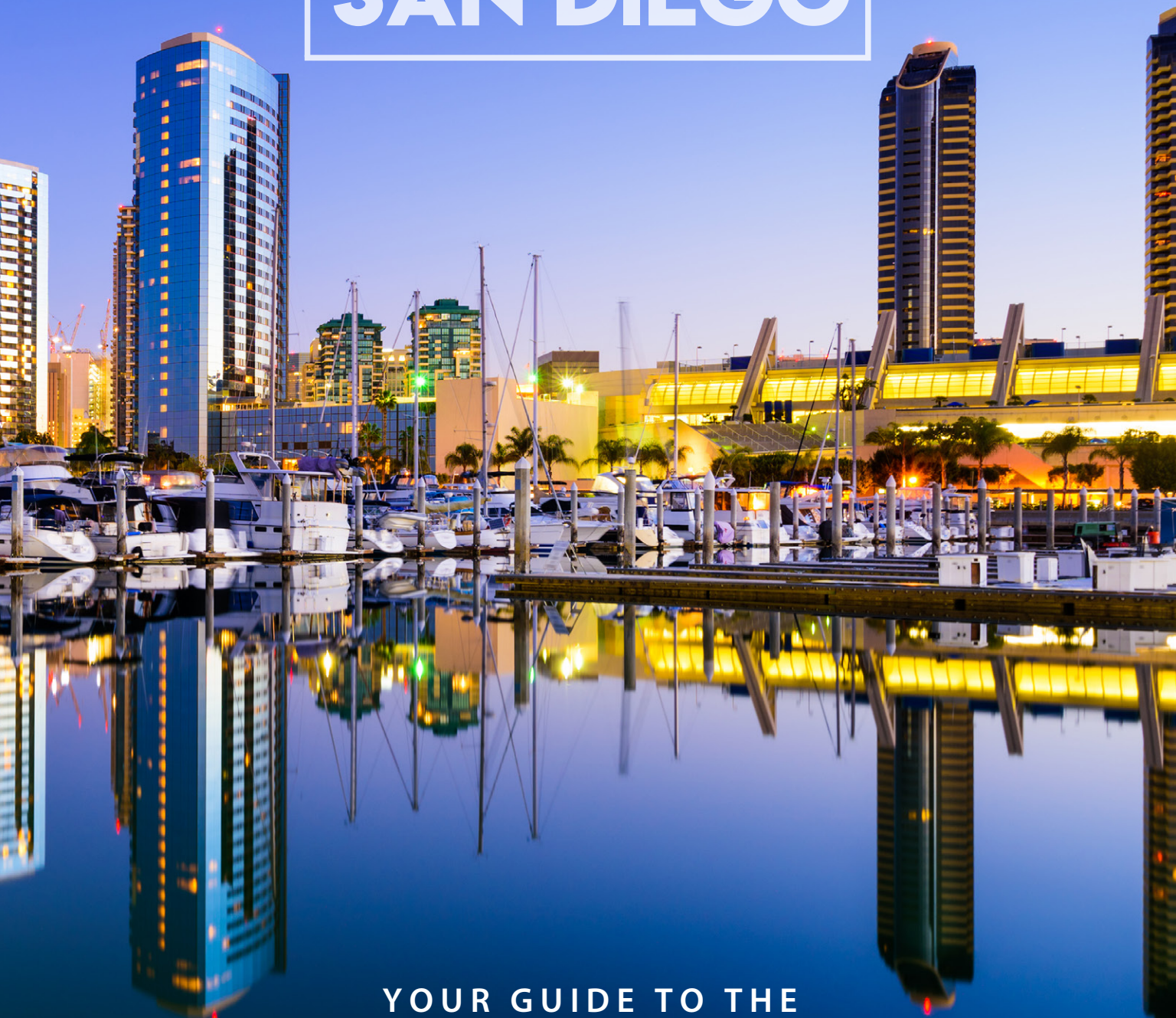


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Best 70	70–35	Sr ⁸² /Rb ⁸² , I ¹²³ , Cu ⁶⁷ , Kr ⁸¹ + research

