



Pregnant pause: The expected (and unexpected) aspects of expecting during residency

By Dean Monti

Have you given thought to a blessed event occurring in your life? No, not passing your in-service boards. Well, yes, *passing your boards*, but what about having a child during your residency? *DW Directions* talked to a few residents who had their first child during their dermatology residency, and commented on some key issues, like — *is residency a good time to have a child?* And if that question is no longer a question, *what else do you need to know?*

If you can, think about timing

Nature often has the last word, and even the most disciplined, organized dermatology resident can't plan exactly when they want to have a child. The list of factors affecting the "optimal time" may include fertility issues, time management, your program's pregnancy leave policy, finances, and your personal beliefs. But if you can think about timing, consider what is best for you. Some residents — taking into account above-mentioned factors — believe the second year of residency may be the best time to have a child.

Ekama Carlson, MD, PhD, who had her first child as a dermatology resident while at University of Colorado Anschutz Medical Center, Aurora, Colorado, said: "I think timing a delivery for the second year of residency is a good plan. The advantages are having lots of personal time to tackle the steep learning curve in dermatology residency training, being able to study for the in-service exam during

the first year, and being able to develop good study and time management habits. Another advantage is that one can job search and interview for jobs and/or fellowship without being visibly pregnant during third year, and can plan accordingly for the real or perceived societal stigma associated with pregnancy in the workplace."

Angela Sutton, DO, was pregnant with her first child during her second year of residency at Saint Louis University and had her daughter at the beginning of her third year (in July). "My daughter was sleeping through the night by around five months and — luckily — on a very reliable schedule at that point, so I could time my studying and other life activities around nap time and after bedtime. That being said, it is harder to 'time' your pregnancy than most people realize. Being flexible — and realizing that you will make it work regardless — is key!"

Can I afford this?

This may or may not be a moot question, but there are several financial considerations to keep in mind. "Depending on your insurance, there may be costs during prenatal visits and delivery," Dr. Sutton said. "Then, of course, you need to purchase all of the 'gear' (and there is a lot!) for when the baby arrives. After delivery, there are continued costs such as diapers, wipes, breast pump/

see **PREGNANCY** on p. 3



Ekama Carlson, MD, PhD, is a Mohs surgeon at the Permanente Medical Group in San Rafael, California.



Angela M. Sutton, DO, is a dermatopathology fellow, PGY-5 in the department of dermatology at Saint Louis University School of Medicine in St. Louis.



Take the boards with CONFIDENCE

BOARD PREP PLUS

AAD'S NEW ONLINE STUDY TOOL FOR RESIDENTS

QUESTION BANK

with over 700 multiple choice questions that follow the ABD Exam format

PRACTICE EXAMS

choose from pre-made, build-your-own, timed and un-timed

PERSONALIZED DASHBOARD

to track your progress

CUSTOMIZED STUDY

based on specialty area, confidence levels, or quiz performance



Choose the subscription option that's right for you:

3 month access	\$249.00	\$224.10
6 month access	\$297.00	\$267.30
12 month access	\$348.00	\$313.20

SAVE 10%! Use promo code DIRSM18

Offer expires October 1, 2018

18-530-MKT

AAD.ORG/BOARDPREPLUS

Copyright © 2018 by the American Academy of Dermatology and American Academy of Dermatology Association. "All rights reserved." Reproduction or republication strictly prohibited without prior written permission.

PREGNANCY from p. 1

accessories or formula, clothes (they grow so fast!), etc. If you are paying for child care, that is often a significant expense as well."

Depending on geographical location, type of care provided (center-based vs. private home care), and hours needed, this can vary. Dr. Carlson estimated that "a general ball park is \$1,000-\$2,500 per month for a mid-cost of living area, such as Denver. It can be much higher in cities like San Francisco. Living close to family that can help with reliable and safe child care is helpful." (See more about day care on p. 7.)

What do you know about your FMLA?

"While all residents are entitled to federal mandated leave (FMLA) up to three months, this is unpaid leave in some programs and states," Dr. Carlson said. "Hopefully, you will have picked a residency program that is supportive of their residents' decision to parent during residency," Dr. Carlson said. "This is very important. You can gauge this by talking to current or previous residents."

"I think it would be very wise to discuss with your individual program about what their policies are, if you are considering having a baby during residency," Dr. Sutton added.

