

## SOCIAL MEDIA & RADIATION ONCOLOGY



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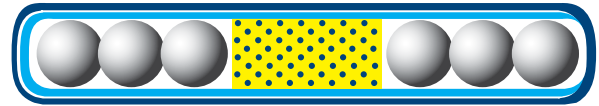
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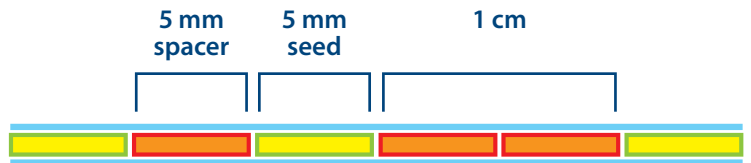
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# ASTRO news

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## SOCIAL MEDIA, APPS AND APIS

### GREETINGS FELLOW ASTRO MEMBERS!

Facebook, Twitter,  
Snapchat, Instagram.  
Four names that  
signify a phenomenon

that has swept the world and occupies a significant share of our waking hours. Social media has long ceased to be just a great way to waste time and has become one of the most intense forms of engagement. How can social media be used in the practice of radiation oncology—and how can the obvious pitfalls be avoided? Hopefully this issue will shed some light on that.

Consider this: Facebook has surpassed 1.6 billion users, a fifth of humanity<sup>1</sup>. The new generation of tools and applications fosters user-generated content, social interaction and real-time collaboration. It's estimated that nearly 90 percent of physicians use social media for personal use and more than 65 percent for professional purposes<sup>2</sup>. Coupled with the strong presence of patients on social media, it's inevitable that these platforms will play a role in modern medicine—a view that's not without controversy.

But what would it look like for doctors and patients to interact online—beyond the exam room? One big benefit would be improving the health care provider-patient interaction in a dynamic environment, thereby enhancing patient access and experience, which would hopefully lead to improved health outcomes. There is currently a heightened emphasis on extending care in the community through improved communication with patients and families to foster team-based care. Social media can provide unprecedented opportunities for cost-effective, two-way communication, cutting down on unnecessary clinic visits and investigations. With the current focus on alternate payment models, such interactions could be built into the total cost of care, so that the payment structures incentivize these common-sense options.

Despite the potential benefits, it's not surprising that there's wariness. After all, social media seemingly prizes sharing, openness, transparency and informality—values that can be at odds with the concepts of privacy, consent and confidentiality that form the bedrock of our professional culture. Moreover, the business model of data monetization (i.e., targeted ads) gives us further pause. The more that these platforms know about their users, the more they can specifically target ads to increase their own bottom lines.

For social media to migrate from general-purpose engagement to professional practice, several things need to happen. Platforms need to become bulletproof in terms of security, ensuring that doctor-patient confidentiality is impregnable. They also need to be robust enough to withstand attack from the many threats that loom in cyberspace—including identity theft, malware and spammers. Another danger is the proliferation of bad information, which, at times, seems to disseminate at warp speed from all sorts of apps and websites. It should be said that social media platforms are trying to address these issues, but there's some way to go.

In the here and now, though, we look at how social media can be used to better our practice. Our in-depth examination opens with Managing Editor Leah Kerkman Fogarty explaining why the benefits of being on social media outweigh the risks. One example: Social media helps physicians stay abreast of the latest developments, aiding ongoing education.

Sushil Beriwal, MD, provides a snapshot of some radiation oncology-related platforms that are “helping to spread knowledge throughout the field of radiation oncology—and beyond.” They are well worth looking into: The Red Journal's Gray Zone, Chartrounds.com, Radiation Nation and theMednet.org. These social media channels can be used to share thoughts and ideas regarding clinical queries, engage in a Twitter conference with colleagues and trainees and observe and engage in ongoing discussions with subject experts. Wondering whom to follow? Take a look at our listing

of radonc Twitterati. ASTRO Associate General Counsel Amy Nordeng, JD, explores the ins and outs of engaging online while protecting the privacy of patients. When the Health Insurance Portability and Accountability Act (HIPAA) was created in 1996, the internet as we know it was still in its infancy. Although HIPAA has been updated over the past two decades, it is critical that it evolve in lockstep with rapid changes in technology.

Among the thousands of medical apps that are released every year, there are a few that are geared toward radiation oncology. One of them, the RadOnc Toolbox, was developed by Malolan Rajagopalan, MD, MBA, backed by Radiation Oncology Institute funding. This includes evidence-based symptom pathways for eight of the most common radiation side effects and will be a great resource for practitioners when the app version is released. Right now, you can access it online at [rotoolbox.com](http://rotoolbox.com).

Where do we go from here? Wouldn't it be great to have the most updated TNM staging, all national guidelines, open clinical studies, etc., in one mobile app? Even better, we could make health care data, including electronic health records (EHRs), available for third-party applications. Imagine patients having easy access to their own data to make more informed choices. Health care providers could be empowered by innovative user interfaces and analytics platforms that could support their clinical decision making. That would require open application programming interfaces (APIs), which are programming routines or protocols that allow software applications to share data.

These are commonplace in internet-based businesses but have progressed slowly in health care, because the sector lacks the robust APIs and app developer programs common in other industries<sup>3</sup>. But that could change soon. The recent passage of the 21st Century Cures Act, which ASTRO strongly supported, contains sweeping bipartisan legislation intended to advance the research and development of new therapies and diagnostics by making substantial federal investments in a wide range of health care priorities.

It also moves interoperability to the frontlines and stipulates that a year from now, open APIs will be necessary for EHR system certification. This is expected to drive further growth in the app ecosystem<sup>4</sup>. Some in radiation oncology are not waiting for these legislative mandates to kick in. Strolling through the Exhibit Hall



at the 2016 ASTRO Annual Meeting in Boston, I came across companies that are taking the initiative to build these much-needed APIs and develop platforms that seamlessly integrate with department oncology information systems, allowing them to deploy their apps quickly and across multiple platforms and devices. This holds the promise that radiation oncologists can manage their patients in more dynamic circumstances with information at their fingertips.

There is an adage, often attributed to Thomas Jefferson, that advises, "In matters of style, swim with the current; in matters of principle, stand like a rock." A balance must be struck as social media is an avenue through which a torrent of information is flooding through. The endeavor should be to securely harness this massive resource for the greater good so that it improves medical care without compromising the bond of trust with the patient.

Enjoy!

*Dr. Mohideen is the senior editor of ASTROnews and attending physician of the Department of Radiation Oncology at Northwest Community Hospital in Arlington Heights, Illinois. He welcomes letters to the editor at [astronews@astro.org](mailto:astronews@astro.org).*

## References

- <sup>1</sup> <http://www.internetworldstats.com/facebook.htm>
- <sup>2</sup> Modahl, M.; Tompsett, L.; Moorhead, T. (Accessed February 28, 2017) <http://www.quantiamd.com/q-qcp/DoctorsPatientSocialMedia.pdf>
- <sup>3</sup> Robert S. Huckman, Maya Uppaluru. "The Untapped Potential of Health Care APIs," Harvard Business Review (Accessed Feb 28, 2017) <https://hbr.org/2015/12/the-untapped-potential-of-health-care-apis>
- <sup>4</sup> <https://www.congress.gov/bill/114th-congress/house-bill/6>



## SPEAKING OF REVOLUTIONS...

WE HAVE LIVED THROUGH MANY REVOLUTIONS in the practice of radiation oncology. Some have been technologic. The introduction of Cobalt-60, the linear accelerator and intensity-modulated radiation therapy as tools in the fight against cancer stand as mileposts along a journey that traces its source back to the first medical use of radium in an era of gas lamps. There have been similar revolutions in the area of health economics with a periodic rethinking of how patients, or more recently, third parties and society, pay the doctor. We have seen biologic revolutions with the development of combined modality drug and radiation combinations and altered fractionation schemes, including stereotactic body radiation therapy, that are rapidly changing our workflow.

A similar revolution has taken place in how we communicate with each other and with the outside world. We call it social media and each one of us uses it—or completely ignores it—in different ways. Some of those differences are generational and some are just based on experience with the medium. There has been a paradigm shift with winners and losers in business. We receive our news and information in new ways. We hear from family and friends in new and different ways. In fact, what it means to be a “friend” has changed.

So it should come as no surprise that the subject is being explored in this issue of the *ASTROnews*. Social media has already changed radiation oncology in many ways: how we share knowledge with each other, how we communicate with patients and advocacy groups and even how we learn of proposed changes in the Medicare program.


There is a small but engaged community of us with these online relationships. I have studied, in real time, data slides from presentations or posters at meetings that I did not attend. I have been a small part of online journal clubs discussing the latest Red Journal article. I have developed new online relationships; I have expanded my horizons and I have wasted an incredible amount of time.

In the November 2016 issue of *The Atlantic* is a thoughtful analysis entitled “War Goes Viral: how social media is being weaponized across the world.”

This article contains some surprising descriptions of the role these sites play in fomenting unrest and, not only uniting likeminded individuals, but also aiding in the activities of true revolutions that are not mere metaphor, but creating war zones across much of the world. Campaigns in the past few U.S. presidential elections have used social media, but none as extensively and effectively as the current occupant of the White House.

Radiation oncology in social media is small. How it works for us, and in our world, is still unclear. Peter Bray, a social media analyst cited in *The Atlantic* article, tells us that in the larger internet universe, the average tweet reaches the peak of its popularity a mere 18 minutes after it is posted. I may not check my account every few minutes, but do our tweets ever really go viral? Clearly what it means to be a group, hashtag or follower will be different in radiation oncology than for much of the world, but this is a space that is changing the world and we need to engage it in ways that not only change but enhance our corner of the social media landscape.

This winter, the ASTRO Board of Directors spent two days creating a new strategic plan to guide our future agenda. We heard from many members who shared their time and insights, and took to heart the diverse needs of the specialty. I will speak more about this later, but one point that repeatedly came out of that effort was the general lack of recognition of the central role of our specialty among our professional colleagues, among the general public, in the awarding of cancer research funding and in the creation of various alternative payment models.

Today we begin just one small, but important, part of that conversation. How do radiation oncologists interact with each other through social media? How do we interact with the outside world, including patients, through this medium? What do our patients want to see from us that we may not yet be giving them? Perhaps this revolution will begin with a hashtag. 



