

WINTER 2018

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**Clinical Trials  
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**IN RADIATION ONCOLOGY**



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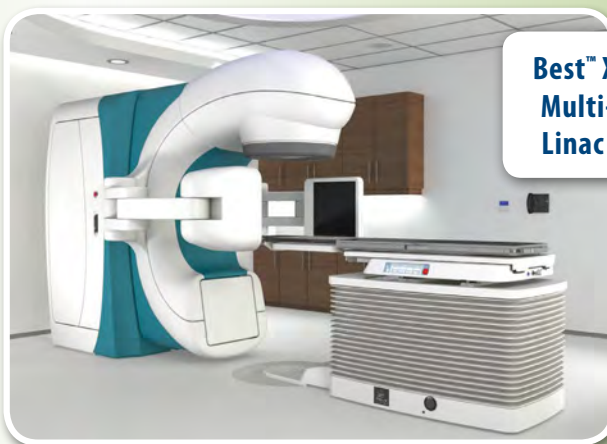
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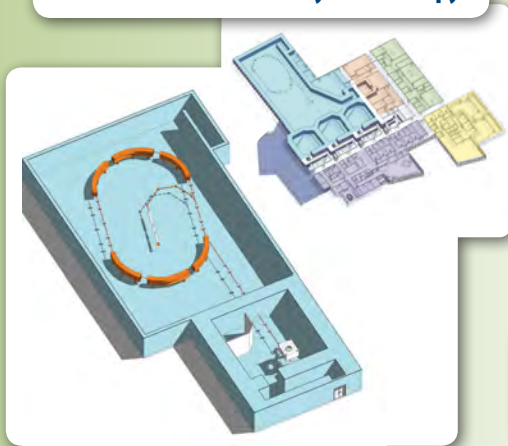
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# ASTRO news

AMERICAN SOCIETY FOR RADIATION ONCOLOGY

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# A PROMISING FUTURE for Radiation Oncology

**October was a great month for radiation oncology with practice-**

**changing trials being presented** both at the ASTRO Annual Meeting in San Antonio and the European Society for Medical Oncology (ESMO) Conference running almost concurrently in Munich. It was like Live Aid, with radiation oncologists as the rock stars! (And for those who don't remember Live Aid, the movie *Bohemian Rhapsody* offers a reminder.)

In this issue, Sushil Beriwal and Scott Glaser provide a comprehensive roundup of the major studies at the meetings. Matt Katz shares a fascinating viewpoint on the slow adoption of clinical trial results or guidelines by the community. Carol Hahn explains how ASTRO's clinical practice statements consider new research and make recommendations for changes in practice. Sue Yom shines a timely spotlight on managing conflict of interest in relationships with the industry. A recent study<sup>1</sup> had shown that a substantial minority of presentations in the prior ASTRO Annual Meetings lacked meaningful disclosures and another study<sup>2</sup> showed that there is also the potential for undue influence of industry in oncology clinical practice guidelines. ASTRO, as an organization, had taken additional steps at this year's meeting to promote more meaningful and accurate disclosure, including having a mandatory 7-second disclosure slide. On to Chicago now for ASTRO 2019 where the theme is Innovate, Collaborate: Transform, with a focus on a practical understanding of precision medicine and how we as radiation oncologists may use that information to manage patients differently in the next decade. As Paul Harari states in his ASTRO Chair's Update, "start your research engines" as "there has perhaps been no better time to be involved in radiation oncology research and clinical cancer care than the present."

November started out with a bang, too. In a speech before the Patient-centered Primary Care Collaborative Conference, U.S. Department of Health and Human Services' Secretary Alex Azar outlined the agency's strategy for driving toward value-based payment. He

noted that the Center for Medicare and Medicaid Innovation (CMMI) will soon roll out new mandatory Medicare payment models, including a model for radiation oncology. Many of us who are also involved in health policy have been inundated with emails and calls from anxious members.

So why do we need an alternative payment model (APM)? In April 2015, the Medicare and CHIP Reauthorization Act (MACRA) was enacted. It effectively replaced the flawed Sustainable Growth Rate with the Quality Payment Program (QPP), which is designed to transition from the current fee-for-services system to one based on value and quality performance. QPP involves two tracks: the Merit-based Incentive Payment System (MIPS) and APMs. Although many physicians will participate in the MIPS program at the outset of QPP, MACRA was designed to move as many physicians as possible into APMs.

The period between 2008 and 2015 was a time of turbulence in radiation oncology reimbursement. Freestanding radiation oncology clinics experienced Medicare payment cuts of approximately 20 percent from 2008 to 2015. Even further cuts were projected for 2016. The ASTRO-supported Patient Access and Medicare Protection Act (PAMPA) of 2015 brought much-needed stability to community-based radiation oncology clinic reimbursement by freezing payments for key radiation therapy services at 2016 levels through December 2018, with a subsequent extension to December 2019. As part of PAMPA, Congress had also directed the Secretary of Health and Human Services to submit a report to Congress on the development of an episodic APM for Medicare payment for radiation oncology.

ASTRO had formulated a radiation oncology APM (RO-APM) that would meet MACRA requirements and was designed to protect access to care, improve the quality of care for patients with cancer and promote payment stability. This instability is not just confined to freestanding practices. Hospital-based facilities also continue to see declines as the Comprehensive Ambulatory Payment Classification system expands,

bundling more services and reimbursing them at lower rates. This has a particular effect on services such as brachytherapy, a theme we'll explore in the Spring 2019 issue of *ASTROnews*.

The CMMI report<sup>3</sup>, "Episodic Alternative Payment Model for Radiation Therapy Services," was finally published in November 2017. While the report was not an endorsement of the ASTRO APM concept, it contained areas of alignment and made clear that CMMI recognizes the importance of an RO-APM. Since the issuance of the report, the clock has been ticking for CMMI to introduce an APM for radiation oncology. ASTRO has had many conversations with the CMMI leadership on this. The secretary's mention of a mandatory model has given rise to some disquiet among members. While there is great enthusiasm about an RO-APM, there are also concerns about the possibility of launching a model that requires mandatory participation from all radiation oncology practices from the beginning. These are genuine concerns and I remain cautiously optimistic that, once the model is issued, there will be an opportunity for analysis and a deeper understanding of the potential impact. As with many things, the devil is in the details.

On a sad note, we mourn the loss of another giant in the field with the passing of former ASTRO President, Gold Medalist, Red Journal editor and physician leader par excellence, Dr. Jim Cox. Tom Buchholz pays tribute to him on page 7. Also in this issue is the 2018 ASTRO Member Survey and a feature on Radiation Oncology Institute-supported research, in addition to the regular features.

Finally, the summer 2018 diversity-themed issue was well-received and generated many positive comments. However, one response stood out for being critical but also thoughtful and constructive. Diversity and inclusion mean bringing everybody into the tent, and we must take greater care to ensure that all perspectives are accounted for so that nobody feels excluded from the discussion. In this case, our correspondent pointed out that the issue didn't include the concerns of the LGBTQ community. This issue carries an excerpt from Dr. Barnes communiqué in the Letters section and you can find the full text online at [www.astro.org/astronews](http://www.astro.org/astronews). I encourage you all to read it and hope this will be the start of a meaningful conversation about the breadth and scope of diversity within our community and how discrimination can be addressed.

From the entire editorial board, we wish you a very happy new year. 🇺🇸

## References

- 1) Meaningful and Accurate Disclosure of Conflict of Interest at the ASTRO National Meeting: A Need for Reassessment of Current Policies. Awad A. Ahmed, Stella K. Yoo, Shahil Mehta, Emma B. Holliday, Curtiland Deville, Neha Vapiwala et al <https://doi.org/10.1200/JOP.18.00121>
- 2) Financial Relationships With Industry Among National Comprehensive Cancer Network Guideline Authors :Aaron P. Mitchell, MD; Ethan M. Basch, MD, MSCr; Stacie B. Dusetzina, PhD, JAMA Oncol. 2016;2(12):1628-1631.
- 3) <https://innovation.cms.gov/Files/reports/radiationtherapy-apm-rtc.pdf>

## LETTERS to the editor

### CONCERNING LGBTQ AND DIVERSITY

Dear Dr. Mohideen,

I enclose an essay, which I have written to you concerning a problem with your otherwise excellent Summer 2018 edition of the *ASTROnews*. The problem is the complete exclusion of LGBTQ people from the issue's thoughts and reflections on diversity in radiation oncology. I find this omission at best sad, at worst, another blatant statement of overt discrimination.

I trust that you and your associates will read my opinion, and take seriously my call for a statement of inclusion of LGBTQ people in ASTRO's statement of "Diversity and Inclusion." Please make inclusion of LGBTQ colleagues part of your core value.

Respectfully,

Margaret M. Barnes, MD  
Fergus Falls, Minnesota

*Editor's note: You may read Dr. Barnes' essay in its entirety on the ASTROnews webpage at [www.astro.org/astronews](http://www.astro.org/astronews).*



## A Year of Innovation: ASTRO'S 2018 YEAR IN REVIEW

Since 2017, when ASTRO launched its new strategic plan, we have been looking at how we can raise the profile of the profession. Through member feedback and patient surveys, it has become apparent that ASTRO must act decisively and boldly to elevate the status of radiation oncology in the House of Medicine.

As a result, 2018 was a year of innovation. With the hiring of a new director of Public Relations and Strategic Communications, Jeff White, we are spearheading many new projects to tackle some of the negative connotations radiation has among the general public and even referring practitioners. This year, we conducted a survey of radiation therapy patients to use as a road map in our mission to combat negative stereotypes of the profession. A survey of referring physicians is also planned.

We wanted to learn from recent radiation therapy patients to better understand their expectations prior to treatment, as well as their actual radiation therapy experiences. Patients noted that many wished they had known a bit more about side effects. We've taken their feedback and used it to help update our RT Answers patient education materials, including new graphics that showcase possible side effects and their duration. More of these patient research findings will be shared in a paper being written by a team of ASTRO volunteers to be submitted for publication.

To keep our Society abreast of the latest news and to participate more robustly in the realm of social media, we also hired a social media specialist last summer. In the social media space, ASTRO is actively engaging with audiences including patient groups, news outlets and the broader oncology community. We encourage you to follow ASTRO on Twitter, Facebook and our newly launched Instagram feed at [ASTRO\\_org](https://www.astro.org).


Another way we're encouraging more responsive communication is through our recently launched *ROhub*, ASTRO's private online community. Here, ASTRO members can post questions and feedback about the profession. All ASTRO members were

automatically subscribed to a daily email digest of these posts. Log on to [rohub.astro.org](https://rohub.astro.org) to update your preferences and participate in the latest conversations.

We're also taking the theme of innovation and applying it to the ASTRO Annual Meeting. In the meeting's 60th year, in San Antonio, we transitioned over to all electronic posters and said good-bye to paper poster tubes. Our attendees and presenters were ready for the change—the Innovation Hub, in which all posters were presented electronically on the floor of the Exhibit Hall, was a buzzing hive of activity. We also started a new, condensed format of the Annual Meeting, held the weekend before, to help busy private practice doctors attend without missing time in the clinic. The Practical Radiation Oncology Program, or PRO Program, was well-received by the more than 250 attendees.