And regardless of your FMLA, you still need to make sure you're adhering to ABD guidelines. According to the FAQ on the ABD website concerning medical leave (including maternity): "An absence exceeding six weeks in any one academic year, or a total of 14 weeks in three years, may necessitate additional training to successfully 'make up' for that lost time."

This may be a limiting factor for some, but you're encouraged to make an informed decision.

Coming back to work: pumping and transitioning

The residents we talked to indicated that transitioning back into the workplace was not overly daunting, provided you have a good support system and a supportive team at work. However, many mothers may be breastfeeding, and with that, comes pumping. That means time, privacy issues, sore areoles, and unwanted, loud humming noises.

Dr. Carlson said that pumping was one of the more stressful aspects of transitioning back to the workplace. "Knowing when, where, and how often to pump during the workday is important." She added that the stress "can have a negative impact on oxytocin-induced milk" and said to make sure to address the topic openly with your obstetrician if you are experiencing problems.

"Work with the program director to find safe, secure places within the workplace to pump during the workday," Dr. Carlson said. "Plan to pump a minimum of every four hours for optimal milk supply, and plan to pump on maternity leave to build up a frozen supply of milk for the infant."

But...you do have a lovely child

"I won't sugar coat it. Life after leave is challenging at first," Dr. Sutton said.

"You will likely still be dealing with physical challenges left over from birth, in addition to high emotions and possibly anxiety about leaving your newborn. Additionally, you will likely be majorly sleep-deprived. I was fortunate to be surrounded by extremely supportive faculty and co-residents, which made coming back to work much more bearable. I think allowing yourself grace and talking about any challenges you are dealing with is helpful. Also, realizing your daily routine will be different and allowing for trying times (*cue spit-up all over your work clothes, just prior to leaving the house*). But eventually, you will grow into your 'new normal.'"

"The bright side is that we got to fulfill our desires to become parents despite said hardships," Dr. Carlson said. "Being a parent is sort of like going through medical school. It is tough but you do it anyway because it is your dream."

"Overall, having a child has been the best and hardest thing I have ever done (including residency!)" Dr. Sutton said. "As a parent, you will likely experience your highest highs and lowest lows, but the experience is truly indescribable and entirely worth every moment." **DR**

Race for the Case

By Kylee N. Sacksteder, DO, and Katya Harfmann, MD



A 6-year-old male presented with a two-week history of "dark spots on his feet." Dark spots were first noticed after the patient had spent the day hiking in Ohio in the fall. The patient had started taking amoxicillin for strep throat two days prior to the appearance of the lesions and this is the fourth time he has been treated for strep throat this year. Lesions were asymptomatic. Punch biopsy revealed "subtle and non-diagnostic changes" including sparse perivascular lymphocytic inflammation. PAS staining for fungal elements was negative.

1. What is the diagnosis?
2. What feature of his history is most associated with this disease?
3. What demographic is most commonly affected with this disease?
4. What is the treatment?



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

Kylee N. Sacksteder, DO, is a PGY-4 dermatology resident with OhioHealth in Columbus, Ohio.

Katya Harfmann, MD, is a pediatric dermatologist with Nationwide Children's Hospital in Columbus, Ohio.

Race for the Case: Winner (Spring 2018)

Congratulations to Blair Murphy-Chutorian, MD, PGY-4, for submitting the correct responses in the quickest amount of time! Dr. Murphy-Chutorian is a dermatology resident at Montefiore Medical Center at the Albert Einstein College of Medicine in Newport Beach, California.

Full answers to the last Race for the Case are at: www.aad.org/RaceForTheCase.

Disorders of dyschromia (hypo- and hyperpigmentation)

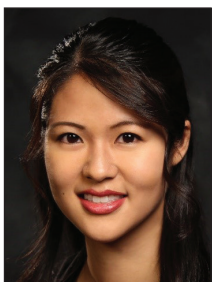
by Parin Pearl Rimtepathip, MD, and Janna Mieko Vasantachart, MD

