: 12 months of both-
    • Dapsone 100 mg/day
    • Rifampin 600 mg/day
  - Multibacillary: 24 months of all 3-
    • Dapsone 100 mg/day
    • Rifampin 600 mg/day
    • Clofazamine 50 mg/day
- Other- minocycline, macrolides, fluoroquinolones
- Type 1 (reversal) reaction- usually paucibacillary
  - Gradual, vague malaise, neuritis
- Treatment = corticosteroids drug of choice, immunosuppressives, symptomatic (gabapentin, NSAIDs, amitriptyline)

**AbbVie**
• Type 2 (erythema nodosum lepromatous) reaction—usually multibacillary
• Sudden, +/- pain, fever, malaise, new red/tender lesions, neuritis, neutrophils
• Treatment = corticosteroids 1mg/kg symptomatically or thalidomide
  (drug of choice but teratogen, hypercoagulable, neuropenia, bradycardia, constipation) or high dose clofazimine 200 mg/day (post-inflammatory hyperpigmentation but reversible with time)

Consequences of Hansen’s Disease
Capt. John Figarola, MA, LOTR, CHT
• 30-40% of patients have some disability in the hand and foot
• Consequences: Psychological, sensory loss, muscle paralysis, self-care, economic and physical dependence
• Stigma…disbelief, fear, confusion
• Key: physician’s initial reaction sets tone of recovery
• Educate patients that the disease is curable and not easily transmitted
• Inquire about patient’s concerns, empower patient and provide hope
• Can palpate nerves to check for tenderness/enlargement
• Peripheral neuropathy: calluses, ulcers, loss of protective sensation (e.g. corneal ulcers), deformities
• Prevention of Disability:
  • Annual hand & foot screen
    • Baseline on diagnosis
    • Annually x 5 years or more frequently if necessary
  • Patient education
    • Protection of insensate areas (e.g. insulated mugs when microwaving)
    • Assistive devices (e.g. for buttons, utensils)
  • Daily self-inspection hands & feet:
    • Open wounds, blisters, callus, ingrown nails, redness, increased temperature, signs of infection
  • Management of hand & foot problems and routine follow-up
    • Callus and nail care, offloading, splinting and casting (rest, prevent contractures and shear), wound management
    • Offloading with total contact cast 4-6 weeks (don’t use if infected)—reduces pressure by 84-92% and cuts cost in half
  • Footwear selection & assistive devices
    • Should be worn at ALL times

The Art of Radiotherapy in Skin Cancer Management
David Herold, MD

• Radiation therapy is an evidence-based curative cancer treatment
• Indicated for functional, cosmetic, and patient preference as a primary treatment
• Advantages
  • Tissue preservation
  • Not removing tissue
  • Better cosmetic and functional outcomes
• Disadvantages
  • Requires series of treatments
  • Long term subtle skin changes
  • Salvage surgery could be more difficult
  • High cost
  • Rare significant side effects/complications
• Indications
  • Definitive management of malignancies
  • Post-op management of malignancies
  • Treatment of benign proliferative diseases (keloids, postop)
  • BCC, SCC, SCCIS, lentigo maligna/MMIS, post op for invasive MM
• Patient selection
  • High medical/anesthesia or surgical risk
  • Manage expectations
  • Will patient be happy with no-surgical management?
  • Perineural/vascular invasion post op
  • SCC >6mm deep
  • Large lesion
  • Positive or close or uncertain margins
  • Recurrent disease
  • LN mets
  • “Insurance” if surgeon uncomfortable
  • CTCL
  • Merkel cell tumors
    • Very sensitive to radiation
  • Keloids
    • After surgical removal
    • Should initiate radiation within 24-48 hours of surgical removal
• Contraindications
  • Pregnancy
  • Scleroderma
  • Lupus
  • Gorlin’s syndrome (BCC Nevus)
  • Prior XRT to exact site
  • Young patients (<60 years old)
    • Concern for late effects, second cancers
  • Non-compliant patient
    • Unwilling or unable to make repeated visits
• Overview
  • Full radiation dose divided into fractions
  • Small doses delivered over several weeks
  • Larger doses delivered 2-3 times weekly
  • Treatment 1-3 minutes
  • Painless
• Fractionation
  • Need to allow normal cells to recover between treatments
  • Normal cells can repair DNA damage more effectively than cancer cells
  • Repeated “hits” on cancer cells damages these cells
  • Need to choose a field size that gives margin for subclinical extension of lesion
• Technology
  • Orthovoltage units penetrate 1-2 cm deep
  • Papillon units used for anal and vaginal cancer
  • Sensus (topex) unit for simple, superficial cancers
  • Xstrahl photoelectric machine useful for faster therapies
Many others as well
Superficial units
Pros
• Relatively inexpensive
• Small footprint/mobile
• Minimal (if any) shielding needed
• Simple operation
• Can hypofracturate
• Can treat cancers and keloids
Cons
• Thick lesions need debulking
• Limited to small lesions
• High surface field sizes/shapes
• High surface gradient dose
• High bone dose (with orthovoltage)
• Challenge for pinna/irregular contours
• Relatively meek reimbursement
Megavoltage electrons
Pros
• Long-term data available
• Can treat deep lesions
• Can limit surface dose to 100%
High dose brachytherapy
• Placement of radioactive seeds in the tumor
• Follow with brachytherapy machine
Pros
• Can be mobile
• Can treat large and small lesions
Cons
• High cost HDR unit $400K
• Source contacts ($40-75K/year)
• Need vault/shielding/safety
Summary
• Many ways to skin a cat
• RT can provide preservation of function, cosmosis, and excellent tumor control areas
• For certain anatomic sites, functional and cosmetic outcomes of radiation may exceed those of surgery

Cases from the Crescent City: Dermatology Self-Assessment
Tulane University Panel
• Disseminated gonorrhea
• Arthritis dermatitis syndrome and localized septic purulent arthritis
• You should culture from urethra, cervix, throat, or rectum
• Treat with IM or IV antibiotics
• Epidermodysplasia Verruciformis
• Predisposes to HPV
• Genetic defect in EVER1 and EVER2
• Acquired phenomenon in immunodeficient patients
• “Blue gray cytoplasm” on histopathology is present, not seen in more common warts
• Lepromatous leprosy
• Associated with decreased pain in the lower extremities
• Tuberculoid type
• Symmetric, hypof/hyperpigmented macules, swelling of peripheral nerves
• Lepromatous (multibacillary)
• Symmetric, multiple skin lesions present
• Anesthesia in stocking-glove distribution
• Diagnosis is by skin/nerve biopsy
• Cutaneous mycobacterium
• M. fortuitum is associated with nail salons
• Skin microtrauma from shaving increases risk, as does tattooing
• Molluscum contagiosum
• Caused by parapox virus
• In HIV patients, the presence of multiple lesions can be an indicator of advanced immunosuppression
• Herpes simplex
• Unique presentation of a large erythematous, crusted plaque with ulcerating and scalloped border
• In patients with CD4 counts, vesicles can be very transient, leaving crusted necrotic lesions
• Multinucleated keratinocytes on pathology are key for the diagnosis
• Disseminated Cryptococcus neoformans
• Occurs in patients with very low CD4 counts
• Typically a primary pulmonary infection
• Cutaneous manifestations are widely variable
• Diagnosis is done by culture of CSF, sputum, urine, and blood
• Fixed tissue sampling with mucicarmine and Fontana-Masson can aid diagnosis
• Primary varicella
• Polymorphous skin lesions in various stages
• Tzanck smear has high sensitivity and specificity
• Staphylococcal scalded skin syndrome
• Important to go to the primary site of the infection to get a positive culture (throat, conjunctiva, rectum)
• Skin culture is negative!
• Due to exfoliative toxin cleaving at desmoglein 1
• Represents 5% of staph aureus isolates
• Prodrome of fever/malaise, but neonates may only have mild fussiness
• Positive Nikolsky sign and heals without scarring
• Cutaneous mucormycosis
• Necrotic skin lesions caused by rhizops, mucor, or absidia
• Broad non septate hyphae with 90° branching
• Can be primary (by inoculation) or secondary (by hematogenous spread)
• Dermatomyositis
• Affects the muscle as well as the skin
• Photodistributed, mottled, heliotrope, and gottron’s are all things to look for
• Drug induced dermatomyositis
• Hydroxyurea, phenytoin, tegafur, and TNFa-inhibitors are all known causes
• SLE
Hypocomplementemic urticarial vasculitis (HUV) is associated with SLE
Associated with MSK, pulmonary, ocular, and renal manifestations
Chronic cutaneous lupus
• Acute CLE: butterfly rash
• Subacute CLE: polycyclic plaques/papulosquamous, psoriasiform
• Chronic CLE: discoid, chilblain, tumid, panniculitis
Work up
• ROS, PE, chart review
• CBC with diff, CMP, ANA, UA and consider ENA, C3/C4, ESR/CRP
• At follow up: ROS, PE, CBC, UA, ANA (if not positive)
Urticaria multiforme
• Presents in otherwise healthy children with recent viral illness
• Annular or polycyclic lesions with transient ecchymosis
• Favorable response to oral antihistamines
• Key to differentiate from EM and serum sickness like reactions
Acute general exanthematous pustulosis (AGEP)
• Acute, febrile, drug eruption with sterile pustules
• >90% of cases are due to beta-lactam antibiotics, typically within 48 hours
• Elevated neutrophil counts are present, mild eosinophilia possible (but less than DRESS)
• Treatment includes discontinuing offending medications and monitor for systemic involvement and superinfection
Calcinphylaxis
• Skin biopsy for H&E and cultures are first step, preferably a telescoping biopsy
• Exquisitely painful lesions, livedo reticularis, and possible eschar
• Predominantly affects CKD patients on dialysis
• Can be uremic (up to 80% mortality) or nonuremic
• Tends to affect areas of high fat content
• Treatment is wound care, debridement (controversial), hyperbaric oxygen, infection prevention, pain management, sodium thiosulfate (best treatment available)
• Sweet’s syndrome
• Secondary to strep pyogenes, IBD, malignancy, and medications
• Corticosteroid therapy is the standard treatment and usually provides rapid relief
Zinc deficiency
• Diarrhea, depression, dermatitis
• Seen in alcoholics, malabsorption conditions, GI surgery, and AIDS
• Can also have alopecia, paronychia, and onychodystrophy
• Zinc competes with copper for absorption
• Roux en Y procedure is the greatest bariatric surgery risk for zinc deficiency
• Dermatitis can resolve within 4 weeks at 220mg of zinc sulfate
Phytophotodermatitis
• Caused by figs (Moraceae family)
• Furocoumarins are the inciting agent
• Most commonly is the citrus reactions
• More common with increased UVA and plant exposure
• Blister and persistent hyperpigmentation
• Cow parsnip can also cause a reaction known as “pushkie burns”
• Potassium dichromate allergy
• Found in leather shoes, cement, and wood finishes
Cutaneous sarcoidosis
• Lupus pernio: indurated, lumpy, violaceous papules/plaques on nose/ cheeks/lips/ears
• More predictive of pulmonary sarcoid
• ½ of sarcoid patients will develop cutaneous lesions
CTCL
• Pleomorphic T-cell lymphoma is a rare type of CTCL affecting the head and neck area
• Presence of prominent granulomatous infiltrates can make the diagnosis of CTCL more difficult, but does not affect the prognosis nor treatment
Kaposi’s Sarcoma
• Most common tumor in HIV patients, and is an AIDS defining illness
• CD4 count is considered to be the most important factor in tumor development
• Lymphedema is classically associated with non-AIDS related variant, but can also be seen in AIDS-related KS
Pityriasis Rosea
• Herald patch which is pink to salmon colored patch/plaque with slightly raised margin
• Symmetrical lesions appear along the Langer lines of the trunk
• HV-6 and 7 have been reported to be associated
• Can also be a drug eruption
Eczema herpeticum
• Best treatment is valacyclovir
• AD patients are especially susceptible to infections and can be fatal
Graft versus host disease
• Best initial treatment is corticosteroids
• 3 features are skin eruptions, GI involvement, and hepatic involvement
• <50% of patients will have sustained response to steroids, so secondary therapy is often required
Acute: morbilliform eruption more common with GI/liver involvement
• Chronic: polymorphous appearance and affecting multiple sites
Grover’s disease
• Transient or persistent monomorphous papulosquamous eruption classified as non-familial acantholytic disorder
• More common in older males
• Unknown etiology but UB, heat, and sweating are all indicated