# SOCIETY NEWS

## ASTRO joins forces with CancerLinQ™

ASTRO is partnering with CancerLinQ™ LLC, a nonprofit repository of oncology patient information, to bring radiation oncology expertise to CancerLinQ and improve the care of cancer patients nationwide. ASTRO will provide guidance for the development of the CancerLinQ platform to ensure that the system captures more relevant patient data to drive actionable decision-making in cancer care, as well as to advance public policy and population health issues. ASTRO also will use insights from CancerLinQ Discovery™ to improve the care of patients receiving radiation therapy.


Important details about radiation dose and treatment schedule are often absent from the electronic health record systems used in many oncology practices. Through the partnership, experts will develop specialized indicators for radiation-related treatment outcomes and quality that can be incorporated into the CancerLinQ platform. Inclusion of these metrics will provide a much more complete and accurate characterization of the cancer care that patients are receiving, particularly for the many situations where radiation and chemotherapy are combined.

“The addition of the nation’s radiation oncologists is essential to ensuring CancerLinQ’s capacity to improve patient care and can help both organizations achieve outcomes that are larger and more impactful than what either one could have achieved alone,” said Kevin Fitzpatrick, chief executive officer of CancerLinQ

LLC. “With ASTRO, we are bringing the expertise of the nation’s leading physicians who specialize in treating more than one million patients each year with radiation therapy.”


The partnership reflects CancerLinQ’s goal to create a system that encompasses all of cancer care by bringing together expertise from throughout the cancer community, as well as ASTRO’s mission to improve patient outcomes through research and education.

“With the number of cancer patients rising each year, collaboration across the spectrum of cancer care has to be our reality rather than our goal,” said Laura Thevenot, chief executive officer of ASTRO. “By combining ASTRO’s domain-specific knowledge with CancerLinQ’s broad reach, we can help physicians and their patients be more informed as they navigate complex treatment decisions.”

In addition to the radiation oncologists, CancerLinQ LLC—a wholly owned nonprofit subsidiary of the American Society of Clinical Oncology (ASCO)—is forging important strategic alliances with national leaders and organizations that play important roles across the entire care continuum that support high-quality care for patients, including professionals representing the entirety of the care team, government agencies, academic research institutions, life sciences, technology experts and advocacy organizations. 

## The ASTROblog seeks contributors

For timely updates about topics impacting the field of radiation oncology, be sure to visit our ASTROblog at [www.astro.org/astroblog](http://www.astro.org/astroblog). We are frequently posting news about upcoming meetings, new research and health care policy, so check in often or subscribe to the ASTROblog via your favorite RSS aggregator, such as Feedly.

ASTRO is looking for contributors to the blog, which can be accessed from the ASTRO website. We are seeking experts to write blog posts about what they see as the biggest issues facing radiation oncologists and medical physicists. If you are interested in writing a guest blog post for the ASTROblog, please email your ideas to [barbara.moody@astro.org](mailto:barbara.moody@astro.org). 





## 2017 ASTRO Radiation Oncology Research Agenda

BY ASTRO SCIENCE COUNCIL, [RESEARCH@ASTRO.ORG](mailto:RESEARCH@ASTRO.ORG)

Curing cancer and maintaining high quality of life for patients with cancer are the foremost goals of those in radiation oncology. Today, because of the tremendous advances made in cancer research, we understand more about cancer than ever before. Cancer is not just one disease, but rather it is more than 200 different diseases. Recently, research in genomics, proteomics and immunology have provided a greater understanding of how cancer grows and spreads—and how it can be stopped. Improvements in technology and therapy have led to improved outcomes and patient care with precision targeting of treatment and a reduction in toxicity and detrimental side effects. But we are not done. More research is necessary.

As we uncover more about the complexities of disease, we understand how to better use combinations of the techniques and technologies we already have to improve care. Yet there are still many unanswered questions, so ASTRO's Science Council has outlined five key research areas for the radiation oncology field.

### 1. Genomic influences and targeted therapies

Precision medicine is redefining treatment options and treatment regimens for patients. More and more, patients receive treatments based on the profile of their disease (e.g., genomics of the tumor, location or morphology). Understanding both how changes in the genome could alter radiation treatment effects and how radiation alters the genome will have large impacts on cancer therapy. Learning how to best use genomic tools in radiation therapy will lead to better patient outcomes.

### 2. Immunotherapy and combination therapies

For some tumors, treating with one modality is not enough. Combinations that include multiple modalities (radiation, surgery, chemotherapy, targeted therapy and immunotherapy) provide the best option for success. There is still much to learn about which combinations are most effective for any given tumor. New data are emerging that radiation in combination with chemotherapy or

immunotherapy provides a much safer and longer lasting solution to eliminate cancer growth and metastasis.


### 3. Tumor microenvironment, normal tissue effects and reducing toxicity

The environment in which the tumor lives can have a large impact on tumor growth and metastasis and may alter responses to therapy. Understanding the influence of the tumor microenvironment, how the immune system controls tumor growth (the abscopal effect) and the impact of metabolism on radiation therapy outcomes is necessary to improve treatment efficacy and patient outcomes. Likewise, the study of radiation effects on normal tissue and on tissue vascularization will provide better understanding of how to eliminate or avoid toxicities.

### 4. Imaging and emerging technologies

Visualizing a tumor and accurately delivering radiation to the tumor site with better efficiency while avoiding damage to adjacent normal tissues is the goal of every radiation oncology treatment. Improving technology and treatment modalities that increase the efficacy while decreasing the toxicity to normal tissues is a primary area of research focus.

### 5. New clinical trial design and big data

Mutations found in each tumor are making individualized treatment options more common. This is changing the traditional format of clinical trials and bringing into question traditional sample sizes. Identifying new clinical trial designs and methods to utilize this new information while maximizing patient safety is a necessary focus. In addition, collecting, processing, storing and presenting clinical data on previously treated patients in a learning health system environment will be a powerful tool in our path toward precision medicine. 



**First row, left to right:** Ken Knudson, Augmenix; Ron DiGiaino, Revenue Cycle; Deborah A. Kuban, MD, FASTRO; Peter Rossi, MD; Michael Fiore, McKesson Heath Solutions.  
**Back row, left to right:** John Lefkus, RAD Technology Medical Systems; James Hoey, Elekta; Nat Geissel, CIVCO Radiotherapy; Kolleen Kennedy, Varian Medical Systems; Bruce D. Minsky, MD, FASTRO; Raymond Riddle, Standard Imaging


## Four companies elected to ASTRO's Corporate Advisory Council

ASTRO's Corporate Membership has elected four companies to serve on the 2017 Corporate Advisory Council (CAC): Ion Beam Applications (IBA), Qfix, RaySearch Laboratories and Xstrahl. They join eight other companies on the CAC.

Through a synergistic relationship between ASTRO and its corporate members, the Council focuses on issues and initiatives of mutual concern in radiation oncology to increase awareness of radiation therapy and advance the science and practice of cancer treatment and patient care. Together with ASTRO leadership, the Council convenes several times a year via conference call and holds an in-person meeting at ASTRO's Annual Meeting. Discussion topics have included a report on the status of research within the science community and strategic steps to increase collaborations in research, plus updates on the ASTRO Accreditation Program for Excellence (APEX®), RO-ILS: Radiation Oncology Incident Learning System®, Qualified Clinical Data Registry (QCDR), the Radiation Oncology Institute and the recent ASTRO member survey results.

The Council is a smaller, representative group of the corporate membership-at-large, with a proportional mix from the corporate membership base. Seats on the Council are held by high-level decision makers within

the corporations and are equally balanced between large and small corporations to represent a broad cross-section of the industry.

All corporate members can nominate their companies to serve on the Council. Nominations are accepted every fall with elections conducted during the winter. For more information about the Council and/or Corporate Membership, please contact Joanne DiCesare at [joanne.dicesare@astro.org](mailto:joanne.dicesare@astro.org) or 703-839-7398. 

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Xstrahl Ltd.	Adrian Treverton	2019

## Immunotherapy and the role of radiation oncology: a workshop

BY PHUOC TRAN, MD, PHD, GEORGE WILSON, PHD, AND JUDY KEEN, PHD

Treatment of cancer is ever-changing. New agents, such as immuno-oncology drugs, most notably checkpoint inhibitors, are transforming clinical care and the role of radiation therapy within it. Public awareness of these advances continues to grow. Indeed, immunotherapy has gained recent public attention from select high-profile patient cases, such as former President Jimmy Carter and his treatment for metastatic melanoma with immunotherapy along with stereotactic radiosurgery.

But what is immunotherapy and why should we in radiation oncology care? To answer that question, ASTRO, in collaboration with the Society for Immunotherapy of Cancer (SITC) and the National Cancer Institute (NCI), is hosting the Immunotherapy Workshop: Incorporating Radiation Oncology into Immunotherapy, being held June 15–16, 2017, on the National Institutes of Health (NIH) campus in Bethesda, Maryland.

Under the leadership of workshop chairmen, Drs. Phuoc Tran and George Wilson, and with help from SITC representatives Silvia Formenti, MD, FASTRO, and Sandra Demaria, MD, members of both the radiation oncology and immunology communities are gathering at NIH to discuss the role and future of radiation oncology in immunotherapy.

### What is immunotherapy?

Immunotherapy (IMT) broadly refers to harnessing the power of the body's immune system to fight disease. Cancer IMT (CIMT) seeks to understand how the immune system can be used to modify cancer cells and their activities toward better clinical outcomes. CIMT has realized some early promises with the introduction of new agents and cell-based therapies resulting in remarkably durable clinical results.

### What are the major challenges facing cancer immunotherapy?

CIMT is a true paradigm shift in the treatment of cancer patients with some hailing IMT as the fifth

pillar of modern day cancer therapy. CIMT may prove to be more significant than any other form of treatment for metastatic cancer patients, as some reports have surfaced of IMT inducing complete and long-lasting tumor regression. This is in stark contrast for most metastatic solid tumors where surgery, radiation therapy, chemotherapy and even targeted pathway inhibition with small molecules are generally not curative. However, there are still hidden complexities and considerable challenges to be addressed before the promise of CIMT can be realized.

Major challenges for CIMT are the relatively small frequency of patients that respond to single-agent IMT, how to rationally design IMT combinations among the dizzying array of novel options, the lack of reliable biomarkers to predict patient response and emerging acquired resistance mechanisms that, as of yet, remain largely unknown. Another major challenge for CIMT, and for oncology in general, are the health economics surrounding these emerging therapies and how the payer systems will handle the ever-skyrocketing cost of these novel agents.