Genetic conditions

Disorder	Gene Mutation	Pathophysiology	Clinical Features (Unique Features)
Dyskeratosis Congenita (Zinsser-Engman-Cole syndrome)	XLR (MC): DKC 1 AD: TERT, TERC	Reduced telomerase activity and abnormally shortened telomeres → chromosomal instability/cellular replication dysfunction	Male > Female. Bone marrow failure up to 90% (increase risk of hematopoietic malignancies) + triad of abnormal skin pigmentation (poikilodermatous patches of face/neck/upper torso), onychodystrophy, premalignant oral leukoplakia (vs benign oral leukoplakia in Pachyonychia Congenita type I)
Dyschromatosis Symmetrica Hereditaria (Reticulate Acropigmentation of Dohi)	AD: ADAR (SDAR gene)	Heterozygous mutations in the gene encodes an RNA specific adenosine deaminase	Presents by 6-years-old with hyper/hypopigmented macules restricted to sun-exposed skin on the dorsal aspects of bilateral extremities and face
Naegeli-Franceschetti-Jadassohn Syndrome (NFJS)	AD: Keratin 14	Location of expression of keratin 14 - Basal keratinocytes	Allelic to DPR. Brown gray reticulated hyperpigmentation typically localized to abdomen, develops around age 2 and improves after puberty . Other findings: PPK + adermatoglyphia (no finger prints) + dental anomalies including early loss of teeth (not seen in DPR) + hypohidrosis + onychodystrophy
Dermatopathia Pigmentosa Reticularis (DPR)	AD: Keratin 14	Location of expression of keratin 14 - Basal keratinocytes	Allelic to NFJS. Unique features: diffuse non-scarring alopecia (not seen in NFJS) + onychodystrophy + adermatoglyphia + persistent reticulated hyperpigmentation of torso and proximal UE + No dental anomalies
Dyschromatosis Universalis Hereditaria (DUH), familial progressive hyper- and hypopigmentation	AD/AR: ABCB6	Mutation in ATP binding cassette subfamily B, member 6	Japanese. Torso predominant with mottled appearance , nail dystrophy, and pterygium. Rare reports of assoc with short stature, idiopathic torsion dystonia, x-linked ocular albinism, and neurosensory hearing loss
Reticular Acropigmentation of Kitamura	AD: ADAM 10	Encodes a disintegrin and metalloproteinase 10	Japanese. Slightly depressed, lentigo-like hyperpigmented macules coalescing into a reticulated pattern (hence the name) on the dorsal hands and feet (main clue) + PPK pits and abnormal dermatoglyphics. Histo significant for increased melanin and an increased number of melanocytes
Dowling-Degos Disease (reticular pigmented anomaly of flexures)	AD: Keratin 5 gene (also a/w EBS with mottled pigmentation)	Location of expression of Keratin 5 - Basal keratinocytes	Adult onset with reticulated hyperpigmentation involving axilla and groin (skin folds) + Comedone like lesions on the back or neck + Pitted perioral scars. Histo significant for increased pigmentation of basal layer and "antler-like" pattern with finger-like rete ridges. Galli-Galli disease : Variant of DDD in which suprabasilar acantholysis is noted on histology but presents similar clinically.
Epidermolysis Bullosa Simplex (EBS) with Mottled Pigmentation	AD: Keratin 5>14	Mutation in keratin affecting epidermal stability	Childhood onset with acral blisters , mottled pigmentation on trunk and limbs. Punctate palmoplantar keratoderma, nail dystrophy.



Parin Pearl Rimtepathip, MD, is a 2nd year dermatology resident at Loma Linda University.



Janna Mieko Vasantachart, MD, is a 2nd year dermatology resident at Loma Linda University.

Disorders of dyschromia (hypo- and hyperpigmentation) (continued)