Physician Burnout
Lisa Swanson, MD

• What is burnout?
• Physical or mental collapse caused by overwork or stress
• Burnout is not just stress - differentiated because it is difficult to recharge in a short period of time
• Leads to decreased productivity, quality of care, depression, anxiety, substance abuse, relationship issues, and suicide
• The physician wellbeing index is a good indicator for your level of burnout
• Burnout rates in dermatologists has risen from 32% to 57% from 2011 to 2014
• Women have higher rates of burnout than men, predominantly in women with children working in academia
• Common causes are increasing clinical requirements, EMR, lack of efficiency in office, and generalized decreased respect for physicians, malpractice concerns
• Decision fatigue
  • Working in blocks of 90 minutes is ideal
  • We are allotted a certain number of decisions in a day, and the end of the day we get tired of making decisions
• What can be done to treat burnout?
  • Fine tune your practice
    • Think about the ideal properties for your practice and find the steps to reach those goals
    • Initiate a 5 minute huddle at the beginning of the day, that will save 30-60 minutes during the day
  • Adjust your mindset
    • What are you metrics for success?
    • Realize you’re only human
    • Physicians are perfectionists, and this is a challenge
  • Celebrate your success
    • Have your moments when things go right
    • Celebrate with your whole team
  • Recharge your batteries
    • Get comfortable saying “no”
    • Listen to music, take vacation, get a “walk out” song
  • Manage your stress
    • Exercise, sleep, eat well, smile, monostask, breathe, mindfulness, be grateful
    • To do lists are good and have been shown to release the same levels of dopamine as shopping
    • Start a gratitude journal

Adherence to Treatment
Steven R. Feldman, MD, PhD

- Low hanging fruit
  - We have treatments that are remarkably effective
  - Patients don’t always get better
- Consider resistant atopic dermatitis
  - 12 year old patient
  - Total body, lichenified atopic dermatitis
  - Failed outpatient treatment with high strength topical steroids, sauna suit, methotrexate, cyclosporine
- Resistant atopic dermatitis
- Solution

- Admit the patient to the hospital
- Treat with topical triamcinolone
- They clear up in 3 days
- When hospitalized and medications were applied for him, he improved rapidly because someone was making him use his topicals

- Adherence definitions
  - Prescriptions given initiates acceptance
  - Initiation of treatment marks the end of acceptance and beginning of period of persistence/quality of execution
  - Discontinuation marks the end of execution
- Three big reasons for poor treatment outcome
  1. Poor compliance
  2. Poor compliance
  3. Poor compliance

- In an anonymous survey of psoriasis patients, 40% report noncompliance!!!
  - The rest are probably lying
- Psoriasis resistant to topical treatment
  - 35 year old male
  - Psoriasis of the elbows and knees
  - Prescribed combination of betamethasone and calcipotriol
  - Returns in 2 weeks with no improvement
  - Is the patient genetically deficient in steroid and vitamin D receptors?
- Primary nonadherence
  - Many patients don’t even fill the prescription
  - Psoriasis patients are among the worst
- Topicals stopped working
  - 45 year old woman with psoriasis of the legs
  - Initial good response to topical betamethasone
  - Over time, the medication has gradually become less effective and no longer controls the psoriasis
- Why is the disease now resistant?
  - Has she developed mutant T cell steroid receptors?
  - Were the T cells in the lymph nodes exposed to the steroid?
- Secondary nonadherence
  - Medication bottles that record when they are opened
  - Noted discrepancy between when the bottle was recorded as opened and when the patients report they used their medication
- Biologic failure
  - 52 year old woman had extensive psoriasis
    - 20% body surface area affected
  - Treated with adalimumab
    - Initial very good response
    - Gradual loss of efficacy
- Why are patients non-adherent?
  - Poor motivation: The patient may not be particularly bothered
  - Secondary gain: Seeking disability or other gain
  - Lack of trust in doctor: Physician-patient relationship is the foundation
  - Fear of medication: Founded or unfounded fear of treatment
  - Don’t know what to do: Patients may not remember oral instructions
  - Burden of treatment: Sometimes the treatment is worse than the disease!
  - Perceived burden: Sometimes treatment seems worse than the disease
  - Passing the responsibility buck: With multiple caregivers, no one may take responsibility
Forgetfulness: “Pavlov’s dog” problem
Laziness: No energy to follow treatment
Resignation: Some patients have just given up
We can encourage better compliance
Establish a relationship with patients
Involve patients in treatment planning
• Make it easy!
• Don’t scare patients with side effects
• Choose fast-acting agents
• See patients back for a return visit
• Give clear, written instructions
Good medical practice
• Make the right diagnosis
• Prescribe the right treatment
• Get patients to use the treatment
• Communicate & follow up
• Project the appearance of empathy
• Appear caring
People want caring doctors
Friendliness and caring attitude coincide with patient satisfaction rating
Interventions to appear caring
• Open the door slowly to appear as though not in a hurry
• While washing hands tell the patients “I’m doing this to protect you from (insert favorite infectious disease here)”
• Sit down
• Examine patients carefully
• Palpate the rash
• Waive a lighted magnifier over lesions
• Asking a few questions about the disease
• “Your previous treatments have probably been very frustrating…”
• Address psychosocial issues
• Use support groups
• Put a clock on the wall behind the patient
• Looking at a watch can be the kiss of death
• Put clocks behind where patients sit
• I’m doing it now because I care, not because I am in a hurry
• What matters is how it is perceived
• Choose a vehicle that the patient will use
• Less messy products seem to be preferred over:
  • Ointment
  • Cream
  • Emollient
  • Gel
• Scalp, palm, face and body psoriasis
• 38-year-old male presents with scattered lesions of psoriasis
Treated with:
• Scalp: fluocinonide and calcipotriol solutions
• Face: desonide ointment and topical tacrolimus
• Palms: Clobetasol ointment and tazarotene gel
• Body: betamethasone/calcipotriene ointment
• Return in 8 weeks with minimal improvement
• Simplify treatment
• Resistant atopic dermatitis
• 12-year-old patient
• Total body, lichenified atopic dermatitis
• Failed outpatient treatment with high strength topical steroids, sauna suit, methotrexate, cyclosporine
• This time, you don’t want to admit him to the hospital
• Add a one-week return visit
• Kids with atopic dermatitis
• 0.1% tacrolimus ointment BID
• Return in 4 weeks or 1 week/4 weeks
Curse of knowledge
• Better informed people find it difficult to think from the perspective of less well-informed people
• Makes it hard to meet patients’ education needs
• Give instructions in writing
• Motivating kids
• Positive reinforcement
• Sticker calendar
• Use sticker charts to motivate your residents, too :)
• Side effects are a mixed bag
• Side effects & fear of them can reduce compliance
• Side effects may also be an opportunity
• For acne patients on spironolactone
• “This drug is a diuretic. In addition to its effect on your acne, you may also notice some weight loss.”
• For scalp psoriasis, tell patients: This may sting…
• That’s because it is so strong
• The stinging is a sign that it is working
• Most guys don’t have what it takes to use this stuff
• Framing
• A set point, even an arbitrary one, affects perceptions
• A risk that is more likely than being killed by lightning doesn’t sound nearly as bad as a risk that is less likely than a coin flip
Anchoring
• How willing would you be to take a shot once a month?
• How willing would you be to take a shot once a day? Once a month?
Loss aversion
• Losses make bigger impact than equivalent gains
• Taking a statin
• If you take this statin regularly, on average, you would live a year longer
• If you don’t take your statin regularly, on average, you would die a year sooner
• Sunscreen
• Will keep you looking young
• If you don’t use it, you will lose the youthful look of your skin
Address cost issues
• Prescribe low cost medicines
• Give patients a range of options
• Lower cost generics
• Higher cost drugs that have greater benefit
• Patient assistance programs
• Company-sponsored copay or other assistance programs
• Local indigent pharmacy resources
• Change the priority/urgency
• Real and perceived cost/benefit
• Encourage patient to share cell phone with the pharmacist
Inertia/default option/anecdote
• Powerful force
• Thaler & Sunstein’s book: Nudge: Improving Decisions About Health, Wealth, and Happiness
• Opt out versus opt in
• Dramatically increases retirement plan participation
• Keeps people from switching medications
• Also, too much choice isn’t helpful
• People choose the middle
Assessing adherence
• The honest truth about dishonesty
• “Try to recall the Ten Commandments”
• Putting patients in a religious state of mind makes them less likely to lie
• Also, ask indirect questions
• “Are you keeping the extra syringes you’ve accumulated refrigerated like you are supposed to?”
• They shouldn’t have extra syringes
• “What do you do with leftover medication? Is it in a locked cabinet or in the medicine cabinet or do you throw it away?”
Adherence to biologics
Resistant scalp psoriasis
Prescribe only "all natural" treatments
Never, ever use the word "steroid"
"Complements natural healing pathways"
What is a "subclinical AK?"
Giving patients your cell phone
Mom would like the child treated
Have patients pick the one or two
She says she wants all
Anchoring
You only need to take the injection once a day. Wait, did I say once a day? It’s only every month."
Resistant scalp psoriasis
36-year-old woman with resistant but limited scalp psoriasis
Has seen many dermatologists
Has tried numerous topical treatments with no benefit
She brings a bag full of them, including clobetasol solution
Is wondering about using a biologic
Cell phone number
Return visits make people get the medicine and use it
Focus on initial adherence also promotes habit
A cell phone call can do the same thing
Giving patients your cell phone number is a powerful statement of how much you care about the patient (whether you answer the phone or not)
Do Not Preprint Your Cell Phone Number on Your Business Card!
Patient wants natural treatment
8-year-old with atopic dermatitis
Mom would like the child treated with all natural treatment
25-year-old woman with very severe psoriasis
She says she wants all natural treatment
Prescribe only "all natural" treatments
The words we use with patients are important
Never label patients "non-compliant"
Never, ever use the word "steroid" with a mom
Use reassuring words
"All natural"
"Complements natural healing pathways” “Holistic”
"The sun makes vitamin D in your skin naturally”
Internet survey & contest
Half the subjects received a weekly email link to the survey
For each completed survey, subjects were entered to win an iPod Nano
For 5 of 6 completed surveys, subjects received a $5 gift card
Conclusions
Difficulty clearing psoriasis is often due to poor adherence
Improving adherence is low hanging fruit
Adherence is a major issue in the treatment of chronic skin diseases
We can promote better adherence
Timing of follow up
Easy to use treatments
We need to look to new ways to enhance patients’ adherence and treatment outcomes
Skin Cancer Hour
Neal Bhatia, MD

What is the disease?
Actinic Keratosis can either regress, persist, or progress to SCC?
AK as a symptom of photodamage, a disease that cannot be cured?
SCC in situ that should be treated to avoid recurrence or invasion?
"AK is the initial clinical manifestation of a disease continuum that progresses to frank SCC…”
Ackerman, BA, “Respect at last for solar keratosis,” Dermatopathology, 1997, 3:101-3
"Actinic keratosis is a premalignant condition of thick, scaly, or crusted patches of skin.”

Conclusions
Difficulty clearing psoriasis is often due to poor adherence
Improving adherence is low hanging fruit
Adherence is a major issue in the treatment of chronic skin diseases
We can promote better adherence
Timing of follow up
Easy to use treatments
We need to look to new ways to enhance patients’ adherence and treatment outcomes

571 pts surveyed at PSU-Hershey: 3 questions about AKs between June 1-July 31 2016, mean age 42, gender equal
The question that presented AK as a “precancer” had the highest proportion (92.2%) responding they preferred treatment.
Two questions presenting the risk of AK as not progressing to cancer yielded the lowest proportion of individuals who chose treatment [57.7%] and [60.9%].
Conclusions: pts’ decisions on whether to receive treatment for AK is significantly affected by physician wording, especially if made aware of risk of CA
Are actinic keratoses the cutaneous version of “cavities”?
Treatment
Dermatologists examine for AKs the same way dentists search for dental caries
One cavity today → ten cavities later
Filling cavities is like freezing AKs: it is a bandage not a remedy
Prevention
When you brushed your teeth, did you brush only one tooth or all of them?
Do we take that same approach for AKs?
Is sunscreen the same as toothpaste for the skin?
What is a “subclinical AK?”
Evolving AKs are still AKs, whether we see them with our eyes, dermatoscope, confocal microscopy, or fluorescence
To reduce the risk of skin cancer, we treat what is coming and not just what we see today
“Squamous cell carcinoma is the major cause of nonmelanoma skin cancer related death”
“cSCC is the 4th most common cause of death in renal transplant patients”
Marcen, R, Transplant Proceedings

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“Almost 50% of Caucasian Australians will develop a BCC before the age of 70…it is likely that the same person will develop another within three years.”

