Where are you in the resident life cycle?

By Danielle Piquette

The residency experience is an exciting, eventful — and often overwhelming — time in your career as a physician. It’s the foundation for what kind of dermatologist you will become. In a world with so many resources, it can be difficult to find the time to discover ones that will help actually you. With input from dermatology residents and graduates, the Academy created this unique infographic to show the top resources it has available for every stage of the residency experience.

ACADEMY RESOURCES
• AAD’s Basic Dermatology Curriculum: Each module has been peer-reviewed and is based on the best available evidence. Clinical vignettes and questions within each module provide a practical framework for learning. After completion of each module, students can test their knowledge with quiz questions.
• Learn about AAD SpotMe® resources.
• Review latest literature in JAAD.

RESIDENCY: YEAR 1 (PGY-2)
Get ready for the in-service exam (dates vary for MDs and DOs); start getting involved in community service, AAD committees, and med school committees; start thinking about derm fellowship (if you want to do a pathology fellowship, you need to be doing path research; same for Mohs, etc.).

ACADEMY RESOURCES
• Boards Fodder archive
• AAD Case Challenges / Question of the Week
• JAAD CME Quizzes and Practice Quizzes
• Race for the Case
• DSAP for Residents
• Resident volunteer programs through AAD.

RESIDENCY: YEAR 2 (PGY-3)
Get ready for the in-service exam (dates vary for MDs and DOs); begin job search (look at types of practices); learn how to negotiate contracts; start getting as much CV help as possible; start building a professional network; attend the AAD Annual Meeting and/or Summer Meeting.

ACADEMY RESOURCES
• Boards Fodder archive
• AAD Case Challenges / Question of the Week
• JAAD CME Quizzes
• Race for the Case
• DSAP for Residents
• Practice Management Center (coding and reimbursement section — especially prior authorization forms)
• Choosing A Dermatology Practice Model Toolkit

RESIDENCY: YEAR 3 (PGY-4)
Begin board prep; take the board exam; acquire contract help; continue job search; study as much as you can about your finances; learn about the components of practice management; attend the AAD Annual Meeting and/or Summer Meeting.

ACADEMY RESOURCES
• AAD Career Compass
• Boards Fodder archive
• JAAD CME Quizzes (especially for PGY-4 since boards test heavily on CME questions)
• Practice Management Center (coding and reimbursement — especially prior authorization forms)
• AAD Case Challenges / Question of the Week
• Race for The Case
• DSAP for Residents
• Choosing A Dermatology Practice Model Toolkit
A 43-year-old female presented for a chief complaint of a severe scalp pruritus and inflammation that had been present for the past year. Prior treatments included topical steroids and ketoconazole shampoo, with minimal improvement. Note that the patient had recently experienced unexplained weight loss and had been found to have a pulmonary nodule, which was pending a needle core biopsy. The physical exam revealed confluent erythematous plaques with thick, overlying greasy, yellow scales within the patient’s scalp. No other lesions were present elsewhere on her body and lymph node exam was normal. It was later found that the scalp and pulmonary nodule biopsies had the same histopathology.

1. What three histopathologic stains would be helpful in making the diagnosis?

2. What are the three most commonly involved organs in adult patients?

3. Which clinical subtype of this disease has the worst prognosis?

Respond online with the correct answers at www.aad.org/RaceForTheCase for the opportunity to win a Starbucks gift card!
Derm Surgery: Danger Zones and Relevant Anatomy

By Lance Chapman, MD, MBA; Dorota Korta, MD, PhD; and Patrick Lee, MD

Sensory innervation of the face is primarily from the 3 branches of the trigeminal nerve (CN V) — the ophthalmic nerve (V1), the maxillary nerve (V2), and the mandibular nerve (V3). Four branches of the cervical plexus innervate the head/neck. Innervation from the dorsal rami of the cervical nerves is also shown. The auricular branch of the vagus nerve (Arnold’s nerve) supplies innervation to the skin of the ear canal, tragus, and auricle.

Innervation of the facial muscles is from the 5 branches of the facial nerve (CN VII). The nerve emerges from the stylomastoid foramen and passes through the parotid gland. The spinal accessory nerve (CN XI) is also shown in this diagram; it innervates the SCM and trapezius muscles.