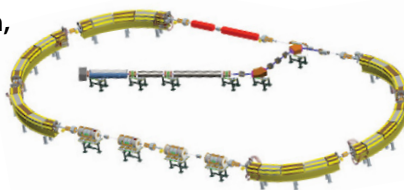
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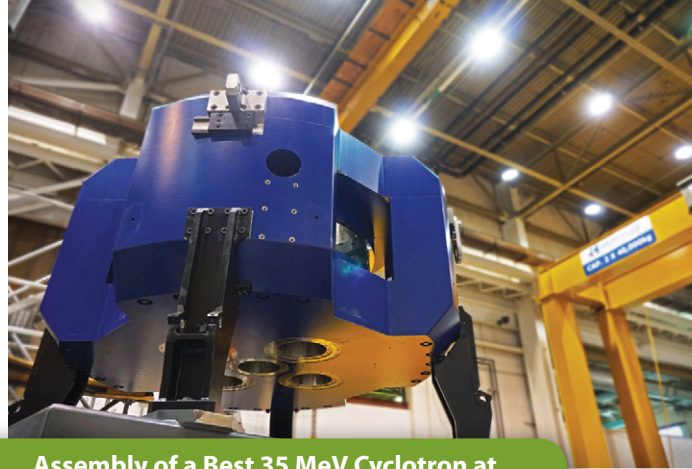
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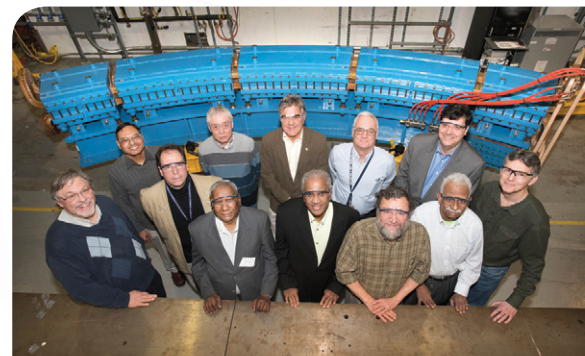
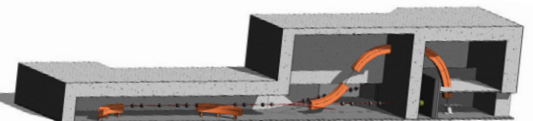


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ASTRO Secretary/Treasurer Jeff M. Michalski, MD, MBA, FASTRO, reviews the Society's 2016 financial statements

ABOUT THE COVER



The San Diego Convention Center (the brightly lit, low building on the right side) sits on the San Diego Bay with water views of the San Diego Marina. Its prime location puts it within walking distance of the Gaslamp Quarter, the USS Midway Museum and Petco Park.

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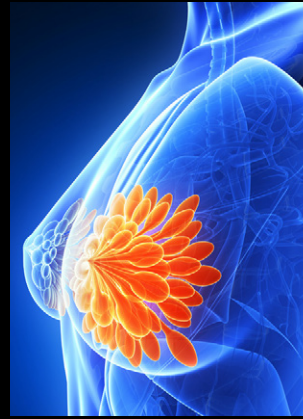


