Self-made financial health

Rajiv Nijhawan, MD, is a young dermatologist who has considered and outlined what he needed to know about — and got answers. He gave a talk to residents about finances at the AAD Annual Meeting and recently talked to Dermatology World Directions to remind residents that it’s never too early to address your financial health.

DWD: Why is it important for residents to know about their financial health?

Dr. Nijhawan: Residents are given very little business training during medical school and residency. It’s just not part of most residency curriculums. Physicians are easy targets, since we’re often not as financially savvy as many might assume. There’s also a perception among the general population that doctors “have it made” after finishing residency, and far too often, that’s not the case.

DWD: What is the reality, what are the roadblocks to financial success?

Dr. Nijhawan: I think there are big expectations for dermatologists right out of residency, but I think you should plan to live like a resident for a few years after residency. You don’t need a big house or fancy things immediately, and by initially managing your money wisely, you’ll be able to pay off your student loans much sooner (which can save a lot of money on interest in the long run). I don’t think you should expect the dream right away. You can begin saving toward a plan to start a practice, own a house, etc.

DWD: So you suggest early loan repayment, if possible?

Dr. Nijhawan: Yes, absolutely. If you can, try to avoid going into forbearance because the amount you end up paying in the long run is way more. The National Student Loan Data System (NSLDS.ed.gov) will help verify federal loans. Consider paying accrued interest — or some of it — before capitalization occurs. Loan consolidation is another option — although you should know that if you extend the repayment term, the total cost of the loan will increase. You can also consider financing with an outside lender, but those often don’t have the same ‘safeties’ as student loans, such as income based-repayment. (Also see ‘Prioritizing Debt’ infographic on page 7).

DWD: What other options are you aware of?

Dr. Nijhawan: Some federal agencies (NIH, VA, etc.) offer loan repayment assistance or forgiveness. If you’re working in public service, there’s also a Public Service Loan Forgiveness Program. I think it’s important for residents to be aware of and investigate all their options.

DWD: What tips did you offer in your presentation at the AAD Annual Meeting in Orlando earlier this year?

Dr. Nijhawan: Pay off loans with the highest interest, and pay off all your debt as soon as you’re able to. Most student loans have higher interest rates than mortgages, so your focus should be paying off as much student debt as possible. Residents should also start an emergency fund, and only use it for true emergencies. If you plan on see FINANCIAL HEALTH on p. 3
You learn a lot during your residency but it’s impossible to see every type of condition.

To further prepare you, the AAD, with support of an independent medical education grant from Procter & Gamble, has created a new online course, Essentials of Pediatric Dermatology.

Designed to support and complement your training, this free activity will allow you to expand your knowledge in these areas:

- Autoimmune Connective Tissue Diseases
- Pigmented Lesions, Lumps and Bumps
- Pediatric Inflammatory Diseases of the Skin
- Inherited and Acquired Bullous Diseases
- Pearls & Key Concepts in Vascular Anomalies
- Childhood Exanthsms
- Genetic Skin Disorders

Learn the ins and outs of building a career from those who have been there before.

LIFE AFTER RESIDENCY: A TOOLKIT FOR SUCCESS

February 15, 2018 • San Diego, CA

Topics covered include:
- Choosing a practice setting
- Deciding if a fellowship is right for you
- Maintaining work-life balance & financial health
- Negotiating contracts

Registration for Life After Residency is FREE but separate from Annual Meeting registration.

And don’t miss the 2018 AAD Annual Meeting, February 16 – 20 in San Diego, California – there’s an educational track designed just for residents!
A 10-year-old African American male presents with a focal papular eruption on the left flank that he has had since birth. The lesions have grown progressively in proportion to the child. They are intermittently itchy in nature and at times cause irritation due to friction from overlying clothing. The child is otherwise healthy with no other cutaneous lesions.