**PLANES OF DISSECTION/UNDERMINING**

<table>
<thead>
<tr>
<th>Location</th>
<th>Plane</th>
<th>Structures to avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scalp</td>
<td>Subgaleal</td>
<td>Scalp arteries (subgaleal plane is relatively avascular); Hair follicles</td>
</tr>
<tr>
<td>Forehead</td>
<td>Deep subcutaneous fat above frontalis fascia; subgaleal on large defects</td>
<td>Supraorbital and supratrochlear arteries and nerves; Subgaleal plane is relatively avascular</td>
</tr>
<tr>
<td>Eyebrow</td>
<td>Subcutaneous fat deep to hair bulbs (for larger defects, above frontalis)</td>
<td>Hair follicles</td>
</tr>
<tr>
<td>Eyelid</td>
<td>Above the muscle (orbicularis oculi)</td>
<td>Lacrimal gland and drainage system on lower lid; orbicularis oculi</td>
</tr>
<tr>
<td>Ear</td>
<td>Above perichondrium</td>
<td></td>
</tr>
<tr>
<td>Nose</td>
<td>Upper 2/3 above the muscle; lower 1/3 above perichondrium</td>
<td>Nasociliary nerve, angular artery; deeper plane is relatively avascular</td>
</tr>
<tr>
<td>Temple</td>
<td>Superficial subcutaneous fat</td>
<td>Temporal branch of the facial nerve; superficial temporal artery</td>
</tr>
<tr>
<td>Cheeks</td>
<td>Mid-deep subcutaneous fat below hair follicles; above SMAS for larger defects</td>
<td>Parotid duct, buccal/zygomatic branches of the facial nerve; facial artery at melolabial fold</td>
</tr>
<tr>
<td>Mandible/chin</td>
<td>Mid-deep subcutaneous fat below hair follicles; above SMAS for larger defects</td>
<td>Marginal mandibular branch of the facial nerve; facial artery at cheek-chin junction</td>
</tr>
<tr>
<td>Lip</td>
<td>Above the muscle (orbicularis oris)</td>
<td>Branches of the labial artery; vascular orbicularis muscle</td>
</tr>
<tr>
<td>Neck</td>
<td>Superficial subcutaneous fat</td>
<td>Cervical branch of facial nerve and major blood vessels in anterior cervical triangle; spinal accessory nerve in posterior cervical triangle</td>
</tr>
<tr>
<td>Trunk/extremities</td>
<td>Deep subcutaneous fat/above the fascia</td>
<td>Larger veins in forearms, dorsal hands, and feet; peroneal nerve in lateral lower leg</td>
</tr>
</tbody>
</table>
### Sensory defect syndromes

<table>
<thead>
<tr>
<th>Anatomy</th>
<th>Defect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury to auriculo-temporal branch of CN V in parotid region</td>
<td>Carries both sympathetic nerve fibers (to scalp sweat glands) and parasympathetic nerve fibers (to parotid gland), so injury results in redness and ipsilateral cheek hyperhidrosis while eating</td>
</tr>
<tr>
<td>Injury or infection of CN V (gasserian ganglion)</td>
<td>Injury/infection can result in paresthesia, dysesthesia, anesthesia of nasal ala, leading to sickle-shaped erosions and ulcerations</td>
</tr>
<tr>
<td>CN V1 (ophthalmic nerve)</td>
<td>Both ciliary branch and external nasal branch come from nasociliary nerve, so herpes zoster on tip of nose can signify ocular involvement</td>
</tr>
</tbody>
</table>

### Anatomy Defect

**Frey’s syndrome**
- Injury to auriculo-temporal branch of CN V in parotid region
- Carries both sympathetic nerve fibers (to scalp sweat glands) and parasympathetic nerve fibers (to parotid gland), so injury results in redness and ipsilateral cheek hyperhidrosis while eating

**Trigeminal trophic syndrome**
- Injury or infection of CN V (gasserian ganglion)
- Injury/infection can result in paresthesia, dysesthesia, anesthesia of nasal ala, leading to sickle-shaped erosions and ulcerations

**Herpes zoster on tip of nose**
- CN V1 (ophthalmic nerve)
- Both ciliary branch and external nasal branch come from nasociliary nerve, so herpes zoster on tip of nose can signify ocular involvement

### FIGURE 3: DANGER ZONES FOR MOTOR NERVE INJURY

<table>
<thead>
<tr>
<th>Nerve</th>
<th>Location</th>
<th>Function</th>
<th>Defect</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Spinal accessory nerve (CN XI)</td>
<td>Identify the posterior triangle</td>
<td>Innervates trapezius muscle</td>
<td>Shoulder droop, winged scapula, inability to abduct arm</td>
</tr>
<tr>
<td></td>
<td>are posterior border of sternocleidomasto- toid (SCM), anterior border of trapezius (TRP), and superior border of clavicle. Then draw a vertical line down from the mastoid process 6 cm to posterior border of SCM. Emerges within 2 cm of this point, called Erb’s point (A).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B: Temporal branch of facial nerve (CN VII)</td>
<td>Draw a line from the earlobe to the lateral brow. Then draw a line from the tragus to the HIGHEST forehead crease. Nerve courses through this zone before diving under frontalis muscle.</td>
<td>Innervates frontalis muscle</td>
<td>Ipsilateral eyebrow droop, inability to raise eyebrow, inability to close eye completely</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C: Marginal mandibular branch of the facial nerve (CN VII)</td>
<td>Draw a circle centered on the mandible, approximately 2 cm lateral and 2 cm inferior to the oral commissure.</td>
<td>Innervates lip depressors</td>
<td>Ipsilateral lip elevation, drooling, crooked smile</td>
</tr>
</tbody>
</table>

**REFERENCES:**
Career case study

The growth of the cosmetic career path

Susan Weinkle, MD, interviewed by Directions.