Do AKs grow up to become SCC?

- Anywhere between 0.025 and 16% of AKs can progress to invasive SCC
- Extrapolation studies suggesting the risk of progression at approximately 8%
- Risks vary with age, gender, chronic UV exposure, and location of AKs
- Spontaneous regression of AK
- Estimated 15–25% in 1-year period
- Occurrence rate of invasive SCC
- 5–20% over follow-up periods of 10–25 years
- 0.1% and 0.24% transformation rate from AK to SCC in 1 year
- 82.4–100% pts with invasive SCC arising on sun-exposed areas have a history of AK
- Hot off the Press: Seborrheic keratosis (SK) may mimic cancer
- Dermatopathology samples from 2015:
  - “SK” or “ISK” “SK rule out others,” changing, growing, and so on—were excluded. A total of 4,361 eligible cases were identified and used for analysis
  - Of total cases identified as only “SK” or “ISK” in the clinical data, 3,759 (86.2%) were, in fact, SK or ISK
  - A total of 466 (10.7%) were an assortment of non-malignancy diagnoses, such as dermatofibroma
  - There were 136 (3.1%) cases histologically diagnosed as malignancies
  - The majority (9/136 cases; 67%) were in situ or invasive squamous cell carcinoma; 24.3% (33/136) were basal cell carcinoma and 8.8% (12/136) were melanoma
- Hot off the Press: Vitamin D receptor polymorphism increasing NMSC risks?
- Protection from cumulative UV that induces NMSC is exerted via signaling mechanisms involving the vitamin D receptor (VDR)
- Single-nucleotide polymorphisms in VDR can potentially increase NMSC risk: 3 mutations types Apal, BsmI, and TaqI
- Study evaluating 200 patients, matched for high risk factors—skin type, sunburn history, lighter eyes and hair
- Results: Highest risk factors correlated with the BsmI polymorphism in the Vitamin D receptor almost 2:1
- Hot off the Press: New label for sonidegib
- Label reflects long-term sustained response of BCC
- BOLT Trial: n=194 locally advanced BCC, 36 metastatic
  - 200 mg/d vs 800 mg/d
  - Objective response rate for 200 mg dose: 56%
  - Sustained median duration of response: 26 months
  - 30% experienced side effects that lead to discontinuation
- Can AK treatment be simple yet complete…
  - Veterans Affairs Keratinocyte Carcinoma Chemoprevention (VAKCC) trial
  - 12 VA medical centers recruited from 2009 to 2011 and followed up until 2013
  - 932 veterans with 2 or more AKs
  - Mean follow-up duration was 2.6 years
  - “A single course of 5% fluorouracil cream effectively reduces AK counts and the need for spot treatments for longer than 2 years.”
- Is “spot treating” better than “not treating?”
  - 5% FU cream, (n = 468), or vehicle cream (n = 464) to the face and ears bid for 4 weeks
  - At 6 months 5-FU group demonstrated:
    - Fewer AKs compared with the control group
    - (3.0 vs 8.1, P
  - Ingenol disoxate (LEO 43204) 0.018% and 0.037%: ester of ingenol for treatment of AKs
  - Currently in trials for full face, scalp, and chest—3 day prescription with 12 day follow up for recurrence
  - More potent activation of protein kinase C
  - Significantly more exuberant neutrophil bursts
  - Superior antitumor effect in B16 mice with melanoma
  - Improved stability at ambient temperatures
  - New 4% 5-FU cream in Peanut Oil
  - Aqueous vehicle cream w/ peanut oil, apply once daily
  - 4 week comparison study against 5% 5-FU bid, n=841
- Results:
  - All in 4% arm achieved 75% clearance (vs. 95%)
  - 80% were 100% clear (vs. 75% for 5% 5-FU)
  - 30% irritation in 4% cream arm compared to 60% in 5% arm
  - Same comparison of stinging, crustung, and itching
  - Peanut Oil added moisturizing effects and was safe to use in patients with peanut sensitivity
- Combining calcipotriol and 5-FU
  - Combination cream of both superior to 5-FU alone
  - Induction of TSLP results in recruitment of anti-tumor T cells
  - 131 pts applied combo or 5-FU alone bid for 4 days
  - 8 weeks after: combo 87% mean AK clearance (vs. 39% combo group vs. 13% 5-FU alone
  - Concerns: stability of combo, effects and was safe to use in patients with peanut sensitivity
- What’s coming for AKs
  - KX2-391 Ointment
  - Inhibit T cell migration and endothelial tubule, lymphocyte infiltration, angiogenesis
  - VDA-1102 Ointment
  - Placebo vs 5% vs 10% for 28 d
  - Anti-neoplastic agent
  - Selective modulation of VDAC/HK2, unique to glycolysis and mitochondrial
  - Selectively triggers apoptosis in cancer cells
  - SR-T100 gel—antiproliferative
  - Solanum lycocarpum alkaidolic extract and their constituents, solamargine and solasolone
  - 16 week treatment study, 8 wk F/U for recurrence evaluation
- Actikerall (LAS41005)
  - 0.5% 5-fluorouracil (5-FU) and 10% salicylic acid in film-forming base
  - Comparison trial against placebo and LAS106521 similar compound
- Management strategies
  - Start slowly
  - Wait at least a week after cryotherapy
  - Consider regions instead of full face
  - Forehead MWF
  - Rest of face TiThSat
  - Make sure there is no history of HSV labialis
- Bacteriostatic healing ointment
- Barrier restoration
- Pramoxine lotion
- Mix equal parts with moisturizer to maximize surface areas
- Spray sunscreens
- Turn the radio up or down but not off
- Tips for success
- Have patients fill prescriptions between Monday to Thursday—less likely to be switched than Fridays or weekends
- Have patients start treatments on Sundays so that reactions occur midweek rather than on weekends
- Take at least 4-7 days off before and after destructions or surgery
- Use every adjunct possible except steroids
- Chemoprevention with PDT is not old news but should be routine
- Does blue light PDT using 20% ALA reduce occurrence of AK in high-risk patients: 52 week study.
- Submitted as abstract 5194
- Multi-center evaluator-blinded, placebo-controlled study
- Measures occurrence of AKs and development of NMSC subsequent to cryotherapy then multiple treatments with ALA-PDT
- N=166, facial AKs, a history of NMSC, and histologic evidence of dysplasia within clinically normal-appearing perilesional skin
- Clinically evident facial AKs were treated with cryotherapy prior to initial PDT randomly assigned to ALA-2X: (Baseline, Week 4); ALA-3X (Baseline, Week 4, Week 24) or VEH-PDT
- Placebo treatments matched 1:1 to the two active groups
- Treatment day
- Remind patients to bring a wide-brimmed hat to shield the treated lesions from ambient light
- Bring books, music, or something to pass the time
- Put together a package:
- Topical anesthetics: lidocaine gel, pramoxine
- Moisturizers, sunscreens
- There is no reason to stop meds that are sensitizing in the UV spectrum since PDT works in 410-417nm Antibiotics, Diuretics, Anti-hypertensives
- If you are worried, then have them hold the drugs on the day before and the day of treatment
- Rationale for antihistamines
- Anticipated ALA PDT Response: erythema and edema
- Edema generated by mast cell degranulation
- Erythema response is unaffected by H1 blockade
- More mast cell related over 72 hours than lymphocytic, so steroids not as potentially helpful
- New trial underway to measure LSRs
- Randomized, double-blind, placebo-controlled, 5-20 AKs
- 20 patients, given Cetirizine 10 mg or placebo prior to and after treatment
- Measure LSRs: erythema, edema, crusting, exudation, vesiculation/pustulation and erosion/ulceration
- Return of red: 10% ALA in nanoemulsion BF-200 (Ameluz®)
- 7.8% ALA free acid equivalent to 10% ALA
- Spectrum around 630 nm
- No PpIX induction below the basal membrane
- European studies: emitting light between 580–1400 nm
- Nanotechnology optimizes the transport of 5-ALA through the Stratum Corneum
- Nanoemulsion delivery of BF-200 allows penetration of ALA without permeation into dermis
- Return of Red: 10% ALA in nanoemulsion gel Phase III pivotal trials
- 779 patients skin type I-II
- 4 to 8 AKs
- BF-200 10% gel vs. MAL 21.3% vs. Placebo
- Narrow emission LED lamps 630 nm
- BF-200 10% nano-ALA: Phase III Field treatment efficacy
- Pros and cons of medical options for NMSC
- Pros
  - Plenty of non-surgical patients:
  - Anticoagulants
  - Oxygen
  - Nursing home/non-ambulatory
  - Issues with anesthesia
  - Surgical fatigue (no más por favor)
  - Bad locations
  - Eyelids
  - Genitals
  - Multiple
- Cons
  - Expensive
  - Off-label or not covered…or both
  - Margins not defined
- Overall lack of experience and regimens in the dermatology world
- Pharma will not support it
- Recurrence and relapse data not completely published
- What actually works for treating NMSC?
  - Most every agent for treating AKs has been investigated for treating BCC, only imiquimod is FDA approved for sBCC
  - Topical treatments for SCC still do not relieve or mitigate the risk of invasion or metastasis
  - Is the concept of a non-surgical option even possible anymore? Aside from efficacy, what about liability?
  - If you were a skin cancer, and want to be successful, you would…
  - Try to evade the host’s inflammatory mechanisms and take advantage of immunosuppression
  - Recruit your own blood supply from the host to sustain growth
  - Maintain and accelerate unregulated cell division to outgrow host defenses
  - Become as immortal as possible to counter host apoptosis and death enzymes
- Checkpoint inhibitors for NMSC
  - Programmed cell death proteins on T-cells → PD-1
  - PD-1 binds ligand PD-L1 on tumor cells blunts immune response
  - Monoclonal Abs (Pembrolizumab) target and block this interaction
  - Cemiplimab (REGN2810)– FDA Breakthrough Designation for Advanced Cutaneous SCC
  - EMPOWER-CSSCC 1,Phase 2, potentially pivotal, single-arm, open label clinical trial of Cemiplimab
  - Enrolling for metastatic or locally advanced unresectable CSCC
- Various targets for therapy
  - Mitogen-Activated Protein Kinases (MAPks) Raf/ERK
  - Most critical mediator of Ras-dependent carcinogenesis
  - Activated Akt promotes cell survival by inhibiting apoptosis and regulates activation of NF-κB and AP-1
  - Adding MEK inhibitors (cobimetinib, trametinib) helps combat tumor resistance
  - Demonstrated in melanoma, still investigated in SCC
- Resistance to topical 5% 5-FU - No controlled studies for 0.5%, 1%, or 4%
- 31 patients with sBCC--5% 5-FU bid for 11 weeks:

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• 90% histologic clearance, as early as 3 weeks
• 10% “tumor resistance” reported within 3 months
• 29 pts with SCC in situ—5% 5-FU bid for 4 weeks
• Complete response rates fall: 83% at 3 months, 60% at 12 months
• 17% recurrence after one year
• Theories behind resistance:
  - Dihydropyrimidine dehydrogenase
  - Protein deficiencies: Bag-1, Hsp-70
  - Stem Cell proliferation during tumorigenesis
• Imiquimod 5% cream vs excisional surgery (4 mm margin) of nodular or superficial BCC
  - 401 (80%) patients intention-to-treat group year 3
  - At 3 years, 178 (84%) of 213 pts cleared with imiquimod group vs 185 (98%) of 188 participants in the surgery group (RR 0.84, 98% CI 0.78-0.91; p
• PDT vs imiquimod vs 5-FU for treatment of sBCC
  - 7 centers in Netherlands, n=601:
    - MAL-PDT; two sessions with interval of 1 week
  - Imiquimod cream daily, 5 times per week for 6 weeks
  - 5-FU cream bid for 4 weeks
  - Follow-up was at 3 and 12 months post-treatment
  - MAL-PDT: 144/196 patients 72.8% (95% CI 66.8-79.4)
  - Imiquimod: 158/189 pts 83.4% (78.2-88.9)
  - 5-FU: 159/198 80.1% (74.7-85.9)
• PDT vs. 5-FU vs. Imiquimod for BCC
  - 3 year follow-up: MAL-PDT, Imiquimod 5%, and 5% 5-FU
  - 590 patients treated, 66 treatment failures within three years
• Ingenol Mebutate gel and BCC
  - PEP005 0.0025%, 0.01% and 0.05% Gel With Two Treatment Schedules, Day 1 & 2 or Day 1 & 8
  - sBCC 4-15 mm, nBCC
• Ingenol Mebutate 0.05% gel and SCC in situ
  - 24 patients, two applications of 0.05% PEP005 gel on the extremities, trunk or face
  - Return for check-up visits the day after the first application and routine milestones x 2-3 months
• Ingenol Disoxate (LEO 43204) 0.018% and 0.037%: Ester of Ingenol for Treatment of AKs
• Currently in trials for full face, scalp, and chest—3-day prescription with 12 month follow up for recurrence
• More potent activation of protein kinase C
• Significantly more exuberant neutrophil bursts
• Superior antitumor effect in B16 mice with melanoma
• Improved stability at ambient temps
• What works for SCC in situ?
  - Topical 5% 5-FU
  - 26 pts, applied bid for about 9 weeks
  - Complete clearance up to 55 months
  - 5% 5-FU vs. ALA-PDT
  - Daily for 4 weeks vs. one or two cycles
  - 12 months after treatment:
    - 5-FU 48% clearance
    - PDT 82% clearance
    - Imiquimod 5% cream
  - 31 patients, treated qd for 16 weeks
  - All resolved with clearance up to 9 months
• Erythroplasia of Queyrat:
  - Imiquimod doses ranged from 3 mg to 240 mg capsule
  - Antioxidant effects through
  - Exogenous forms isolated from a cyanobacterium Anacystis nidulans in marine plants
• Photolyases
  - Naturally occurring enzymes
  - Repair UV-induced thymidine dimers
  - Absent in placental mammals
  - Active in organisms with high cumulative UV exposure.
  - Exogenous forms isolated from a cyanobacterium Anacystis nidulans in marine plants
• Long-term use improves:
  - Expression of MMP-1, Ki67, PCNA
  - Mutations of p53, p21
• Photolyases provide protection post-PDT
  - Sunscreens contain Photolyases encapsulated in liposomes
  - 36 pts, scalp AKs, treated with PDT; biopsies performed pre-PDT, after one month and one year use
• Overall reduction of p53 expression (indicative of apoptosis cell) and Ki67 expression in comparison with a sunscreen with SPF 50 +
• Preventative effects of photolyases compared to conventional sunscreens
  - 9 month long study involving 30 patients after treatment with PDT on the face or scalp
• Sustained remission of previously treated AKs and in patients treated once with PDT
• All patients in the group treated with photolyases avoided a second PDT treatment vs. 10 of 15 subjects in the sunscreen only group needing a second treatment to stay clear
• Long-term prevention strategy with exogenous photolyases in sunscreens
  - Study with Xeroderma Pigmentosum n=8
  - Inherited defects in nucleotide repair mechanisms and ongoing formation of CPDs
  - Treated for at least 12 consecutive months
  - 65% reduction in appearance of new AKs
  - 56% BCC and no new SCC
• Polypodium leucotomos extract: Yes it is natural but what is the dose?
  - Marketed OTC as a food supplement: 240 mg capsule
  - Antioxidant effects through polyphenolic acids
• Use for daily photoprotection is different than incorporation into a treatment regimen
• One capsule daily, add one before sun exposure
• Higher doses—480-960 mg for treating vitiligo, melasma, and PMLE
• New data: patients with lighter skin types could benefit from more photoprotection from an extra dose than darker patients
• “Measurable suppressive effects on UVB-induced erythema”
• Polypodium leucotomos extract for chemoprevention? So far only data in mice
• PLE in UV-irradiated mice delays tumorigenesis
• Increases epidermal p53 expression and the anti-oxidant status of UV-irradiated hairless mice
• In non-tumoral skin, this increase was significantly higher in PL-treated animals than in non-treated mice
• Can contribute in delaying tumor development, either by repairing the damaged DNA or by increasing apoptosis
• Studies coming for chemoprevention

• Nicotinamide 1000 mg daily ($10 per month)
• Phase 3 ONTRAC skin cancer prevention study
• N=386 pts, aged 30-91 years, hx ≥2 NMSC over past 5 years
• Reduced incidence of new skin CA by 23% vs. placebo after 1 year among high risk patients
• Reduced new AKs by 11% at 3 months, 15% after 12 months
• Prevents UV-induced ATP depletion, glycolytic blockade
• Enhanced DNA repair
• Reduces UV-induced immunosuppression
• No vasodilatory side effects: HA, flushing, itching, hypotension
• Good news and bad news on using retinoids for chemoprevention

• Good News:
  - Retinoids stabilize differentiation and atypical keratinocyte replication
  - Inhibit of ornithine decarboxylase
  - Promote of dendritic cell activity and restoration of apoptosis

• Bad News: Good luck finding a way to get them for your patients
• But if you can: Start slow 10 mg acitretin daily and increase as tolerated, 25 mg qod then qd
• Titrate up and down to manage side effects…but don’t stop
• Every systemic retinoid is considered off-label for chemoprevention

• Just something natural please…
• Caffeine
• Oral ingestion: strong inhibitory effect on UVB-induced carcinogenesis
• Topical caffeine to the dorsal skin of mice pretreated with UVB for 20 weeks resulted in enhanced apoptosis

• Green Tea Extract (Polyphenols)
• Derivatives for Chemoprevention
• DNA repair mediated through IL-12 induction
• Anti-photocarcinogenic activity when green tea added through drinking water in mice models
• Targets for polyphenols: Ras oncogene, activator protein-1 (AP-1)
• Potential additives to sunscreens or other topical agents
• Epigallocatechin gallate (EGCG)
• Perillyl alcohol from limonene
• DFMO ornithine decarboxylase inhibitor
• Selenium, retinoids and salicylates
• Switch from liquor to coffee to reduce alcohol intake levels
• Meant to serve as public health message
• Relative risks for NMSC:
  - 0.96 for one cup of coffee
  - 0.92 for one to two cups
  - 0.89 for two to three cups
  - 0.81 for more than three cups of coffee per day, respectively
• Caffeinated coffee may have dose dependent chemopreventive effects against basal cell carcinoma

• Not to be forgotten…
• Sebaceous carcinoma
  - 3 cases/1 million people
  - Increasing frequency in males skin types I-II
  - Increasing mortality in males skin type VI, extracutaneous tumors
• Dermatofibrosarcoma protubersans
  - 0.61/100,000 people
• Higher incidences in black skin and females than in past
• Increasing cases of males over 80 with tumors on head

• Merkel cell carcinoma
• Avelumab
• CDK 4/6 inhibitor of PD (programmed cell death pathway)
• 88 pts studied—33% complete or partial shrinkage
• 6 months—86% sustained clear, 12 months—45% sustained

• New approaches to cutaneous oncology
• Revival of topical Nitrogen Mustard
• Topical hypericin plus UVB—localized photodynamic tx
• Systemic options revisited: Bexarotene, JAK Inhibitors
• PD-1 Inhibitors for CTCL
• BRAF inhibitors for Langerhans Cell Histiocytosis
• Topical rapalogues for angiosfibromas, Kaposi’s Sarcoma
• JAK Inhibitors for GVHD

Holy MACRA! Avoiding MIPS Penalties
Mark Kaufmann, MD

• 2018 changes in reimbursement:
  - 10040 +6.87%
  - 96910 +55.6%
  - 17000: -2.37%
  - 17003: -18.52%
  - 17004: -12.67%
• Two new codes for photodynamic therapy—code determined by who does the painting
  - If non-qualified healthcare provider (e.g. medical assistant) does illumination and painting with chemical
• 96567
• 2018 payment amount will be decreased by 46.66%
• MD/DO/MPPA (not RN/LPN)
• 96X73: if only paint + illuminate
• 96X74: if also debride (targeted curettage, abrasion) at least 1 actinic keratosis before painting
• Don’t forget to use J code*

MACRA
• Prevented Centers for Medicare and Medicaid Services (CMS) from pulling the global periods from our codes!
• Repealed the SGR (Sustainable Growth Rate) avoiding a 21% pay cut
• Mandates The Merit based Incentive Payment System begin in 2019 (MIPS)
• Those in Alternative Payment Models (APMs) will be excluded from the MIPS program
• 99024 - Use if you see someone in global period (not payable visit but tracking visit)
• Any group of 10 or more physicians/qhp needs to start reporting code 99024 on ALL visits that take place in the global period:
• Florida, Kentucky, Louisiana, Nevada, New Jersey, North Dakota, Ohio, Oregon, Rhode Island
• MIPS: 2017 is a transition year. How to avoid penalties-
• Test pace: just have to submit something for MIPS. Cheat Sheet…
• https://qpp.cms.gov/mips/quality-measures
• Data submission methods drop down menu → claims →
• Documentation of current medications in the medical record
• Be sure to include all of following: medication name, dosage, frequency and route of administration
• Use code G8427 (current medications documented)
• EOB: look for comment code N620 (“this procedure code is for quality reporting/information purposes only”) = you have submitted a quality measure.
• **Only has to happen one time on one patient to be exempt from 4% penalty!**
• Partial participation
• Full participation
• Healthcare Reform:
• Challenges to being paid for value not volume: financial incentive reversed

as you try to see the patient less often, do fewer procedures, and shift to less expensive interventions
• Consolidate into larger group practices
• Increase use of extenders & teledermatology
• One thing government agrees on: data-driven healthcare

Bureaucracy and Burnout Panel
Neal Bhatia, MD
Mark Kaufmann, MD
Andrea Murina, MD
Lisa Swanson, MD

• AADA actively working on:
• FDAs compounding proposals
• Access to pharmaceutical cost transparency
• Medical spa standards
• Easing burden of prior authorization
• Fighting scope expansion efforts nationwide
• Truth in advertising (e.g. board certified credentials)
• Successes in 2017
• Sunscreen allowed in schools in 7 states
• Step therapy in 3 states
• Indoor tanning restrictions 2 states
• Modifier 25 update:
• Only 3 E/M codes cover cost of PE and malpractice RVUs (99204, 99205, 99215)
• Anthem: 14 states. Some of which as of January 2018 will only pay 50% of evaluation and management modifier
• What You Can Do: spread the word- state insurance commissioner, patients, small business associations in your state, insurance companies, Centers for Medicare and Medicaid Services, state/federal legislators
• Otherwise…People will end up not having procedures done same day they are seen

www.surveymonkey.com/r/mod25

for more information

Clinical and Dermoscopic Characteristics of Desmoplastic and Amelanotic Melanomas
Ali Banki, DO, FAOCD

• Desmoplastic melanoma (DM)
• Accounts for less than 4% of primary cutaneous melanomas
• Elderly individuals
• Found on chronically sun-damaged skin
• The male to female ratio is approximately 2:1
• DM most often affects the head and neck region (51%)
• Extremities (30%)
• Trunk (17%)

• Clinical presentation
• It can arise de novo: tan, erythematous, firm papule, nodule, or plaque, usually lacking any epidermal component or as an ill-defined scar like lesion
• It can be associated with other melanoma subtypes, mainly lentigo maligna type: It is recommended to palpate the skin overlying a lentigo maligna to detect for any dermal tumors

• Differential diagnosis
• Benign:
• Dermatofibroma, Scar, Cyst, Neurofibroma
• Malignant:
• Sarcoma, Basal cell carcinoma, Squamous cell carcinoma, Amelanotic melanoma