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ASTRO news

AMERICAN SOCIETY FOR RADIATION ONCOLOGY

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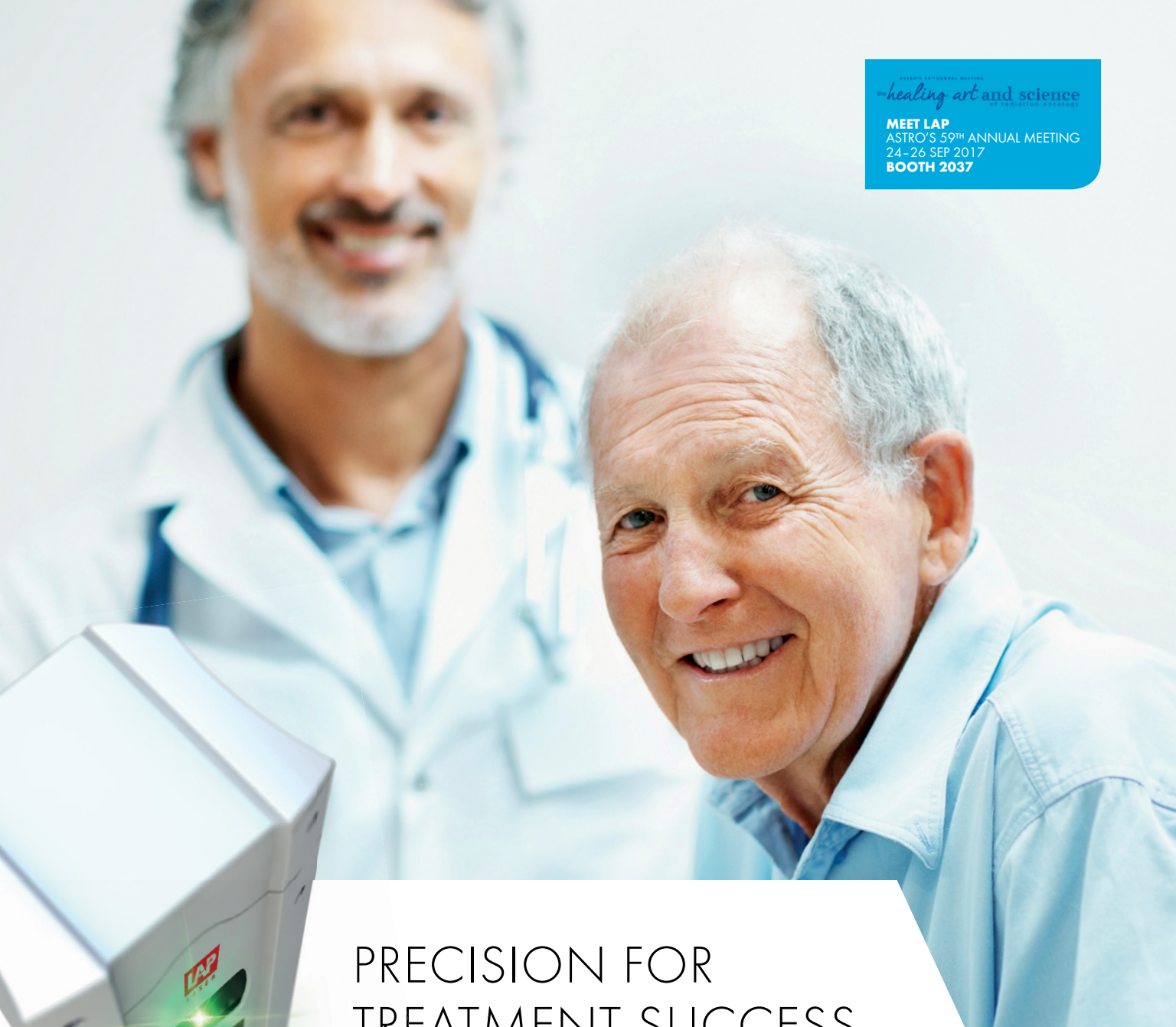
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EDITOR'Snotes

BY NAJEEB MOHIDEEN, MD, FASTRO
SENIOR EDITOR, ASTRONEWS

WELCOME TO THE ANNUAL MEETING EDITION OF ASTRONEWS

THIS YEAR'S ANNUAL MEETING IS SHAPING UP TO BE A LANDMARK EVENT.

"The Healing Art and Science of Radiation Oncology" is its deceptively simple theme. Over four days in San Diego, we'll discuss and debate the future of our discipline and its relevance in the broader field of health care.

As ASTRO Chair David Beyer writes in his update, "radiation oncology is notably underrepresented" in the federal funding initiatives and "if we are not innovating, we can't expect to have a place at the table." This year's meeting will help forge a vision for the future but it will also be an occasion for the reaffirmation of those high ideals that brought us to medicine and to pursue the art of healing.


We'll have three outstanding keynote sessions. First, there's Richard D. Zane, MD, of the University of Colorado School of Medicine, a renowned expert on the use of modern industrial engineering and informatics and the impact of disruptive technology on patient-doctor relationships. As the environment shifts toward a more population health-based framework, what changes does he foresee? Lucy Kalanithi, MD, widow of the late Paul Kalanithi, MD, and Heather Wakelee, MD, Paul Kalanithi's oncologist, will take part in a fireside chat on the life-and-death challenges that face oncology patients and those who care for them. Rather than accepting distress as a normal part of the cancer journey, addressing morale earlier can lead to tangible results. Also unmissable will be the keynote by Vinay K. Prasad, MD, MPH, of the Oregon Health and Sciences University. Dr. Prasad has written widely about

financial conflicts in academic oncology, bias in industry-sponsored randomized trials, the cost of cancer care and the lack of evidence to support many current medical practices. Expect impassioned arguments!

I am also looking forward to the new Science Highlights sessions. These will showcase the top abstracts by disease site the following day, thus ensuring that those who missed out can still keep track of what's going on. Don't miss the Awards Ceremony (see page 49 for more on the winners) where we honor the best in our field. This year's Gold Medals go to three outstanding professionals: Søren Bentzen, DSc, PhD; Louis Harrison, MD, FASTRO; and Michael Steinberg, MD, FASTRO.

Finally, a big thank you to ASTRO President Brian Kavanagh, MD, MPH, FASTRO, Scientific Committee Chair Ben Movsas, MD, FASTRO, and ASTRO staff and the planning committee. The Annual Meeting is the culmination of more than a year of planning and coordinating geared toward bringing you the world's premier radiation oncology conference. For those attending, it is a splendid opportunity to learn, network, relax and have fun in this wonderful host city blessed with daily sunshine. It is called the "finest city in America" with good reason.

