Legal ease for residents: Social media

By Daniel F. Shay, Esq.

Most Americans use some form of social media, never considering the potential legal implications of their posts and interactions. Physicians, including dermatology residents, however, must carefully consider their actions in the social media context.

Understanding compliance

The primary issue is compliance. The Health Insurance Portability and Accountability Act (HIPAA) and its regulations impose a broad range of requirements on “covered entities” (including physicians, physician groups, and hospitals) regarding patient “protected health information” (PHI) and electronic and/or unencrypted PHI (ePHI and uPHI, respectively). Protected health information is any information that individually identifies the subject of the PHI. This obviously includes patient names, birth dates, and medical record or Social Security numbers, but it can also include things like photographs or videos of patients, or even distinctive tattoos, scars, or birthmarks, as well as audio recordings.

Improper disclosures of PHI violate the Privacy Rule regulations, and disclosures of ePHI violate both the Privacy Rule and the Security Rule. Disclosures of uPHI are presumed to be breaches under the Breach Notification Rule. An improper disclosure on social media could implicate all three rules. Social media is often publicly visible, but even private messages can be seen by the social media company itself. None of it is encrypted, so any PHI posted on social media is both uPHI and ePHI.

Misconceptions

One common misconception is that patient inquiries on social media allow the physician to reply on the same platform. If the patient asks about lab results on Twitter, doesn’t that mean that they’ve agreed to let the physician respond? In fact, disclosures of PHI to the patient over social media may violate HIPAA, even if the patient has already used the platform to communicate with the physician. While patients may request the method(s) by which their physicians communicate with them, including through unsecured or unencrypted methods, most institutions and larger groups have policies about how patients must document such requests. Usually, a patient must fill out a specific form that the institution keeps on record.

Other potential perils

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SOCIAL MEDIA from p. 1

PHI may find its way to social media. Discussions with colleagues, and even casual posts about one’s work, can result in inadvertent disclosure of PHI. The key question to ask is whether the information posted could be used to identify the individual. In many cases, the answer will be “no” and disclosure is safe. However, the more specific the information becomes, the more likely it is that it may identify the patient. Similarly, it is critical to remember in the social media context that images alone may identify a patient, and that PHI may be captured in images without it being the focus of the image. A physician might never intentionally disclose PHI in written form (e.g., a patient’s name), but a physician posting a photograph of the patient, happy after a swift recovery and just before discharge, even with the patient’s verbal permission, is an improper disclosure of PHI.

What’s in the picture?
A staff member of a client of ours once posted a photo of an apple that a patient brought from their own orchard which almost disclosed PHI. In the photograph, the apple was on top of a charge sheet, which included a range of patient information. Luckily, the photograph was zoomed in so that no PHI was clearly visible, but the story illustrates the risks that photographs in the work setting can create.

Another incident involved a physician being photographed in front of a patient’s home. The patient had given permission to the photographer to take the picture, but their house number was visible, and the physician was holding a copy of their file with the patient’s name clearly visible in the photograph. Even though the patient had ostensibly given permission for the photograph to be taken in front of their home, they had not authorized the physician to disclose their PHI under HIPAA.

Adhere to your program’s rules
In addition to HIPAA, medical residents should be careful to adhere to the requirements of their residency programs regarding their social media conduct. These may include how they represent themselves online and whether, how, and when to indicate their affiliation with the residency program. For example, in the midst of a global pandemic, residents may want to contribute to social media discussions about public health and may want to show they speak from knowledge because they are residents. Such posts should at least make clear that they do not speak for the residency programs in any official capacity, and that their statements are their own. Likewise, they should be careful to avoid giving medical advice online that might create a physician-patient relationship, and therefore potential malpractice liability.

Special consideration should be taken if a resident’s post goes viral. For example, if a tweet about an experience in the hospital is retweeted by a celebrity, will their program want to take any other steps in response? Are there things the resident must or should do in light of the additional scrutiny they, their program, and maybe the hospital now have? Such a situation could draw press attention, either good or bad. So, even if the program has no specific rules, the resident may want to discuss it with their program director.