In order to extend our reach and encourage the next generation of radiation oncology researchers, our Scientific Affairs department initiated several new grant opportunities this year. Teaming up with the Prostate Cancer Foundation, the Breast Cancer Research Foundation, the American Association of Physicists in Medicine and the Melanoma Research Alliance, ASTRO is now offering collaborative grants for research in these respective disease sites.

Innovation in reimbursement? That's what we've tried to accomplish with our version of a radiation oncology alternative payment model (RO-APM). ASTRO submitted its version to the Centers for Medicare and Medicaid Services in April 2017. As of press time, we are awaiting word on whether this RO-APM will become a reality but we're hopeful this plan will be approved and will offer our members a better way of navigating the reimbursement process.

In 2019, we have many more new ventures planned to help us help you. How are we doing? How can we better serve you? Please let us know your thoughts at [astronews@astro.org](mailto:astronews@astro.org). And here's to another great year ahead. 



## CHAIR'S *Update*

PAUL HARARI, MD, FASTRO  
CHAIR, BOARD OF DIRECTORS

# LADIES AND GENTLEMEN, **START YOUR RESEARCH ENGINES!**

The 2018 ASTRO Annual Meeting spotlighted a broad series of cutting-edge research and clinical trial advances in radiation oncology that are impacting the care of cancer patients today and in the future. Several of these advances are described within this issue of ASTROnews, including a recap of several high-profile clinical trial presentations (Drs. Glaser and Beriwal); an editorial describing how community practitioners encounter stumbling blocks incorporating new science from clinical trials into practice (Dr. Matthew Katz); and a commentary about managing conflicts of interest with industry as it relates to research (Dr. Sue Yom). Below, I've outlined some of my personal highlights from the meeting.

**NCI Director visits ASTRO:** Further illustrating the theme of cancer research, ASTRO welcomed Dr. Ned Sharpless, the 15th director of the National Cancer Institute, to deliver a Keynote Address at the 2018 ASTRO Annual Meeting in San Antonio. Dr. Sharpless referenced his recent discussions with ASTRO leadership and his interest in radiation oncology translational research initiatives where the NCI might play a supporting role. He described the critically important NCI budget increases (including Moonshot funding initiatives). He emphasized the commitment of the NCI to early investigators and training the next generation of cancer researchers and clinicians in highly relevant arenas in oncology and emphasized the ongoing need to submit quality research proposals. He further described the deep commitment of the NCI to cancer clinical trials.

**Discovery science impacting radiation oncology:** The opportunity to visualize how discovery science is impacting radiation oncology for the future was on

vivid display throughout the 2018 ASTRO Presidential Symposium. Four major themes were explored that have the potential to dramatically impact cancer care and radiation oncology care in the future. These themes included the Radiation Oncology/Immunotherapy Interface, Viral-induced Cancers, Artificial Intelligence and Liquid Biopsies. World-class speakers illuminated the science and emerging clinical applications in each of these exciting areas.

**Radiation oncology/immunotherapy interface:** Moderated by Dr. Silvia Formenti, two emerging stars in the field, Dr. Jennifer Wargo and Dr. Zachary Morris, outlined discoveries in immunotherapy that are impacting cancer research, clinical trial design and routine cancer care at a rapidly escalating pace. How best to combine radiation with immunotherapy to optimize ultimate benefit for cancer patients was highlighted, as well as multiple clinical trials currently underway that will further define this remarkable new cancer therapy domain.

**Virally-induced cancers:** With approximately one in six human cancers caused by viruses, this session focused on the current and future burden of virally-induced cancers. The new opportunities to consider cancer prevention (immunization), along with new screening and treatment strategies, were brilliantly outlined by moderator Dr. Paul Lambert and speakers Dr. Erich Sturgis and Dr. Brian O'Sullivan. With our central role in the treatment of patients with cervix, head and neck, liver and other virally-induced malignancies, radiation oncology physicians and scientists are beautifully positioned to make major contributions to this blossoming field.


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**Artificial intelligence (AI) meets radiation oncology:**

Moderated by Dr. David Jaffray, this session included captivating presentations by Dr. Kristy Brock and Dr. Andre Dekker. These speakers helped demystify AI for attendees by first defining AI and machine learning and then presenting specific examples of how AI research is poised to contribute to radiation oncology. Many young researchers in our discipline are actively engaged in this powerful domain to help design effective and efficient radiation oncology care approaches for the future.

**Liquid biopsies and cancer care:** Liquid biopsies offer a relatively simple and noninvasive technique to gain molecular tumor profiling information without having to obtain tumor tissue directly. Moderated by Dr. Catherine Park, Dr. Max Diehn and Dr. Nitzan

Rosenfeld described the rapidly expanding science of circulating tumor DNA and tumor cells. They highlighted the current and potential future impact of liquid biopsies in the field of radiation oncology.

**Futures:** There has perhaps been no better time to be involved in radiation oncology research and clinical cancer. New discoveries are translating into increased cure rates and diminished side effects for many cancer patients. The discipline of radiation oncology is ideally positioned to implement new discoveries into clinical practice for the benefit of cancer patients. By strategically investing in scientific discovery and innovative clinical trials across radiation oncology, we have the opportunity to further strengthen our discipline for future generations. 



To view these sessions from the Annual Meeting, registered attendees can view the Virtual Meeting. Nonattendees can purchase the Virtual Meeting from the Product Catalog at [www.astro.org/productcatalog](http://www.astro.org/productcatalog).

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Expanding Participation in Health Studies



## TRIBUTE

### James D. Cox, MD, FASTRO

BY THOMAS BUCHHOLZ, MD, FASTRO

**The profession of radiation oncology and the international cancer community lost a good friend** and landmark figure with the passing of James D. Cox, MD. His death on August 14, 2018, left many with an empty place in their hearts. However, there was also a recognition that he enriched and fulfilled so many professional lives. For those who had the opportunity of knowing and working with Jim, we are better oncologists and better people because of his wisdom, inspiration, friendship and mentorship.

To try to summarize Jim's professional impact and personal attributes within this short tribute, I could only fall short. His professional work history included training under Juan del Regato at the Penrose Cancer Center in Colorado, a fellowship outside of Paris at the Institut Gustave Roussy, followed by distinguished service as an active-duty radiation oncologist with the Army. He began his academic tenure at Georgetown University and, at a relatively young age, was recruited to serve as the chair of the first Department of Radiation Oncology at the Medical College of Wisconsin.

In 1985, Jim began his second tenure as a chair of the Department of Radiation Oncology, this time at Columbia University in New York. His final professional move occurred in 1988, when he came to the University of Texas MD Anderson Cancer Center as a vice president of patient care and physician-in-chief. In 1995, he again assumed the professional role he most cherished, leading a radiation oncology group. At that time, Jim became only the third division head and department chair of radiation oncology at MD Anderson.



I personally met Jim shortly after he became MD Anderson's radiation oncology leader, when I was exploring career possibilities in academic radiation oncology. I was amazed how he was able to successfully balance this significant leadership role with all of his other responsibilities. These included carrying a busy clinical practice, chairing the Radiation Therapy Oncology Group (RTOG) and serving as the Editor-

in-Chief of the *International Journal of Radiation Oncology • Biology • Physics*. This amazing portfolio of professional responsibilities arguably made Jim one of the most influential members of our professional community. However, it was not this professional pedigree that drove me to accept his offer to join the faculty of MD Anderson—instead, it was his humility and character.

Jim was the most enthusiastic and inspiring medical professional I had ever met. He had a passion to advance the field of radiation oncology. He recognized the urgency of how cancer affects patients and families and sought to expeditiously translate clinical research findings into new standards of practice that benefited patients. This enthusiasm and urgency were infectious. All those around him could not help but reexamine their own ambitions and refocus their energy to assure it was aligned with directly benefiting patients.

Jim's personal scholarship and contributions rank with the legends of oncology. He was passionate about evidence-based medicine and highly valued prospective clinical trials. He believed deeply that ionizing radiation played an important role in the treatment of most cancers and effectively demonstrated this conclusively

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through clinical research. His contributions crossed a variety of disease sites including genitourinary, lymphoma and thoracic cancers. His number of investigator-originated peer-review publications is likely at or near record levels for our profession. More importantly, nearly all of these had a direct impact on clinical care.

Despite his academic and research achievements, I believe that Jim's greatest attributes were in his leadership and personal qualities. Jim was a truly superb leader. He was visionary, selfless, mission-focused, dedicated, honest, giving and had a unique ability to make hard work fun. These qualities were recognized by his peers with every major accolade available within our profession. He was bestowed the privilege to serve as the president of ASTRO and the American Radium Society, he was honored for his leadership with the gold medal of ASTRO and he was awarded an honorary fellowship from both ASTRO and the American College of Radiology. His achievements were also recognized with numerous European gold medal awards and invited named lectureships and visiting professorships from prestigious universities both domestic and abroad.


Jim understood that leadership provides the opportunity to influence the world in a way that is beyond oneself. His intellectual focus and energy were most often about others rather than himself. He had a unique skill in silently opening up doors, providing opportunities or steering one's decision-making to choose a path that provided the most meaning. He mentored colleagues. He mentored his faculty. He mentored his trainees. Jim truly loved seeing those around him excel. He dedicated his time as a trustee to Kenyon College, his undergraduate alma mater, to provide students a glimpse of what a career in science could bring. He dedicated countless hours teaching trainees the rich history of our profession. He dedicated

himself to those around him, facilitating their ideas to fruition and supporting their career paths.

Jim's mentorship and leadership extended well beyond his immediate radiation oncology department and family. As chair of RTOG, he provided countless opportunities for young investigators to run clinical trials. As editor of the Red Journal, he frequently sought out new reviewers and editorialists to provide new opportunities and insights. I am confident that hundreds within our ASTRO community have a memory of an important moment when Jim Cox made a positive difference in their professional lives.

Finally, a tribute to Jim could not be complete without commenting about his humanity. Jim's core values defined the essence of who he was. He had uncompromising integrity. He embraced diversity and specifically sought to promote those with less opportunities than he was given. He'd invite visitors from all over the world to his home to share a glass of wine and make them realize their importance to our field. Despite his incredibly busy life, he always made time for everyone.

Jim carried a passion for life that included the field of radiation oncology but had a richness that extended beyond his work. He deeply loved his wife, Ritsuko Komaki, MD, his children and his grandchildren. He passionately embraced sports, good food, good wine and good friends. He loved art, music and scholarship.

Our profession of radiation oncology has been blessed with many who have helped define who we are. Arguably, Jim Cox has been one of the most influential members in our community over its history. His influence has brought us to a place of great respect within the medical community. His influence has enriched our lives and inspired us. Jim—we offer our collective thanks, and please know that you will forever be missed. 

## There's **More** Online!

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Whether you'd like to share a story with a colleague or view online exclusives, there's more to see online:

- Full essay from Margaret Barnes, MD, about supporting the LGBTQ community in radiation oncology.
- An update on what ASTRO's journals are doing to promote transparency in disclosing potential conflict of interests.
- The entire magazine in shareable, flipbook format or a printable PDF.