Why did you choose to pursue a cosmetic/aesthetic specialty?

From the very beginning of my career, I was a surgically oriented dermatologist. I have been doing Mohs surgery since 1979 and started injectables very early in my career. As a resident, I did the protocol studies for collagen at Stanford, so I had an early exposure to what was really the birth of aesthetic dermatology. At the time, collagen was new and was the only injectable, and for the most part, it stayed that way for a long time. In 2004, Restylane was approved and hyaluronic acid injections began to come on the market. I found those new advances in aesthetics could be very rewarding and a complement to my practice.

What personality traits are most desirable and helpful in this type of work? Is it more social or solitary? Do you need good people skills?

I have always appreciated art. I think you have to have an aesthetic eye. You have to have an eye for beauty and balance. You have to be able to see and visualize — and then your hands can do the work. You also have to enjoy being with your patients. Particularly in aesthetic dermatology, the expectations from patients are very high. Many patients I encounter have body dysmorphic disorder, so you need to be sensitive to that, as well.

Describe a typical day.

I start each day with two surgery patients on the table ready to go. I see five to six Mohs patients in the morning (along with some patients in between). In the afternoon, it is primarily botulinum toxin injections and fillers. I do administration and paperwork within the day. I have a totally electronic office. The patient’s pathology and the picture of the lesion are pulled up for me on my iPad. I do all my own Mohs surgery, including repairs. I also have a scribe who follows me and writes in the charts. The key to my success is that I genuinely care about my patients and I am incredibly efficient. Efficiency is the key to success in this day and age, and that extends to my office staff. Outside the office, I go to a lot of international meetings to teach and expand my knowledge.

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

Mohs, in particular. I did so much surgery back when I was a resident, more than 500 Mohs surgeries. A lot of cutting and sewing and refining hand-eye coordination and dexterity. My Mohs experience developed my dexterity, and I found I had good ability with my hands. I used to sew with my grandmother when I was a young girl. Sewing skin is not that much different than being good with needlework! I think that skill set and comfort level with my hands led to an easy transition to doing aesthetics. Because of the growth of cosmetic surgery, there are now cosmetic dermatology fellowships being offered; so there is now opportunity to do an extra year of fellowship strictly in cosmetics after residency. That opportunity was not available when I was a resident.

In terms of need, workforce, and opportunities, how does it compare? Is it more difficult to land a cosmetic subspecialty position than another subspecialty? Cosmetics has advanced — so there are more opportunities in cosmetic dermatology. Along with that, residents should be aware that the market has become more saturated. Also, the marketplace is changing. Some people are going to spas instead of dermatologists, but it can still be a very good path if you are flexible enough to find the right position in a desirable market. The Academy has some resources that can be very helpful in job searching.

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

Many opportunities exist that did not exist 20 years ago. For instance, I have been chairing a resident cosmetic symposium every year in April. I am also involved with a preceptorship program with various volunteer surgeons. I have been directing a course at the AAD meetings every year since 1980 and have spent 12 years doing live patient presentations. I would encourage residents to seek these out and any other educational opportunities that can provide them with first-hand experience. Beyond residency, continue with education and volunteer work. You should never stop learning.

Is there something specific to cosmetic dermatology that is personally rewarding? Why will residents feel satisfied with this choice?

You can really help patients feel better about themselves and it can affect all aspects of their life. I had one patient, a woman, who I treated over a six-month period. She was applying for a position and kept getting rejected. We were able to make her look more attractive, and, equally important, increase her self-confidence. When she got the job, she was incredibly grateful and satisfied with this choice.

Career Case Study

Career Case Study is a new quarterly feature to help residents with choosing a sub-specialty.

Next issue: Pediatrics
Do you have that fellow feeling? Five key questions to ask

By Dirk Elston, MD

Adding a year of fellowship is a critical choice for many residents. Many variables are involved when making the decision, and you have to accept that changes will occur along the way. Here are five key questions to ask yourself now to help make an informed decision.

