



DermWorld

directions in residency

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Sharon Jacob, MD, is a health sciences professor of medicine and pediatrics (dermatology) at University of California-Riverside.

Developing a learning style

By Sharon Jacob, MD

Sharon Jacob, MD, has been a contributor and long-time supporter of the Boards Fodder study charts from Directions in Residency and is a frequent speaker at the American Academy of Dermatology (AAD) Meetings. She also has a keen interest in how residents learn and how this translates to teaching aptitude. Directions talked with her about how she learned to study and how that knowledge helped create learning programs for others.

What do we mean when we talk about a 'learning style'?

"How do you learn?" is one of the first questions I ask the incoming residents and students. The ones that don't look at me like a deer in the headlights often recite skill sets they have developed, such as "I read and take notes" or "I make charts." I relate with those, as I also make charts, and have been doing so since the sixth grade when I realized I could easily memorize a large number of facts that were systematically grouped and classified. This skill proved quite useful in medical school and in residency when I needed to categorize large amounts of information into succinct, easy review sheets.

What have you discovered about the way people learn?

Certainly, having an established knowledge base is fundamental, but individuals also have inherent preferences when it comes to learning modalities. One resource I've found useful and have recommended to colleagues and learners is VARK (an acronym for learning style preferences: Visual, Auditory, Read-write, and Kinesthetic). Regardless of education, it is often apparent during the developmental years which of these four learning styles people prefer. Those with a high visual preference, for example, are drawn to pictures and graphics. And, notably, I've seen these learners comprehend the AAD Boards Fodder material by color coding the charts. Repeatedly, I have also seen learners with a high read-write preference (who learn by reading and summarizing the material in their own written words) 're-create' the charts, while those with a high auditory preference (who retain information when it's reinforced through sound) read the charts into a recording device and repetitively listen while they exercise, for instance. As for kinesthetic learners, they study best when learning is combined with physical activity, so they



Dr. Jacob worked on the popular and extensive **Contact Dermatitis** Boards Fodder chart, assisted by Elise M. Herro, MD, and Alina Goldenberg, MD, MAS. The chart is available in the *Directions in Residency* Boards Fodder archives at www.aad.org/boardsfodder.

see **LEARNING** on p. 3



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LEARNING from p. 1

may create interactive memory games to learn the charts. It really is quite interesting.

I encourage all learners to take the questionnaire at the VARK website (<https://vark-learn.com>) to find out about their own learning preferences and strategize how to incorporate their preferences into their learning activities. Another aspect I have found to be especially interesting is that of classroom reversal or “the flipped classroom” (i.e. not focusing on a lecture from the teacher), where the attention is intentionally shifted from instruction to a learner-centered focus. The delivery of the content becomes a collaborative endeavor, as learners engage in discussions and adaptive reasoning exercises.

What kind of studying is best for dermatology?

I found that dermatology lent itself particularly well to both charting (given the large volume of information to be learned) and adaptive reasoning (given the integrative complexity of medical dermatology). It seems like I charted daily during residency, digesting chapters, journals, and archived slides, and in doing so realized systematic patterns of analysis. Around that time, I offered my Boards Fodder charts to the AAD and had several published. I figured if they utilized and built upon the timeless information in those charts residents had the potential to save precious time. In 2014 (a decade later), I realized those same Boards Fodder charts are still being used by residents (most often by new residents who let me know they had discovered the Boards Fodder series and saw me in them), so a group of us set out in teams of resident peer-reviewers to take on the colossal task of updating the archived charts and creating some much needed charts on new topics. The feedback from residents on how useful the Boards Fodders have been is interesting, both on the organization of the material and how they are being utilized for study.

With the recent and dramatic rise in virtual education, can you talk about the value of video education?

Several years ago, as part of the University of Miami Dermatology musculoskeletal and skin course, we studied the effects of video on learning. Video works best with visual, auditory, and kinesthetic learners, especially if it is followed with self-processing, group discussion and a presentation. During the first year of the course, the students attended a lecture and then participated in a faculty-led small group discussion; the second year, they received the same lecture without the interactive discussion, and the third year they watched “My Skin’s on Fire: Living with Psoriasis” — an independent film by Fred Finklestein — followed by a lecture. The video had a profound effect on information retention across all three years. The University of Miami Dermatology course has continued to lead in learner-centered knowledge acquisition and utilizes this well-received classroom reversal method (i.e. not beginning with a lecture), allowing students to first learn the material according to their learning preferences (readings, video-lectures) followed by interactive discussions and faculty-led breakout sessions. It is clearly a useful educational method and one to be emulated. This past year, with the COVID-19 pandemic, we have had to rely even more on virtual video technology and have been humbled by the tremendous strides that have been noted in connectivity and partnered educational sessions!