## Norman Coleman given NCCS award


**Norman Coleman, MD, FASTRO**, was awarded the **Ellen L. Stovall Award** for Innovation in Patient-centered Cancer Care by the National Coalition for Cancer Survivorship (NCCS) at a reception in November.

Named for former NCCS CEO, Ellen Stovall, who died in 2016 due to complications from three cancer treatments, the award seeks to highlight those who continue Ellen's work of transforming cancer care to further incorporate patients' goals, needs and values. This year's honorees included Dr. Coleman, senior investigator at the National Cancer Institute, and Gay Crawford, founding director of Cancer CAREpoint.

Dr. Coleman is board certified in internal medicine, medical oncology and radiation oncology. He was a professor at Stanford University School of Medicine and Harvard Medical School, before returning to the National Cancer Institute to serve as director of the Radiation Oncology Sciences Program. He continues to lead a laboratory at NCI focusing on radiation-induced molecular and immunotherapy targets. He is also a Senior Medical Advisor in the Office of



Emergency Management and the Senior Scientific Advisor to the International Cancer Expert Corps (ICEC), a non-governmental organization focusing on global disparities in cancer care.

"I met Ellen Stovall many years ago and our shared interest and understanding of innovative patient-centered cancer care delivery forged a tremendous friendship," said Dr. Coleman. "Since early in my career and in every role that I serve, I always ask myself, 'Is this what the patient wants and is it in their best interest?'" 

## In Memoriam

ASTRO has learned that the following members have passed away. Our thoughts go out to their family and friends.

- James D. Cox, MD, FASTRO**, Houston
- Giulio J. D'Angio, MD, FASTRO**, Swarthmore, Pennsylvania
- Ralph R. Dobelbower, MD, PhD**, East Aurora, New York
- Robert W. Kline, PhD**, Rochester, Minnesota
- Angel Medina, MBA, MS, CMD, RT, FACHE**, Philadelphia
- Eleanor D. Montague, MD, FASTRO**, Houston
- James M. Slater, MD**, Loma Linda, California
- Lynn Verhey, PhD, FASTRO**, Stonington, Maine

The Radiation Oncology Institute (ROI) graciously accepts gifts in memory of or in tribute to individuals. For more information, visit [www.roinstitute.org](http://www.roinstitute.org).



**ASTRO STAFF CONDUCTS FOOD DRIVE TO ASSIST FURLOUGHED GOVERNMENT EMPLOYEES.**



# 2018 ASTRO Annual Meeting

## Wrap-up

Practice Changing Highlights from San Antonio and Beyond

BY SCOTT GLASER, MD, AND SUSHIL BERIWAL, MD, MBA

**ASTRO 2018 has come and gone**, but the winds of change engendered at the meeting continue to gain traction among the oncology community. Numerous innovative and practice-changing presentations were delivered, though much of the chatter seemed to be focused on oligometastatic disease. It appears that the decades-old paradigm that metastatic disease should be treated with systemic therapy alone, with radiation reserved for palliation, has been shattered. How radiotherapy fits into the oligo- or poly-metastatic picture remains to be cohesively defined but the question is no longer, “Is there a role for aggressive radiation in metastatic patients to improve survival?” but rather for whom, when and how? Additionally, there were several reports that will help guide the optimal management of prostate cancer patients in the salvage and definitive setting, as well as decreasing the toxicity of whole brain radiotherapy.

In the Plenary Session, David Palma, MD, PhD, presented the results of the SABR-COMET trial.<sup>1</sup> This study enrolled patients with a controlled primary but oligometastatic disease. The trial randomized patients with one to five metastases (92 of 99 patients had one, two or three lesions) who were amenable to either stereotactic body radiation therapy (SBRT), standard of care (SOC) systemic therapy or SOC plus SBRT to all sites of metastatic disease. The trial included an even distribution of breast, lung, colorectal and prostate patients, with a minority of patients from other disease sites. With a median follow-up of 27 months, the median overall survival for patients in the SBRT arm was 13 months longer than in the SOC arm (28 versus 41 months). Progression-free survival also increased from a median of six months to 12 months ( $p=0.001$ ). Of note, there were no differences in quality of life scores between the groups. However, there were three grade 5 toxicities in the SBRT group related to radiotherapy, underscoring the importance of thoughtful implementation of SBRT in this patient population. A successor trial, SABR-COMET 10, will ask similar questions, but include patients with four to 10 sites of metastatic disease. The full-length manuscript from the SABR-COMET trial is in press in *The Lancet*.

Keeping in the theme of oligometastatic disease, Daniel Gomez, MD, presented an update from a multicenter randomized phase II study of local consolidative therapy (LCT) for oligometastatic non-small cell lung cancer (NSCLC).<sup>2</sup> This protocol enrolled patients with metastatic NSCLC who were treated with upfront systemic therapy and then, on

interval restaging, had three or less non-progressing lesions. Patients were randomized to standard maintenance therapy or LCT, which could be surgery or radiotherapy to the primary disease site and metastases followed by standard maintenance therapy. Crossover was allowed at the time of progression. A total of 49 patients were reported on. The median overall survival was improved with LCT from 17 months to 41 months ( $p=0.017$ ). Perhaps the most interesting part was the observation of a trend of improved survival with complete LCT at time of progression, implying there may be a benefit of a repeat course of LCT of “oligoprogressive” disease, rather than just a benefit from one episode of LCT earlier on in the treatment course.

Across the Atlantic at the European Society for Medical Oncology (ESMO) 2018 Congress, an analysis of the STAMPEDE trial was presented that randomized 2,061 men with metastatic prostate cancer to SOC systemic treatment with or without local radiation therapy to prostate.<sup>3</sup> Although radiotherapy to the prostate did not improve overall survival in the entire cohort, a preplanned subset analysis did show that prostate radiotherapy improves overall survival in the 40 percent of the population with oligometastatic disease (defined as three or less bone metastases



with none outside the vertebral bodies or pelvis and without visceral metastases). In this limited metastatic burden cohort, three-year survival increased from 73 percent to 81 percent. In order to decrease the

burden of prolonged radiotherapy courses, external beam radiation therapy (EBRT) was given in one of two hypofractionated courses; 36 Gray (Gy) in six fractions once per week or 55 Gy in 20 fractions over four weeks. This trial offers level 1 evidence that prostate radiotherapy improves survival in men with oligometastatic prostate cancer and should be a standard part of the care for such patients. The optimum dose schedule for such patients remains to be defined. Since this trial used hypofractionation and there is a growing body of literature demonstrating that hypofractionation is well-tolerated when using contemporary techniques, it seems that moderate hypofractionation should be the preferred approach in this patient population.

Indeed, earlier in October, ASTRO, ASCO and the AUA published consensus guidelines<sup>4</sup> on the use of hypofractionated prostate radiotherapy. There was strong agreement that most men should be offered moderate hypofractionation but should be made aware the potential for a small increased risk of acute GI toxicity with no expected difference in long-term toxicity. These recommendations are supported by several large randomized trials with results from the CHHiP Trial playing an important role. At this year's ASTRO Annual Meeting, five-year patient-reported quality of life outcomes from the CHHiP Trial were presented.<sup>5</sup> This study randomized patients to either 74 Gy in 37 fractions, 60 Gy in 20 fractions, or 57 Gy in 19 fractions. With a total of 2,100 patients enrolled in the quality of life portion of the trial, there was no statistically significant difference in bowel or urinary bother among the various fractionation regimens. Interestingly though, there was a greater increase in sexual bother among men treated in the conventionally fractionated arm, suggesting less erectile dysfunction in men treated with hypofractionated radiotherapy.

While the debate on pelvic nodal radiation for the definitive management of prostate cancer patients continues with the recent publication of long-term results from RTOG 9413 and the ongoing RTOG 0924, ASTRO 2018 provided phase III randomized data regarding pelvic nodal radiation in the salvage setting with the presentation of the NRG Oncology/RTOG 0534 SPPORT Trial.<sup>6</sup> Here, a total of 1,792 patients were treated in one of three arms: prostate bed RT alone (64.8-70.2 Gy); prostate bed RT plus short-term androgen deprivation therapy (ADT); or prostate bed RT plus short-term ADT plus pelvic nodal radiation (45 Gy).

Using the phoenix definition of biochemical failure along with clinical progression or death from any cause, the five-year progression-free survival increased from 71 percent in arm 1 to 81 percent in arm 2 to 87 percent in arm 3 (all  $p < 0.005$ ). Toxicity increase was minimal, with a 3 to 4 percent increase in acute grade 2+ GI, and both acute and late hematologic toxicity between arms 2 to 3. While no statistically significant differences in this early evaluation of metastasis-free survival were seen, the absolute five-year rates favored arm 3 (91.7 percent versus 94.4 percent versus 95.2



percent). The authors suggest that the benefit of pelvic nodal radiation may be less in patients with a low PSA (below the median of 0.34). Further subset analyses on the impact of other risk factors, such as extracapsular extension (ECE) (28 percent of patients) and positive margins (50 percent of patients) will be important.

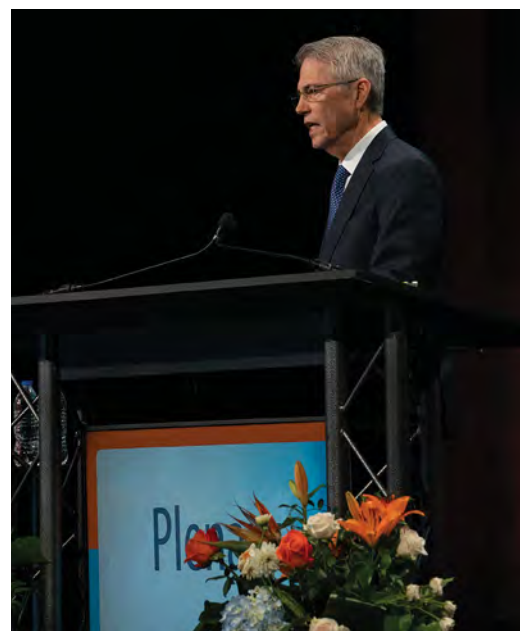
Two previous RTOG studies (0614 and 0933) independently investigated the neuroprotective effect of memantine or hippocampal avoidance for patients undergoing whole brain radiotherapy (WBRT) with promising results. In NRG CC001, these two concepts were tested in tandem.<sup>7</sup> The trial randomized patients between WBRT with memantine to WBRT plus memantine plus hippocampal avoidance intensity-modulated radiation therapy (IMRT). A total of 518 patients were randomized. With a median follow-up of six months, there was no difference in intracranial progression-free survival, but the time

to neurocognitive failure (defined as a clinically significant decline in any one of three administered cognitive function tests) was significantly improved with the addition of hippocampal avoidance, with a rate of neurocognitive failure at six months of 69 percent without hippocampal avoidance and 58 percent with hippocampal avoidance ( $p=0.012$ ). The authors state that the combined effect of memantine and hippocampal avoidance results in a hazard ratio of neurocognitive decline of 0.58 compared with WBRT alone, and that this value is comparable to phase III

trials comparing SRS and WBRT. Thus, this objective data should increase usage of hippocampal-sparing WBRT in patients with metastatic disease to the brain.