### What is the impact of cancer immunotherapy on radiation oncology?

Unlike CIMT, which is an emerging treatment for cancer, radiation therapy is a stalwart pillar of cancer therapy. The field of radiation oncology has vigorously demonstrated the curative benefits of improved local control in localized and even locally advanced cancers. In the metastatic setting, radiation therapy also plays an important role for local palliation.

The far-reaching impact of incorporating radiotherapy with CIMT is still unknown. The early data from combinations of radiation and CIMT suggest an avenue where the radiation oncologist can have a potentially curative influence in the metastatic space by elaboration of the formerly elusive abscopal effect. Radiation therapy has multiple immune stimulatory properties; for example, radiation-induced cell death




can be very immunogenic. Radiation can also increase T cell infiltration into tumors. It can further increase priming of anti-tumor T cells.

However, radiation also has a number of potentially immune-suppressive effects and, in addition, most solid tumors have well-developed barriers to establishing an effective systemic anti-tumor immune response. There are several ongoing preclinical and clinical initiatives addressing both radiation and CIMT. Therefore, with the current CIMT surge and potential impact for identifying and finding novel solutions to overcoming these immune-suppressive barriers, the attention on

how to best combine radiation therapy and CIMT has never been more important or timely.

The marriage between radiation and CIMT agents is still in its infancy but it is an area of great promise and stands to change the longstanding reach of radiation as an exclusively local therapy and extend it to the systemic space. This significant shift will only happen if we can understand how to best combine radiation with CIMT.

For more information about the meeting, or to register visit the Immunotherapy Workshop website at [www.astro.org/immunotherapyworkshop](http://www.astro.org/immunotherapyworkshop). 


## Updated guideline reaffirms radiation therapy as the gold standard in treating bone metastases

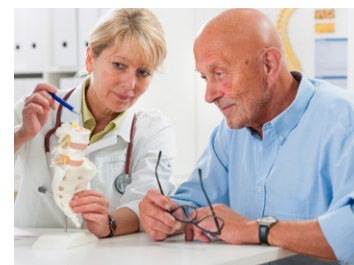
ASTRO recently published an updated clinical guideline for the use of palliative radiation therapy (RT) to treat painful bone metastases. Based on recent clinical trial data, the guideline recommends optimal RT dosing schedules for pain relief, including options for retreatment. The guideline, “Palliative radiation therapy for bone metastases: Update of an ASTRO Evidence-based Guideline,” is available as a free access article in *Practical Radiation Oncology*, ASTRO’s clinical practice journal.

The updated guideline maintains the four previously recommended dosing schedules for external RT to treat previously unirradiated tumors: a single 8 Gray (Gy) fraction of RT; 20 Gy administered in five fractions; 24 Gy in six fractions; or 30 Gy in 10 fractions. Research indicates that patients experience similar pain relief and toxicity rates with each of the fractionation options. Although clinical trials have cited higher retreatment rates for patients who received single-fraction RT, the convenience of this option may make it the optimal choice for patients with limited life expectancy.

Greater adoption of the single-fraction approach—which requires only one visit—also may reduce the disparity between the number of patients who would benefit from this therapy and the markedly smaller number who actually receive it. Surveys<sup>1</sup> of palliative

care professionals indicate that the vast majority consider RT an important and effective component of hospice care but do not actually refer many of their patients for the therapy. In one study<sup>2</sup>, for example, 88 percent of hospice professionals said that painful bone metastases merited referral for palliative RT, but only three percent of hospice patients nationwide actually received the treatment. Barriers including cost, transportation and length of treatment were cited as key reasons for underutilization.

“Decades of research and many clinical trials have established that radiation therapy can provide safe, effective and quick pain relief for patients suffering from bone metastases,” said Stephen Lutz, MD, FASTRO, chair of the task force that developed the guideline update and a radiation oncologist at Blanchard Valley Regional Health Center in Findlay, Ohio. “Moreover, this relief can be achieved in as little as a single fraction, which alleviates the additional burdens of time, travel and cost for the patient.” 



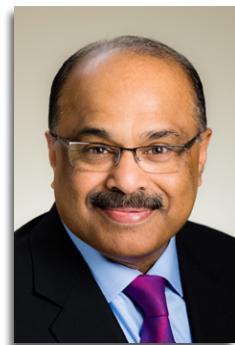
### References

- <sup>1</sup> <https://www.ncbi.nlm.nih.gov/pubmed/17476142/>;  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4707009/>
- <sup>2</sup> <https://www.ncbi.nlm.nih.gov/pubmed/15337808/>



## *with ASTROnews Senior Editor* **Najeeb Mohideen, MD, FASTRO**

Meet the incoming editor and learn of his goals for the magazine, mentoring and M.I.A.



**ASTRONEWS WELCOMED** its new senior editor, Najeeb Mohideen, MD, in October 2016. Dr. Mohideen, attending radiation oncologist at Northwest Community Hospital in Arlington Heights, Illinois, is a longtime ASTRO member and was named an ASTRO fellow in 2014. Previously, he has served as Chair of ASTRO's Health Policy Council and on the Board of Directors, and volunteered on numerous committees. Here, *ASTROnews* managing editor Leah Kerkman Fogarty talks with Dr. Mohideen about his new venture and his plans for the future.

### **You're heading into your 18th year of membership with ASTRO. Tell us a bit about how—and why—you've been involved with the Society for so long.**

I became an ASTRO member in 1998 soon after completing my residency and joining Loyola University Medical Center. The then-Department Chair, Bahman Emami, MD, FASTRO, encouraged me to do committee work and so I volunteered. I began with one of the Health Policy subcommittees under the Joint Economic Council of ASTRO and the American College of Radiology (ACR). The work was interesting and important and I was soon hooked by that and the dedicated passion and vision displayed by the volunteer leaders—like Mike Steinberg, Paul Wallner, Tim Williams, Lou Potters, David Beyer and others. Most importantly, they also took the time to help mentor young physicians. I take that lesson about paying it forward to this day, and experiences such as this have always kept me motivated to stay involved in ASTRO.

### **As the new senior editor of *ASTROnews*, what are some of your primary goals for the magazine?**

I would like to help improve communication between ASTRO leadership (i.e., the Board of Directors, the Committees and ASTRO staff) and the membership. We also plan to highlight emerging trends and notable successes within our field. Furthermore, we will also try

and foresee potential challenges to our profession and look to how they could lead to opportunities. Finally, we want to open the magazine up to input from the membership in order to learn what needs our members would like addressed within these pages. I welcome reader comments via email to [astronews@astro.org](mailto:astronews@astro.org).

### **What made you interested in taking the helm of the magazine?**

It's a great opportunity and a new challenge for me. The decision by the Board of Directors to offer both print and digital editions gives us an increased readership and consequently, exposure for all published articles. The challenge will be on the editorial board, staff and myself to ensure that we are on our A game to keep the stories relevant and interesting.

### **As an attending physician, how does your day-to-day work contribute to your editorship?**

It contributes a great deal. Many of the themes emanate from challenges that our patients and we, as care providers, face in the clinic. For instance, ensuring patient safety, measuring quality, access to treatment, how cost and coverage impact patient management, communicating effectively with patients, disparities in care and deficiencies in current care delivery models and how regulations are impacting our work—these are all issues I deal with directly on a daily basis.

### **What are some of the topics you are excited to cover in upcoming issues of *ASTROnews*?**

I am excited about all of them but I am particularly interested in our current issue theme on social media. Social media has considerably extended the scope for physician and patient interaction. As our technological capabilities expand, there is no doubt that it will become a potent tool for health care in the future. Also, ASTRO has a workforce survey currently out in the field and it will be fascinating to tie that into one of the

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DR. MOHIDEEN WITH HIS FAMILY IN ATLANTA FOR HIS ELDEST SON'S COLLEGE GRADUATION.

future themes which we are considering—the Radiation Oncology Workforce. We also have planned an issue on Radiation Oncology Around the World, which will focus on the different and varying challenges we face globally as radiation oncologists.

## What's the value in a magazine like *ASTROnews*? What do you hope readers take away from each issue?

First off, the content is high quality—a fact that reflects the outstanding scholarship and expertise that exists both within the ASTRO organization and within our field in general. It is my sincere hope that we cultivate a habit of learning about what is going on in other areas of our field. For example, it was an eye-opener for me to learn about the work of our talented researchers in the last edition on New Directions in Radiation Treatment.

## In your downtime, what are your favorite activities and hobbies?

When I'm not working, I enjoy getting outdoors and traveling. My favorite sports are basketball, followed closely by soccer. I am also a keen movie buff and enjoy a wide variety of music and, thanks to my high-school age daughter, I've come to terms with M.I.A. though I can't quite wrap my head around Fetty Wap. 🎧



THEN-CHAIR COLLEEN LAWTON, MD, FASTRO, PRESENTS DR. MOHIDEEN WITH HIS ASTRO FELLOW DESIGNATION IN 2014.



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“The Multidisciplinary Head and Neck Cancers Symposium is the best head and neck cancer meeting as it is truly multidisciplinary and has content that covers everything from practical management to new research and future directions for therapy,” says Katharine Price, MD, and a 2016 attendee of the meeting.

In 2018, this meeting will provide the most up-to-date information on multidisciplinary therapies, the latest clinical research, new treatment strategies, supportive care, scientific breakthroughs and toxicity mitigation.

### Highlights include:

- Keynote speakers addressing timely and relevant topics in head and neck cancer treatment.
- Dynamic sessions focused on the major disease sites with expert faculty providing education.
- The top research presented in oral abstract sessions and a poster reception.
- Interactive and case-based tumor boards.
- Many opportunities to network with colleagues from around the world.

Registration for this meeting will open in mid-August. Visit [www.headandnecksymposium.org](http://www.headandnecksymposium.org) for more information. 

## Submit your news to ASTRO

Every month, ASTRO reports [People in the News](#), featuring updates about your colleagues' awards, promotions, media coverage and other announcements. We encourage ASTRO members to submit items of interest to [communications@astro.org](mailto:communications@astro.org) for inclusion in the online feature.