• Histopathological subtypes
• Two subtypes, based on the degree of desmoplasia:
• 1. Pure DM: More than 90% of the tumor shows desmoplastic features
• Pure DM is less likely to affect the lymph nodes and has a less aggressive course compared to the mixed DM
• 2. Mixed DM: Desmoplastic features in less than 90%
  but more than 10% of the lesion
• Perineural invasion
• DM frequently show perineural invasion and such tumors
  are termed desmoplastic neurotropic melanoma
• Aggressive, higher tendency for local recurrence
• Dermoscopy review
  • Vascular morphologies melanocytic lesion
    • Linear comma-type (dermal nevi)
    • Dotted (melanomas, melanocytic lesions, spitz nevi)
    • Linear irregular (melanoma)
  • Vascular morphologies nonmelanocytic
    • Linear loop/hairstrip (SK)
    • Glomerulus (bowens, intraepidermal carcinoma, SCCIS)
    • Branched (nodular bcc)
• Vessels never crossing through center of lesion
  (sebaceous hyperplasia)
• Melanoma specific structures
  • Helical vessels
  • Milky globules
  • Linear irregular vessels
  • Dotted vessels
  • Irregular dots/globules
  • Irregular pigment network
  • Irregular streaks
  • Regression (peppering scar-like depigmentation)
  • Crystalline structures
  • Blue/whitish veil
  • Irregular pigmentation
• Dermoscopic features study
  • The most common dermoscopic features in DM include
    • Atypical vascular structures, peppering, and occasionally
      other melanoma specific structures
  • Largest series describing dermoscopic features of DM
    (n=37)
  • All DM featured at least one melanomaspecific structures
    • Most common being atypical vascular structures (81%)
  • The most common melanoma-specific structures after
    atypical vascular structures were as followed:
    • Regression structures (peppering and scarlike areas)
    • Blue-white veil
    • Atypical globules
    • Atypical network
  • Peppering was more frequent in pure DM than
    mixed DM
  • Crystalline structures, polymorphous vessels, and milky
    red area were more commonly seen in mixed DM than in
    pure DM
  • It can be hypothesized that since mixed DM has more
    of a melanoma specific structures (crystalline structures,
    polymorphous vessels, milky red area) therefore it can be
    more easily be diagnosed than pure DM
  • At least one of the 14 melanoma-specific features evaluated
    on dermoscopy was found in 100% of DM
  • Dermoscopy may be a useful tool for identification of DM
• Study of dermoscopy and confocal microscopy in DM
  • Both this study and Jaimes et. al found a high prevalence of
    atypical vascular structures in DM
  • Both studies found melanoma-specific structures in 100%
    of cases
• Key points
  • DM head and neck, elderly individuals
  • Non-pigmented, tan or erythematous, nodule or plaque
  • Associated with lentigo maligna, palpate the underlying skin
  • Two forms histologically: Pure and Mixed
  • Mixed DM more aggressive form, more likely to invade the
    regional lymph nodes
• Dermoscopy summary for DM
  • Atypical vascular structures (high prevalence)
  • Dotted blood vessels, linear irregular blood vessels,
    Polymorphous blood vessels, Milky-red areas
  • Melanoma specific structures (100% of cases)
  • Peppering more frequent in pure DM
  • Crystalline structures, polymorphous vessels, and milky read
    area more common in mixed DM
• Amelanocytic melanoma
  • Accounts for 2-8% of all melanomas
  • Sun exposed skin, elderly individuals
  • Nodular or superficial spreading
  • Males: found on the trunk
  • Females: found on the limbs
• Clinical presentation
  • Can be classified into three groups according to the extent
    or absence of pigment:
    • 1. Amelanotic - complete lack of melanin even
      under dermoscopy
    • 2. Partially pigmented-pigmentation is found in less than
      25% of the lesion
    • 3. Lightly colored melanoma-faint brown pigmentation
      that covers more than 25% of the lesion but without dark
      brown, blue or black pigmentation
• Truly amelanotic melanoma:
  • Superficial: asymmetrical or symmetrical erythematous
    macules or patches with/or without scale
  • Nodular: flesh colored, pink, red, EFG (Elevated, firm,
    growing), lacking ABCDs of melanoma
• Hypomelanotic melanoma:
  • Look for signs of pigmentation (especially pigmentation
    pattern with dermoscopy)
• Differential diagnosis
  • Benign:
    • Eczema, Contact dermatitis, Pyogenic granuloma, Nevi,
      Hypergranulation tissue, Hemangioma
  • Malignant:
    • Basal cell carcinoma, Bowen’s disease
• Study: Clinical and dermoscopic characteristics of
  amelanocytic melanomas not nodular types
• Retrospective review of 20 amelanotic melanomas
• Amelanotic melanomas often present as symmetrical
  erythematous lesions
• Superficial spreading type:
  • Scaly, erythematous macules and patches, with a relatively
    circular to oval symmetric shape, and regular border
• Dermoscopic criteria of melanomas lacking pigment,
  depends on the analysis of its vascular structures:
  • Most common vascular structures:
    • Dotted vessels
    • Milky-red areas
    • Linear irregular vessels (serpentine)
    • Polymorphous vessels
• AM should be strongly considered if one of the following three vascular structures is present:
  • More than one shade of pink,
  • Dotted and linear irregular (serpentine vessels)
  • Predominant central vessels
• This study showed that 90% of the lesions has at least one of the vascular criteria:
  • More than one shade of pink most common (80%)
  • Dotted and linear irregular (serpentine vessels) (60%)
  • Predominant central vessels (20%)
• Study: Dermoscopic evaluation of amelanotic and hypomelanotic melanoma
  • 105 melanomas
  • 170 Benign melanocytic lesions
  • 222 non-melanocytic lesions
  • Lacking significant pigment (amelanotic, partially pigmented or lightly colored)
  • Imaged using glass-plated dermoscopy and scored for 99 dermoscopic features
• Main outcome measures:
  • Sensitivity, specificity, and odds ratio for individual features and models for the diagnosis of melanoma and malignancy
• The most common predictor of melanoma lacking significant pigment:
  • Blue-white veil
  • Scarlike depigmentation
  • Multiple blue-gray dots (peppering)
  • Irregularly shaped depigmentation
  • Irregular brown dots/globules
  • 5 to 6 colors
  • Predominant central vessels
• The most significant negative predictors of melanoma:
  • Multiple >3 milia like cysts
  • Comma vessels with a regular distribution
  • Comma vessels as the predominant vessel type
  • Symmetrical pigmentation pattern
  • Multiple blue-gray globules
• Thickness of amelanocytic melanoma
  • Thin AM < 0.75mm:
    • Atypical network
    • More than 1 shade of tan or brown
    • Dotted/pinpoint vessels (as the predominant type)
  • Thick AM, > 1 mm
    • Greater frequency of hairpin vessels
    • Central vessels
    • Ulceration
    • Large diameter vessels and irregular vessels
    • Pink color
• Key points
  • Sun exposed skin, elderly individuals
  • Accounts for 2-8% of all melanomas
  • Can be classified into three groups according to the extent or absence of pigment: Amelanotic, partially pigmented, lightly colored melanoma
  • Spotting amelanotic melanoma can be challenging, due to a broad differential diagnosis and lack of significant pigment
  • Dermoscopy can be an effective tool in diagnosing these lesions at an earlier stages
  • Vascular features can be useful for amelanotic melanomas (no Pigment)
• Key dermoscopic vascular features:
  • Dotted vessels
  • Milky-red areas
  • Linear irregular vessels
  • Polymorphous vessels
• Other features to look for when lesion has some pigmentation:
  • Blue-white veil
  • Scarlike depigmentation
  • Multiple blue-gray dots (peppering)
  • Irregularly shaped depigmentation
  • Irregular brown dots/globules
• Nodular Amelanotic melanoma:
  • EFG (E elevated, Firm, Growing), despite lacking ABCDs of melanoma
  • Biopsy these lesions

Desmoplastic Melanoma: Surgical Management and Adjuvant Therapy

Dale Han, MD

• Background
  • Desmoplastic melanoma (DM) represents <4% of melanomas
  • Older patients (median age: about 65 years)
  • More common in males and on head and neck
  • Often thicker tumor compared with non-DM
    • Median thickness for DM: 2.5 – 3.7 mm
    • In contrast, for all newly diagnosed melanomas
      • 70% are thin melanomas (≤1 mm)
      • Median tumor thickness approximately 1 mm
  • Distinct biology with clinical behavior that is unique compared with non-DM
  • Histologically divided into pure and mixed subtypes based on the extent of desmoplasmia
    • MSKCC classification system
      • Pure DM: spindle cell melanoma with ≥90% desmoplasia
      • Yale University School of Medicine
      • Mixed DM: desmoplasia involving 10% of the spindle cell melanoma
  • DM histologic subtype correlated with outcome
    • In 2004, Busam et al. classified DM as pure or mixed/combined
      • Histologic subtype significant predictor of disease-free survival (DFS) on multivariable analysis
      • Mixed DM: 3.5 times greater risk for death or metastases (95% CI 1.3 – 9.5) compared with pure DM
    • Hawkins et al. compared DM histologic subtypes
• Classified as pure or mixed DM
• 5-year melanoma-specific mortality (MSM) varied by histologic subtype
  • 31% for mixed DM
  • 11% for pure DM (P <0.01)
• Melanoma variant with unique biology
• Treatment of primary melanoma
  • Wide local excision (WLE)
  • Margins:
    • 0.5 - 1 cm for in situ
    • 1 cm for ≤1 mm
    • 1 or 2 cm for >1-2 mm
    • 2 cm for >2 mm
    • Resect to fascia
  • Closure of defect
  • Local control + remove microscopic satellites
• Wide local excision margin for desmoplastic melanoma
  • P=0.014 5-year overall survival:
    • 79.5% for pure vs. 61.3% for mixed DM (P=0.001)
• Patients with mixed DM had higher death rate than those with pure DM
  • Different biology between pure and mixed DM
    • Locally, pure DM is more aggressive
    • Mixed DM behaves like non-DM for local disease
    • No data presented for pure DM ≤1 mm thickness treated with 1 cm margin
• Nodal status for melanoma
  • Nodal status predicts survival for melanoma
  • Majority with no clinical evidence of nodal spread
  • Microscopic nodal spread?
  • Morton et al. reported on sentinel lymph node biopsy (SLNB) for melanoma as a less invasive technique to evaluate nodal status
  • Within SLNB group, melanoma-specific survival (MSS) differs significantly based on SLN status in intermediate thickness (1.2-3.5 mm) and thick groups (>3.5 mm)
  • Crucial staging tool providing significant prognostic information in intermediate thickness group
• Is nodal status also prognostic for DM?
  • Nodal status predicts survival for melanoma but is this also true for DM variant?
  • Feng et al. studied DM patients in the SEER database (1992 – 2007)
  • Nodal metastasis correlated with higher risk for DM-specific death
  • Not consistently seen in other SEER-based studies on DM
  • Most studies on DM unable to assess prognostic significance of nodal status due to low numbers
• Recent large study evaluated predictors of survival in DM patients
  • 316 patients presented with local disease
  • Median follow-up: 5.3 years – Positive nodal status included:
    • Positive SLN patients
    • Negative SLN patient who developed nodal recurrence
    • No SLNB and developed nodal recurrence
    • Patients with positive nodal status significantly predicted MSS for DM patients on multivariable analysis
  • Nodal metastasis rate for desmoplastic melanoma
  • Initial and early reports showed relatively high nodal disease rates
• Conley et al.: 3 of 7 (42.9%) patients
• Devaraj et al.: 4 of 13 (30.8%) patients
• Larger and more recent studies on DM (2001 onward) show much lower overall nodal metastasis rates
• SEER-based studies: 2.8 – 4.3%
• Single institution studies: 9 – 18%
• Lower nodal disease rate for DM compared with non-DM
  • Nodal metastasis rates for non-DM of comparable thickness (>3 mm) is >25%
• Livestro et al.: Case-matched DM and non-DM patients by age, gender, tumor thickness
  • SLN metastasis rates lower for DM (8%) compared with non-DM (33.8%, P=0.013)
• Melanoma variant with unique biology
• Sentinel node biopsy for desmoplastic melanoma
  • Given the lower nodal metastasis rate for DM, use of SLNB for DM is debated
  • SLN disease rates for DM
    • Contemporary series: 0 to 18.2%
    • Several studies report a zero rate of SLN metastases for DM
      • Small series assessing <25 patients who underwent SLNB
        • Of these, one study specific for head and neck but was also the only one to assess histologic subtype
  • Studies evaluating SLNB in DM
    • +SLN rate: – If exclude zero rate of +SLN: 6-18.2% – If exclude studies with <50 patients: 6-13.7%
    • Although lower rate of nodal disease for DM compared with non-DM, nodal status appears to predict survival in DM patients
    • SLN disease rate in the range of 6 – 14%
      • If a 5% risk threshold for nodal disease is utilized to justify a procedure, SLNB would in general be indicated for DM
    • Prognostic value of SLN status in desmoplastic melanoma
      • Most studies on DM are unable to assess prognostic significance of SLN status due to low numbers
      • Two studies showed that SLN status significantly predicted DFS
      • Additional study demonstrated that a positive SLN status was significantly correlated with a higher MSM
  • Which DM patients are at higher risk for a positive SLN
    • Rates vary with histologic subtype
    • Significantly higher positive SLN rate in mixed versus pure DM
    • SLN disease rate for mixed DM: 8.5 – 24.6%
      • Potentially mirrors what is seen for non-DM
    • Pawlik et al. compared non-DM with mixed DM and pure DM
      • Non-DM positive SLN rate 17.5%
      • Mixed DM positive SLN rate 15.8%
    • SLN disease rate for pure DM: 2.2 – 9%
  • Which patients with DM should be offered SLNB?
    • Older population: consider age and comorbidities
    • Based on a 5% risk threshold for nodal disease, SLNB should be offered for mixed DM
  • Controversy over use of SLNB for pure DM
    • Often thicker but lower positive SLN rate
    • If follow lower range for a positive SLN (2-4%): SLNB probably should not be done
• If follow upper range for a positive SLN (5-9%): SLNB probably should be offered
• Remains debated and further studies are needed
• Completion lymph node dissection for melanoma
• Completion lymph node dissection (CLND) recommended for positive SLN
  • SSO/ASCO and NCCN guidelines
  • Based on data showing unknown survival benefit*
  • Recommended for regional disease control
• Rate of additional nodal disease in CLND after positive SLNB:
  • Range: 15-32%
  • MSLT-I: 16%, Sunbelt Melanoma Trial: 16%
  • Meta-analysis: 20.1%
• For DM, what is the rate of finding additional nodes with metastatic disease after a positive SLNB?
  • Limited data due to low numbers of positive SLN patients
  • 2 larger studies (>200 patients) reported on positive CLND rates
    • Moffitt Cancer Center: 4 of 24 (16.7%) positive SLN patients with additional positive CLND nodes
    • Melanoma Institute Australia: 4 of 17 (23.5%) positive SLN patients with additional positive CLND nodes
• Positive CLND rate for DM also appears consistent with reported literature
  • Does performing CLND improve survival?
    • DeCOD-SLT Trial
    • MSLT-11 Trial
    • No survival benefit for having CLND
• Adjuvant radiation therapy for DM
  • Studies show radiation therapy improves local control significantly
  • Radiation therapy, margin status, and subtype were good predictors
• Adjuvant systemic therapy options for nodal disease
  • Interferon
  • High dose ipilimumab (10 mg/kg)
  • Clinical trials
    • Neoadjuvant (for macroscopic nodal disease) vs. adjuvant
    • Targeted therapy
    • Various immunotherapy regimens
• Summary
  • DM is histologically categorized into pure and mixed subtypes
  • WLE margins for DM are similar to what is used for non-DM, but thinner cases of pure DM may need 2 cm margins
  • As for non-DM, nodal status is also prognostic for this melanoma variant
  • Nodal metastasis rate in DM is lower than for non-DM but varies by histologic subtype
  • SLNB for DM provides key prognostic data
    • Significantly higher positive SLN rate for mixed DM compared with pure DM (similar to non-DM)
    • For medically fit cases, SLNB should be offered for patients with mixed DM
    • Controversial if SLNB should be used for pure DM cases and further studies needed
  • Adjuvant radiation may be used to improve local control, particularly in cases with positive margins or other high risk features