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At the ASTRO Annual Meeting in San Antonio last October, presenters highlighted some of the top science in the field. David Palma, MD, PhD, (previous page) presented the results of the SABR-COMET trial. From left to right, Daniel Gomez, MD; John Staffurth, MD; and Alan Pollack, MD, PhD, provide results and commentary about recent clinical trials.

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# Minding the Gap from Publication to Practice:

## A Community Perspective

BY MATTHEW S. KATZ, MD, FASTRO

**Both in print and online, I see understandable frustration expressed by academic radiation oncologists** at the slow pace at which published research disseminates into clinical practice. After dedicating years on research to improve cancer care, why isn't it being implemented?

I don't appreciate all of the challenges facing academic radiation oncologists. Training and working in academic environments gave me insight into the academic career track, and many friends have remained dedicated in their careers to scientific inquiry. But it's a very different practice setting than in the community. Unless you've worked in a non-academic setting, where the majority of cancer patients receive treatment, it may be hard to understand why there's slow adoption.

Why the gap? Let's discuss some general reasons, then look at two specific examples.

First, the published literature has selection bias favoring the academic perspective. Doctors leaving academia may not have the time or desire required to design and publish research. As a result, peer-reviewed

literature may not translate well into all radiation oncology practice settings.

Whether it's retrospective studies or prospective trials, there may also be selection bias on the patients included. Social disparities can play a big role in adoption of some research, particularly if it involves higher cost treatment. I work in post-industrial urban communities taking care of wonderful people. Unlike my time training and working at academic centers, I now find myself having to use medical translators much more frequently, and social support networks for my current patients aren't as strong. So generalizability may be an issue.

Sometimes, the problem is lack of adequate information to adopt new practices. It's improved with more online supplements with published articles, but a 2010 *Journal of the National Cancer Institute* study suggested that only 11 percent of published oncology trials reported enough information to translate research to practice. We often have the technical details in the published protocols. But academic centers often use



tighter dose-volume histogram constraints, with more treatment planning and allied health support than in many community settings. I suspect there may be some assumptions built in that we'll 'get it,' but some of the fine points in maximizing higher quality treatment may not be explicitly shared. Maybe there's a water cooler effect in site-specific academic circles with verbal transmission of tips and tricks. But if it's not in print, community doctors, as 'generalists,' may not feel comfortable adopting something new if there's a knowledge gap.

Finally, there is also the possibility that well-done research doesn't change practice dramatically but simply expands options. And sometimes even then, people may not choose new options if they're happy with the old ones and if there isn't a clear explanation of value.

Since we're talking value, I'll use two examples where "less is more" and we are still doing more than some expected.


Prostate cancer hypofractionation is the new academic standard but has had low utilization rates with no change between 2004 and 2013. Some academics on Twitter complained that community doctors use conventional fractionation for profit motive. That's a quick conclusion to draw, and I don't think it's fair without considering the community perspective. First, we have all been taught *primum non nocere*: first, do no harm. If pragmatic, soup-to-nuts guidance isn't available on best practices to implement, then it's harder to do in settings with less treatment planning support. Cutting and pasting DVH criteria from a trial is a fool's errand, particularly when we know academics then publish how high-volume centers are "better." Why didn't that information get shared with us in the first place? Second, many of us were taught enough about the higher toxicity with larger doses, so we're conservative on the possibility of causing harm.

Community doctors know that poor implementation can hurt people, undercut trust in our competence and lead to malpractice risk. When National Comprehensive Cancer Network (NCCN) guidelines allow 1.8 Gray (Gy) fractions and academic colleagues haven't provided a full blueprint for implementation, don't be surprised if change occurs slowly. I adopted 70 Gy in 28 fractions and am moving toward 60 Gy in 20 fractions for many prostate cancer patients. But it could have been a lot easier. To accurately claim slow adoption is due to a profit motive, remove all barriers to implementation—then those motivated solely by profit will stand out with a competitive disadvantage.

How about leaving out treatment completely, such as for women over 70 with ER+, early-stage breast cancer after lumpectomy with negative margins? This gap is not a technical issue. It's both cultural and related to patient autonomy. In the U.S., the tendency is to 'do something' rather than not—often for both doctors and patients. Getting a cancer diagnosis may amplify that sense of need, along with a 30-plus-year track record of clinical trials with evidence of radiation reducing the risk of recurrence after breast-conserving surgery. In different practice settings, surgeons and medical oncologists may exert a strong influence on patients' choice before we even get to meet with them.

My colleagues are generally great about not biasing patients before they see me. When I meet with patients and share the data supporting a reduced local recurrence risk with no survival benefit, still about 75 to 80 percent choose radiation. As much as it may not seem medically necessary to do the radiation, from the patient perspective, I see enough older women who still choose treatment. The most common reasons they choose treatment despite no survival benefit are either they don't want to have surgery or worry again, or they need to remain a caregiver for a spouse or family member without distraction for their own health issues.

Because we value patient autonomy, we must provide the facts, learn patients' values and maximize another important endpoint: reduced decisional regret. If there are ways to frame the issue in a balanced way, please share them! I'm open to it. But if we need paternalistic approaches to achieve lower utilization, do the ends justify the means?

We all want to improve cancer care. ASTRO's guidelines for breast and prostate hypofractionation are an important way to highlight the value of shorter treatment times. We just need to make sure we understand how to best make those guidelines work in different clinical settings. If we can find and mind the gaps in communication, we can ensure the hard work done by academic experts can be translated into clinical practice and reach as many patients as possible. 

*Matthew S. Katz, MD, FASTRO, is a community practice doctor with Radiation Oncology Associates in Lowell, Massachusetts.*

# Can Guidelines Help 'Bridge the Gap'?

BY CAROL HAHN, MD

**As practicing clinicians, keeping up with relevant clinical advances and translating recently published research into how we treat our patients can be challenging.** Dr. Katz has provided an eloquent discussion of the challenges facing a community practitioner in this regard and the challenges ring true for all of us in radiation oncology. How then can we move forward through the ever-expanding seas of information to move toward the beacon of high-value care? Well, the goal may be lofty, but ASTRO attempts to assist radiation oncologists in these efforts by developing evidence-based Clinical Practice Guidelines.

In developing ASTRO guidelines, the focus is to synthesize relevant literature to provide guidance to educate our membership and to optimize delivery of evidence-based care. In other words, take the best data and put together disease-focused experts to translate it into specific recommendations that can be implemented into clinical practice.


Implementation of recommendations from published trials can be challenging and those who practice within tertiary care generally live much closer to unpublished data and have the benefit of collaborations with multiple subspecialist colleagues that may direct planning in ways not generally utilized in other practice settings. Thus, community-practice physicians and trainees are purposefully included to provide perspective and ensure balance.

Specific recommendations with actionable statements are most helpful. The strength of recommendations, however, need to reflect the strength of the data. A good example of this is seen in the whole breast fractionation guideline and subsequent update.<sup>1,2</sup> In the initial document, conservative recommendations were given for use of hypofractionation in women older than 50. Following publication of additional long-term follow-up data, the update makes much stronger recommendation for hypofractionation in the treatment of women with early-stage breast cancer.

Technical details are also important for implementation. In the updated breast fractionation guideline, the task force worked to address this with specific recommendations for dose homogeneity and on which to base decisions for tumor bed boost therapy, along with guidance on optimal dosage and method of delivery.

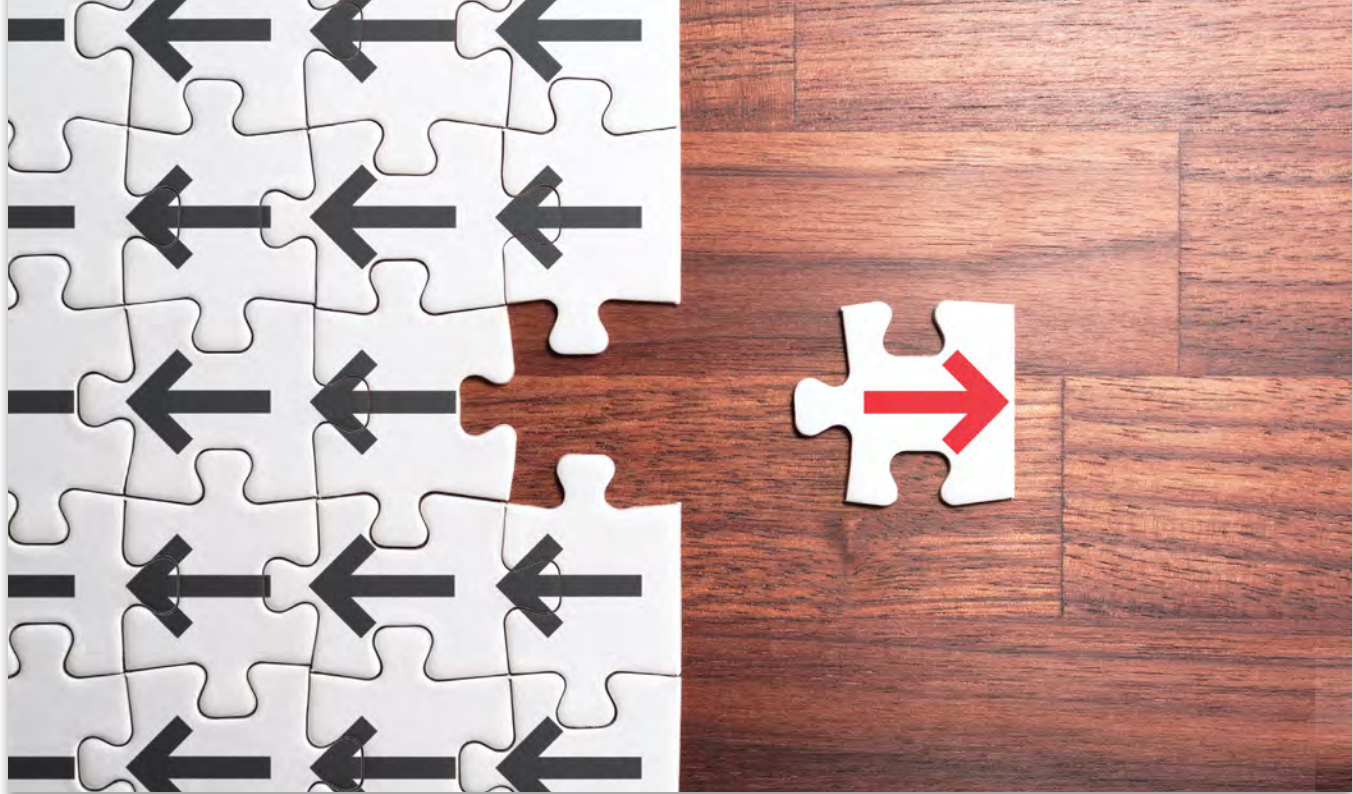
Given the limitations of published data related to patient selection, the guidelines recommend considering the individual clinical situation of each patient and encourage shared decision-making between providers and patients. ASTRO has promoted shared decision-making as part of the "Choosing Wisely" initiative of the American Board of Internal Medicine, including developing our list of "things physicians and patients should question."<sup>3,4</sup> Many of these statements are derived directly from ASTRO guideline recommendations. Such statements as "don't initiate therapy for low-risk prostate cancer without discussing active observation" and "don't initiate whole breast radiation as part of breast-conserving therapy for women with early-stage invasive disease without considering shorter treatment schedules" are simple, direct, but not prescriptive. These items can serve as helpful starting points for discussions on care options.