1. Is it worth it financially?
   - Factors to consider:
     - One more year of PGY salary
     - Moving expenses
     - Cost of setting up a lab/Mohs practice
     - Know that you currently don’t need to be fellowship-trained to do dermpath, pediatric dermatology, cosmetic dermatology, or Mohs
     - There is no shortage of academic jobs

2. Do I love the subspecialty?
   - Factors to consider:
     - If you don’t love it, medicine is way too hard a way to make a living
     - There are much easier ways to make money
     - Most of us are doctors because we want to practice medicine

3. Does fellowship training make me a better doctor?
   - According to the literature:
     - Dermatopathology fellowship training has been associated with a substantial decrease in major misdiagnosis (J Am Acad Dermatol. 2013 Jan;68(1):119-28)
     - 1,491 Mohs cases before error rate declined below 1/100 (Dermatol Surg. 2008 Dec;34(12):1637-41)
     - Case complexity is similar whether in academic or private practice — regardless of years of experience (J Dermatology Treat. 2012 Dec;23(6):421-7)
     - The fellowship-trained [pediatrics] group was more likely to report learning opportunities in their work environment. (Pediatrics. 2015 Oct;136(4):672-9)

4. Does fellowship training make me a happier doctor?
   - Fellowship training has been shown to increase confidence, sense of self-efficacy, improve others’ perceptions of their credibility, and provide support from a community of peers and mentors (Acad Med. 2009 Aug;84(8):1089-97)
   - The fellowship-trained group was more likely to report learning opportunities in their work environment (Pediatrics. 2015 Oct;136(4):672-9)

5. Why did I go into medicine?
   - Never forget why you are on this path; most of the rewards are not monetary in nature. Rather, you will find your true satisfaction in:
     - Altruism: the number one driver of happiness
     - Intellectual stimulation
     - Ability to make a difference
     - Respect
     - Opportunities to teach

Other factors to keep in mind:
- Most decisions aren’t a matter of right or wrong; they’re just different.
- Most dermatologists leave the first practice they join.
- The best financial offer is often not the best choice. Look for a quality work environment, one that best fits your work/life/family balance, and look for an employer whose values fit well with yours.
- For clinical professionals, clinical autonomy is often more important than managerial autonomy
- Contentment comes from a daily opportunity to do what you do best.
- Never lose heart if this is your calling. The rewards will be great. The sky has been falling since I left medical school, but practicing medicine is still a blast. DR

AAD to offer quality improvement grant for residents

The AAD will be offering financial support to resident and fellow physicians engaged in quality improvement projects that help meet requirements for ACGME accreditation. Get up to $2,500 and recognition for the valuable work that is required as part of today’s training. Funds can help cover the expenses of data collection, materials and supplies, and even travel to the AAD Annual Meeting for a presentation. See more at: www.aad.org/qualityimprovementaward.

The award will open in July and close on August 31, 2017. DR

Join JAAD’s new Virtual Journal Club!

www.mendeley.com/community/jaad-journal-club-1/
No matter what stage of the “resident life cycle” you may be in, you know that each year of residency is tough and has its own unique challenges. After reading through this issue, you can see that the AAD provides a lot of great resources to us throughout residency — so take advantage!

Looking back on my life cycle, I came up with these six things I wish that I had done, or was really glad that I did, in order to make my life easier:

#1 Start a CV on day one of intern year. It will be so much more painful backtracking everything you have done later on. Don’t worry about the template — this can be modified later when it’s time for job applications. Make it a habit to add to it as you go.

#2 Find one review book that you like and stick with it and add to it throughout residency. In addition to boards fodder, write in clinical pearls, pathology pearls, challenging dosing regimens, new info from journal articles, etc. My Sima Jain is so valuable to me that I have a cash reward offer written on the inside cover for anyone that finds it!

#3 Complete your ACGME case logs as you go — don’t let these build up! The easiest way to do these is to log as you do your bill-

ing by getting the CPT billing codes and entering them into the ACGME “search by code” box. Then you don’t have to spend all that time searching for the names/specifics of the procedure!

#4 Keep all of your JAAD CME articles and quiz questions. Highlight the important stuff you want to remember/review — these are highly tested on the boards and you will want them all in one place.

#5 Get a financial advisor. Find someone who has specific experience working with physicians.

#6 Learn as much as you can. You only have a short amount of time in residency before you are out on your own. Ask your attendings and your upper levels a lot of questions. It won’t annoy them — promise! Take advantage of your friends in other fields of medicine as well. Contact them anytime you have a question about a funny lab result, culture sensitivity, how to manage an issue outside your areas of expertise, etc. Lastly, my favorite motto, if you don’t know something, take the time to look it up.

Have an idea for one of my columns that residents would like? Email me at mbshiver@uams.edu.