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* Melanoma specific structures
  • The more structures present, the higher likelihood a lesion is a melanoma
  • Intraclass correlation for any given melanoma specific structure is poor, ranging from 0.05 to 0.34
    • Ground truth is that if a structure is present, rates of melanoma are still higher
    • The distribution of colors and structures is more important than any single color or structure that is present
      i.e. organized versus disorganized on dermoscopy images
  • Are there simpler methods for melanoma detection?
    • Triage algorithm
    • Other published algorithms: 3-point checklist, AC rule, BB rule, Chaos & Clues, and prediction without pigment
    • TADA algorithm (triage amalgamated dermoscopy algorithm)
    • SKs, hemangiomas, and DFs do not enter the algorithm (unequivocal lesions)
    • Then look at organized versus disorganized on dermoscopy
      • If disorganized, biopsy it!
    • Then examine specific structures
      • Some cancers are organized and are difficult to diagnose
        • Difficult due to morphology
          • Nodular
            • Pigmented: lack features of BCC, nevi, and SK. They also lack network, streaks, and regression
            • Amelanotic: lack features of BCC, nevi, and SK. They also lack arborizing vessels and comma vessels.
          • Desmoplastic
            • Pure (no epidermal changes) and mixed types associated with LM
          • Nevoid
            • Histologic definition: the cells have a nevoid appearance
            • Nevoid with conventional features
            • Nevoid with nevus like structures
          • Amelanotic
            • Nodular and non-nodular variants
            • Non-nodular are often pink and symmetric
              • If you see only dotted and linear vessels in a lesion, the only thing you should suspect is melanoma
        • Spitzoid
          • Lack ABCD features
---

*Dermoscopy Simplified: the TADA Algorithm
Ashfaq A. Marghoob, MD*
Starburst, negative network, and shiny white lines are known features. Difficult to diagnose melanomas that SHOULD be biopsied have varying features including:
- Starburst pattern
- Blue or black color
- Gray color
- Shiny white structures or white circles
- Negative network
- Vessels (dotted AND linear)
- Ulceration

Overall, the sensitivity of TADA is about 95%, and specificity of 72%
Irrespective of lesion, the sensitivity is about 95%
Previous training in dermoscopy does not affect the sensitivity (comparing dermatologists to family medicine physicians).

Updated Medical Treatment for Melanoma
Sanjiv Agarwala, MD

*Previous therapies were largely poisoning the patient, and we have moved toward much more targeted therapies*
*Current therapeutic agents for metastatic melanoma*
- BRAF-WT patients (~50%) \( \rightarrow \) immunotherapy (mono or combo)
- BRAF+ patients (~50%) \( \rightarrow \) immunotherapy or targeted therapy
- Immunotherapy
- Checkpoint inhibitors
- T-cell activity is regulated by immune checkpoints to limit auto-immunity
- Immune checkpoints function at different steps in the immune response to regulate at multiple phases

Drugs approved for melanoma:
- Anti CTLA4 = ipilimumab
- 20% of patients are alive at 10 years, which is a huge change in previous data (previously 0%)
- Became standard of care in 2011
- Anti PD-1 = pembrolizumab, nivolumab (more nontoxic)
- Pembro versis ipi was shown to improve survival from 20% to 40% at 10 years
- Anti PD-1 is better than Anti CTLA4 \( \rightarrow \) making it the new standard of care
- Combining Anti CTLA4 and PD-1
- Response rates with combo therapy are higher than ipi alone
- However, survival rates are no different; Only progression was diminished with the combo therapy
- Combo therapy also has higher rates of adverse events, coming on sooner and take longer to resolve
- Higher levels of the biomarker PDL-1 is shown to improve tumor response to a single drug versus combo therapy
- BRAF+ therapies (remember we can use targeted or immunotherapy)
- BRAF mutation is present in 50% of melanomas
- You can target both BRAF and MEK (another enzyme in the same pathway) to improve outcomes with oral medications
- Targeted therapies have a high response rate that is very rapid
- Immunotherapy takes a longer time to work
- When comparing targeted versus immunotherapy in these patients, the outcomes are similar
- Front line and second line therapy of BRAF Inhibitors is almost no different in terms of response rates
- Current status of adjuvant therapy
- The burden of high risk disease dwarfs that of advanced melanoma. Adjuvant therapies are mostly used for stages IIB to III
- Adjuvant IFN-a treatments (the old)
  - It’s non-targeted immunotherapy
  - Ipilimumab (the new)

Stage I and II patients (up to 85% of new melanoma patients)
- Margins of excision
  - <1 mm : 1 cm margins
  - 1-2 mm: 1-2 cm margins (adjusted in anatomically restricted areas)
  - >2 mm: 3 cm is better than 1 cm, 4 cm is not better than 2 cm, 3 cm can’t be better than 2 cm, most 2 cm excisions can be closed primarily
- Regional nodes are most common site of first recurrence after WLE of melanoma
- Goals for SLN Biopsy is to improve disease outcome and provide minimally invasive approach to nodal staging
- Risk factors for regional recurrence after surgery alone has a weighted average of 21%
- Nodal dissection significantly improves the outcomes of durable local regional disease control
- Multidisciplinary components
  - Preoperative lymphoscintigraphy, surgical approach, and the pathologic evaluation of the node all require high level of care and detail
Stage III patients
- There is huge prognostic heterogeneity in this patient population ranging from 30% to 90%
- CLND was recommended for stage III patients in the 2015 NCCN guidelines
  - Rationale: probability of +NSLN for staging, improved regional control, improved survival, and less morbidity for the patient
- A selective approach to completion dissection is rational
- The strong independent prognostic significance of positive NSLN has been confirmed by 4 separate studies
- Reasons for CLND after positive SLNBx
  - Improved regional disease control and less post-dissection morbidity for patients with non-sentinel node involvement (may be the only benefits of CLND)
- However, there is no direct evidence that CLND provides a survival benefit
- New NCCN 2016 guidelines recommend that you discuss and offer CLND with patients

Stage IV patients
- Oligometastatic disease (resectable)
  - Standard of care is upfront surgery, selective use of adjuvant irradiation, and the use of systemic adjuvant therapy (nivolumab)
  - Potential benefit of treating patients before surgery has potential advantages including
    - Decrease surgical burden and morbidity
    - Avoid unnecessary irradiation
    - No delay in treating micro-mets, preventing distant disease spread
    - Systemic therapy may be more effective with the tumor in tact (more tumor to target, more antigen, more T-cells to activate)
  - Possible role for intralesional therapy

Case 1
- Local recurrence (or possibility of new primary?) after initial wide excision of primary melanoma
- Next steps: further excision and new split thickness skin graft and SLN biopsy

Case 2: History of 10+ melanomas
- Two rounds of isolated limb perfusion with Melphalan and TNF performed
- Topical Aldara tried with little benefit
- Placed on Dendritic Cell Vaccine Protocol and resulted in complete response to therapy and remission since 2008

Case 3: 3 primary melanomas + history of lymphoma
- Added risk of her diagnosis of lymphoma to her melanoma risk?
  - If prior radiation treatment for lymphoma definitely need increased screening for basal and squamous cell carcinomas, but melanoma(?)
  - Anecdotally seems to be a link but no known associated syndrome
- Role for genetic testing?
  - Probably no but opinions differ
- Role for new DermTech adhesive skin biopsy skits due to the numerous scars from excisions and biopsies?
  - More false positives with DermTech

Case 4: Incompletely excised melanoma on scalp, lesion in right lower lobe of lung questionable on CT à PET +, negative SLN, FNA biopsy of lung lesion positive for desmoplastic melanoma
- BRAF WT: excise and give adjuvant therapy according to recent trial, or expectant management with immunotherapy
- Patient was placed on nivolumab and disease is stable

Case 5: Pigmented lesion on thumb with irregular bands x 8 years. Proximal nail biopsy (because lunula involved) revealed severely atypical melanocytic proliferation approaching the diagnosis of melanoma in situ
- Treatment? Remove entire nail matrix, save dorsal tendon, cross finger flap

Case 6: Superficial spreading melanoma treated with 8 wide local excisions on scalp + imiquimod. Single focal invasion of 1.18mm along a hair follicle, final margins appeared clear
- No regional nodal disease by ultrasound of head and neck area, chest x-ray negative for metastasis
- Next step? No further therapy recommended
**Select Dermatopathology Topics for the Practicing Dermatologist**