So, do our guidelines actually achieve the goal of bridging the gap? Published data have demonstrated impact of utilization of APBI with decrease in use in "unsuitable" patients following publication of the initial APBI consensus statement.<sup>5</sup> Additional work demonstrating impact of ASTRO Guidelines on clinical care is ongoing.<sup>6</sup> Furthermore, results of annual member surveys report ASTRO guidelines to be highly valued by our members and are among the most read and frequently downloaded articles from our journals.<sup>7,8</sup>

Going forward, input from membership is vital to produce guidelines that continue to be useful in bridging this gap. I encourage all to visit the ASTRO website, where links are available to the published guidelines. Members should also provide feedback on documents being developed that are open for comment and submit topics of interest for future guidelines to further these efforts. 

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# Managing Conflicts of Interest Related to Industry Relationships

*How can radiation oncology ensure the validity  
of industry-funded research?*

BY SUE S. YOM, MD, PHD, MAS

**There has been increasing attention paid to potential conflicts of interest** that the medical community has in its relationship with industry. Prominent physician leaders, politicians, nonprofit organizations and the press have increasingly criticized funding from industry to support medical activities. Proposals for greater restrictions have recently gained momentum after several conspicuous news reports described acclaimed physician leaders who substantially profited from their relationships with industry, while failing to disclose their relationships to institutional governance boards or the public.<sup>1,2</sup>

The zero-tolerance perspective is grounded in a legitimate concern for bias that could influence the outcomes of clinical trials or worse—guidelines for care or coverage. Furthermore, there is some validity in the contention, as explored in *The New York Times* December 8, 2018, article, “What These Medical Journals Don’t Reveal: Top Doctors’ Ties to Industry.”

In that story, one expert said that “the system is broken” in terms of adequately policing persons who deliberately cloak their relationships for reasons of concealing personal profit.<sup>2</sup>

However, the proposal to prohibit all industry involvement from the profession of medicine leaves aside the reality that with the high and rising costs of education and research, it would be extremely challenging for medical schools and organizations to carry out their missions without industry funding. At present, the vast majority of medical institutions and organizations, including ASTRO, rely on industry to advance improvements in education, research and quality of care. Government and public funding is clearly unable to fill this gap.<sup>3</sup> Another aspect of the issue is that without industry interaction, advances in technology and pharmaceuticals could be less available for testing to assure appropriate translation to patient care.

*Continued on following page*

One could also argue that industry should not be the only one to benefit from the medical profession. An alternative perspective might be that, as sellers of products who directly benefit from the work of physicians and medical organizations, industry has an ethical obligation to provide general-use, unrestricted funding to support the education of practitioners, as well as contribute to the development and translation of scientific advances and improved patient care.<sup>4</sup>

Some might propose that medical schools and organizations should turn to philanthropy as a more unbiased source of funding. This source is unlikely to fill the gap, as philanthropic fundraising initiatives have already greatly expanded since the early 2000s to what may be a near-maximum, particularly in the large health care systems.<sup>5</sup> It should also be noted that, depending on the source, philanthropy may not necessarily be more free from commercial influence, and furthermore, a strict reliance on philanthropy could favor certain types of initiatives or certain types of organizations over others.

An immediate solution to these issues would be absolute transparency of all funding originations with an emphasis on strong firewalls between the funding source and the activity. For instance, the Accreditation Council for Continuing Medical Education (ACCME) is an organization that oversees and certifies the activities of continuing medical education in the United States. The ACCME has issued rigorous standards to guide interactions with industry at medical conferences and educational events. These standards, which are described in the guideline, “Standards for Commercial

Support: Standards to Ensure Independence in CME Activities,” describe the requirements for organizations to accept funding while maintaining scientific independence. The entire guideline is available for review at [www.accme.org/resources/standards-for-commercial-support-resources](http://www.accme.org/resources/standards-for-commercial-support-resources).

More generally, “The Code for Interactions with Companies,” issued by the Council of Medical Specialty Societies, is available for download at [www.cmss.org/codeforinteractions.aspx](http://www.cmss.org/codeforinteractions.aspx). This code reviews all areas of interactions between medical societies and industry and provides numerous suggestions for creating strong firewalls across many forms of interaction. This is a document worth reading as a model of good practice in managing relationships, as the principles go far beyond simple disclosure.

It is important for individuals and organizations alike to understand that disclosure of a relationship does not expunge inappropriate behaviors. Disclosure is one aspect of a multipart management plan that should include openness to verification and critique and continuing recalibration—including severance of inappropriate relationships—as needed.

Individuals in the past have been able to avoid complete disclosure, in part because of the varied requirements for disclosures among journals and organizations, as well as disagreement on what constitutes a “relevant” conflict of interest. The most universally recognized disclosure form used by journals is freely downloadable from the International Committee of Medical Journal Editors (ICJME), available at <http://www.icmje.org/conflicts-of-interest/>. This form requests disclosures existing over the past 36 months, encompassing all “relevant” financial activities, as well as relationships “that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work.”

Not all journals and organizations utilize the ICJME format. A request for disclosures may range across the past 12 months or the past 36 months; it may encompass all known relationships or only relationships thought to be “relevant” to the work under consideration; the categories listed on the form may not allow entry of a specific type of relationship. Some journals still allow a single corresponding author to attest that there are no relationships for any co-author. Most importantly, the definition of “relevance” may allow for considerable leeway in judgment on what must be disclosed.

In the end, no form can account for these many




possible circumventions, and “regulation cannot substitute for integrity.”<sup>6</sup> The responsibility for disclosure rests not with a form but with the individual investigator. Disclosure, if it is being performed in good faith, should be as complete as possible and relevance should be broadly defined, with disclosure as the default position in cases of uncertainty. In cases of true ambiguity, the investigator should seek further guidance rather than choosing not to disclose. Acknowledgement and awareness of one’s own vulnerability to influence is important. An interesting survey of radiation oncologists found that while 96 percent of participants had accepted gifts, only 5 percent thought their own prescribing practices were affected, although 33 percent agreed that other physicians’ prescribing practices would be affected.<sup>7</sup>

For physicians who do not fully disclose their relationships, they should be aware that payments are now openly searchable on the internet. The Physician Payments Sunshine Act of 2010 was passed to mandate reporting by industry of any physician-related payment more than \$10 or any physician ownership or investment interest, including payments made to institutions to support research for which the physician was a principal investigator. These enforced disclosures now reside on an easily searchable public website known as Open Payments, available at <https://openpaymentsdata.cms.gov/>.

Open Payments is revolutionary, because one of the most powerful checks on impropriety in industry relationships is transparency. In managing relationships with industry, good stewardship should be maintained by reviewing relationships frequently, keeping careful records of the status and timelines of each relationship, and taking advantage of all institutional and organizational forums to disclose relationships and invite external review. Repeated open review and analysis of these relationships is currently the most effective means of verifying the appropriateness of the situation.

Many persons dismiss the disclosure and peer-review process as burdensome, uninteresting and meaningless—but it is not. It should be treated with seriousness, as it forms the ethical groundwork of the activity in question. The low regard for disclosure manifests at academic conferences, where it has been found repeatedly that the majority of authors fail to file relevant or accurate disclosures or rush past them dismissively before presenting.<sup>8,9</sup>

Some may feel that relationships with industry should be one’s own private matter and it is not anyone else’s business how someone makes money. However, an important aspect to keep in mind is that when we publish, speak or advocate on behalf of any organization, we are not just representing ourselves. We are speaking on behalf of a team and organization that houses our work and makes it possible. Full disclosure and proper management of relationships is our obligation to others who believe in our work and its ethical provenance. 

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To read more about what ASTRO journals are doing to promote transparency about potential conflicts of interest, read more at [www.astro.org/astronews](http://www.astro.org/astronews).

# Member satisfaction remains high; prior authorization emerges as key issue

## Results from the 2018 ASTRO Member Survey

BY TIM SANDERS, ASTRO RESEARCH ANALYST

The ASTRO membership survey is an annual look into how members feel about their membership and the Society's initiatives, direction and programs. The 2018 membership survey was fielded from May 14 to July 2, 2018. A total of 1,579 ASTRO members who received the survey completed it, for a response rate of 18.8 percent.

### Respondent and practice demographics

As in previous years, the 2018 respondents were representative of ASTRO's membership. Nearly two-thirds of respondents were radiation oncologists, with medical physicists and radiation oncology residents as the next most common occupations. (See Figure 1 for a more detailed listing of respondent professions.)

Geographically, most respondents practice in North America (75 percent), followed by Asia (12 percent) and Europe (7 percent). A total of 61 countries across six continents were represented in the survey, most commonly the U.S. (70 percent), Japan (5 percent), Canada (3 percent), Brazil (2 percent) and India (2 percent). When looking specifically at the United States, the greatest number of radiation oncologists practice in the South and the greatest number of radiation oncology residents practice in the Northeast.

The 2018 membership survey saw an increase in responses from millennials (ages 20 to 37) and a

decrease among baby boomers (ages 54 to 72). Just over two-thirds of respondents were male. Men continue to outnumber women in the professions that comprise the majority of our membership, including radiation oncologists, medical physicists and radiation oncologist residents, although the gender gap is the smallest among radiation oncology residents.

Just over half—51 percent—of the respondents' practice in an academic or university system, while 36 percent are employed in a private practice/community-based system. Compared with the ASTRO membership database, a greater share of respondents came from academic centers. Approximately four out of five respondents described their primary work setting as hospital-based, with the remainder working primarily in freestanding/satellite clinics. Data over time demonstrate slight increases among academic/university system employers and hospital-based work settings since 2014.

A variety of practice sizes were represented, most frequently small and medium practices (between 0 and 499 new patients and between 500 and 999 patients, respectively, with 27 percent each), followed by jumbo practices (more than 1,500 patients, 25 percent) and large (between 1,000 and 1,499 patients, 22 percent).

ASTRO asked members if they conduct basic, clinical or translational research. Two-thirds of all respondents reported conducting research. The respondent group with the highest concentration of researchers was radiation oncology residents, painting a bright future for ASTRO's strategic plan goal of retaining and fostering intellectual research talent.