Consider carefully before posting
The key thing to remember in all social media usage is think twice. Social media is a fast-moving environment. People often post in haste, without regard for the content of their posts. While the public may enjoy this luxury, physicians — including residents — must be more careful. As a final cautionary tale, consider the story of a physician working at Northwestern Memorial Hospital who posted to social media a photo of an inebriated patient in the ER. In addition to the disciplinary action that likely followed the event, and the potential violation of HIPAA, the physician, the hospital, and the medical school were all sued by the patient for infliction of emotional distress. All of this could have been avoided if the physician had simply thought twice before posting. DR

Race for the Case
By Jessica Lu, MD, and Zeinah AlHalees, MD

An otherwise healthy 39-year-old female presented to the dermatology clinic with a 3-year history of skin lesions on her dorsal fingers, that are exacerbated by sun exposure. In the past 9 months, she stopped playing sports due to significant muscle weakness and fatigue. Her review of symptoms was otherwise negative. Physical exam revealed erythematous-violaceous flat-topped papules on her dorsal fingers, nail fold capillary changes, violaceous macules on her upper eyelids, and flagellate erythema on her back. Complete blood count and differential, creatine kinase level, liver enzymes, creatinine, and ferritin were all within normal limits. A myositis panel was done and was positive for anti-transcription intermediary factor 1γ (anti-TIF1γ) antibodies. A skin biopsy revealed an atrophic epidermis with prominent vacuolar interface change and markedly increased dermal mucin.

1. What nail fold changes are noted in this disease and in what other disease can they be found, as well?
2. What is the significance of anti-TIF1γ antibodies, what investigations should be ordered when they are detected, and for how long should these patients be followed up and screened for?
3. List the antibody associated with each of the following features: a) hallmark of cutaneous disease with good response to treatment, b) Interstitial lung disease, c) cardiac involvement.
4. What is the difference in first-line treatment for patients with skin-limited disease compared to those who also have associated myopathy or systemic symptoms?

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 2021)
Congrats go out to Dragan Jejinić, MD, a fourth year resident at University Clinical Centre Ljubljana, Slovenia. He correctly identified leishmaniasis in our latest photo feature and provided the most comprehensive answers to the accompanying questions. He will be sent a Starbucks gift card to use at his local Starbucks in Ljubljana!
Dermatologic adverse events from immune checkpoint inhibitors

By Taylor Gray, DO, and Lisa Fronek, DO

**Immune Checkpoint Inhibitors**

<table>
<thead>
<tr>
<th>CTLA-4 Inhibitors</th>
<th>PD-1 Inhibitors</th>
<th>PD-L1 Inhibitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ipilimumab (Yervoy)</td>
<td>Pembrolizumab (Keytruda)</td>
<td>Atezolizumab (Tecentriq)</td>
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<tr>
<td>Nivolumab (Opdivo)</td>
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<td>Avelumab (Bavencio)</td>
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<td>Cemiplimab (Libtayo)</td>
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<td>Durvalumab (Imfinzi)</td>
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*CTLA-4: cytotoxic T-lymphocyte-associated antigen
PD-1: Programmed cell death protein-1
PD-L1: Programmed death-ligand 1