### Sean Stephenson, DO, FAOCD

- Cutaneous Squamous Cell Carcinoma staging update: AJCC7 vs. AJCC8
- T category changes with T1-2 based on purely on size, and T3 based on size and high risk features
- High risk feature: depth of invasion changed to beyond the SC fat or >6mm
- Mitoses are no longer part of the T1 category for thin melanomas <1mm
- T1 category uses 0.8 mm as a threshold with T1b category defined as 0.8 – 1 mm with or without ulceration
- “Microscopic” and “macroscopic” detection of tumor in lymph nodes is now referred to as “clinically occult” and “clinically detected”
- New N1c, N2c, and N3c categories that take into consideration the presence of microsatellites, satellite metastases, and in-transit metastases
- New M1d for distant metastasis to CNS
- How could it affect your practice?
  - Melanomas 0.76-1.0 mm thick: SLNB may be considered in the appropriate clinical context (e.g. age ≤45, Breslow depth 0.85 mm, mitotic rate >1/mm, and/or with ulceration)
  - ≤1.0 mm: little consensus as to what should be considered “high-risk features” for a positive SLN
  - Conventional risk factors for a positive SLN, such as ulceration, high mitotic rate, and lymphovascular invasion (LVI), are very uncommon in melanomas ≤0.75 mm thick. When present, SLNB may be considered on an individual basis
  - If the SLNB is positive does complete dissection improve survival?
- **Melanomaprosnosis.org**
- **Criteria based on**
  - Primary or metastatic
  - Age of patient
  - Location
  - Breslow depth
  - Ulcerated vs. non-ulcerated
  - Estimates 1, 2, 5, and 10-year melanoma survival
- Gene expression profiles
  - Offers additional information to TNM and SLNB
- **Serum studies**
  - Higher S100-Beta Protein in primary or metastatic
- **T category changes with T1-2 based on**
  - Size and high risk features
  - Higher S100-Beta Protein in primary or metastatic
- **Spitz tumor markers with poorer prognosis**
  - Gain of 6p25 and 11q13
  - TERT-p mutations
  - Positive SLNB not poor prognostic factor for atypical spitz tumor
- **Immunohistochemistry and molecular studies (e.g. FISH and gene expression profile) can aid in a more definitive diagnosis with melanocytic lesions**
- **Re-excision of dysplastic nevi**
  - Low grade- none
  - Moderate grade
  - If out in the planes of section examined (shave or punch), and clinically completely removed: likely ok to observe for recurrence
  - If extends to biopsy margin and clinically completely removed: observation for recurrence is likely ok
  - If extends to biopsy margin and clinically is visible: likely should completely remove
- **High grade**
  - Full thickness elliptical excision recommended (with up to 5mm margin of normal skin)
  - If diagnosis is confirmed by FISH, CGH, or GEP should still do a full thickness elliptical excision

### Lisa Swanson, MD

- **Pediatric Dermatology**
- **What’s new in atopic dermatitis?**
  - Patients have increased risk of anxiety and ADHD, injuries, and infections
  - Always do topical steroid ointments in little kids
  - There is no need to “soak and smear”
- **The skin can be wet or dry**
  - Topical steroid burst for severe flares (as effective as oral prednisone without the withdrawal flare)
  - Clobetasol BID for 4-5 days
  - Fluocinonide BID for 10 days
  - TAC BID until clear or follow up appointment
- **Pimecrolimus study from Pediatrics**
  - No evidence of lymphoma, malignancy, or immune system impairment in a study of 2418 patients. Concluded that it was safe even in the younger age group (age 3-12 months)
- **New treatments**
  - Crisaborole: Boron based treatment. Inhibits PDE4 and decreases proinflammatory cytokines
  - 50% patients clear/almost clear at 4 weeks
  - Stinging/burning is the only major side effect
  - Dupilumab: blocks IL-4 and IL-13, decreasing TH2 inflammatory response
  - SubQ every other week
  - Good side effect profile
  - Injection site reaction, conjunctivitis, and HSV (questionable, because there’s a decrease in eczema herpeticum)
  - Studies in kids are happening right now. Early reports show positive results
  - Nemolizumab: IL-31 blocker, the “itch cytokine”
  - IL-13 blockers including lebrikuzumab and tralokinumab
  - Ustekinumab may be beneficial in some AD patients
- **Natural treatments**
  - Coconut oil has good antibacterial properties
  - Sunflower seed oil does appear to help. Aroma workshop in Chicago has the best formulation.
  - Olive oil makes AD worse!
  - Chilled noxzema can help decrease the itch
  - Hard water can worsen AD (recommend a water softener)
- **Prevention of AD**
  - Don’t smoke, avoid exposure
  - Probiotics taken by a pregnant woman 2 weeks prior to delivery and for the first 3 months after delivery
  - TEWL management early on in a baby’s life can reduce AD risk by 50%
Most studies now show that ⅔ of children outgrow AD by age 5, and more by adulthood.

Early peanut exposure reduces the rate of allergies.

What’s new in pediatric allergic contact dermatitis?
- Wet wipe contact dermatitis
  - Also think about wet wipes as a cause of persistent facial dermatitis
- Nickel contact dermatitis
  - Most common contact allergen
  - www.nonickel.com
- Can trigger an id reaction
  - Can be confused with Gianotti-Crosti (but GC involves the ears) which lasts up to 8 weeks
- Shin guard dermatitis
  - Try drysol, guard liners, and some even use duct tape
  - Use fluocinonide or clobetasol to treat
- Toilet seat dermatitis
  - Either a reaction to a cleanser or to the components of the seat itself
  - Plastic training seats are common triggers
  - Classic on the lateral buttock and posterior thighs

What’s new in pediatric psoriasis?
- Plaque psoriasis is a little less common in kids
- Guttate - can be triggered by strep
  - Inverse - nearly always mistaken for year/tinea in kids/teens
- Anti TNF alpha psoriasis - most common on the scalp
  - Caused by infliximab and humira most commonly
  - Check the nails, tongue, and belly button
  - #1 association in children is obesity
  - Screen for diabetes and NASH every 3 years starting at age 10
- Topical treatment
  - Clobetasol
  - Elidel/protopic for face/folds
  - Steroids are the mainstay treatment
- Biologic therapy
  - Etanercept is now approved for children as young as 4
  - Adalimumab is currently pursuing a pediatric indication
  - Ustekinumab is now approved for kids 12 and older
  - Live vaccines need to be avoided!
    - MMR, varicella, Herpes zoster, intranasal flu
    - Others: typhoid, yellow fever, oral polio, vaccinia/smallpox, BCG, rotavirus

Alternative treatments
- 1 cup baking soda to a bath once weekly
- Fish oil has been shown to be helpful in small studies

What’s new in pediatric rashes
- Perioral dermatitis
  - Standard treatment is elidel BID, amoxicillin 30 mg/kg/day divided BID for a month
  - Always ask about steroids (inhalers, topicals, nasal sprays) because they can aggravate this rash
- Diaper rashes
  - Irritant contact (concave surfaces affected) and yeast (satellite pustules!)
  - Use zinc oxide barrier cream with each diaper change
  - Pick one cause and go with your gut and treat. If not significant improvement, use the other treatment option
    - Hydrocortisone 2.5% for irritant
    - Econazole 1% for yeast
- HFMD
  - Commonly produces onychomadesis 1-2 months later
  - Tinea capitis
    - Cochrane review considered griseo (20-25 mg/kg/day) and terbinafine are both 1st line treatments
    - Never use oral ketoconazole!
  - Onychomycosis
    - Treat with terbinafine for 3 months
    - <20 kg: 62.5 mg daily (1/4 pill)
    - 20-40 kg: 125 mg daily (1/2 pill)
    - >40 kg: 250 mg daily
    - Griseo does not work
    - Lichen sclerosus
      - Maintenance treatment is better than as needed treatment
    - Shingles
      - Unclear why this is occurring
      - Treat with acyclovir 30-50 mg/kg/day, valtrex if they’re old enough
    - Crohn’s disease
      - “Persistent funky rash” in the genital area or persistent penile/scrotal swelling showing granulomatous inflammation
    - Urticaria pigmentosa
      - Most kids outgrow it (mean duration 9-10 years)
      - No reason to check serum tryptase
      - No risk of mast cell leukemia
      - Manage with topical steroids prn, antihistamines +/-

Epips are unnecessary

What’s new with moles?
- Steroids are the mainstay treatment
  - Screen for diabetes and NASH every 3 years starting at age 10
  - Changes in isotretinoin monitoring
    - At baseline, and after 2 months of therapy
    - No need to check CBC
    - Isotretinoin and depression
      - Did NOT show any association, actually showed an improved mood
      - However, doctors still report anecdotal evidence few and far between
- OCPs
  - Become comfortable prescribing these as dermatologists!
  - Start the Sunday after the patient’s period starts
  - Migraine with aura are at increased risk of stroke while taking OCPs, so determine this during history taking
  - All OCPs help with acne
    - Best: Yaz, Yasmin
  - Contraindications: age >35, heavy smoker, migraines with focal neurologic symptom
  - Progesterone only birth control increase acne

What’s new with hemangiomas?
- Propranolol is still great!
  - Dose for a baby is around 1 ml TID
  - 2 mg/kg/day divided TID
  - ALWAYS give with food to prevent hypoglycemia
  - Topical timolol 0.5% gel forming solution is best for superficial hemangiomas
  - Can also use for pyogenic granulomas

What’s new in genodermatoses?
• Ichthyoses can be associated with vitamin D deficiency
• What’s new with cooties?
  • Scabies
    “Dirty” appearing rash in babies with pustules on palms/soles
    • Treat the whole family!!
    • Post scabetic dermatitis: schedule follow up 1 week after completing scabies treatment
• What’s new in warts?
  • WartPeel is a great treatment
  • New studies show giving HPV vaccine can clear large numbers of warts
• What’s new in molluscum?
  • Candida injections treating 1 every 3 weeks
  • Pseudofurunculoid
    • BOTE - beginning of the end sign
    • Can cause an ID reaction
• What’s new in JAK inhibitors?
  • Increasing use in alopecia showing good outcomes
  • Also used in vitiligo (and ensure patients get sunlight)
• Other tips and tricks
  • MAM air pacifier
  • Buzzy (for injections/biopsies)
  • Invest in a “prize box” to help kids feel comfortable