Figure 1: Respondents' Profession

Profession	% of Total
Radiation Oncologist	63.8
Medical Physicist	16.1
Radiation Oncology Resident	12.2
Administrator	1.6
Clinical Oncologist	1.5
Other	1.3
Medical Dosimetrist	1.0
Radiation Biologist	0.9
Radiation Therapist/Technologist	0.5
Nurse Practitioner	0.4
Oncology Nurse	0.3
Veterinarian	0.2
Medical Oncologist	0.1
Physician Assistant	0.1

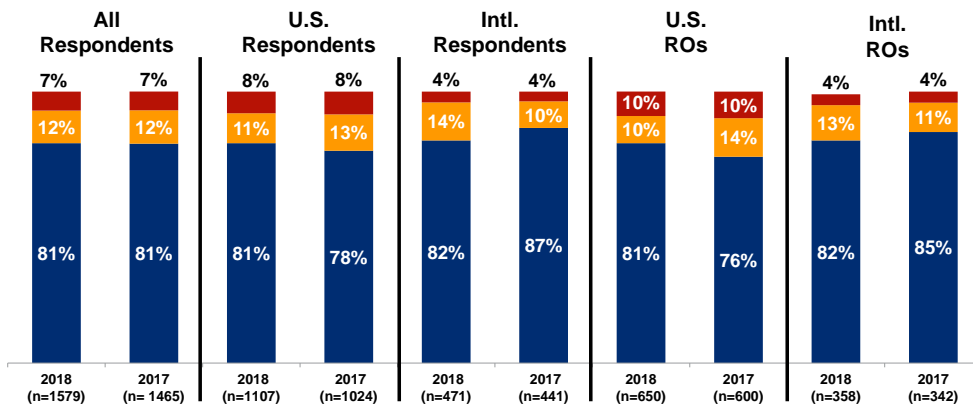
The 2018 Member Survey respondents mirror overall ASTRO membership.

### Satisfaction with ASTRO membership

In general, satisfaction remained high compared with 2017. More than nine out of 10 respondents reported being satisfied with or neutral about their ASTRO membership. While international respondents, as a whole, showed the highest levels of satisfaction, domestic radiation oncologists reported the largest increase in satisfaction in the past year, up six percent. (See Figure 2.) The largest decrease in satisfaction from 2017 was among radiation oncology residents, identifying a need for ASTRO leadership to focus on

this segment as they establish themselves as fully active members of our Society. (See figure 3.)

U.S.-based respondents in academic/university systems reported higher levels of satisfaction compared with respondents in private or community-based systems (82 versus 78 percent), yet both saw increases from 2017. The opposite remains true among international respondents, where those at private or community-based systems are slightly more satisfied than those in academic/university systems. (See figure 4.)

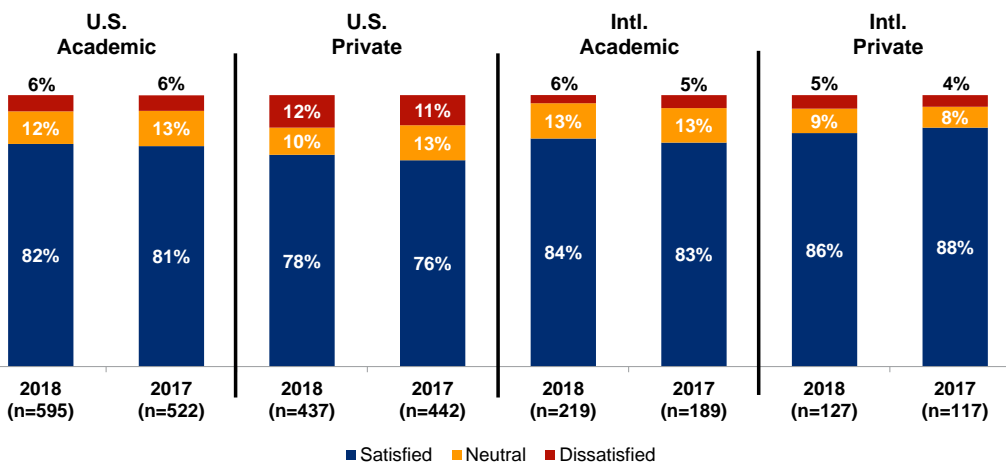
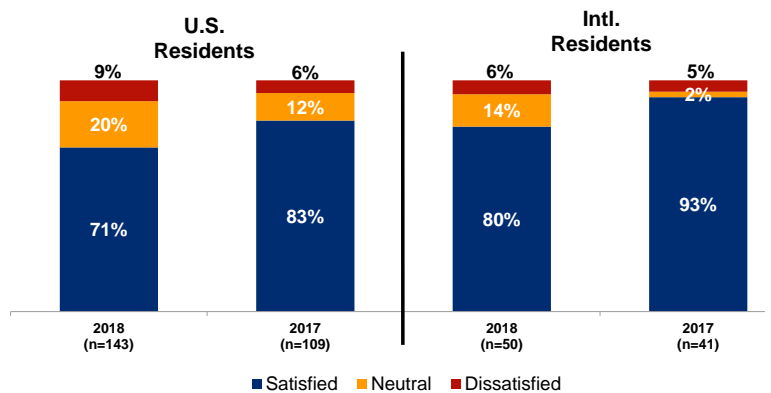


**Figure 2: Satisfaction with ASTRO Membership**

Satisfaction with membership is high for all members, with an increase in satisfaction reported among U.S. radiation oncologists.

**Figure 3: Radiation Oncology Resident's Satisfaction with ASTRO Membership**

U.S. radiation oncology residents reported a decrease in satisfaction.



**Figure 4: Satisfaction with ASTRO Membership by Employer**

Satisfaction remains relatively consistent across primary employers.

Overall, nine in 10 respondents agreed that participation in ASTRO is a good use of their time, and this level of perceived value has held steady over the past five years. Respondents from academic/university systems were more likely to agree that ASTRO is a good use of their time than those employed in private practice/community-based systems (92 versus 87 percent).

### Challenges radiation oncologists face

The 2018 membership survey identified “getting prior authorization” as a growing problem in radiation oncology. This challenge was added to the 2018 survey, and it skyrocketed to the top of the list as the most challenging issue for academic radiation oncologists and the second-most challenging for private practice radiation oncologists. (See figure 5.) To combat this challenge, ASTRO has reached out to all radiation oncologists to gain insight and collect further information about the specifics that cause the prior authorization process to be so challenging. If you haven’t already completed ASTRO’s Prior Authorization Survey and would like to provide feedback, email [research@astro.org](mailto:research@astro.org) for ways to participate in the conversation.

Both academic and private practice radiation oncologists also reported restrictive coverage policies

Figure 5: Challenges Facing U.S. Radiation Oncologists by Primary Employer

	Academic	Private
Getting prior authorization	39%	46%
Restrictive coverage policies by payers	38%	48%
Administrative burden (less time available for patients)	38%	39%
Balancing patient care and research	33%	10%
Using electronic medical records	21%	23%
Participating in federal quality payment programs	17%	42%
Rising practice costs	17%	29%
Keeping up with the latest developments/emerging tech. in the field	15%	13%
Referring physician perception of radiation therapy	13%	10%
Retention of qualified/experienced office or allied health staff	13%	15%
State and federal regulatory compliance	12%	21%
Managing disparate populations	12%	15%
Patient perception of radiation therapy	8%	12%
Radiation oncology leadership of multidisciplinary care (e.g., tumor board)	7%	10%
Implementing evidence-based guidelines/best practices	5%	7%
Malpractice issues	3%	5%

Getting prior authorization and restrictive coverage policies by payers pose the greatest challenges for both academic and private practice radiation oncologists.

Figure 6: Perceived Importance of ASTRO Functions

	2018 US (n=1107)	2018 US ROs (n=649)	2018 Intl (n=472)
	Average rating, 1=Not at all to 7=Very Important		
Advocate on behalf of members for appropriate reimbursement (insurers, CMS)	6.25	6.33	--
Educate Congress and regulators about radiation oncology	6.23	6.27	--
Publish scientific and practice journals (Red Journal, PRO and Advances)	6.22	6.24	6.32
Host the Annual Meeting	6.13	6.08	6.00
Support the delivery of safe and effective patient care (publish clinical practice statements, offer APEX for practice accreditation, provide error reporting system through RO-ILS)	6.08	5.97	6.11
Provide education and professional development opportunities (CME/SA-CME) for physicians and other members of the treatment team	6.07	6.15	5.96
Raise public awareness of radiation oncology as an effective form of treatment for patients with cancer and benign disease	5.96	5.91	5.87
Provide guidance to members regarding regulatory issues affecting their practice	5.95	5.95	--
Advance science through research and innovation to improve clinical outcomes (participate in NCI workshops, ASTRO supported grants)	5.83	5.69	5.83
Host specialty meetings (e.g., Annual Refresher Course, Best of ASTRO, Thoracic, Head & Neck)	5.73	5.84	5.67

Advocating for appropriate reimbursement, educating Congress and publishing scientific journals were the most important functions ASTRO provided in 2018.

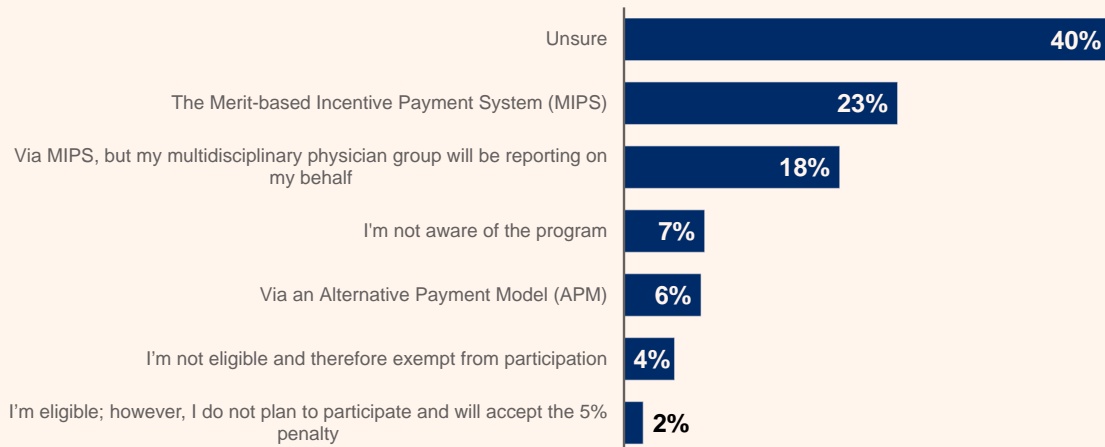
by payers and administrative burdens as challenging. Academic radiation oncologists reported a greater challenge in balancing patient care and research than those in private practice, while participating in quality payment programs is more of a challenge for radiation oncologists in private practice.

### ASTRO engagement and direction

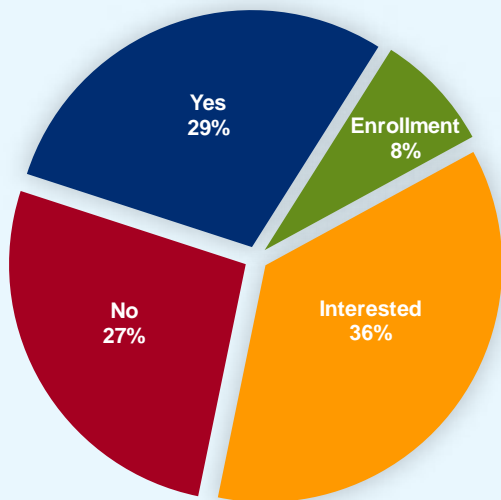
Every other year, we ask members to gauge the importance of functions ASTRO provides as a membership society. Data in 2018 suggest slight shifts



**Figure 7: Plans for MIPS Participation**



*Respondents were equally as likely to say they plan participate in the 2018 Medicare QPP via MIPS as they were to say they were unsure how they will participate.*



**Figure 8: RO-ILS Participation**

*More than a third of respondents are participating or are in the enrollment process for RO-ILS, with another third of respondents interested in learning more about the program.*


in perceived importance. Advocating for appropriate reimbursement and educating Congress and regulators about radiation oncology were rated the two most important functions in 2018 (see figure 6), whereas providing education and professional development opportunities and publishing scientific and practice journals were the top two in 2016.