**Dermatologic Adverse Events**

<table>
<thead>
<tr>
<th>Cutaneous Reaction</th>
<th>Clinical Description</th>
<th>Timeframe</th>
<th>Treatment</th>
<th>Special Notes</th>
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<tr>
<td>Maculopapular Rash</td>
<td>-Faint erythematous macules and papules that coalesce into plaques -Most commonly affects the trunk and extensor surfaces of extremities</td>
<td>-3-6 weeks after initial dose</td>
<td>-Grade 1 and 2 presentations are most common and are often self-limited but may be treated with TCS. Immunotherapy is continued -Grade 3 is treated with TCS + systemic CS taper. Immunotherapy is held until rash is grade 1 or less -Grade 4 warrants discontinuation of immunotherapy in addition to systemic CS administration</td>
<td>-Grade 1: rash covering &lt;10% BSA +/- symptoms -Grade 2: rash covering 10-30% BSA +/- symptoms; limiting instrumental ADL; rash covering &gt;30% BSA +/- mild symptoms -Grade 3: rash covering &gt;30% BSA + moderate or severe symptoms; limiting self-care ADL -Most common cutaneous AE overall -More commonly induced by CTLA-4 inhibition</td>
</tr>
<tr>
<td>Pruritus</td>
<td>-May present with or without cutaneous eruption</td>
<td>-3-6 weeks after initial dose</td>
<td>-Grade 1 and 2 presentations are most common and management strategies include emollients, oral antihistamines, and TCS. -Gamma-aminobutyric acid analogs have also been utilized</td>
<td>-Grade 1: mild or localized -Grade 2: widespread and intermittent; skin changes from scratching noted -Grade 3: widespread and constant; limiting self-care ADL or sleep -2nd most common cutaneous AE overall -More commonly induced by CTLA-4 inhibition</td>
</tr>
<tr>
<td>Lichenoid Eruption</td>
<td>-Multiple, discrete, erythematous-to-violaceous papules and plaques -Often involve the chest and back and rarely the extremities, palmoplantar surfaces and oral mucosa -Up to 45% of the time the lichenoid infiltrate involves the hair follicle resulting in a clinical pattern reminiscent of lichen planopilaris or keratosis pilaris</td>
<td>-6-12 weeks after initial dose</td>
<td>-Usually manageable with TCS without disruption in immunotherapy dosing schedule -Systemic CS administration and immunotherapy cessation may be required in severe cases -Phototherapy and acitretin have also been utilized</td>
<td>-More commonly associated with anti-PD1/PD-L1 therapy</td>
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<tr>
<td>Bullous Pemphigoid</td>
<td>-A non-bullous prodromal phase characterized by pruritus may precede development of localized or generalized tense blisters -Oral mucosa involvement is seen 10-30% of the time</td>
<td>-Mean onset of 12-14 weeks following initiation of therapy, however, cases have been reported 3-84 weeks after initial dose</td>
<td>-Grade 1 eruptions may respond to TCS -Addition of systemic CS in grade 2 and rituximab in grades 3-4 may be warranted -For grade 2 events and higher, immunotherapy should be held until grade 0-1 is achieved -Nonsteroidal options including doxycycline, nicotinamide, methotrexate, and omalizumab have also been utilized</td>
<td>-Grade 1: asymptomatic; blisters covering &lt;10% BSA -Grade 2: blisters covering 10-30% BSA + erythema or pruritus; limits instrumental ADL -Grade 3: blisters covering &gt;30% BSA; limits self-care ADL -Grade 4: blisters covering &gt;30% BSA; electrolyte abnormalities -Grade 5: death -May persist several months after discontinuation of therapy -More commonly associated with anti-PD1/PD-L1 therapy</td>
</tr>
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<td>Vitiligo-like Eruption</td>
<td>-Characterized by macules of deepening into large symmetric plaques on photo-exposed skin</td>
<td>-Cases have been reported to occur 6 days-36 weeks after initiation of therapy</td>
<td>-No specific treatment is required, however, photoprotection should be utilized to protect the depigmented/hypopigmented skin -Potent TCS and calcineurin inhibitors can be used -Cosmetic camouflage may limit negative psychosocial impact -Resolution with cessation of therapy does not occur</td>
<td>-Vitiligo-like skin eruptions are associated with greater anti-cancer benefit from immunotherapy -Hair depigmentation may also be observed -More commonly associated with anti-PD1/PD-L1 therapy</td>
</tr>
<tr>
<td>Neutrophilic Dermatoses</td>
<td>Sweet’s syndrome</td>
<td>-Neutrophilic dermatoses secondary to immunotherapy are morphologically similar to these eruptions in circumstances that lack inciting immunotherapy trigger</td>
<td>-For cases presenting as Sweet’s syndrome, AGET and intracorneal drug eruption time to onset was approximately 9 weeks -Cases of PG and bullous lupus presented approximately 16 weeks after initiating therapy</td>
<td>-Sweet’s syndrome eruptions have been treated successfully with systemic CS and immunotherapy dose interruptions -TCS and systemic CS, with and without dose adjustment, have been utilized for AGET, intracorneal drug eruptions, and bullous lupus -For cases of PG, TCS, systemic CS, intrallesional CS and infliximab have been utilized -Cases of Sweet’s syndrome have been reported secondary to ipilimumab</td>
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<td></td>
<td>-Sweet’s syndrome</td>
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Dermatologic adverse events from immune checkpoint inhibitors