## Joining the Online Conversation

*The professional benefits of being on social media outweigh the risks*

BY LEAH KERKMAN FOGARTY, *ASTRONEWS* MANAGING EDITOR, [LEAH.FOGARTY@ASTRO.ORG](mailto:LEAH.FOGARTY@ASTRO.ORG)

COMMUNICATION HAS ALWAYS BEEN a cornerstone of doctor-patient care. But in recent years, the ways in which we communicate have shifted. From texting and emailing colleagues to checking Facebook feeds to retweeting the latest research, much of our daily communication is now online.

There can be no denying that this digital revolution has greatly impacted health care. Information that once was only shared from doctor to patient in an office setting can now be googled and accessed online by anyone, at any time. According to a 2013 Pew Research Center study, 59 percent of all adults in the United States had searched online for health information in the past year alone.<sup>1</sup>

“Increasingly, people are using the internet to get health information,” says Matthew Katz, MD, who runs the [Radiation Nation](#) website and [twitter account](#). “Cancer patients deserve an accurate understanding of radiation therapy. We are obligated to ensure they can find what they need.”

Getting clinicians on social media is not the issue—surveys say that physicians are already online and using social media platforms. One study showed that 90 percent of physicians said they used some kind of social media in their personal lives—but only 65 percent reported using social media for professional reasons.<sup>2</sup>

Some posit that physicians are slow to embrace social media in their professional lives because of the possible ramifications of creating doctor-patient relationships online. Read more about how to protect privacy—both for clinicians and patients—in the story “Private Matters” on page 22.

Despite the risks, however, social media is a powerful means of communication that’s here to stay—whether or not radiation oncologists choose to participate.

“Interacting with people with cancer online has improved my ability to take care of my patients,” says Dr. Katz. “You have to watch out to avoid creating a therapeutic relationship, but there’s so much I’ve learned from others online.”

*Continued on next page*

Still not sure? Here are just a few of the benefits of joining the online conversation.

### Keeping current

According to a 2014 study, more than 94 percent of hospitals in the United States have a Facebook page and more than 50 percent have an official Twitter account.<sup>3</sup> These organizations use social media to put out the latest in research and policy, as do the major medical journals in the United States. Radiation oncologists say a primary benefit of using social media is to stay abreast of the latest clinical findings and research.

“The pace of scientific research is increasing, and more journals are coming up and more papers are being published, and it’s hard to keep track of it all,” says Zain Husain, MD, assistant professor of therapeutic radiology and director of the Head and Neck Radiotherapy Program at the Yale School of Medicine. “Social media can act as a crowdsourcing tool to bring up the most important or most innovative papers you may have missed.”

“The beauty of social media is I truly learn something new every day I am on it,” says Dr. Husain. “I will get breaking abstracts from conferences I am unable to attend or see studies that were just published that I would not have otherwise read for weeks or even months.”

Indeed, a great advantage of social media is that it’s accessible around the globe—allowing users to learn about things happening halfway across the world. “I am interested in what is happening in oncology in Europe and Australia and New Zealand and it’s not easy to get this up-to-date information in the United States,” says Sue Yom, MD, PhD, associate professor in the Department of Radiation Oncology at the University of California San Francisco.

“I get information about important meeting presentations, new initiatives by the national societies or new studies that are being launched in those areas of the world mostly through announcements on social media.”

Drew Moghanaki, MD, MPH, a radiation oncologist with the U.S. Department of Veterans Affairs and associate professor at Virginia Commonwealth University’s School of Medicine, is a self-proclaimed Twitter hound. Of the microblogging

website, he says, “From a professional standpoint, social media provides a much better opportunity to keep up with the rapid pace of new information in oncology. One can follow people they trust, who altruistically post information that is almost always helpful.”

Dr. Moghanaki follows more than 15 journals on Twitter and retweets—reposts—relevant studies and findings. In this way, you can, at minimum, monitor what new studies are coming out, rather than use social media to interact. Moghanaki says, “I know many radiation oncologists who have a social media account who use it primarily to read, as opposed to post.”

Chirag Shah, MD, associate staff and director of clinical research at the Taussig Cancer Institute at the Cleveland Clinic, agrees that Twitter and other social media sites are a source for knowledge gathering. “In 2017, social media can almost be considered part of ongoing medical education in the same way we devote time to reading medical journals,” Dr. Shah says.

“If radiation oncology is not on social media, the profession is at a **high risk** of being marginalized and not valued as an important part of American health care.”

### Collaborating and crowdsourcing

But social media, as its name implies, is just as much social as it is media. In other words, many people find the value in communicating online is the ability to debate with others and learn about diverse viewpoints.

After getting your feet wet in the social media pond—or perhaps more accurately, the social media ocean—you can go from being a lurker, which is internet speak for users who read content only, to posting your own questions and comments.

“You can post clinical problems and see what others think. Experts chime in, not usually amateurs,” says Dr. Moghanaki.

Dr. Moghanaki recalls a prospective collaboration that began as a Twitter conversation. “I corresponded with a urologist, and, all of a sudden, we’re on the phone talking about a phase III clinical trial. That would never have happened had we not gotten to know one another over Twitter.”

Resources like [theMednet.org](http://theMednet.org) and [Chartrounds.com](http://Chartrounds.com) are a great crowdsourcing resource for radiation oncologists, says Dr. Husain. “These sites give people an opportunity to ask questions to experts in the field.” For more on these types of social media platforms, read “Learning from the Social Network” on page 19.

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“We all need to do a better job representing our specialty outside of our own siloed departments, and social media is right there for us to make that happen.”

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“I have participated in both the Mednet and Chartrounds and I think both are amazing sites that demonstrate how radiation oncology can use the internet as a platform for education, socialization, training and quality assurance,” agrees Dr. Yom. “Radiation oncology can be a force for good to bring quality content and purpose to the internet.”

### Being an advocate for the specialty

Another aspect of being a force for good, as Dr. Yom says, is using social media to become an advocate for radiation oncology as a specialty.

“From a professional standpoint, social media provides an open forum to directly debate non-radiation oncologists who commonly misinterpret what our specialty has to offer,” says Dr. Moghanaki. “This is an activity that has historically been reserved for experts at medical conferences, but now, with the asynchronous communication available through social media, we can push back and prevent the spread of misinformation.”

Dr. Yom, pointing to the importance that social media played in the 2016 presidential election, says, “Social media is a powerful way to talk to the public and gain influence in government and the public sphere. If radiation oncology is not on social media, the profession is at a high risk of being marginalized and not valued as an important part of American health care.

“Social media is the way that many people learn about the world and form their opinions about what is important,” says Dr. Yom. Indeed, a 2016 Pew Research Center study showed that 62 percent of all adults in the United States have gotten news from social media, most notably from Facebook and Twitter.<sup>4</sup>

### Preventing pitfalls

Of course, there are drawbacks to being active on social media, too. As the term “fake news” has become commonplace, so has the proliferation of misinformation and sensationalism on social media platforms. After all, as Dr. Moghanaki points out, “there is no peer review process to clean up any of the content, and thus it’s important to choose wisely what you post.”

So how do you find the valuable information in the sea of spam, trolls and propaganda? Radiation oncologists who use social media urge those new to

the medium to seek out established accounts they trust to follow, like hospitals and academic institutions; associations and societies; and colleagues. See the sidebar on page 24 for a list of the radiation oncology “Twitterati,” a good place to start to build your social network.

“The downsides are that once you post something, it is out there for the world to see,” says Dr. Shah. “As such, it is imperative for physicians to always read and re-read their posts or comments to make sure they accurately reflect the message they are trying to send.” Certainly, says Dr. Yom, tone can be hard to interpret online and the very nature of social media—its brevity and quick pace—can lead to posts that can come off as abrupt.


“Without the calming influence of interpersonal interaction, the tone of social media can be quite shrill and may sound argumentative and overtly forceful even if the intention was not that,” says Dr. Yom.

Another possible hazard of joining social media is the idea of “FOMO,” or “fear of missing out.” There is always something new—people are constantly updating their accounts—and so it’s possible to spend *too* much time on Twitter if you’re not careful about setting limits.

“I probably spend about 30 minutes on social media daily,” says Dr. Yom. “This is self-imposed because, like many other people, I had phases when I lost hours surfing and being mesmerized by the internet.” Dr. Shah also estimates he spends no more than 15-20 minutes a day on social media, just to get the headlines and see the major news of the day.

Yet, despite its drawbacks and limitations, having an active presence on social media is important for the specialty of radiation oncology, says Dr. Moghanaki.

“There continues to be a very big missed opportunity to help both patients and other specialists learn more about what we, as radiation oncologists, have to offer,” he says. “We all need to do a better job representing our specialty outside of our own siloed departments, and social media is right there for us to make that happen.”

It’s time to join the conversation. 

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### References

- <sup>1</sup> <http://www.pewinternet.org/2013/01/15/health-online-2013/>
- <sup>2</sup> [http://www.quantiamd.com/q-qcp/social\\_media.pdf](http://www.quantiamd.com/q-qcp/social_media.pdf)
- <sup>3</sup> <http://www.jmir.org/2014/11/e264>
- <sup>4</sup> <http://www.journalism.org/2016/05/26/news-use-across-social-media-platforms-2016/>

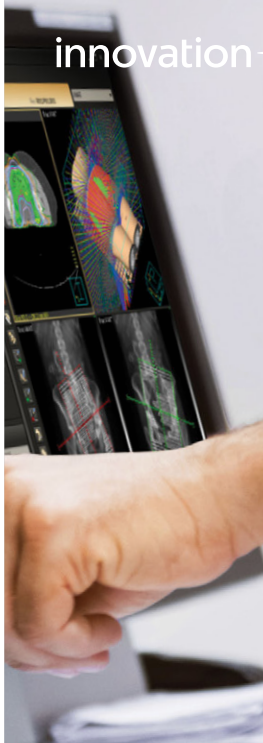


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# PHILIPS



# Learning from the Social Network

*Social media can be used for more than emojis, “likes” and cat videos. These social media platforms are helping to spread knowledge throughout the field of radiation oncology—and beyond.*

BY SUSHIL BERIWAL, MD

THE PENETRATION OF SOCIAL MEDIA into modern society has become a worldwide phenomenon. In 2016, there were more than 1.5 billion monthly active users on Facebook and more than 300 million monthly active users on Twitter, according to *Ad Week*. Social media, which encompasses a variety of web-based and mobile technologies, provides new opportunities for health care professionals and institutions to interact with patients and other professionals. Oncologists may use social media as a platform for patient education, knowledge sharing, collaboration, advocacy and more.