When asked to rank a list of potential topics for upcoming guidelines, respondents ranked oligometastatic disease as the top candidate, followed by laryngeal cancer, bladder cancer and benign

disease. The most common write-in choices were prostate and breast cancers and stereotactic body radiation therapy (SBRT). Based on member interest in oligometastatic disease guidance, ASTRO is working with the European Society for Radiotherapy and Oncology (ESTRO) to develop a collaborative consensus definition paper on oligometets. Afterward, we anticipate developing a collaborative guideline on the management of oligometastatic disease in non-small cell lung cancer.

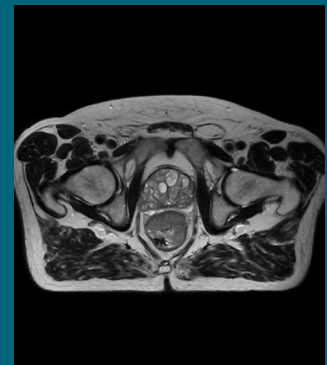
In terms of participation in the 2018 Medicare Quality Payment Program (QPP), respondents were equally as likely to say they plan to participate via the Merit-based Incentive Payment System (MIPS) as they were to say they were unsure how they will participate. Academic respondents were slightly more likely to report uncertainty about how they will participate. (See figure 7.)

Lastly, more than a third of respondents reported participating in RO-ILS: Radiation Oncology Incident Learning System®, including those in the enrollment process. Another third are interested in exploring RO-ILS as an option for their practice. Of the respondents who participate in RO-ILS, nine out of 10 rate the program as valuable to their practice. Perceived value is especially high among medical director and physicist respondents. (See figure 8.)

ASTRO continues to use the information you provide to improve our Society offerings. Thank you to everyone who took the time to complete the 2018 survey. The survey is sent out every spring, so don't miss it next year! Your input is essential to make ASTRO work best for you. 

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 **Elekta**



# The ROI Fills an Important Niche in Radiation Oncology Research

BY EMILY CONNELLY

**Quality of life studies and health services research make up only 4 percent and 2 percent respectively of all radiation oncology research**, despite their importance to clinical outcomes as the number of cancer survivors and people living with cancer grows.<sup>1</sup> The Radiation Oncology Institute (ROI) focuses its investments in research on these essential areas to help improve the lives of cancer patients and survivors. Founded with the intent to demonstrate the life-saving and quality of life benefits of radiation therapy, the ROI has funded more than \$3 million in research since 2010.

Health services research is a broad multidisciplinary field that studies how social, financial, organizational and personal factors affect health care access, costs, quality and value, and their impacts on patient outcomes. Many of the ROI's grants support investigations in this area, including that of researcher

Fumiko Chino, MD, at the Duke Cancer Institute, who is taking on the challenge of prospectively quantifying and investigating how high treatment costs affect head and neck cancer patients receiving radiation therapy. Mentored by Yvonne Mowery, MD, PhD, and David Brizel, MD, Dr. Chino's research will shed light on the effects of financial toxicity—a term for the hardship that patients face from their medical expenses—for head and neck cancer patients.

"I'm grateful for the commitment of the ROI to actively support research focused on how to improve the patient experience. Addressing financial toxicity has the potential to not only decrease stress and enhance quality of life but—in the long run—actually improve cancer outcomes like disease control and survival," says Dr. Chino.

*Continued on following page*

ROI researcher Chad Tang, MD, at the University of Texas MD Anderson Cancer Center, is conducting an analysis to understand the barriers to access and costs associated with four treatment options for prostate cancer patients—surgery, external beam radiation therapy, brachytherapy and active surveillance. Prostate cancer is the most common cancer among men in the United States, but many patients are not presented with the full array of radiation treatment options due to complex factors, including referral, reimbursement, training and the limited number of radiation oncologists, especially those practicing brachytherapy.

Dr. Tang’s study will be the first national-level analysis of the costs, financial toxicity and utilization of these four treatment options, and the results could be used to help increase access to radiation therapy for patients with prostate cancer across the United States. Although Dr. Tang’s research could have a national impact, the ROI is one of the few funding organizations filling this important niche.

“The ROI support is allowing us to conduct radiation-focused, value-based research that would be difficult to fund otherwise,” says Dr. Tang.

The ASTRO Board of Directors recognized that the type of research being done by Dr. Chino, Dr. Tang and other ROI investigators could help quantify and promote the benefits and value of radiation therapy. So they established the ROI as a separate, nonprofit foundation dedicated to supporting these critical fields of study.

“The ROI is advancing the profession by investing in research that addresses vital issues like access, cost, quality and value to ensure that cancer patients have the best outcomes possible and to strengthen radiation oncology’s leadership position in cancer care,” says ROI President Deborah A. Kuban, MD, FASTRO. “This research is about the future of our specialty, and all of us must support it.”

### References

1. Int J Radiation Oncol Biol Phys, Vol. 101, No. 4, pp. 767-778, 2018

## 2018 CORPORATE AMBASSADORS

ASTRO PROUDLY RECOGNIZES THE ONGOING COMMITMENT OF OUR CORPORATE AMBASSADORS FOR THEIR OUTSTANDING YEAR-ROUND LEADERSHIP AND PROMOTIONAL SPONSORSHIP OF RADIATION ONCOLOGY.





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- Harnessing the immune response in oligometastatic disease.
- Regulating issues, perspectives and guidelines.
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The latest science will be presented in short oral abstract presentations and posters on display. *Accepted abstracts will be published in the International Journal of Radiation Oncology • Biology • Physics (Red Journal).*

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# IN APPRECIATION OF ASTRO'S 2018 CORPORATE AMBASSADORS AND ANNUAL MEETING SPONSORS

Attendees were once again treated to an amazing display of products and services in radiation oncology and cancer care in the Innovation and Solution Showcase featuring the newly designed Innovation Hub spotlighting ePoster presentations and Industry-expert Theaters. ASTRO leadership visited Ambassadors and Meeting Sponsors to thank them for their support of the Society in an Annual Meeting tradition. On behalf of ASTRO, thank you for your generous support. These booth visits are only one of many benefits of Annual Meeting sponsorship. If you would like to learn more, please visit [www.astro.org/AMPromoOpps](http://www.astro.org/AMPromoOpps) or email [corporaterelations@astro.org](mailto:corporaterelations@astro.org) to discuss ways to sponsor the 61st Annual Meeting in Chicago, September 15-18.

(Not pictured: Bayer, Brainlab, Galera Therapeutics, Nanobiotix, Sirtex, UPMC, Vision RT)

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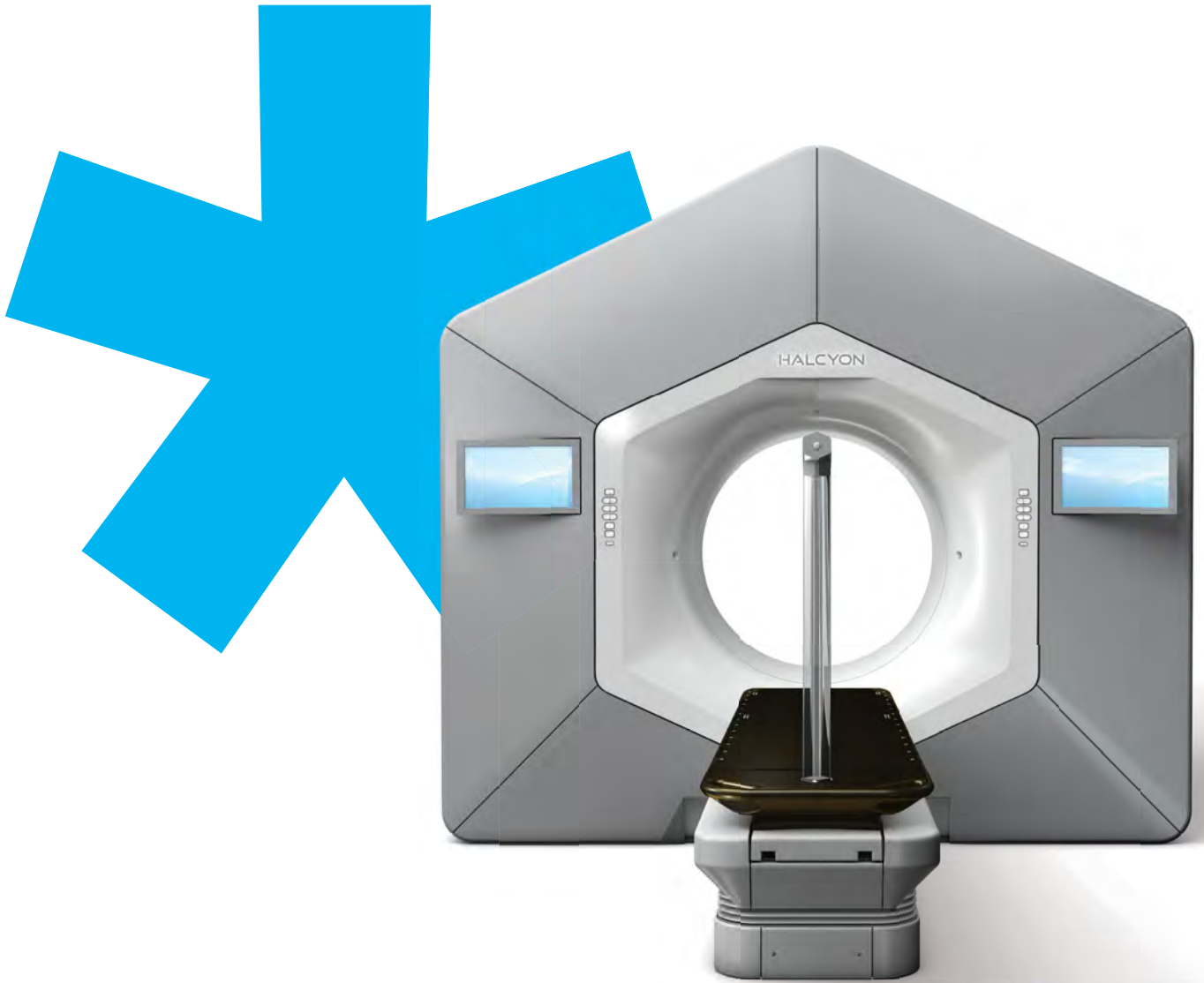


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## ASSESSMENT OF KNOWLEDGE REGARDING CLINICAL TRIALS

**Reported findings of clinical trials represent perhaps the most significant driver of decision-making in modern medical practice.**<sup>1</sup> In 2000, the National Institutes of Health launched the [Clinicaltrials.gov](http://Clinicaltrials.gov) website which, as of this writing, has grown to more than 100,000 entries.<sup>2</sup> Many of these trials ultimately may be closed before completion for lack of accrual or a variety of other reasons; others may never be reported in the peer-reviewed literature because of a presumed editorial bias against negative results.<sup>3</sup> A majority of reported trials are of limited value in informing day-to-day clinical care, but significant trials validating the efficacy of current practices or procedures or establishing new or revised norms are critical for the knowledge base of practicing physicians. The level of that knowledge must be assessed by the 24 member boards of the American Board of Medical Specialties (ABMS) as a basic element of their initial certification (IC) and Maintenance of Certification (MOC) assessment instruments.