by Parin Pearl Rimtepathip, MD, and Janna Mieko Vassantachart, MD

Genetic conditions			
Disorder	Gene Mutation	Pathophysiology	Clinical Features (Unique Features)
Hutchinson-Gilford Progeria	AD: LMNA gene	Mutation affects the structure and function of the cellular nuclear envelope	Accelerated aging seen around 6-18 months. Sclerodermatous changes, dyspigmentation, failure to thrive, atherosclerosis, angina, osteoporosis, lipodystrophy, enlarged head, micrognathia, beaked nose.
Werner Syndrome (Adult Progeria)	AR: RECQL2/WRN gene	Encodes a DNA helicase that when mutated results in inhibitors of DNA synthesis and telomere-driven replicative senescence	Accelerated aging seen in 3rd-4th decade. Short stature, muscle wasting, atherosclerosis , osteoporosis, diabetes mellitus, hypogonadism, cataracts, malignancy. Cutaneous findings with premature canities, bird-like facies, sclerodermatous changes, ulcers, mottled pigmentation.
Incontinentia Pigmenti (IP)	XLD: NEMO	Mutation in nuclear factor- κ B (NF-κB) essential modulator prevents activation of NF- κ B which regulates cell proliferation, inflammation and apoptosis induced by TNF- α	Neuroectodermal disorder affecting teeth (hypo/anodontia), CNS, eyes and skin. Skin manifestations follow Blaschkoid pattern with streaks and whorls. Four distinct stages: Vesicular (birth-1 mo), Verrucous (up to 2 yrs), Hyperpigmented (up to adolescence), Hypopigmented (may persist through adulthood).
Congenital Erythropoietic Porphyrria (Gunther's disease)	AR: UROS XLR: GATA1	Deficiency in uroporphyrinogen III synthetase (UROS) results in a buildup of uroporphyrin I and coporphyrin I in erythrocytes, plasma, urine, and feces	Erythrodontia (red teeth under Wood's lamp), red urine at infancy, hemolysis, hypertrichosis. Extreme photosensitivity with blistering, scarring, dyschromia, and increased skin cancers.
Other			
Disorder	Pathophysiology/Epidemiology/Histology		Clinical Features (Unique Features)
Confluent and Reticulated Papillomatosis (CARP)	Unknown etiology, starts at puberty, F>M, blacks>whites Hyperkeratosis, acanthosis, papillomatosis		Keratotic red or brown papules that spread from intermammary region outward Pseudoatrophoderma colli: variant with vertically-oriented hyperpigmented papillomatous lesions with wrinkling on the neck. TOC: Minocycline
Kwashiorkor	Protein deficiency, normal caloric intake		Edema, potbelly, red-tinged dry hair +/- flag sign , superficial desquamation (flaky paint sign), pallor, petechia, dyschromia
Vascular Lasers	Targets hemoglobin		Side effects, purpura, blisters, dyschromia (increased risk in darker skinned patients)
Tinea Versicolor (Pityriasis Versicolor)	Malassezia furfur overgrowth; produces azelaic acid which blocks melanin synthesis; "ziti and meatballs"		Hypo- and hyperpigmented macules and patches with fine scale in lipid-rich areas; common in summer; pale yellow fluorescence with Wood's lamp

Boards Fodders online!



In addition to this issue's Boards Fodder, you can download the new online Boards Fodder at www.aad.org/Directions.

Go online for a very special Boards Fodder exclusive, [Drug Interactions in Dermatology, Part 2](#) by Jesse Hirner, MD.

To view, download, or print every Boards Fodder ever published, check out the archives at www.aad.org/boardsfodder.

Ready to pay it forward?



Ready to pay it forward? You can help future residents by helping the AAD ensure access to resident education. It's important.

See why at www.aad.org/ResidentEducationGrant



Tammie C. Ferringer, MD, is the section head for Geisinger Medical Laboratory's dermatopathology subspecialty section. She is also an associate in the department of dermatology at Geisinger Medical Center and serves as the director of the dermatopathology fellowship program.

Job Searching



Check out the Academy's Career Compass for help with job searching: www.healthcareers.org

Career Case Study

Career Case Study is a quarterly feature to help residents with choosing a subspecialty.

Next issue: Surgical

Career case study

Pursuing a career path in dermatopathology

Tammie C. Ferringer, MD, interviewed by *DW Directions*

Why did you pursue a specialty in dermatopathology?

I was surprised to find that in medical school I enjoyed studying pathology above all subjects. Pathology provided the final diagnosis; the final answer to the patient's mystery. Thus, it made sense to further investigate pathology for my first clinical elective. Seeing the biopsies microscopically left me wanting to explore the clinical presentation and the patient behind the biopsy. The resulting clinical dermatology exposure provided the perfect opportunity to interact with patients and provide a "final diagnosis" that I could help resolve or manage.

Describe a typical day. What are the various tasks? How much time are you spending with patients, office work, other?