Perhaps a more recent development in the field of radiation oncology is to use this so-called new media for education—both within and outside of the specialty. The advantage of using this medium as a means of education is the open access to all who have an internet connection, with no additional cost or resources like a subscription fee.

Other advantages to using social media as a means of knowledge gathering is its interactive educational experience with the flexibility of time—it’s available 24 hours a day, 7 days a week. And the very nature of social media also helps in speeding the dissemination of information (e.g., research presented at medical conferences) inside and outside the oncology community.

This has the potential to become a mainstream source of education in the developing world, where rapid growth of smartphone technology can provide health care providers easy access to this kind of education. But one of the issues with this technology is the veracity and authenticity of information, as it is not peer-reviewed and may reflect individual opinions rather than a consensus statement or evidence-based statements. It becomes important for societies like ASTRO to get actively involved in social media platforms so that the quality of information to its

followers is evidence-based, verified and authentic. See page 21 for more on how to follow the official ASTRO accounts on social media.

There are various ways to share knowledge via social media. One way that radiation oncologists have used social media is to create hashtags or handles within Twitter, a real-time social messaging system and microblogging service, to assist in the dissemination of new research and other applicable news. Another option is standalone websites that use crowdsourcing, which refers to harnessing the knowledge base, skills and enthusiasm of a community of users external to an individual or organization for the purpose of collaboratively solving problems, gaining knowledge or garnering opinions.

Both methods are being used by those in the radiation oncology specialty. [Charrounds.com](http://Charrounds.com) and [theMednet.org](http://theMednet.org) are examples of crowdsourcing sites. The Red Journal’s feature, the Gray Zone, and Radiation Nation’s online journal club are examples of using Twitter to provide a platform for learning and interactive discussion. Read on for more details on each of these offerings.

## Gray Zone

The idea behind this [Red Journal](#) feature is to trigger an ongoing discussion using the convenience of Twitter. Each issue of the journal presents a challenging clinical case, alongside various treatment options. Readers are urged to continue the conversation on Twitter using the hashtag [#gyzone](#).



*Continued on next page*

According to David Palma, MD, PhD, “The Gray Zone was started in recognition of the fact that, although radiation oncologists strive to deliver evidence-based care, often difficult clinical cases may not have evidence to guide their management.”

Each Gray Zone case is featured as an open-access article in the Red Journal to encourage sharing and discussion online. With its free, unfettered access, anyone involved in radiation oncology patient management, such as all specialties of oncology physicians, residents, physicists and radiation therapists, can participate in the discussion.

Since its debut in January, there have already been online discussions debating the pros and cons of various management options. As a tool for education, readers benefit from realizing that other radiation oncologists are struggling with similar clinical dilemmas that they themselves face in clinic. They can also critically appraise the published management recommendations, and then continue the discussion on social media.

### Radiation Nation

[Radiation Nation](#) is a website founded in 2014. Coordinated by Matthew Katz, MD, of Lowell, Massachusetts, and Richard Simcock, MD, of Brighton, United Kingdom, the website shares information about radiation oncology and promotes a global community to improve cancer care.

Currently it coordinates a monthly journal club on Twitter using the hashtag [#radonc](#) at [@Rad\\_Nation](#). Started by Dr. Katz and Zain Husain, MD, of Yale University, the journal club allows clinicians, researchers and patients to discuss new research, usually with temporary free access to the article and participation by one or more authors. Each [#radonc](#) journal club has 40 or more participants globally, who can learn from each other and share the value of radiation oncology publicly in an online forum.

The Radiation Nation website will soon be part of the African Organisation for Research and Training in Cancer (AORTIC) in order to better promote global collaboration and sharing expertise. Like [kevinmd.com](#), the site accepts blog posts for publication with opportunities for more people interested in cancer care to get involved.



### Chartrounds.com

[Chartrounds.com](#) brings together academic disease site specialists from leading cancer treatment institutions and connects them with the Chartrounds network of more than 1,500 physicians and medical physicists. On a scheduled basis, participants discuss patient management and treatment plans with trusted colleagues in real time.



Through the American Society of Clinical Oncology Improving Cancer Care Grant funded by Susan G. Komen for the Cure (2010), founder Patricia Hardenbergh, MD, was able to develop a web-based educational program to share knowledge between these two groups. Chartrounds.com is a free online conferencing program that allows community physicians to present their cases in a “live” setting and interact with U.S.-based academic disease site specialists in radiation oncology.

Feedback reports following the completion of each session have assessed the quality and relevance of the discussion as well as logged anticipated practice changes. Since its inception in December 2010, 58 disease site specialists have led more than 750 sessions, connecting more than 10,000 participants from all 50 states.

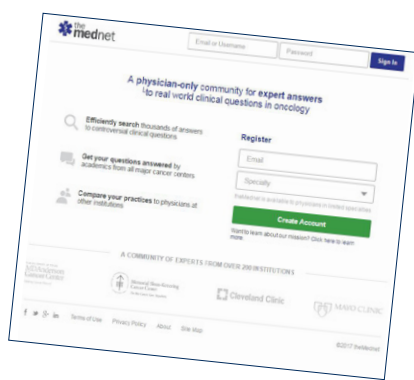
Overall, 80 percent of Chartrounds.com participants responded that they anticipated making a change in practice as a result of the session. In addition, the program is approved by the American Board of Radiology and qualifies users for Maintenance of Certification requirements, such as free Practice Quality Improvement (PQI) and peer-to-peer review projects and Continuing Medical Education (CME) credits. In 2013, Chartrounds added a similar program specifically designed for medical physicists, with nearly 300 physicist members.

According to Dr. Hardenbergh, “The success of the online education for radiation oncologists has attracted international attention and application. I have been working closely with ASTRO’s international education subcommittee to build an international membership by global regions. We hope to expand the website to include specific sessions for Africa, China, India and Latin America.”

The website has recruited disease site experts from each of these regions to host sessions in 2017. The Latin America sessions will be hosted in Spanish and the sessions for China will be hosted in Mandarin.

## TheMednet.org

[TheMednet.org](http://TheMednet.org) is a social question-and-answer website where academic physicians share experiential knowledge and insights on how to incorporate new research into clinical practice. It




takes the current offline practice of Q&A happening between physicians in hospital hallways, on the phone and at conferences, and uses technology to match physician questions with academics qualified to answer them.

Co-founder and radiation oncologist Nadine Housri, MD, says the site's mission is to make the best information about treating cancer available to all oncologists by building the world's largest and most up-to-date searchable cancer knowledge base. She says she started theMednet with her brother, Samir, after their father, a hematologist, was diagnosed with cancer. While getting advice from experts on their father's treatment, they realized that the same questions come up frequently in oncology and they are often not answered by textbooks, published research or guidelines.

"The current process for most physicians is to ask our colleagues for advice or to reach out to experts via phone or email," says Dr. Housri. "The problem with this method is that the information you receive is only as good as your network, and it is very time-consuming. We started theMednet to document expert knowledge on a wide range of clinical questions and make it easily accessible to clinicians looking for answers on how to best treat their patients."

Anyone can post a question anonymously, says Dr. Housri. The 30-person team of junior faculty, fellows and residents in radiation and medical oncology, who curate and moderate the content, then find an expert to answer that question. Once answered, it becomes part of the searchable database of more than 1,000 questions so that any physician who is a part of theMednet community can browse and locate the answer.

Currently, nearly 3,000 physicians are members of theMednet, and 500 of those are academic oncologists. The site is a free resource, but every physician has to be approved for membership, says Dr. Housri. It is currently open to all U.S. radiation and medical oncologists, in addition to radiation oncology residents and hematology/oncology fellows. 



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### Other ASTRO-affiliated social media sites include:

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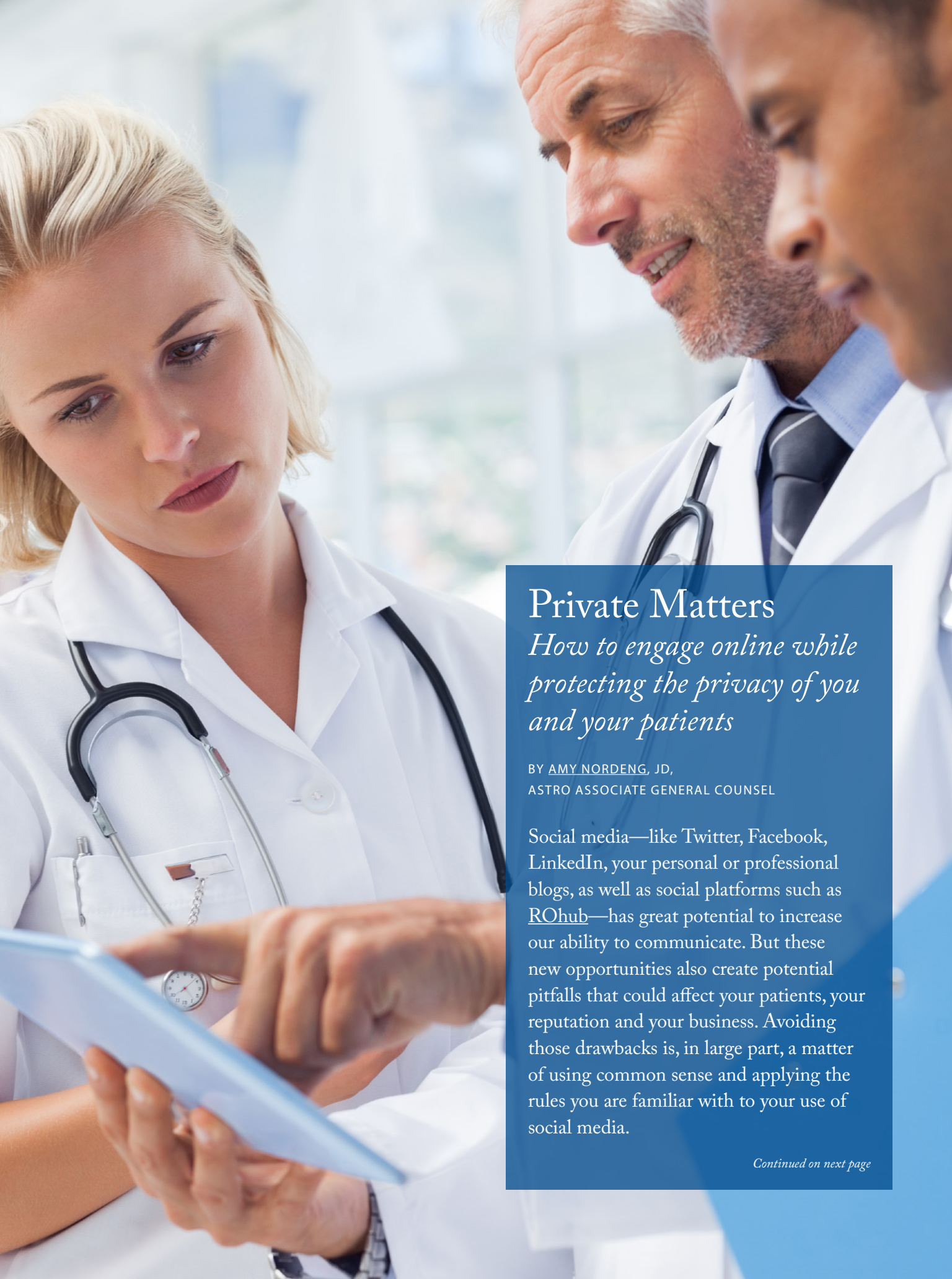
[https://twitter.com/RTAnswers\\_org](https://twitter.com/RTAnswers_org)