The American Board of Radiology (ABR) exams include questions related to clinical trial outcomes only for those trials that have been widely reported in national or international peer-reviewed journals and that have been determined to have an impact on clinical care. These trials may include diagnostic or therapeutic oncologic interventions, as well as those that demonstrate superiority, inferiority or non-inferiority of the trial options. Although an emphasis is placed on prospective cooperative group, multi-institutional or large single institutional studies, questions based on significant retrospective reports also may be included.

The IC qualifying (written) clinical exams are predominantly populated by traditional multiple-choice questions containing a stem (question), a key (the correct response) and three or four distractors (incorrect options). When based on data from clinical trials, items might query knowledge of outcomes or trial management. The primary interest of the ABR is that candidates understand the implications of the trial.

The IC certifying (oral) exam is entirely case management-based and might include questions related to outcomes and rationale for selection of management options. Similar material had been included in the now-retired MOC Part 3 (Assessment of Knowledge, Judgment and Skills) which, for radiation oncology diplomates, will be replaced by the ABR Online Longitudinal Assessment (ABR OLA) in 2020. Items related to clinical trials will be included in ABR OLA.

While important, knowledge of clinical trial outcome data is not felt to be sufficient on its own for modern practice. All ABMS certification exams, including those of the ABR, now include material related to “nonclinical” information such as bioethics, biostatistics and research design. These items are included not to test minutiae, but to assess knowledge of critical elements of literature and trial analysis, such as the statistical validity of outcomes and the ethical implications of clinical research. Because these various “nonclinical” domains are potentially far-ranging, the ABR has provided a syllabus that contains all relevant information and appropriate references.<sup>4</sup> The ABR is committed to updating this source and study material every three to four years.

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4. American Board of Radiology Non-Clinical Skills Syllabus, [https://www.theabr.org/wp-content/uploads/2017/06/RO\\_NCS\\_Syllabus.pdf](https://www.theabr.org/wp-content/uploads/2017/06/RO_NCS_Syllabus.pdf) Availability verified Nov. 5, 2018.

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

**September 1, 2018**

### **Radiation in central nervous system leukemia: guidelines from the International Lymphoma Radiation Oncology Group**

*Pinnix et al*

This article presents guidelines for adults with acute lymphoid leukemia (ALL) and acute myeloid leukemia (AML), focusing on use of CNS radiation. As systemic control improves, preventing CNS relapse becomes more crucial for patient outcome, though CNS-directed therapies have an increased risk of toxicity.

**October 1, 2018**

### **Multicenter trial of stereotactic body radiation therapy for low- and intermediate-risk prostate cancer: survival and toxicity endpoints**

*Meier et al*

The authors report the five-year outcomes of a multi-institutional study where localized prostate cancer patients were treated with 40 Gray (Gy) in five fractions using stereotactic body radiation therapy (SBRT). The study focused on disease-free survival and toxicity rates when compared with results from dose-escalated external beam radiation therapy studies. The authors found that the rate of grade 3 to 5 toxicities was well under the 10 percent rate deemed excessive. The study also showed improved disease-free survival for both low- and intermediate-risk patients.

### **Patient-reported outcomes in NRG Oncology RTOG 0938 evaluating two ultrahypofractionated regimens for prostate cancer**

*Lukka et al*

This study compared two different schedules of ultrahypofractionated radiation therapy (UHRT) for prostate cancer patients with a focus on quality of life, as reported by the Expanded Prostate Index-Cancer (EPIC-50) bowel and urinary questionnaires. The authors state that if UHRT is found to be comparable to standard radiation therapy, patient-reported outcomes will become important for deciding which regimens to choose. The results of this study showed generally comparable EPIC scores for both bowel and urinary scores, though longer follow-up is required to evaluate for late toxicity.

**November 1, 2018**

### **Imaging-based outcomes for 24 Gy in two daily fractions for patients with de novo**

### **spinal metastases treated with spine stereotactic Body Radiation Therapy (SBRT)**

*Tseng et al*

Studying 279 de novo spinal metastases in 145 consecutive patients, Tseng and colleagues concluded that 24 Gy in two daily SBRT fractions is safe and effective in achieving high tumor control rates. The authors note that these outcomes will inform an ongoing randomized trial comparing 24 Gy in two SBRT fractions to 20 Gy delivered in five daily conventional fractions.

**November 15, 2018**

### **Positron emission tomography (PET)-adjusted intensity-modulated radiation therapy (IMRT) for locally advanced non-small cell lung cancer (NSCLC)**

*Ohri et al*

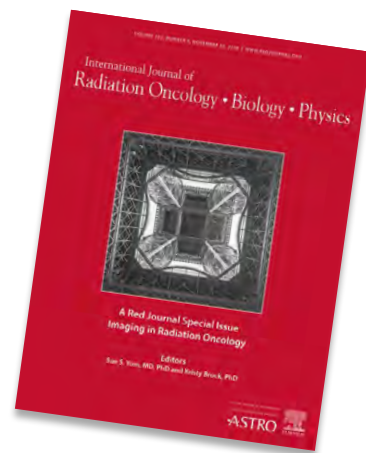
This article, featured in the November 15 imaging special edition, details a prospective trial examining PET-based, dose-painted IMRT for NSCLC. Considering both high-risk and low-risk lesions, the investigators found that dose-painted IMRT based on pretreatment PET metrics with concurrent chemotherapy yielded high rates of metabolic response and local disease control for locally advanced NSCLC.

**December 1, 2018**

### **Impact of immunohistochemistry-based subtypes in muscle-invasive bladder cancer on response to chemoradiation therapy**

*Tanaka et al*

Aiming to evaluate the impact of immunohistochemistry (IHC)-based subtyping in muscle-invasive bladder cancer on prediction of chemoradiation therapy response, Tanaka and colleagues applied an IHC-based subtyping model to classify patients into three groups. The model, developed at Lund University, classifies patients into urobasal (Uro), genomically unstable (GU) and squamous cell cancer-like (SCCL) subtypes. GU and SCCL cancers showed more favorable CRT response than did Uro cancers.





## HIGHLIGHTS FROM PRACTICAL RADIATION ONCOLOGY

November-December 2018

### Local control for clinical stage I non-small cell lung cancer treated with five-fraction stereotactic body radiation therapy is not associated with treatment schedule

*Samson et al*

There is some debate on whether consecutive stereotactic body radiation therapy (SBRT) for lung cancer affects radiosensitivity of the tumor. The authors of this study compared failure and survival rates in patients from two institutions who received either consecutive or non-consecutive five-fraction lung SBRT. No differences were found in failure or survival rates for patients who were treated consecutively when compared with those treated non-consecutively. The authors note that their findings are one example of how SBRT can be effective without adhering to principles of radiobiology, namely leaving time for reoxygenation and redistribution of cells within the tumor.

### Hypofractionated radiation therapy for localized prostate cancer: executive summary of an ASTRO, ASCO and AUA evidence-based guideline

*Morgan et al*

This executive summary introduces a guideline and recommendations for treatment of localized prostate cancer using external beam radiation therapy (EBRT). Moderate and ultrahypofractionation are defined as between 240 and 340 cGy or greater than 500 cGy per fraction, respectively. Moderate hypofractionation and ultrahypofractionation may provide more convenient treatment options without compromising efficacy. There is still some uncertainty in the benefit-risk balance for ultrahypofractionation, and shared decision-making between clinicians and patients is encouraged. Practical Radiation Oncology has published a podcast discussing the guideline with two of the authors, which is available for free at [https://www.practicalradonc.org/article/S1879-8500\(18\)30247-9/fulltext](https://www.practicalradonc.org/article/S1879-8500(18)30247-9/fulltext).

## HIGHLIGHTS FROM ADVANCES IN RADIATION ONCOLOGY

October-December 2018

### Achieving gender equity in the radiation oncology physician workforce

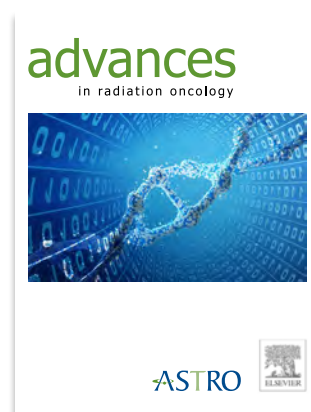
*Holliday et al*

According to the authors, radiation oncology is lagging behind other specialties when it comes to gender representation and it would take fifty years to reach equity at the current rate. Some possible causes can include unconscious bias at various stages in the professional pipeline. Other issues can include a collision of the biological and professional clocks, a lack of mentorship opportunities or misconceptions about the specialty itself. Some tools to combat these inequalities include unconscious bias training, workplace culture adjustments and sponsorship programs. The authors state that leaders should make a commitment to hire and retain underrepresented individuals if gender equity and diversity is to increase. Advances in Radiation Oncology has published a podcast discussing this article with several of the authors which is available for free at [https://www.advancesradonc.org/article/S2452-1094\(18\)30179-9/fulltext](https://www.advancesradonc.org/article/S2452-1094(18)30179-9/fulltext).

### Introduction to the special edition on immunotherapy and radiation oncology

*Bornstein and Formenti*

This article introduces the immunotherapy and radiation oncology special edition of Advances in Radiation Oncology. The authors address the new role of radiation, as an “adjuvant” to immunotherapy. This special issue addresses dose and fractionation, treatment sequencing, toxicity, field size, immunosuppression and DNA damage response. The authors note that the combination of radiation oncology and immunotherapy will shift the paradigm toward more advanced and personalized care.



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Pitch at 5 (neutral)



Pitch at 10 (chin up)

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- Midline thermoplastic mask attachment provides increased rigidity and minimizes shrinkage to enhance patient comfort
- Highly conformal to the patient when using a customizable cushion and dedicated thermoplastic mask
- Utilizes ClearVision™ Open-face thermoplastic compatible with Vision RT's Align RT® camera system and IMRT Reinforced Thermoplastics™
- FDA 510(k) Cleared



See CIVCO's YouTube channel for the Solstice Instructional Video or contact us for a demo!

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**This multidisciplinary meeting brings together medical and radiation oncologists, thoracic surgeons and all members of the treatment team to examine the top science and clinical treatment updates in thoracic oncology.**

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