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Dermatologic Adverse Events

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<td>Psoriasiform</td>
<td>Well-defined, scalp, erythematous plaques on the trunk and extremities</td>
<td>0-3 weeks after treatment initiation is common, however, cases have been reported after 3 weeks</td>
<td>High potency TCS, vitamin D3 analogues, and narrowband ultraviolet B therapy are commonly used</td>
<td>Eruption has been shown to correlate with positive tumor response in melanoma patients</td>
</tr>
<tr>
<td>Severe Cutaneous Adverse Reactions (SCAR)</td>
<td>SCARs may manifest similarly to a maculopapular rash initially or may present immediately with blister formation, Nikolsky signs, mucosal ulceration, fever, or cutaneous pain</td>
<td>Cases have been reported within 1-20 weeks of initiating therapy, however, the majority have occurred in the first 4 weeks</td>
<td>Immunotherapy should be discontinued immediately and patient should be hospitalized for systemic treatment</td>
<td>Mortality rate is 10% for SJS, 30% for SJS-TEN, and 50% for TEN</td>
</tr>
<tr>
<td>Granulomatous Reactions</td>
<td>Subcutaneous nodules or indurated papules and plaques</td>
<td>Typically occurs within 12 weeks of initiating therapy</td>
<td>Systemic CS</td>
<td>In many cases patients go on to develop systemic granulomatous disease</td>
</tr>
<tr>
<td>Lupus Erythematosus</td>
<td>Presentations include: erythematous papules and plaques, annular papulosquamous plaques, bullous eruptions, and reactivation of discoid lesions</td>
<td>4-34 weeks</td>
<td>TCS, systemic CS and hydroxychloroquine have all been utilized</td>
<td>Lupus erythematosus and lichenoid reactions may be difficult to distinguish clinically and histologically. Therefore, it is recommended immunofluorescence be performed. Anti-nuclear antibodies may be absent.</td>
</tr>
<tr>
<td>Hair Effects</td>
<td>Alopecic patches are most common</td>
<td>3-6 months after initial dose</td>
<td>Intralesional triamcinolone and clobetasol foam are often used to treat alopecic patches</td>
<td>Hair regrowth may manifest with SD and alopecia. Appropriate work-up should be performed to rule out other causes of alopecia. Of note, PD-1 expression is believed to contribute to the immune privilege of hair follicles. Therefore, use of anti-PD1/PD-L1 therapy may result in follicular inflammation.</td>
</tr>
<tr>
<td>Mucosal Effects</td>
<td>Nonspecific stomatitis, mucosal inflammation, periodontal disease, and lichenoid reactions have all been reported</td>
<td>Median onset 3 weeks</td>
<td>TCS and lidocaine are often utilized</td>
<td>Xerostomia and lichenoid reactions are most common. Mucositis has been associated with risk of gastrointestinal immune-related adverse event including gastroenterocolitis. The differential diagnosis of candidiasis should be kept in mind for individuals who may be treated with CS</td>
</tr>
</tbody>
</table>

*CS: corticosteroids  
*TCS: topical corticosteroids  
*BSA: body surface area  
*ADL: activity of daily living  
*AE: Adverse effect  
*CPI: Checkpoint inhibitor  
*AGEP: Acute generalized exanthematous pustulosis  
*PG: Pyoderma gangrenosum  
*DRESS/DIHS: Drug rash with eosinophilia and systemic symptoms/Drug induced hypersensitivity syndrome  
*EM: Erythema multiforme  
*SJS: Stevens-Johnson syndrome  
*TEN: Toxic epidermal necrolysis

References
Infantile Hemangioma (IH)

**Risk factors**
- Caucasian
- Female
- Higher maternal age
- Prematurity
- Low birth weight
- Multiple gestation
- Placental insufficiency
- Chorionic villus sampling
- Not fully elucidated.
- Theories include: vascularogenesis & angiogenesis
- 1 VEGF signalling → endothelial cell proliferation
- Expression of placenta-associated vascular antigens (GLUT1)
- Hypoxia → GLUT1 & VEGF mobilization of endothelial progenitor cells
- Genetic associations: VEGFR2, ANTXR1, loss of heterozygosity of Sq

**Clinical types**
- Superficial (50-60%, most common)
  - Superficial dermis
  - Strawberry plaque with finely lobulated surface
- Deep (15%)
  - Deep dermis / subcutis
  - Warm, ill-defined light blue-purple mass with minimal or no overlying skin changes → high flow by doppler during proliferative phase
- Mixed (25-35%)
  - Well-delineated red vascular plaque overlying larger, poorly circumscribed violaceous or light blue nodule

**Patterns of involvement**
- Focal
  - Multifocal: if ≥5 lesions are present → must rule out extracutaneous hemangiomas (liver most common site for visceral involvement)
- Segmental: plaque-like hemangioma covering a developmental unit → must rule out extracutaneous anoma lies
- Indeterminate

**Natural history**
- Subtle IH precursor lesions may be present at birth, but well-formed lesions usually not noted until a few weeks of life
- Early proliferative phase: rapid increase in size, most rapid from 5-8 weeks, 80% reach final size by 3 months
- Late proliferative phase: continued slower growth
- Plateau phase
- Involution phase: gray-purple color change, surface flattening, may begin as early as 1st year of life, median age of complete involution is 36 months, may not fully involute, may leave behind atrophic fibrofatty plaque or telangiectasias

**Syndromes associated with segmental hemangiomas**

**Phacomatoses**
- Posterior fossa & other brain malformations: Dandy-Walker, cerebellar hypoplasia
- Craniofacial hamangiomas: segmental (face & neck)
- Arterial abnormalities: cervical & cerebral artery aplasia, dysplasia, aneurysms (*terebrovascular anomalies = most common)
- Cardiac defects: aortic arch abnormalities, VSD, ASD
- Eye abnormalities: retinal vascular anomalies, optic nerve hypoplasia
- Sternal defects & supraventricular raphe