How does recognizing and adapting your learning style translate to practice after residency?

Learning per one’s preferences improves both engagement and retention, and encourages development of lifelong learner skills, which in turn assures self-sustainability, core competence, and milestone mastery. **DR**



Angelia Stepien, DO, is a PGY-3 dermatology resident at Orange Park Medical Center in Orange Park, Florida.



Preetha Kamath, MD, is a PGY-2 dermatology resident at Orange Park Medical Center in Orange Park, Florida.

Race for the Case

By Angelia Stepien, DO and Preetha Kamath, MD



A 74-year-old Caucasian male with a history of squamous cell carcinoma, hypertension, and hyperlipidemia presented with a solitary lesion over the left lateral lower leg. On physical exam, a single erythematous infiltrative plaque with an anesthetic center was noted. Decreased sensation to touch was present on the plantar surface of the left foot. He denied pain, itching, fever, cough, or chills. The patient reported Florida residence of over 20 years. He denied recent trauma, international travel, or animal exposure. Well-formed granulomas throughout the dermis and perineurally were noted on histopathology. Fite and AFB were negative for organisms. The specimen was sent for PCR and slit-skin smear microscopic evaluation.

1. What is the diagnosis and causative agent?
2. What is the name of the classification system which polarizes the five subtypes of this disease based on a patient’s cell-mediated immunity? Which would this patient be classified as?
3. What is the organism’s ideal temperature for growth?
4. What is the mode of transmission?
5. What HLA subtypes are associated with this condition?
6. Which antibody is associated with reactions and impaired nerve function?
7. For how many years after treatment completion should patients be screened?



Respond with the correct answers at www.aad.org/RaceForTheCase for the opportunity to win a \$25 Starbucks gift card!

Race for the Case winner (Summer 2020)

Congrats to **Julia Escandon Brehm, MD, PhD**, a PGY-3 dermatology resident at Jackson Memorial Hospital. She correctly identified Linear IgA Bullous Dermatitis (LABD) and provided the most accurate responses to the accompanying questions. She has been sent a Starbucks gift card with our compliments.

Cutaneous smooth muscle tumors

by Hayder A. Asfoor, MD

Smooth muscle hamartoma

- Congenital (most common) or acquired
- Clinically:
 - Firm, hyperpigmented or skin-colored plaque ± hypertrichosis or follicular papules
 - Diffuse cutaneous smooth muscle hamartomas may result in the Michelin-Tire Baby phenotype.
- May be associated and overlap with Becker's nevus clinically and on histopathology. However, smooth muscle hamartomas classically differ from Becker's nevus by earlier onset (at birth vs second decade) and location (trunk and extremities vs shoulder or chest).
- May be pseudo-Darier's sign positive (stroking the lesions cause induration and erythema due to SM contraction).
- Histology→ Haphazardly arranged SM bundles in the dermis with epidermal acanthosis and basal layer hyperpigmentation.
- IHC→ positive for SMA, desmin, and smoothelin
- Tx: May perform excision for cosmetic reasons (no malignancy potential)

Leiomyoma

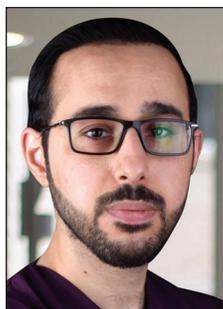
- Benign mesenchymal neoplasms with SM differentiation
- Three Types:

1. Pilar Leiomyoma (arrector pili origin)

- Two Types:
 - Multiple: younger age of onset affecting the trunk and limbs equally. a/w Reed's syndrome (+ uterine leiomyoma and RCC)
 - Solitary: typically in adults, with affinity for the limbs.
- Clinically→ firm, reddish-brown or skin colored nodules, papulonodules, or plaques; typically painful, especially with cold exposure
- May be pseudo-Darier's sign positive
- Histology→ circumscribed proliferations of interlacing bundles of SM fibers within the reticular dermis
- IHC→ positive for SMA and desmin. Calponin and h-caldesmon are also supportive
- Tx:
 - Solitary: complete surgical excision
 - Multiple: nifedipine, nitroglycerin, phenoxybenzamine, gabapentin and hyoscine hydrobromide for pain, CO2 laser