1. What dermoscopic findings would you expect?

2. Which three genetic disorders can this condition be seen in?

3. Where on the body are these lesions most commonly found?

4. What are the most common management options?

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

By Matthew Clark, MD

<table>
<thead>
<tr>
<th>GENERIC NAME</th>
<th>BRAND NAME</th>
<th>ROUTE</th>
<th>MOA</th>
<th>INDICATION</th>
<th>SIDE EFFECTS</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemotherapy</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Dacarbazine</td>
<td>DTIC-Dome</td>
<td>IV</td>
<td>Cell cycle nonspecific alkylating agent</td>
<td>Stage IV melanoma</td>
<td>GI side effects (strong vomiting), thrombocytopenia, hepatic necrosis, alopecia, facial flushing, and facial paresthesias</td>
<td>Requires hepatic metabolism for activation; response rates 5-20% and usually only short duration</td>
</tr>
<tr>
<td>Pegylated IFN-a-2b (Interferon)</td>
<td>Intron A, Sylatron, PEG-intron</td>
<td>IV, SQ</td>
<td>Unknown; activates immune response tumor apoptosis</td>
<td>High risk stage II &amp; III melanoma; often used after resection</td>
<td>Rash, pruritus, GI symptoms, myelosuppression, hepatotoxicity, GI bleeding, pancreatitis, pulmonary toxicity, myocardial infarction, arrhythmias, hypertension, psychological disturbances</td>
<td>Useful as an adjuvant; black box warning that may aggravate fatal or life-threatening autoimmune, infectious, ischemic, or neuropsychiatric disorders; no overall benefit on survival demonstrated</td>
</tr>
<tr>
<td>Interleukin-2 (IL-2)</td>
<td>Proleukin/ IL-2, Aldesleukin</td>
<td>IV</td>
<td>Activates immune response (T-cell growth factor) tumor apoptosis</td>
<td>Metastatic melanoma</td>
<td>High toxicity profile: hypertension, renal insufficiency, hypoxia, flu-like symptoms, capillary leak syndrome</td>
<td>Black box warning that it can only be used in patients with normal thalium stress tests and PFTs; may cause capillary leak syndrome or serious infections due to decreased neutrophil function</td>
</tr>
<tr>
<td>Anti-tumor vaccines</td>
<td>i.e. gp100 vaccine</td>
<td>ID</td>
<td>Monocyte-derived DCs matured and loaded with MHC class II-restricted tumor peptides</td>
<td>Advanced metastatic melanoma</td>
<td>Eosinophilia, injection site reactions, fever</td>
<td>2017 study showed 19% overall 10-year survival, comparable to ipilimumab</td>
</tr>
<tr>
<td>Adoptive Cell Therapy (ACT)</td>
<td>N/A</td>
<td>IV</td>
<td>Ex vivo expansion of autologous tumor-specific cytotoxic T-cells transferred back to patient to boost anti-tumor immunity</td>
<td>Refractory metastatic melanoma</td>
<td>Anti-melanocyte side effects (vitiligo, uveitis) and chemotherapy or IL-2 related side effects (myelosuppression, opportunistic infections, etc.)</td>
<td>Often administered with lymphodepleting chemo and/or high dose IL-2 Phase II trials showed 50% response rate Combination ACT + ipilimumab showed complete remission at 107-week follow up in 2/10 patients</td>
</tr>
</tbody>
</table>

Immune Checkpoint Inhibitors

<table>
<thead>
<tr>
<th>CTLA-4 inhibitors:</th>
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<tbody>
<tr>
<td>Ipilimumab</td>
<td>Yervoy</td>
</tr>
<tr>
<td>IV</td>
<td>Human monoclonal antibody (lgG1) against CTLA-4 inhibition of T-cells enhanced T-cell response</td>
</tr>
<tr>
<td>Metastatic or unresectable melanoma</td>
<td>Autoimmune toxicities/immune related adverse events (irAEs) (bolded more common for CTLA-4 inhibitors):</td>
</tr>
<tr>
<td>Skin: rash, pruritus, vitiligo</td>
<td>Lung: pneumonitis</td>
</tr>
<tr>
<td>GI: colitis, hepatotoxicity</td>
<td>Pregnancy category C; black box warning that may cause severe or fatal immune-mediated reactions due to T-cell activation and proliferation</td>
</tr>
</tbody>
</table>