**LUMBAR**
- Lumbosacral/Lower body hemangioma & Lipomas or other cutaneous anomalies (“skin tags”)
- Urogenital anomalies
- Myelopathy (spina bifida)
- Bony deformities (hip dysplasia, leg length/width discrepancy, scoliosis)
- Anorectal anomalies (anal atresia, imperforate anus) & Arterial anomalies (lower limb stenosis, dysplasia)
- Renal anomalies (hypoplastic, single, pelvic kidney)

**Congenital hemangiomas and hallmark features that differentiate them from infantile hemangiomas**
- Fully formed at birth
- Pathophysiology: Most have mutation in NGN2 or GNA11
- Doppler: dense vascularity, fast-flow
- Rapidly involuting congenital hemangiomas (RICH): rapidly involute in first year of life
- Non-involuting congenital hemangiomas (NICH): do not involute, grow proportionately with child, may be painful
- Partially involuting congenital hemangiomas (PICH): intermediate form, undergoes partial involution
- Pathology: Negative GLUT1 and Lewis Y antigen

**References**
Inaccessibility (i.e., affordability, insurance coverage, geography, language, and availability of specialty services) remains a leading cause of health care disparities around the world, including Nebraska. At the University of Nebraska Medical Center this is precisely the problem we are working on solving through innovation and collaborative partnerships.

Our team of dermatology residents and fellows are passionate about bringing accessible dermatologic services for the uninsured patient population in Omaha. Recently, Elizabeth Mata, BS (M3 dermatology research fellow), Elliot Blue, MD (post-doctoral research fellow), Kristie Hayes, MD, FAAD (director of DEI), Karle Olnes, MBA, (rockstar DEI champion), and I teamed up to foster a collaborative partnership with UNMC’s student-run “Sharing Clinic.” Our goal is for volunteer faculty, residents, and medical students to staff a free skin clinic once a month either in person or via e-consults to provide dermatologic services to patients within the Sharing Clinic. We believe this partnership will provide diverse clinical exposures and impart invaluable educational opportunities for our trainees. Specifically, medical students will benefit from a hands-on volunteer experience with a unique patient population that will expose them to the challenges of treating dermatologic health disparities in uninsured patients. We hope this opportunity will not only provide early dermatology exposure to our students, but also instill a passion for caring for the underserved.

At UNMC Dermatology, we believe in fearlessly innovating and we strive to serve our urban, rural, and underserved communities through leading-edge patient care with a team-based approach. Although we are the new kids on the block, we bring with us new perspectives and innovative approaches to patient care, and we are just getting started! DR
Social media has taken the world by storm, and the medical community is no different. Many of us have likely met patients who presented to clinic with questions about a treatment or skincare regimen they saw on a social media platform. I must admit, as someone who has resisted the social media craze, this used to irk me. However, I have come to realize that social media has the potential to bring extraordinary benefit to patients and physicians.

Many social media platforms have highlighted individuals living with dermatologic conditions to raise public awareness about these conditions and thus destigmatize them. Furthermore, social media acts as a catalyst for many patients, particularly young patients, to seek medical care. As physicians, we would be remiss to not utilize these opportunities to engage and educate interested patients!

For dermatologists in training, social media can also be a valuable educational tool. I know many of my co-residents utilize social media to hear about upcoming virtual educational opportunities, and even to engage with leaders in the field. This has been especially important over the past year when many conferences and educational and networking opportunities have transitioned to virtual or hybrid platforms. Additionally, many residency programs have taken to social media to showcase their program and what makes it unique. I always love seeing my friends at neighboring institutions highlighted on their program’s Instagram. I imagine that for medical students trying to learn about numerous programs, social media is a great way to see what each program values and the culture they create. The ability to effectively engage with others via social media is likely to remain a valuable networking tool beyond the days of the dreaded COVID-19 pandemic. Furthermore, as many of us finish training, social media will become an important educational and marketing tool to be able to leverage.

While social media is a quick and convenient way to communicate, it is important to remember many of the principles highlighted by Daniel Shay, Esq., in this issue’s feature article. While we may have the best intentions, seeking feedback on a case via a social media platform is a clear violation of HIPAA. Thankfully, many organizations are working on HIPAA-compliant ways in which physicians can communicate about challenging cases. I am grateful for the important reminders about appropriate use of social media in this issue’s feature and am excited to see how social media can continue to enhance education and meaningful mentoring relationships within the field of dermatology! DR