2. Genital Leiomyoma (Dartocic, vulvar or mammary sm origin)

- Clinically→ similar to pilar type but usually larger; typically solitary and painless
- Involving vulva, scrotum, penis, nipple, or areola
- Histology→ more circumscribed appearance than pilar leiomyomas and may have mitoses
- IHC and Rx: same as pilar leiomyoma



Hayder A. Asfoor, MD, is a fellow of the Arab Board of Health Specializations, CABDV, and has specialty certification in dermatology from Royal College of Physicians, UK, department of medicine - Kerbala College of Medicine.

Cutaneous smooth muscle tumors

by Hayder A. Asfoor, MD

Leiomyoma (cont.)

3. Angioleiomyoma (perivascular SM origin)

- Pericytic tumor (Myoid differentiation)
- Clinically→ solitary nodule in the lower extremities; often painful
- Histology→ well circumscribed proliferation of fascicles of spindled SM cells admixed with blood vessels within SC. Three variants: solid, venous, and cavernous.
- IHC→ positive for MSA, SMA, and calponin. Variable for desmin and h-caldesmon.
- Tx: Simple surgical excision

Leiomyosarcoma

- Rare: ~4% of cutaneous soft tissue sarcomas.
- Two types:
 - Dermal leiomyosarcoma: arises from arrector pili or genital sm with indolent clinical behavior
 - Subcutaneous leiomyosarcoma: arises from vascular sm with aggressive behavior and risk of metastasis in up to 40%
- Clinically→ solitary red brown and painful nodule, involving extremities, trunk, and head and neck region of elderly
- Histology→ diffusely infiltrative or well-demarcated nodular pattern with SM differentiation + variable degrees of atypia
- IHC→ positive for MSA, SMA. Variable for desmin (though classically +), h-caldesmon, keratin and S100.
- Tx: WLE

Abbreviations:

- IHC: immunohistochemistry
- SMA: smooth muscle actin
- MSA: muscle specific actin
- a/w: associated with
- RCC: renal cell carcinoma
- SM: smooth muscle
- SC: subcutis
- Tx: treatment
- WLE: wide local excision

References:

1. Bologna J, Jorizzo J, Schaffer I. *Dermatology*. Philadelphia: Elsevier; 2018.
2. Rapini RP. *Practical dermatopathology*. Elsevier Health Sciences; 2012 Aug 23.
3. Alikhan A, Hocker TL. *Review of Dermatology E-Book*. Elsevier Health Sciences; 2016 Oct 22.
4. Lau, Sean K., and Stephen S. Koh. "Cutaneous Smooth Muscle Tumors: A Review." *Adv Anat Pathol*. 2018;25(4): 282-290.
5. Aneiros-Fernandez J, Antonio Retamero J, Husein-Elahmed H, et al. Primary cutaneous and subcutaneous leiomyosarcomas: evolution and prognostic factors. *Eur J Dermatol*. 2016;26: 9-12.
6. Espiñeira-Carmona, María Jose, et al. "Smoothelin, a new marker for smooth muscle hamartoma." *Eur J Dermatol*. 2012;22:549-550.

Bonus Boards!



In addition to this issue's Boards Fodder, you can download another new online Boards Fodder chart.

Neuromodulators

by Stefanie Altmann, DO, is now available to download at www.aad.org/Directions.

The AAD now has more than 100 Boards Fodder study charts! Check out the archives at www.aad.org/boardsfodder.

Got Boards?



Directions in Residency is currently accepting submissions for new Boards Fodder charts for 2020-2021. Get published, impress your friends, and help out your fellow residents. Contact Dean Monti, dmonti@aad.org with your chart ideas.



Arisa Ortiz, MD, is director, laser and cosmetic dermatology, and associate clinical professor in the department of dermatology at UC San Diego.



Follow Dr. Ortiz on Instagram
@arisaortizmd for more cosmetic and laser tips and tricks.



If you have suggestions for topics or content for Clinical Pearls, contact Dean Monti at dmonti@aad.org

Clinical Pearls

Clinical Pearls help prepare residents for the future by providing them with top tips from experts about what they should know about specific, key subject areas by the time they complete their residency.