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## Private Matters

*How to engage online while protecting the privacy of you and your patients*

BY [AMY NORDENG, JD](#),  
ASTRO ASSOCIATE GENERAL COUNSEL

Social media—like Twitter, Facebook, LinkedIn, your personal or professional blogs, as well as social platforms such as [ROhub](#)—has great potential to increase our ability to communicate. But these new opportunities also create potential pitfalls that could affect your patients, your reputation and your business. Avoiding those drawbacks is, in large part, a matter of using common sense and applying the rules you are familiar with to your use of social media.

*Continued on next page*



The Health Insurance Portability and Accountability Act (HIPAA) and comparable state laws protecting patient confidentiality are the first place to look for guidance on how to use social media. The U.S. Department of Health and Human Services' Office for Civil Rights (OCR), the agency that enforces HIPAA compliance, plans to release formal guidance on HIPAA and social media later this year. In the meantime, your obligation to protect the privacy of a patient's individually identifiable health information under HIPAA is broad—and it carries over online to anything you may post, on any website. In general, it is best to err on the side of caution when it comes to revealing any patient information online.

Above and beyond the requirements of HIPAA, several groups have considered the question of health care providers using social media and have issued guidance on the topic. The American Medical Association, for example, includes a section in its Principles of Medical Ethics entitled "[Professionalism in the Use of Social Media](#)." Likewise, the American College of Physicians (ACP) and the Federation of State Medical Boards (FSMB) issued a [position statement](#) on online professionalism and relationships with patients and the public.<sup>1</sup> The National Council of State Boards of Nursing also issued a comprehensive discussion of the potential pitfalls associated with the use of social media entitled "[A Nurse's Guide to the Use of Social Media](#)."

Drawing on the federal HIPAA requirements, as well as the above-listed guidance on this topic, here are some thoughts to keep in mind:

- Physicians and other health care professionals who establish relationships with patients online should consider maintaining separate personal and professional online personae. While you may want to use social media to share information with your patients, accepting "friend" requests from patients or otherwise crossing professional boundaries with patients on the internet is discouraged. Maintaining one account for your professional materials and another for your personal interactions helps preserve the physician-patient relationship.
- Familiarize yourself with privacy settings on the social media you use. Maintain strict privacy settings for your personal accounts, and remember that things posted publicly may be available online indefinitely.

- Make sure none of your comments identify a patient or give sufficient information about the patient or his/her condition so that someone could identify him or her. This applies to all information shared online, whether through a professional account or a personal account—even with appropriate privacy settings.
- Except in cases where you have obtained advance written consent, none of your photos should contain patients. Improper disclosures of patient information have occurred when health care providers take photos at work and either intentionally or unintentionally include patients. These photos may also violate your state privacy and licensing laws.
- Keep in mind that even when a patient or family member discloses his/her own health information online (through personal health journals, such as CaringBridge, or their own social media accounts), your obligations do not change.
- Rules about personal and professional use of social media should be written into your workplace HIPAA policies and included as part of your annual staff training.
- Consider including a disclaimer in your social media posts. Whether posting from your personal or professional accounts, you may have obvious ties to an institution. If you are speaking on your own behalf and not on behalf of your institution, you may want to say so.
- Before posting, think through the professional implications of what you are about to say. The ACP-FSMB recommends a "pause before posting" to consider what message you are sending and the effect it could have on your reputation and that of the profession. Your online comments are not viewed in a vacuum but are part of a large and growing mass of public information available about you.

*JAMA Internal Medicine*<sup>2</sup> recently published research linking physicians who "tweet" with public data about payments they received from drug and device manufacturers, as reported through the federal [Open Payments database](#).

*Continued on next page*




## RadOnc “Twitterati”

The research determined that 79.5 percent of the physicians they studied had what was labeled a “financial conflict of interest” with manufacturers.

If you use social media to discuss or recommend treatments or drugs, that information, together with other public data available about you, could color the public’s perception of your comments. One option to avoid the appearance of conflict is to include a disclosure of your relationships, similar to what appears in journals or educational presentations.

- Respect copyright laws when posting on social media. The application of copyright law to social media is admittedly complex and evolving. When posting material, especially to professional accounts that are for commercial activity, keep in mind what you already know about copyright law. If you want to use an image, article or other material created by someone else on your account, make sure you have the needed permission to avoid potential copyright violations.

When considering how to present yourself online, rely on good judgment. While consequences of improper posting can be severe from government entities, the more significant damage may be to your reputation and that of your practice. While it is easier than ever to access information in this era of communication, it is just as easy to share information that can be misconstrued, misinterpreted or misappropriated.

Just like anywhere else, choose wisely what you decide to broadcast on social media. As long as you are protecting patient privacy, using good judgment and posting disclaimers, sharing content on social media can be beneficial for you, your colleagues and your patients. 

### References

- <sup>1</sup> “Online Medical Professionalism: Patient and Public Relationships: Policy Statement from the American College of Physicians and the Federation of State Medical Boards,” *Annals of Internal Medicine*, April 16, 2013.
- <sup>2</sup> Tao DL, Boothby, A, McLouth J, Prasad, V. Financial Conflicts of Interest Among Hematologist-Oncologists on Twitter. *JAMA Intern Med*. Published online January 17, 2017. doi:10.1001/jamainternmed.2016.8467

Wondering who to follow on twitter? Most academic institutions and hospitals have their own Twitter accounts. Nearly every medical journal does, too, so seek out your favorites and start following their tweets. See page 21 for ASTRO’s various social media handles.

Want to follow colleagues in the twittersphere? Here is a snapshot of ASTRO members who, as of press time, are frequent tweeters. This is not an exhaustive list of the radiation oncologists on Twitter—rather, these are the Twitter users whose names came up when *ASTRONews* asked who to follow in the specialty. ASTRO does not endorse the content or views of these accounts.

**David Beyer, MD, FASTRO**, *Cancer Center of Northern Arizona*, [@d\\_beyer](#)

**Walter Curran, MD**, *Emory University*, [@wallyjc](#)

**Nadine Housri, MD**, *Veterans Affairs*, [@nadinehousri](#)

**Zain Husain, MD**, *Yale University*, [@ZHusainMD](#)

**Matthew Katz, MD**, *Lowell General Hospital*, [@subatomicdoc](#)

**Brian Kavanagh, MD, MPH, FASTRO**, *University of Colorado*, [@BK\\_radiation](#)

**Miriam Knoll, MD**, *Hackensack University Medical Center*, [@MKnoll\\_MD](#)

**Jeff Michalski, MD, MBA, FASTRO**, *Washington University*, [@jmmrad](#)

**Drew Moghanaki, MD, MPH**, *Hunter Holmes McGuire VA Medical Center*, [@DrewMoghanaki](#)

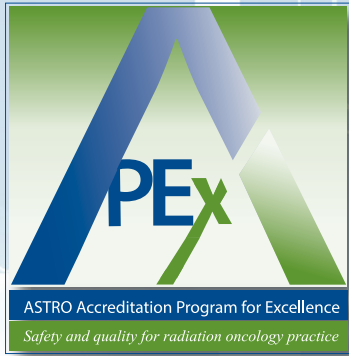
**Sabin Motwani, MD**, *Rutgers Cancer Institute of New Jersey*, [@sabinmotwanimd](#)

**David Palma, MD, PhD**, *London Health Sciences Centre*, [@drdavidpalma](#)

**John Suh, MD, FASTRO**, *Cleveland Clinic Foundation*, [@DrJohnSuh](#)

**James Yu, MD**, *Yale University*, [@jamesbyu](#)

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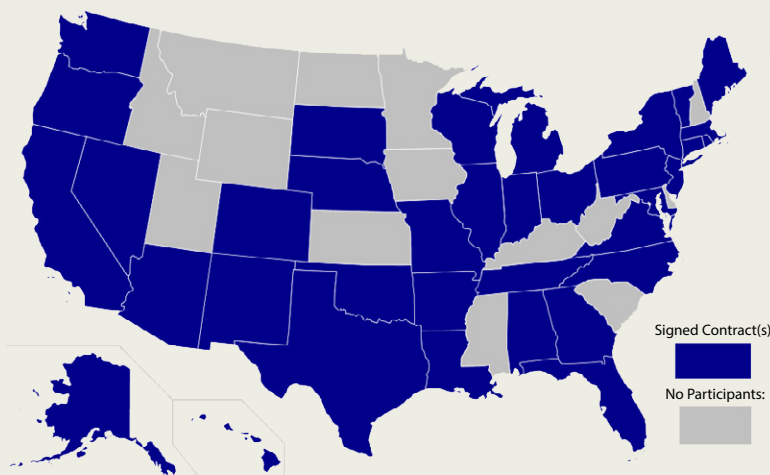
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## ASTRO PROVIDES REPORTING OPTIONS FOR MIPS PARTICIPANTS

ASTRO recently launched new webpages to answer member questions about the new Medicare payment system. The comprehensive pages, at [www.astro.org/mips](http://www.astro.org/mips), provide ASTRO members with the tools they need to determine eligibility, reporting options and more.