PD-1 Inhibitors:

| Nivolumab | Opdivo |
| Pembrolizumab | Keytruda |
| PD-1 Inhibitors: | |
| IV | Humanized monoclonal antibody (lgG4) against PD-1 receptor |
| Metastatic or unresectable melanoma | irAEs (bolded more common for PD-1 inhibitors): |
| Skin: rash, pruritus, GI: colitis, hepatotoxicity | Lung: pneumonitis |
| Endo: type 1 diabetes hyper/hypothyroidism | Can be effective regardless of BRAF or PD1L status; anti-PD-1 agents have higher response rates and lower incidence of grade ≥3 autoimmune toxicities compared to anti-CTLA-4 agents; anti-PD-1 agents hypothesized to be preferred for anti-CTLA-4 agents |
| Phase III trial showed PD-1-inhibitor + CTLA-4-inhibitor > either as monotherapy |

Gene-Targeted Therapies

<table>
<thead>
<tr>
<th>BRAF Inhibitors (BRAFIs):</th>
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<tbody>
<tr>
<td>Vemurafenib</td>
<td>Zelboraf</td>
</tr>
<tr>
<td>Dabrafenib</td>
<td>Tafinlar</td>
</tr>
<tr>
<td>BRAF Inhibitors (BRAFIs):</td>
<td></td>
</tr>
<tr>
<td>PO</td>
<td>Kinase inhibitor of the mutant BRAF (BRAF\textsuperscript{V600E})</td>
</tr>
<tr>
<td>Kinase inhibitor of the mutant BRAF (BRAF\textsuperscript{V600E} &amp; BRAF\textsuperscript{V600K})</td>
<td></td>
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<tr>
<td>BRAF mutation; substitution of glutamic acid for valine at amino acid position 600 BRAF; encodes serine/threonine protein kinase-RAS-RAS-MAPK MAPK pathway</td>
<td></td>
</tr>
<tr>
<td>Advanced BRAF\textsuperscript{V600E} advanced melanoma</td>
<td>Rash, photosensitivity, seborrheic keratoses, SCC, keratoacanthomas, papilomas (via paradoxical RAS-MAPK activation), new primary melanoma (via wildtype BRAF), alpecia, hyperkeratosis, pruritus, GI side effects, increased LFTs, QT prolongation</td>
</tr>
<tr>
<td>Advanced BRAF\textsuperscript{V600E} &amp; BRAF\textsuperscript{V600K} melanoma</td>
<td>BRAF is the most common gene mutated in melanomas (aprox 40%); not effective against wild-type BRAF</td>
</tr>
<tr>
<td>Testing for BRAF mutation required prior to starting</td>
<td>BRAF mutations: acquired / dysplastic nevi, melanomas on intermittently sun damaged skin</td>
</tr>
<tr>
<td>Helpful hint: all BRAF inhibitors have the letters B-R-A-F somewhere in their name</td>
<td>Prompt and high response rates but duration is short-lived with most patients developing tumor progression within 6 months due to development of resistance thus often used in combination with MEK inhibitors to delay resistance</td>
</tr>
<tr>
<td>May be useful in intracranial mets</td>
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</table>
**Update in Melanoma Therapies (continued)**

By Matthew Clark, MD

### Gene-Targeted Therapies

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>MEK Inhibitors (MEKis):</td>
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<tr>
<td>Trametinib</td>
<td>Mekinist</td>
<td>PO</td>
<td>Selectively inhibits MEK1 and MEK2</td>
<td>Metastatic or unresectable melanoma</td>
<td>Rash, acneform dermatitis, alopecia, nausea, vomiting, diarrhea, constipation, fatigue, peripheral edema, hypertension</td>
<td></td>
</tr>
<tr>
<td>Cobimetinib</td>
<td>Cotellic</td>
<td>PO</td>
<td>Selectively inhibits MEK1 and MEK2, regulates MAPK proliferation pathway</td>
<td></td>
<td></td>
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<tr>
<td>Binimetinib</td>
<td></td>
<td>PO</td>
<td>Selective, non-ATP-competitive inhibitor of MEK1 and MEK2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Selumetinib</td>
<td></td>
<td>PO</td>
<td></td>
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**Helpful hint:** MEK inhibitors contain “met” in the name (think ‘met’-“mee”)

Often used in combination with BRAFis to prevent resistance

Combination therapy using MEKI + BRAFI = longer progression free survival

Combination therapy decreases paradoxical SCC development seen with BRAFI monotherapy