Laser considerations

Arisa Ortiz, MD

It's not about the settings, it's about the endpoint

It's important to not use a cookbook approach to laser medicine. Familiarize yourself with the endpoint and look at the tissue interaction. Settings will vary among different laser companies, or even in your own device after maintenance servicing, so it's important not to memorize settings. When treating blood vessels with a vascular laser, you want to see vessel darkening or clearance. When performing laser hair removal, you want to see perifollicular erythema and edema, or hair singeing. Sometimes, this can take a few minutes to develop so do not increase settings right away if you don't see this endpoint. When using a picosecond or nanosecond laser for pigment/tattoos, you want to see whitening, but not tissue splatter. By following tissue endpoints, you will provide safe and effective laser treatments. (1, 2)

We can't erase scars, but we can make them better

When counseling patients, they need to understand that scarred skin will never look like "normal" skin. Sometimes we get close, but I prefer to under-promise and over-deliver when it comes to scars. Erythematous scars will fade with time, but using a vascular laser can speed up the fading. For textural irregularity, stretch the skin. If the scar improves with stretching, then it is amenable to laser therapy. If the scar does not improve with stretching, then it is likely tethered by scar tissue and may require subcision. When using resurfacing lasers, use conservative settings because scars respond best to lower densities. (3)

Laser procedures can be combined on the same day to improve results

In daily practice, we often combine multiple lasers on the same day. As a general rule, I perform vascular lasers first so that you do not exacerbate nonspecific erythema. I follow this by targeting pigment with intense pulsed light, Q-switched, or picosecond lasers. Then I perform laser resurfacing. Finally, I treat any raised seborrheic keratoses with liquid nitrogen.

Using a neuromodulator prior to resurfacing can augment results

Relaxing muscles with a neuromodulator prior to

resurfacing the area can augment laser results. I generally perform the neuromodulator 1-2 weeks prior to resurfacing. Do not administer botulinum toxin on the same day as the laser procedure because swelling can make the toxin migrate and potentially cause a ptosis. (4)

Make sure to lower your settings when you treat off the face

The neck and other areas off the face have fewer adnexal structures and are more likely to scar. Healing time is also prolonged. With resurfacing, use lower fluences on thinner skin, and lower densities for less aggressive settings to avoid complications. (5)

References:

1. Wanner M, Sakamoto FH, Avram MM, et al. Immediate skin responses to laser and light treatments: Therapeutic endpoints: How to obtain efficacy. *J Am Acad Dermatol.* 2016;74(5):821-833. doi:10.1016/j.jaad.2015.06.026
2. Wanner M, Sakamoto FH, Avram MM, Anderson RR. Immediate skin responses to laser and light treatments: Warning endpoints: How to avoid side effects. *J Am Acad Dermatol.* 2016;74(5):807-820. doi:10.1016/j.jaad.2015.06.025
3. Lin JY, Warger WC, Izikson L, Anderson RR, Tannous Z. A prospective, randomized controlled trial on the efficacy of fractional photothermolysis on scar remodeling. *Lasers Surg Med.* 2011;43(4):265-272. doi:10.1002/lsm.21061
4. Yamauchi PS, Lask G, Lowe NJ. Botulinum toxin type A gives adjunctive benefit to periorbital laser resurfacing. *J Cosmet Laser Ther.* 2004;6(3):145-148. doi:10.1080/14764170410023767
5. Avram MM, Tope WD, Yu T, Szachowicz E, Nelson JS. Hypertrophic scarring of the neck following ablative fractional carbon dioxide laser resurfacing [published correction appears in *Lasers Surg Med.* 2009 Jul;41(5):398]. *Lasers Surg Med.* 2009;41(3):185-188. doi:10.1002/lsm.20755 DR

NEW! Clinical Pearls online

The AAD has recently compiled its Clinical Pearls archives from the pages of *Directions in Residency*. The popular feature provides residents with useful tips from experts in dermatology.

Choose from these topics:

- Autoimmune Bullous Disorder
- Contact dermatitis
- Lasers
- Phototherapy
- Pediatric
- Cutaneous T-Cell Lymphoma
- Dermatopathology

Learn more by visiting the archives at www.aad.org/member/publications/more/dir/clinical-pearls.