The Merit-based Incentive Payment System (MIPS), part of the Quality Payment Program (QPP), is designed to reform Medicare payments in an effort to improve care across the entire health care delivery system. MIPS replaces and consolidates previous Medicare quality initiatives, including the Physicians Quality Reporting System (PQRS), Value-based Modifier (VM) and Meaningful Use (MU) programs, and adds a new Improvement Activities (IA) category, into one comprehensive program. Based on an eligible clinician's performance in three categories in 2017, their 2019 Medicare Part B reimbursement will be impacted. Since MIPS is a new program, 2017 is a transition year with an option to "Pick Your Pace."

### MIPS Preparation

In preparation for MIPS, you need to answer the following questions:

1. Am I MIPS eligible?
2. Can I, and do I want to, report as a group?
3. How is my billing allocated and how does that impact my MIPS participation?
4. What pace do I want to attempt for 2017?
5. What do I need to do to succeed in that pace for 2017?

Find more information on developing a MIPS plan on [www.astro.org/mips](http://www.astro.org/mips).

### Videos and toolkits

ASTRO conducted a webinar on December 8, 2016, to inform members on the release of the QPP, including a high-level overview of MIPS. ASTRO has also produced videos on each of the 2017 MIPS

performance categories—Quality, Advancing Care Information and IA. Slides and recordings are available on [www.astro.org/mips](http://www.astro.org/mips). Additionally, users can create personal 2017 MIPS plans by accessing downloadable toolkits for each category.



### ASTRO products for success

There are two ASTRO programs to meet the IA Performance Category requirements.

The **Radiation Oncology Incident Learning System**, or **RO-ILS®**, is a part of Clarity PSO, a federally listed patient safety organization, and can therefore fulfill the "Participation in an AHRQ-listed patient safety organization" (Activity ID = IA\_PSPA\_1) IA. Participating in RO-ILS automatically satisfies the "Test: Improvement Activities" option within the "Pick Your Pace" option for reporting.

Also, RO-ILS can be used towards fulfilling the Part IV Physician Quality Improvement (PQI) Maintenance of Certification (MOC) requirements established by the American Board of Radiology. This meets an *additional* medium-weighted improvement activity (Activity ID = IA\_PSPA\_2).

There is no fee to participate in RO-ILS, but the facility must contract with Clarity PSO so start the contracting process now. Visit [www.astro.org/roils](http://www.astro.org/roils) for more information.

The **ASTRO Accreditation Program for Excellence**, or **APEX®**, focuses on a culture of quality and safety, as well as patient-centered care. Evidence indicators required for APEX accreditation map to 17 different improvement activities, including completion of the APEX MOC. The self-assessment component of the program can satisfy the requirements for the IA performance category.

*Continued on page 29*

## THE AMERICAN BOARD OF RADIOLOGY AND SOCIAL MEDIA

The American Board of Radiology (ABR) has a longstanding commitment to excellent communication with all of its stakeholders. Over the past decade, reliance on “snail mail” has slowly been supplanted by routine use of email communication regarding specific candidate and diplomate issues and for general organizational communications<sup>1</sup>. There is no question that this transition has sped the dissemination of information and has reduced some of the costs associated with publication and circulation of routine and urgent material. The Board also has implemented regular improvements in its website, such as candidate and diplomate personal accounts in the *myABR* site, which has further improved candidate and diplomate access to their own data<sup>2</sup>. At this time, the ABR is working to consider the merits of its participation in the myriad forms of available and emerging social media platforms and the relevance of the various platforms to stakeholders.


Many ABR stakeholders are familiar with the various social media platforms, but a decision to engage in any of these forms of communication is more difficult than it may appear. The following questions are being considered:

- What current communication platforms are insufficient for stakeholder communications or should be supplemented by current and emerging social media platforms?
- What forms of communication best serve stakeholders?

- What resources should be directed to the development and maintenance of social media communications?

A revealing consideration is how the other 23 member boards of the American Board of Medical Specialties (ABMS) and the ABMS itself have dealt with social media. The 24 member boards are quite diverse, with the largest—the American Board of Internal Medicine (ABIM)—awarding 70,000 certificates in the past decade, and the smallest—the American Board of Colon and Rectal Surgery (ABCRS)—awarding 700. Sixteen of the 24 boards use Facebook, 13 use LinkedIn, 11 use Twitter, and one each uses Instagram and YouTube. The ABMS is active on Facebook, LinkedIn and Twitter.

At present, the ABR has “company pages” on Facebook and LinkedIn but is not actually using these sites. Instead, many informational aspects of social media have been met by current email and website communications. However, social media platforms do offer some opportunities for stakeholders to interact with each other as well as with the Board. The ABMS and various member boards use social media in different ways<sup>3, 4, 5, 6, 7, 8, 9, 10</sup>, and stakeholder interest seems to be equally varied (Table 1).

The ABR recognizes interest in and advantages to its participation in various social media platforms, especially among its younger stakeholders, and is actively investigating the potential for its use as an additional communications tool. 

**Table 1.** Snapshot of Twitter use for selected organizations (January 16, 2017)

ORGANIZATION	TWEETS	FOLLOWING	FOLLOWERS	LIKES
ABMS	649	146	519	196
ABIM	616	247	1,070	42
American Board of Surgery	1,338	647	3,875	645
American Board of Family Medicine	12,400	390	26,200	1,377

*Continued on next page*

## References

- 1 American Board of Radiology, the Beam, Spring 2016. <http://archive.constantcontact.com/fs166/1102498794338/archive/1124929580378.html> Availability verified January 16, 2017.
- 2 American Board of Radiology website home page. <https://www.theabr.org/> Availability verified January 16, 2017.
- 3 American Board of Medical Specialties Facebook link. <https://www.facebook.com/ABMSCert> Availability verified January 16, 2017.
- 4 American Board of Medical Specialties Twitter link. <https://twitter.com/ABMSCert>. Availability verified January 16, 2017.
- 5 American Board of Medical Specialties LinkedIn link. <https://www.linkedin.com/company/american-board-of-medical-specialties>. Availability verified January 16, 2017.
- 6 American Board of Internal Medicine Twitter link. <https://twitter.com/abimcert>. Availability verified January 16, 2017.
- 7 American Board of Internal Medicine Facebook link. <https://www.facebook.com/abim.certification>. Availability verified January 16, 2017.
- 8 American Board of Surgery Twitter link. <https://twitter.com/AmBdSurg>. Availability verified January 16, 2017.
- 9 American Board of Surgery Facebook link. <https://www.facebook.com/AmBdSurg>. Availability verified January 16, 2017.
- 10 American Board of Family Medicine Facebook link. <https://www.facebook.com/familymed>. Availability verified January 16, 2017.

*Paul E. Wallner, DO, Senior Vice President for Medical Affairs, 21st Century Oncology, Inc. and Associate Executive Director for Radiation Oncology, the American Board of Radiology*

*Donna E. Breckenridge, MA, Director of Communications and Editorial Services, the American Board of Radiology*

*David J. Laszakovits, MBA, Director of External Relations, the American Board of Radiology*

## ASTRO PROVIDES REPORTING OPTIONS FOR MIPS PARTICIPANTS

Continued from page 27

Start the APEX application now to participate in the self-assessment in 2017. Visit [www.astro.org/apex](http://www.astro.org/apex) to sign up.

Consider submitting the Quality performance category measures via the new MIPS*wizard*. ASTRO's MIPS*wizard* is a CMS-qualified registry that collects and reports data to CMS. This easy-to-use online tool provides an easy and secure way to upload patient data online. The MIPS*wizard* will be available later this year; ASTRO will announce when it is released.

ASTRO will continue to provide information and support to physicians in the Medicare Quality Payment Program. Be sure to attend the ASTRO 2017 Annual Meeting session on the Quality Payment Program (QPP). Visit [www.astro.org/annualmeeting](http://www.astro.org/annualmeeting) to register.



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## EXAMINING CANCER RESISTANCE TO RADIATION THERAPY TO IMPROVE OUTCOMES FOR PATIENTS



2016 winner of the [ASTRO Junior Faculty Award](#), Stephanie Markovina, MD, PhD, is a clinician-researcher in the Department of Radiation Oncology at Washington University in St. Louis. Her work to understand molecular mechanisms of radiation resistance in cervical cancer

and other solid and HPV-related tumors integrates clinical care with basic research and employs her strong cell and molecular biology background.

When asked about her motivation for specializing in radiation oncology, Dr. Markovina explains, “I learned in medical school that I was drawn to the more procedural approaches to cancer treatment, and radiation oncology allowed me to follow that sort of technical approach to treatment while still allowing me to directly interact with and care for my patients.” During her residency at Washington University, she was drawn to her current research interests of studying radiation resistance in cancers because, “I saw patients coming to us with seemingly similar or even identical cancers. And yet after being treated in the same way, some would respond favorably and some would have much less favorable outcomes.”

The prospect of outcomes prediction leading to tailored treatments, also known as precision medicine, was appealing to her. After completing her residency, she joined the faculty there in 2015.


Dr. Markovina’s lab is now attempting to better understand the cellular mechanisms of resistance to radiation by exploring how the protein, squamous cell carcinoma antigen (SCCA), alters tumor cell response to radiation. SCCA is a protease inhibitor that is elevated in some patients with cervical cancer and indicates a poor response to chemoradiation. Dr. Markovina is interested in exploring how SCCA-related signaling pathways might be modulated in

cervical cancer and other tumor types to increase the effectiveness of radiation and chemotherapy and reduce the risk of recurrence.

Research into determining the mechanisms of resistance to radiation therapy, like the work in Dr. Markovina’s lab, could lead to novel targeted therapies that could significantly improve both morbidity and mortality figures for patients with squamous cell carcinoma. She hopes that the mechanisms she is studying could be relevant to many types of cancers, and relevant to explaining resistance to different types of therapies. If that is the case, her research could open up entirely new classes of therapies for many cancers.

Dr. Markovina’s many excellent mentors along the road to becoming a world-class researcher have spurred on a strong sense of responsibility to “pay it forward” through her own mentorship endeavors—which include teaching courses for residents and bringing excited future physician-scientists into her lab to contribute to the research as much as possible.

“It’s really important, both practically and symbolically, that ASTRO continues to sponsor grants,” she says. “There are not too many research funding options available for radiation oncology researchers, especially on the career development side. I’m very grateful to ASTRO for the Junior Faculty Award, and for me, the ASTRO Annual Meeting has been the most important outlet for my research findings.”