**MEK Inhibitors (in development):**

| | | | | | | |
| Talimogene laherparepvec | Imlycig | IL | Tumor-specific modified HSV-1 → insertion/expression of gene encoding (GM-CSF) → direct anti-tumor effect secondary to viral infection and induction of immune response | Loco-regional stage III and IV melanoma | Glomerulonephritis, vasculitis, psoriasis exacerbation, fever, GI side effects, fatigue, headache, disseminated herpes infection | Phase III trial showed 16.3% of patients had decrease in skin/LN tumor size lasting at least 6 months |

**Viral Immunotherapy**

**Other Non-FDA-Approved Therapies**

| KIT-Inhibitors: | | | | | | |
| Imatinib | Gleevec | PO | BCR-ABL/KIT tyrosine kinase inhibitor | KIT-mutated advanced melanoma | Ascites, pleural effusion, pulmonary edema, CHF, GI bleeding, myelosuppression, hepatotoxicity, SJS, photosensitivity, QT prolongation, HBV reactivation | KIT mutations most common in acral and mucosal melanomas |

**Selected References:**

**Medical dermatology**

Amit Garg, MD, interviewed by Directions.

**Why did you choose to pursue a specialty in medical dermatology?**

It was the subspecialty area where I felt I could apply my unique skills most meaningfully as a dermatologist. I work with sick patients who need the specific expertise of a dermatologist to get the right diagnosis and the optimal therapeutic strategy.

**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?)**

Patience, empathy, and persistence. Patients with inflammatory and autoimmune diseases are terrified by their diagnoses and prognoses. Their conditions and their treatments take a toll on physical and mental well-being with a downstream impact on the lives of their loved ones. These patients require care from doctors who will give them time, who will appreciate the broader contextual issues related to their disease, and who can provide unrelenting advocacy in a complex health care environment.

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

My daytime hours are spread across clinical care, research, teaching, and administration. Most of my clinic time is dedicated to the evaluation and management of patients with complex medical issues and training dermatology residents who care for these patients. Outside of clinics, I follow up on results, return patient queries, write prior authorization letters, and update my notes. There tends to be more clinical administrative work for my medical dermatology patients than there is for my general dermatology patients.

**Does the work vary at different times of the year?**

We may see certain types of patients more frequently in particular seasons (i.e. psoriasis patients more frequently in the winter and cutaneous lupus patients more frequently in summer.) The work, however, is constant.

**Is travel a factor in this profession?**

Yes, there is travel for lectures as part of visiting fellowships, talks at national and international clinical or research meetings, presentations at professional societies and advocacy groups, and steering executive leadership with research organizations all provide opportunities to further develop careers, share experiences, and develop friendships with peers. Not everyone will look for these, but for me, personally, these activities have provided numerous enrichment opportunities and account for a substantial portion of my career satisfaction.

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

I draw from my exposures to patients during residency and have adopted attributes in my teachers which were most inspiring. In reality, the learning curve in the three years immediately after residency is as steep as the years during training — and that’s certainly the case in caring for patients with complex dermatologic diseases. My advice would be to seek out continued mentorship after training, stay engaged in continued learning, and stay modest and ask for help whenever it’s needed.

**How does a career path in medical dermatology differ from other subspecialties?**

The foundational principle is the same as other areas in dermatology: put your patients first and go the extra mile for them.

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

There is most certainly a need for dermatologists with an interest in medical dermatology in the community, at academic medical centers, and within clinical and translational research programs.

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

Rheumatology and medical oncology exposures can help in adding depth to one’s understanding of evaluation, diagnostic, and management strategies for patients with overlap conditions. I’m not certain that a year-long fellowship in medical dermatology is required, but these programs offer the benefit of longitudinal experiences, which are sometimes limited in dermatology training, with patients having complex conditions.

**Is there something specific to medical dermatology that is personally rewarding to you? Why will residents feel satisfied in this choice?**

I end each of my days knowing I’ve made a meaningful contribution to the overall physical and mental well-being of patients. This is a critically important aspect of my career satisfaction, in the context of a lot of “nonsense” that my patients and I endure in today’s health care landscape. There is nothing better than hearing your patients, with all of their vulnerabilities, share their sincere gratitude for your expertise. The hugs are nice, too. DR
Prioritizing debt: what to pay off first
By Rajiv Nijhawan, MD

PERSONAL DEBT (E.G. CREDIT CARD)
- Pay off debt that has the highest interest rates and those that capitalize more frequently.
- Avoid accumulating additional personal debt (e.g. unnecessary material things, etc.).
- Live like a resident for a few years after residency.
- But also make sure you are creating a positive credit ‘history.’ Good loan ratings are made by having credit cards and demonstrating that you pay them off on time.