Caring for their own

Brooklyn, New York, was particularly hard hit by the pandemic. In March, New York Governor Andrew Cuomo quickly mandated that SUNY Downstate Medical Center become a designated coronavirus referral center, one of only three in the tristate area. All the residents, attending physicians, and nurses contributed significantly to battling COVID-19. Some residents were deployed to inpatient medicine and the emergency department, while others staffed essential consultation service or worked in collaboration with the Department of Health. Still others staffed in-person clinics for urgent patient visits in order to take the burden off emergency medicine colleagues for skin-related matters. Everyone contributed, including two resident directors of cosmetic dermatology from SUNY Downstate Medical Center, Jameson Loyal, MD, and Derek Ho, MD.



Jameson Loyal, MD (left), and Derek Ho, MD (right), handed out COVID-19 care packages to nurses and doctors at SUNY Downstate Medical Center.

“Well into the pandemic my colleagues and I started seeing numerous health care providers presenting with PPE-related skin injuries,” said Dr. Loyal. “We knew we had to do something to combat this universal problem. My colleague, Dr. Ho, and I started reaching out to skincare companies to help procure gentle skincare products that would help to alleviate the abrasions, dents, and dermatitis that hours upon hours of PPE use left behind. In a matter of a few weeks, Dr. Ho and I had the sponsorship of over 15 major skincare brands and were able to deliver close to 400 care packages to every single floor of Kings County and SUNY Downstate hospitals.” Dr. Loyal said that although their primary intent was to help heal the skin of front-line health care professionals, the little tokens of gratitude also did much in the way of spreading a little joy during this challenging time.



“Looking back on this experience, the three words that come to mind are courage, generosity, and gratitude,” Dr. Loyal said. “My colleagues stepped up without question to help in any way possible to fight this pathogen and care for the sick and vulnerable. Further, the numerous skincare companies donated hundreds of products with an abundance of enthusiasm. Finally, the communities my colleagues and I serve thanked us profusely for doing the job we were trained to do.” DR

What's happening in your residency program?



Send your recent accomplishments to Dean Monti at dmonti@aad.org.

Inside this Issue



Rachel Wheatley, MD,

is incoming PGY-4 chief resident at Harbor-UCLA Medical Center in Torrance, California..



Janice E. Ma, MD

is a PGY-3 dermatology resident, at Harbor - UCLA Medical Center in Torrance, California.

In this issue, our feature topic is “Developing a learning style” by Dr. Sharon Jacob. In dermatology residency, we are inundated by seemingly endless conditions and facts to learn. Dr. Jacob’s article is truly invaluable. She provides guidance in discovering your preferred learning style(s) and tailoring your studies accordingly. I personally treasure the Boards Fodders charts that Dr. Jacob has contributed to and updated over the years. At our program, we refer to the “Monitoring Systemic Dermatology Medications” chart so frequently that it is posted up on our clinic wall.

As dermatologists in training, it is also crucial for us to learn about topics outside of our formal curriculum. It has been increasingly apparent that there is underrepresentation of skin of color in the literature and textbooks, disparities in patient care based on race, and lack of diversity within our specialty relative to our patient population. Alongside you, I am trying my best to listen and learn how we as physicians and the future of dermatology can mitigate and eliminate the racial bias in medicine and our field. At Harbor-UCLA Medical Center, where I am a resident, our division recently hosted a virtual

Grand Rounds session that deviated from our traditional dermatologic topics, and instead featured a panel of black physicians tackling the topic “Racism—A Conversation.” It was truly one of the most valuable and insightful Grand Rounds sessions we have participated in. I also wanted to share a few resources that I have come across. The Skin of Color Society is an incredible community with a robust mentorship program and excellent educational resources. A recent article published in the *Journal of American Academy of Dermatology* provided a comprehensive review of the 16 ethnic skin centers within our nation. I was also thrilled to learn that a new textbook entitled “Dermatology: A Diverse and Inclusive Color Atlas” is being developed by Misty Eleryan, MD, and Adam Friedman, MD. Dr. Eleryan also published an insightful article entitled “Two pandemics” in which she thoughtfully addressed both COVID-19 and racism, and offered thoughtful actions we can take. As dermatology residents, I hope that we can continue to learn alongside each other and strive toward a better future for our field and patients. - **Janice E. Ma, MD. DR**



Residents can still register for AAD VMX and access sessions to help prepare for the boards, including “Conquer the Boards: An Experiential Review.”

Go to www.aad.org/member/meetings-education/aadvmx to learn more.

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