For more on the award, please visit [www.astro.org/JFA](http://www.astro.org/JFA). 

*Dr. Markovina is currently an assistant professor at the Washington University in St. Louis. Prior to this she was a Research Fellow at the National Cancer Institute with David Gius, MD, PhD, in the Radiation Biology Division. She earned her MD and PhD in Cell and Molecular Biology, studying NF-kappaB biology in Multiple Myeloma under the direction of Shigeki Miyamoto, as part of the Medical Scientist Training Program at the University of Wisconsin.*



# JOURNALS

# HIGHLIGHTS

## HIGHLIGHTS FROM *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY • BIOLOGY • PHYSICS*

December 1, 2016

### **Predictive factor analysis of response-adapted radiation therapy for chemotherapy-sensitive pediatric Hodgkin lymphoma**

*Charpentier et al*

In this randomized trial, children with bulky stage I/II disease with anemia had significantly better event-free survival after randomization to radiation therapy despite rapid and complete radiologic response to chemotherapy. Despite recent enthusiasm for selecting patients for radiation therapy treatment based on imaging response alone, treatment selection for pediatric Hodgkin lymphoma patients may ideally require consideration of other important clinical factors.

January 1, 2017

### **Does peer review of radiation plans affect clinical care? A systematic review of the literature**

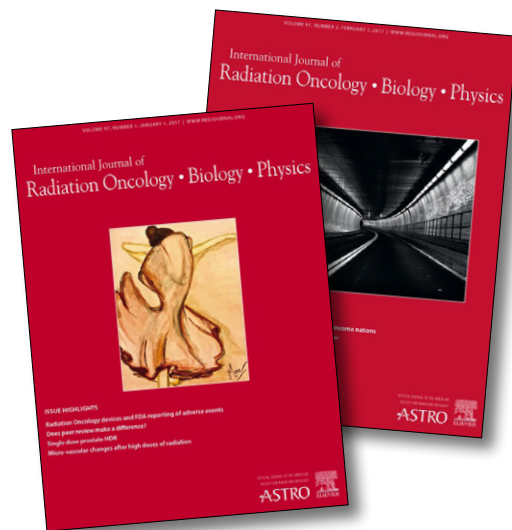
*Brunskill et al*

Although physician peer review of radiation treatment plans is recommended by some organizations as a quality assurance process, its impact on clinical care is uncertain. Through a systematic review of the literature, these authors found that peer review leads to changes to radiotherapy plans in approximately one out of every nine cases overall, with major changes occurring in one out of every 37 cases. The practice of peer review differs widely and it remains unclear which aspects are the most important.

### **Patterns of care in proton radiation therapy for pediatric central nervous system malignancies**

*Odei et al*

These authors used a national registry to perform a patterns-of-care analysis for children receiving proton beam therapy (PBT) for primary central nervous system malignancies from 2004 to 2012. The use of PBT increased from less than 1 percent in 2004 to 15 percent in 2012. In multivariate logistical regression, predictors of receipt of PBT included: private insurance, the highest income bracket, younger age, living in a metropolitan area and residing more than 200 miles from a radiation treatment facility. Disparities exist and efforts are needed to expand accessibility of PBT for children of all socioeconomic backgrounds and in all regions of the country.



February 1, 2017

### **Analysis of the factors contributing to vertebral compression fractures after spine stereotactic radiosurgery**

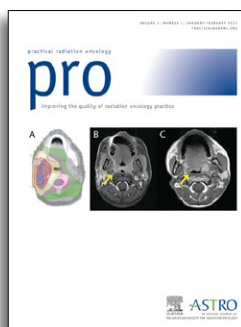
*Boyce-Fappiano et al*

Vertebral compression fracture (VCF) is a risk of spine stereotactic radiosurgery (SRS). These authors performed a retrospective analysis from a single institution over a 12-year period. In total, 1,905 vertebral were treated, of whom 1,070 had adequate follow-up CT and MR imaging studies available. Doses ranging from 10 Gy in one fraction to 60 Gy in five fractions were delivered. Thirty-six percent demonstrated probable SRS-induced VCFs. Of those, 35 percent of VCFs progressed, and the majority of those required stabilization surgery after SRS. Women, prior VCF, primary hematologic tumors, thoracic spine location and lytic lesions demonstrated increased risk for VCF following SRS. Single-fraction SRS doses of 16-18 Gy to the spine appeared to be associated with a low rate of VCFs.

### **Stereotactic body radiation therapy for locally advanced pancreatic cancer**

*Petrelli et al*

Standard dose chemoradiotherapy (CTRRT) or CT alone is used for patients with unresectable pancreatic cancer. Stereotactic body radiation therapy (SBRT) is an emerging alternative. This report is of a systematic review and pooled analysis of published trials to evaluate its efficacy and safety. A total of 19 studies, encompassing 1,009 patients, met the criteria for inclusion in the analysis. The pooled one-year overall survival (OS) was 51.6 percent and the locoregional control (LRC) rate was 72 percent. Overall, the occurrence of severe adverse events did not exceed 10 percent. LRC appeared to be correlated with the total SBRT dose and the number of fractions. The advantages of SBRT in terms of treatment time, satisfactory OS and LRC mean that it is an option for inoperable pancreatic cancer.



## HIGHLIGHTS FROM PRACTICAL RADIATION ONCOLOGY

January–February 2017  
**Gemcitabine-induced  
radiation recall myositis  
in a patient with relapsed  
nasopharyngeal carcinoma**  
*Patel et al*

The authors report a case of radiation recall myositis subsequent to gemcitabine in a pediatric patient with nasopharyngeal carcinoma. As the utilization of gemcitabine-containing regimens in pediatrics increases, awareness of the radiation recall phenomenon secondary to gemcitabine is paramount. Concentrated efforts must be applied to better define the individual patient-specific contributing factors (genetic, molecular and biological), the specific drug factors and the environmental factors that may contribute to a radiation recall reaction.

## Program director and chief resident perspectives on the educational environment of U.S. radiation oncology programs

*Berriochoa et al*

The authors distributed a survey regarding curricular structure via email to all identified U.S. radiation oncology residency program directors (PDs) and chief residents (CRs). Pearson's chi-squared test was used to evaluate whether differences existed between answers provided by the two study populations. The data suggests opportunity for improvement in radiation oncology residency training, such as encouraging more faculty-led, Socratic-based teaching conferences. Increased communication between PDs and CRs can better align perceptions with educational goals.

## HIGHLIGHTS FROM ADVANCES IN RADIATION ONCOLOGY

October–December 2016  
**Cryptic Nocardia nova brain  
abscess postradiation treatment  
and neurosurgery in a patient  
with small cell lung cancer: A  
case report and review of the literature**  
*Abel et al*

Toxicities of systemic therapy, such as myelosuppression, can complicate the management of small cell lung cancer (SCLC). Despite the expanded differential diagnoses that often accompany immunocompromised patients, clinicians may fail to consider all possibilities when managing this patient population. We present the case of an immunocompromised patient with SCLC whose apparent metastatic brain recurrence was in actuality an uncommon infectious agent.

## Satisfaction of breast cancer patients regarding surgery and radiation therapy: A survey in Japan

*Saito et al*

The authors evaluated patient satisfaction in Japan and the factors, including timing, cost and specific medical practices derived from Western influence (shared decision-making and second opinion), which might affect satisfaction. In a large, typical Japanese radiation oncology practice, breast cancer patients' levels of satisfaction correlated with waiting time, cost and the rate with which the patient shared her feelings with her physician. This illuminates targets for quality improvement within the Japanese system and provides interesting cross-cultural comparative data for other countries in which the context of care may differ.



## Welcome to the Gray Zone

*In every issue, the Red Journal's Gray Zone will present difficult cases and offer varying treatment options.*

**February:** The case of a 61-year-old woman with malignant mesothelioma with abnormal left-sided pleural thickening and bilateral pleural plaques. The patient is open to all treatment options. How would you recommend she be treated? [Induction chemotherapy with surgery and radiation?](#) [Pre-operative radiation therapy with surgery?](#) [Or something else?](#)

**March:** This [case](#) centers on a 46-year-old woman whose breast cancer has recurred in her internal mammary chain and bone. She was previously treated six years ago with radiation therapy, chemotherapy and hormone

therapy. How would you recommend she be treated today? With [ablative therapy?](#) [Chemotherapy first, then local therapy?](#) [Perhaps inclusion on a clinical trial?](#) Or would you do something different?

**March 15:** The case features a 76-year-old man who presented to his primary care physician with blood-streaked sputum and was diagnosed with [non-small cell lung cancer after a needle biopsy](#). Would you treat the patient with [sequential chemotherapy plus hyper-fractionated radiation therapy](#), stereotactic body radiation therapy (SBRT) in five fractions, [SBRT in eight fractions](#) or something else?

🐦 [Weigh in on Twitter using the hashtag #gyzone.](#) 🐦

# IMMUNOTHERAPY WORKSHOP

*Incorporating Radiation Oncology  
into Immunotherapy*

**JUNE 15-16, 2017 • NIH Campus, Bethesda, Maryland**

With the current cancer immunotherapy (CIMT) surge in treatment, the focus on how best to combine radiotherapy and CIMT is timely and essential. This workshop will address many of the questions surrounding this promising new approach:

- What are the best radiation doses, volume and schedules that synergize with CIMT?
- What burden of disease is best targeted with radiotherapy and CIMT?
- What predictive biomarkers exist, and which are valuable?
- What combination and sequencing of CIMT with radiation is best for clinical trials?

**Abstracts are currently being solicited for this workshop. Three will be chosen for oral presentation, with others selected for poster presentation. Submit your research now!**

**REGISTER  
NOW!**

Join us at NIH in June for this interactive and relevant workshop.  
[www.astro.org/scienceworkshop](http://www.astro.org/scienceworkshop)

## Letter of Intent WORKSHOP

**June 16, 2017  
NIH Campus, Bethesda, Maryland**

Interested in writing a clinical protocol, but not sure where to start? Register for this hands-on writing workshop, available as an add-on to the Immunotherapy Workshop at a reduced fee, or as a standalone registration.

Space is limited!

[www.astro.org/LOIworkshop](http://www.astro.org/LOIworkshop)

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