STUDENT LOAN DEBT
- Start paying ASAP.
- Avoiding forebearance in training will significantly decrease how much you pay in long run.
- Pay off those loans with higher interest rates and those that capitalize more frequently.
- Once you start working after training, try to pay off debt asap because your overall total payment will be much less (e.g. 10 years versus 15 years).
- Consider refinancing/consolidating if lower interest rates are available (but don’t extend repayment term).

MORTGAGE
- Usually has the lowest interest rates (so you may be able to take your time paying this off).
- Refinancing your mortgage can sometimes lower your interest rate and reset the payment clock.

Pedicures and publications: keeping up on evidence-based medicine
By Cindy Wassef, MD, chief resident of dermatology, Stony Brook University Hospital, Stony Brook, New York

Residency is a time for learning and growth but it can often be a struggle to balance clinical obligations and the ever-growing body of research and literature one is expected to keep up with in order to provide superior patient care. Carving aside time can sometimes be difficult. The place I have found to be my best reading spot is the pedicure chair.

Men and women alike often indulge in pedicures, and this uninterrupted hour can be highly efficient for catching up on medical literature. An hour, not including any time spent waiting for your turn or for nail polish to dry (which can easily add another half an hour or more), is valuable time that can be used wisely for both education and relaxation. Depending on reading speeds and contents of each journal, one can often read one or more journals each visit. And in contrast to cellular phones or electronic devices that can be forever ruined if dropped in the pedicure bath, journals will often survive with minor water damage.

Reading dermatologic journals and literature often comes second to patient care, documentation, and other daily tasks for most clinicians and residents. But in the pedicure chair, one cannot do any of these things and a new opportunity for learning presents itself. DR
Debt management is something I think we all struggle with during residency. However, as Dr. Nijhawan outlined in this issue’s cover story, it is equally important to be money conscious once the paychecks start rolling in. We all have our spending regrets, but I’ve discovered five things that are totally worth your money during your transition out of residency and into practice:

1 **Dropbox** — If you don't have Dropbox, you are seriously missing out! I paid more to get the plus version, which has extra features and essentially unlimited space for PowerPoints and pictures. Dropbox will save your life throughout job applications, licensure, on-boarding, refinancing your loans, and out in practice. It allows you access to all of your important files — anywhere, anytime. I can’t count how many times I’ve had to email in copies of my CV, medical diploma, letters of rec, photo ID, DEA, state license... you name it. You can access and edit your files from anywhere which makes it so much easier to add something to your CV at work instead of having to remember to do it when you get home. I’ve kept all of my favorite treatment algorithms, dosing schedules, etc. from residency which has made practicing so much easier because it’s all at the click of a button on my Dropbox phone app.

2 **UptoDate** — Let’s be real, the other physician resources just don’t even compare. If you are lucky, your job out of residency will provide this for you, but if they don’t, it is worth every penny.

3 **A good dermatoscope** — I have a newfound respect for people who ‘can’t read without their reading glasses’ as that’s how I feel when I spend a day in clinic without my dermatoscope.

4 **AAD's Dialogues in Dermatology** — One of my attendings told me about Dialogues and ever since I started listening to them in residency, I’ve become addicted. These are monthly audio podcasts on specific hot topics — “i.e. what's new in vitiligo treatment?” — that feature dermatology experts discussing their diagnosis and treatment pearls. You can also get CME credit at the end, which you will need after you graduate. In the car, on a plane, folding laundry — listen to them anywhere and learn practice tips you can’t get in textbooks.

5 **A good financial advisor** — We are all familiar with the saying that providers can be dangerous when “they don’t know what they don’t know,” so unless you have a finance degree and know everything there is to know about money, pay a good financial advisor to help you once you graduate. Going from making no money to a lot of money is exciting, but also overwhelming. Having someone to advise you on everything from what price house you can afford to how much money you should be saving, investing, and putting into retirement each month is priceless. DR