Every day can be different. When I started in practice, I either arrived at 8 a.m. to start seeing patients or would come at 7:30 a.m. to quiz the residents on their assigned reading, and then would start seeing patients at 9 a.m. After a quick lunch, I moved from clinic to the lab where either the dermatopathology fellow or I would collect and organize the recuts and special stains from the prior day's cases. Depending on the number of cases for review that day, the day ended around 5 p.m. with a quick review of patient lab results and messages. Recently, I transitioned to full-time dermatopathology, which provides ultimate flexibility. Some days start with an 8 a.m. resident/fellow conference or lab management meeting but most days start at a time of my choosing, often 9 or 9:30 a.m. Much of the morning consists of administrative tasks related to directing the dermatopathology fellowship and the dermatopathology laboratory, with time for other scholarly activities such as research studies, writing or reviewing manuscripts, and completing tasks related to national society committee work. The afternoon remains the same, occasionally interrupted by educational or management meetings and ends no later than 6:30 p.m.

Does the work vary at different times of the year?

The caseload tends to decrease the day after grand rounds or during a day of severe weather when less patients are seen. Clinicians also block their schedules for vacation time during the summer resulting in less specimens. Absence of a dermatopathologist in the group can result in an increased caseload for the remaining dermatopathologists.

What areas of your residency training and education are being put to use the most?

Obviously, the dermatopathology training involved in residency is beneficial but the best dermatopathologists rely heavily on their clinical diagnostic skills to provide the ultimate clinicopathologic correlation. An understanding of disease management, including surgical pro-

cedures, helps the dermatopathologist provide the most useful and essential information to clinicians making these recommendations.

How does a career path in dermatopathology differ from other subspecialties?

A fellowship and subspecialty examination is required for board certification. Compensation tends to be comparable to Mohs surgeons and the upper end of the clinical dermatology spectrum.

In terms of need, workforce, and opportunities, how does it compare? (Is it more difficult to land a dermpath position than another subspecialty?)

As with any area of medicine, the job market waxes and wanes with time. I strongly encourage residents to pursue the area that they find most stimulating. The ultimate success in life is finding the career that you love so much it doesn't feel like work. Dermatology-trained dermatopathologists interested in pursuing a career that combines clinical and laboratory responsibilities tend to find success.

Are there any concerns for the future of the specialty?

Similar to clinical dermatology, advancing technologies, including artificial intelligence, could potentially alter the necessary workforce, but if we embrace and incorporate the technology early, it will more likely enhance our practice.

If residents are considering a dermpath subspecialty, what else should they be considering? Any special training or ways to increase their proficiency beyond their residency?

Dermatopathology fellowships tend to select candidates as early as a year-and-a-half in advance. Those who want to pursue a fellowship immediately after residency should start applying early in their second year of dermatology residency. The early-career decision can be a deterrent for some residents; however, I strongly encourage those who identify an interest later in residency to pursue a year of clinical practice before fellowship. I found this to be enormously valuable in building my clinical confidence and complementing my subsequent fellowship.

What part of dermatopathology is personally rewarding to you?

Most of the dermatopathologists I know truly love what they do. The visual pattern recognition of dermatopathology appeals to those who already pursued the visual-rich field of dermatology. We enjoy collegial relationships with other dermatopathologists who can easily provide second opinions and revel in the ability to provide team-based care with clinicians. There is always something new or interesting to learn. **DR**

Child care during residency: what you should know



PLAN EARLY!

Infant care can be hard to come by, and wait lists can be long. You want ample time to fully establish a plan, long before the baby arrives. The average waiting list for good and/or workplace-associated child care is several months to years. Get on this as soon as possible.



PUT ASIDE MONEY IN YOUR SAVINGS

In some instances, an entire residency salary will be spent on child care for the year. This will be different for every individual, depending on their schedule and the schedule of any other care takers/significant others.



HAVE SUPPORT/BACK-UP PLAN

Expect that things will not always go as planned. Having a back-up care taker is very helpful, especially if your primary child care falls through. **DR**

Meal prep before board prep

By Lauren Boudreaux, MD, PGY-4



As I enter my final weeks of residency, time management becomes crucial. Travel is at an all-time high with board review courses — and the commitment to studying cannot let up!

Increasingly, residents are realizing that mental health and wellness is vital to maintain during these stressful times. To ensure I have enough time to exercise, spend time with my family, and stay on top of what is required to complete my residency, I've been meal prepping every Sunday. This way I'm eating healthy and can just pop something into the oven during the weeknights, allowing more time for study in the evenings.