Psoriasis
Bradley Glick, DO, FAOCD

• What is psoriasis?
  • Inflammatory and hyperplastic disease of skin
  • Characterized by erythema and elevated scaly plaques
  • Auspitz sign with removal of scale
  • Chronic, relapsing condition
  • Course of disease often unpredictable
  • Common, genetic, systemic inflammatory disease with prominent skin and joint manifestations
  • Skin inflammation correlates with systemic inflammation
  • Comorbidities are common
  • Has significant impact of quality of life
  • Caused by a complex interplay of genes, environment, and immune system
• Epidemiology – occurrence
  • Age of onset
    • Bimodal –2nd to 3rd decade of life and second peak incidence after 50 years of age
  • Onset less than 15 years of age may indicate more severe, resistant disease
• Family history
  • Up to 33% patients report family history
  • HLA-B13, B17, Bw57, Cw6 (most significant)
• Genetics of psoriasis
  • 2000: susceptibility loci
  • PSORS1: 6q21.3 most common genetic abnormality
• Clinical features
  • Chronic relapsing immune dysregulatory inflammatory disease
  • Don’t forget to screen for psoriatic arthritis
  • Psoriatic plaques
    • Erythema (redness)
    • Induration (thickness)
    • Desquamation (scaling)
  • Affected areas of the body
    • Bony prominences
    • Symmetric
    • Extensors (elbows, knees)
    • Scalp
    • Trunk
  • No permanent cure
• Prevalence
  • Global disease, South Africa, parts of Europe, etc.
• Co-morbid conditions
  • Obesity
  • Insulin resistance
  • Endothelial dysfunction → atherosclerosis → MI
• Classical and emerging co-morbidities
  • Classic
    • Psoriatic arthritis
    • Inflammatory bowel disease
    • Psychological and psychiatric disorders, psychosocial issues
    • Metabolic syndrome and its components
    • Cardiovascular diseases
    • Atherosclerosis
  • Emerging comorbidities
    • Nonalcoholic fatty liver disease
    • Lymphomas
    • Sleep apnea
    • Chronic obstructive pulmonary disease
    • Osteoporosis
    • Parkinson’s disease
    • Celiac disease
    • Connective Tissue Disease (SLE, Sjogrens Syndrome)
    • Erectile dysfunction
    • Uveitis
  • Related to lifestyle
    • Smoking habit
    • Alcoholism
    • Anxiety
    • Dyslipidemia (acitretin and cyclosporine)
  • Related to treatment
    • Nephrotoxicity (cyclosporine)
    • Hypertension (cyclosporine)
    • Hepatotoxicity (methotrexate, leflunomide and acitretin, methotrexate)
    • Skin cancer (PUVA)
• Immunopathogenesis of psoriasis
• Whole host of inflammatory cytokines responsible
• Multifactorial
• Keratinocyte growth: Normal skin vs. psoriasis
  • Normal
    • 28-30 days
    • Newly generated keratinocytes produced at normal rate → normal movement of keratinocytes from basal layer to surface → normal shedding of non-nucleated keratinocytes at skin surface
• Psoriasis
  • 3-4 days
    • Keratinocyte production and movement is speeded up
    • Keratinocyte production outpaces shedding at skin's surface
    • Keratinocytes pile up on skin surface and form lesions
• Role of T cells in psoriasis
  • T cell directed therapy immensely helps with clinical and immunohistochemical appearance
• Abnormal response to inflammation
  • Proinflammatory cytokines outweigh the anti-inflammatory cytokines
• Study: Circulating levels of Th17 and Th1 cells decreased in subset of 5 patients following induction of therapy with infliximab
  • Drove focus into Th17 pathway as a cause of psoriasis
• Various causes of psoriasis
  • Trigger activates dendritic cells, activates T cells (II17A, IL22, TNFa, IFNg, IL17F)
  • Vasculogenic activation recruits more inflammatory cytokines
• Not just a skin disease
• Comorbidity: medical condition existing simultaneously but independently within another condition in a patient
• Obesity 2x increases risk of psoriasis development (BMI >30)
• More common incidence of DM
• Role of TNFa on insulin resistance
• Cardiovascular conditions
  • Psoriasis patients should have regular if not increased screenings for cardiovascular comorbidities
  • Many times patients taking multiple medications for various serious health conditions → potential drug-drug interactions
• Standard screening recommendations
  • Check BP at every PCP visit?
• At least check every 2 years, more often if elevated (>120/80)
• Fasting glucose, HbA1c, glucose tolerance test every 3 years
• Cholesterol every 5 years after age 21
• More aggressive lipid control?
• Annual skin cancer exam
• Risk Factors
  • Psoriasis independent risk factor for MI from traditional risk factors
  • Risk for DM higher in patients with psoriatic arthritis than rheumatoid arthritis
  • Increasing disease severity increases risk for developing comorbidities
  • Increasing BSA increases risk of metabolic syndrome
• Significance
  • Increased risk for MI, stroke, CKD, loss of life, DM, cardiovascular death
  • 10 year risk for major CV event attributable to psoriasis = 6%
• Talk to patients
  • Ask how their disease affects their QOL
  • Lifestyle recommendations for thing within control (weight, smoking, alcohol consumption)
• Psoriasis may be risk factor for development of coronary artery calcification
  • Particularly in patients with severe disease
• Study: Psoriasis is a systemic inflammatory disease
  • Increased signals on imaging indicative of systemic inflammation
    • Knees and ankles
    • Liver
    • Aorta and femoral arteries
    • Psoriatic plaques
• Psoriasis associated with reduction in HDL efflux capacity independent of CV risk factors
  • Associated with increase in LDL particle concentration and decrease in LDL particle size based on NM resonance analysis
• Comorbid malignancy associations
• Lymphoma
  • Especially when considering a TNF inhibitor for therapy
  • Rates of lymphoma dramatically high in psoriasis, especially if severe
  • 3-fold risk compared to general population
• Psychosocial matters: QOL
  • ½ of patients would prefer a different chronic condition over their psoriasis
  • Feel need to hide psoriasis
• Lowered self confidence
• Chronic depression
• Avoid sports (especially swimming)
• Affects employment
  • Some report loss of job because of condition
• Social relationships
  • Reports of poor or very poor relationships because of condition
  • General public less likely to become romantically involved with patients with psoriasis
• Screen patients before starting systemic/biologic therapy
• Social history
• Labs
  • Viral hepatitis
  • TB
  • HIV if high risk
  • Routine blood tests
• Vaccinations
  • Influenza
  • Pneumonia
  • Zoster (>60 years old)
  • Live vaccine not recommended if on biologic
• Age appropriate cancer screenings
  • Colon cancer
  • Various methods, starting about 50 years old
  • Breast cancer
  • Mammography
  • Cervical cancer
  • Pap smear
  • Prostate cancer
  • Controversial
  • Lung cancer
  • Annual low does CT if >30 py smoking history
• Confirm the diagnosis
  • Biopsy patients with atypical features of psoriasis and/or those not responding to treatment
• Arthritis
  • Peripheral and axial joints affected
  • Spondylitis, sacroiliitis, syndesmophytes
• Extra articular
  • Uveitis, scleritis, skin, nail, urethritis, bowel disease
  • 30-40% have arthritis
  • TNF inhibitor, ustekinumab, apremilast, concomitant MTX, rheumatology consult
• Consider agents that halt progression or radiologic damage
• Clinical evaluation alone may not be enough to identify psoriatic arthritis
• Laboratory test results may be helpful in some patients
• Impact on comorbid conditions when selecting therapy
  • Newest agents
    • Guselkumab, Brodalimumab
  • Obese patients with psoriasis
    • Weight-based dosing typically has better efficacy
      • Ustekinumab, Infliximab, Adalimumab, Secukinumab, Apremilast
  • Concurrent cardiovascular disease
    • Treatments that reduce CV risk
      • MTX, TNF inhibitors, Ustekinumab
    • Lifestyle changes
  • Psoriasis and heart failure
    • Package inserts for TNF inhibitors
    • No warnings for
      • Ustekinumab, Secukinumab, Apremilast
    • Consult cardiology
  • Psoriasis and MS
    • TNF inhibitors contraindicated, Ustekinumab, Anti IL17s, MTX, Apremilast
    • Consult neurology
  • History of cancer
    • Type and timing is important
    • Acitretin, Phototherapy, NBUVB
    • Risk vs benefit of treatment
  • Crohn disease
    • Adalimumab, Infliximab, Ustekinumab
    • Secukinumab warning
    • Treatment-emergent psoriasis
  • Woman of childbearing potential
    • Need to know plan
    • Etanercept (short half-life)
    • More experience with TNF inhibitors
    • Avoid acitretin and MTX
    • Antibodies can cross placenta

Multiple Wiesner’s nevi: consider BAP-1 germline mutation especially with a family history of mesothelioma or uveal melanoma
• BAP-1 gene - chromosome 3p21 (short arm)
  • Cell cycle regulation, differentiation, cell death, DNA damage response
  • Many different types of mutations
    • PCR not feasible in detection
  • Immunohistochemistry is procedure of choice for detection
    • BAP-1 mutations
  • Cancer syndrome involving predisposition to mesothelioma, multiple melanocytic nevi, uveal melanoma, and cutaneous melanoma
  • Concomitant BRAF mutation is frequent
  • 85% of metastatic uveal melanomas have BAP-1 mutation
  • Histone deacetylase inhibitors used for uveal melanoma with BAP-1 mutation
    • Valproic acid helps with differentiation
  • Lack of BAP-1 expression associated with worse survival in cutaneous melanoma
  • Clinical Appearance
    • Solitary or multiple
    • Well circumscribed pink papule or nodule
    • Often polypoid
    • Frequently present since childhood
    • Lesions are often Spitzoid or Epithelioid
    • Spitzoid cytology without epidermal hyperplasia, Kamino bodies, or clefts
    • Various populations with different degrees of atypia (HETEROGENEITY)
    • Different populations of cells
    • Contain highly cellular areas with pleomorphic melanocytes that are BAP-1 negative
  • What would be seen on a report?
    • Atypical Spitzoid tumor with BAP-1 loss
    • Wiesner’s nevus is associated with BRAF EXPRESSION and typically lacks epidermal hyperplasia and Kamino bodies
    • P16 - cyclin-dependant kinase inhibitor 2 (CDKN2A gene) tumor suppressor is EXPRESSED
    • Therefore, “melanocytic tumor of uncertain biological potential” is the best description
    • “Combined melanocytic nevus, including a component of desmoplastic BAP-1 inactivated spitzoid necvus ‘BAP-oma’”
  • What do you do next?
    • Complete excision with generous clear margins (margin of error) and look for additional lesions
    • Inquire about eye tumors and mesothelioma
    • Long term surveillance similar to a melanoma patient
    • Referrals for multiple lesions with suspected germline mutation
    • Multiple lesions followed for change in clinical appearance, radiologic studies, and genetic counseling
  • Summary
    • Solitary or multiple
    • Risk of melanoma is surprisingly low
    • Melanocytic tumor of uncertain biological potential (different from Spitz nevus)
    • Wiesner’s nevus
    • Nev, uveal melanoma, cutaneous melanoma, Familial mesothelioma (non-asbestos related)
    • Extramammary Paget’s Disease

BAP-oma & Beyond
Michael Nowak, MD

• BAP-oma
  • Wiesner 2011: Families with multiple tan dome-shaped papules of head, neck, trunk, and extremities
  • Lesions with BAP-1 loss are termed BAP-oma or Wiesner’s nevus
    • Loss of expression of BAP-1
    • Most Wiesner’s nevi are solitary (sporadic somatic mutation) and behave in an indolent fashion
• Overview
  • Mammary
  • Extramammary
  • Bone

• Prototype (microscopic pattern)
  • 1874 Sir James Paget
    • Mammary skin involvement (nipple) associated with an underlying breast cancer in virtually 100% of cases
    • Poor prognostic sign
  • 1889 Radcliffe Crocker
    • Occurs in anatomic sites rich in apocrine glands
    • Frequently NOT associated with an underlying glandular carcinoma (confined to the skin)

• Presentation
  • Vulva most common
  • Male genital area second most common
  • Axilla
  • Perianal area
    • Sharply demarcated erythematous patch
    • Pruritus and burning pain are common
    • Primary vs. secondary
    • Similar to mammary Paget’s since it is frequently associated with underlying visceral malignancy
    • Frequently NOT limited to the perianal skin
    • More referrals and worse prognosis

• Microscopic Findings
  • Limited to epidermis
  • Invasive - Depth of Invasion (>4mm)
  • Associated with worse prognosis
  • Cell of origin - likely adnexal stem cell origin (primary)

  • Nowak MA, Guerriere-Kovach P, Pathan A, Campbell TE, Deppisch LM
    • Primary lesions (limited to skin): CK20 negative/GCDFP-15 positive, good prognosis, high 5 year survival, intraepidermal apocrine carcinoma
    • Secondary lesions (skin and rectal involvement): CK20 positive/GCDFP-15 negative, poor prognosis, low 5 year survival, rectal carcinoma involving skin vs. invasive Paget’s involving rectum

  • Greleck KW, Nowak MA, Doval M
    • Morphology (loss of signet ring cell features)
    • Immunohistochemical (loss of Muc2 expression)
    • Depth of invasion (> 4 mm): Depth of invasion associated with a worse prognosis (shift in phenotype and differentiation)

• DDX: Erythematous plaque of groin
  • Eczematous dermatitis including irritant and allergic contact dermatitis
  • Tinea Cruris
  • Candidiasis
  • Intertrigo
  • Psoriasis/Seborrhea

• Zoon’s
  • Granular Parakeratosis
  • Malignancy (high index of suspicion)

• Microscopic DDX
  • Paget’s/Extramammary Paget’s disease
  • Melanoma/Melanoma in-situ
  • Squamous cell carcinoma in-situ
  • Sebaceous carcinoma (and other adnexal)
  • Pagetoid reticulosis
  • Merkel cell carcinoma (Golgi CK20 +) - Polyomavirus?

• Morphologic Clues
  • Eyeliner sign (thin vs. thick)
  • Pigmentation
  • Parakeratosis
  • Sebaceous cells
  • String of pearls
  • Nuclear molding
  • Dermal involvement (differentiation)

• Special Stains
  • EMPD vs. SCCIS vs. MIS
  • Primary vs. Secondary
  • Invasion (CKKNBD-56 expressed, MUC-2 lost)
  • Lymphatic involvement (D2-40)
  • PAS +
  • Mucicarmine +
  • Alcian Blue +
  • CK7 +
  • GCDFP-15 +/- (primary/secondary EMDP)
  • CK20 +/- (primary/secondary EMDP)
  • S100 = MIS
  • CK5/6 (LMW) = SCC
  • EMA/Oil-red-O = sebaceous carcinoma
  • CK7 = EMPD
  • GCDFP-15 = primary
  • CK20 diffuse = secondary
  • CK20 perinuclear = Merkel

• Work up
  • Clinical trial with topical therapy
  • Medium potency steroid and antifungal
  • NR in compliant patient at 3-4 weeks
  • Biopsy (4 mm punch in formalin)
  • History and Physical (pelvic, rectal, breast, lymph nodes)
  • Referrals and Staging (Internist, GYN, GE, surgical and medical oncology)
  • Procedures (culposcopy, sigmoidoscopy, cystoscopy)

• Treatment
  • Topical chemotherapy
  • Wide local excision (Stage 1 and 2A)
  • AP resection (Stage 2B and Stage 3)
  • Medical oncology (Stage 4)
  • Radiation (Stage 4)
  • Other referrals
  • Long term monitoring

• Summary
  • Mammary vs. extramammary
  • Primary vs. secondary
  • Clinical differential diagnosis
  • Microscopic differential diagnosis
  • Referrals and treatment
  • Long term monitoring