You can find meal prep containers at almost any grocery store. I love playing with different recipes — spaghetti squash with turkey meatballs is my favorite! If you are not much of a chef or don't have a lot of time, your favorite local groceries offer a ton of easy, healthy options you can use for meal prep. And we residents do love our prep!

Stay healthy and remember to take care of yourself during residency! **DR**



Lauren Boudreaux, MD, is completing her residency at Good Samaritan Regional Medical Center at Western University in Corvallis, Oregon. You can follow her posts on Instagram [@dr.laurenboudreaux](https://www.instagram.com/dr.laurenboudreaux).

How do you manage resident life?



Send your photos and pearls of wisdom to Dean Monti at dmonti@aad.org.

Inside this Issue



Tara Oetken, MD, is a PGY-2 dermatology resident at the University of Arkansas for Medical Sciences (UAMS), in Little Rock, Arkansas.

Hello again, everyone! I hope you have been enjoying some warm weather and sunshine (with appropriate sunscreen, of course) now that summer has finally arrived. After having some free time since in-service was over, I started scrolling through Instagram a bit more than is probably good for me. Maybe not surprisingly, there were skin care recommendation posts galore. Some are innocuous things like, “drink more water and cure your acne.” Not really true, but also not really going to hurt. Some, however, are downright bad for skin, or push really expensive products that don’t have proven results (hello \$40 collagen supplements). It seems like every day there was a new skin care line being promoted by a bevy of Instagram “influencers.” It really got me thinking, how common can this actually be? Luckily, Drs. Park, Christman, Linos, and Rieder are way ahead of the curve and recently published an article in the *Journal of Drugs in Dermatology* (2018; 17 (4): 482-484) which analyzed the use of dermatology-related hashtags on Instagram. They determined that “board-certified dermatologists produce a small proportion of the top dermatology-related posts published on Instagram.” They searched 43 dermatology-related hashtags and found over 10 million posts. “The vast majority of dermatology-related posts were made by individuals without formal dermatology training,” they said. They added that “patients stand to benefit from the

increased presence of dermatologists on these platforms.”

As I read this, I saw two problems with this trend. One, I find myself feeling uncomfortable in the cosmeceutical tidal wave. It would be really hard for me to decipher between some of the products based on ingredients and not packaging or marketing. Two, if dermatologists spend so much time becoming experts on skin, why do we let those with so little training drive most of the public outreach on social media? I know that our dermatology department does not have any social media presence, and while a few of the private practices in our area do, the number is small. Do you use social media in order to help educate the general public on skin care, or do you plan to use it in your future practice? Do you get any guidance on this in your residency, or have a go-to resource regarding cosmeceutical suggestions for patients?

There’s also an excellent article by Danielle Tokarz in the January issue of *Dermatology World* called “Social media in medicine” (www.aad.org/dw/monthly/2018/january/social-media-in-medicine) that looks at the current array of social media options and how dermatologists can use it responsibly. I encourage you to read it.

How are you using social media? As always, thoughts, comments, and suggestions are welcomed and appreciated. You can reach me at taoetken@uams.edu. **DR**



Resident and Fellowship Quality Improvement Award

The AAD recognizes resident and fellow physicians engaged in quality improvement projects that help meet requirements for ACGME accreditation. Applicants are eligible to receive up to \$2,500 in financial support. The funds can be used to cover expenses related to data collection, supplies and materials, and even travel to the AAD Annual Meeting for a presentation! Applications open June 13 and close Aug. 15.

Go to www.aad.org/awards

AMERICAN ACADEMY OF
DERMATOLOGY | ASSOCIATION

9500 W. Bryn Mawr Avenue, Suite 500, Rosemont, IL 60018-5216



DIRECTIONS in RESIDENCY

A Publication of the American Academy of Dermatology

Summer 2018

Physician Reviewer: Tara Oetken, MD

Senior Director, Communications: Melanie Tolley Hall

Director, Communications: Katie Domanowski

Associate Director, Publishing: Richard Nelson, MS

Managing Editor, Special Publications: Dean Monti, MFA

Staff Writer: Danielle Tokarz

Creative Manager: Nicole Torling

Senior Graphic Designer: Theresa Oloier

Copyright © 2018 by the American Academy of Dermatology and the American Academy of Dermatology Association.

“All Rights Reserved.” Reproduction or republication is strictly prohibited without prior written permission.