On page 26, apart from the beaches and jogging tracks, San Diego residents Catheryn Yashar, MD, and Prabhakar Tripuraneni, MD, FASTRO, urge you to watch out for local character John 'Slomo' Kitchin, "a retired neurologist who has risen to fame for his slow-motion dance on rollerblades."

Have a great meeting! 



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FELICIA	OCONNELL	Duke, Kay	May 29, 1959	ID35682	Female				✓
DEAN		Kay	Jul 6, 1937	ID35684					○
			Jun 12, 1939	ID35684					○
SANTIAGO	SCHROEDER	Taylor, Robert	Jan 29, 1951						○
ELIZABETH	SHAFFER	Taylor,							○
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ELEVATING THE PROFILE OF OUR SPECIALTY

FOR MANY OF YOU, ASTRO IS AN EVENT. It happens once a year when we get together in a faraway city to learn about new cancer research, sharpen our clinical skills, see the latest tools and reconnect with friends. But in reality, ASTRO is much, much more than that. We are a year-round operation working to support and represent you in many arenas. At the 2016 Annual Meeting in Boston, I outlined a number of initiatives I was hoping to pursue. High on that list was to work with the membership and the Board to develop a new strategic plan to guide ASTRO over the next five years.

I believe the overall vision will resonate well with the membership of ASTRO as we strive to ensure that “Radiation oncology is the recognized leader in quality, innovation and value in multidisciplinary cancer care.” We may have once been considered a niche field, buried deep in the basement. Today we are a vibrant specialty and rightly an equal partner on the cancer team—but without this type of vision we risk being overshadowed by larger forces. We have identified four large goals; steps for ASTRO and its members to take on over the coming years to help achieve this future vision.

In order to ensure that radiation oncology is an equal partner in cancer care, we must work to elevate our profile. We remain an enigma to much of the public and to many medical colleagues. We also remain underrepresented on many of the panels where decisions relating to cancer research are made. For many of us, the Cancer Moonshot Initiative spearheaded by Joe Biden in the last year was a wake-up call. They proposed a new initiative and funding to jumpstart and accelerate research in cancer, but radiation oncology was notably underrepresented.


In naming it a “moonshot,” the analogy is to President Kennedy’s challenge to the nation to land a man on the moon by the end of the 1960s. But this challenge did not come out of the blue. It was stimulated by the Soviet Union’s launch of Sputnik as a wake-up call to the United States and was the stimulus to develop a new space program. So the Moonshot was our specialty’s Sputnik. We have some work to do.

If our first challenge is to raise the profile of the specialty, the second is to ensure that radiation

oncologists are doing the kind of research that gets noticed. ASTRO can help create the conditions wherein researchers are able to succeed. It goes without saying, if we are not innovating, we can’t expect to have a place at the table. We have started taking first steps this year. The Science Council has created a research agenda; big and small questions that need answers that will not only stimulate the specialty but also solidify our place on the cancer care team of tomorrow. We convened a meeting in May with representatives of industry, government agencies and ASTRO leaders to incite the kinds of partnerships and cross-pollination that radiation oncologists need to answer pressing questions.

The new plan does not forget that ASTRO must shape the policy environment to support our ability to succeed in practice. We have and will continue our advocacy efforts through the American Medical Association’s RVS Update Committee and the Current Procedural Terminology Editorial Panel; in Congress and at the Centers for Medicare and Medicaid Services; with insurance and industry. Changes in the U.S. health care system are in the news almost daily. ASTRO.org has guidance for practitioners to help meet the requirements under the new payment systems and sessions are devoted to this at the Annual Meeting. More is yet to come.

Finally, our strategic plan recognizes the critical importance that we deliver high-quality and high-value care to all the patients we serve. ASTRO has created tools to help with the ASTRO Accreditation Program for Excellence (APEX®) and the RO-ILS: Radiation Oncology Incident Learning System®. Many new and updated guidelines are available to the radiation oncology community to help deliver quality care. Some of these will likely end up as parts of a future Alternative Payment Model (APM) we are creating.

These goals are distinct but overlapping. Our success in one will help support the others. This will require a sustained effort by every member to be a cutting-edge, hands-on, clinically involved specialist in every hospital, department, office and clinic. Your first step toward achieving this goal is this year’s Annual Meeting. 



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PRESIDENT'S *Update*

BY BRIAN D. KAVANAGH, MD, MPH, FASTRO
PRESIDENT, BOARD OF DIRECTORS

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ABOUT THAT 2017 MEETING THEME... SCIENCE, ART, HEALING...

I WOULD HEREBY LIKE TO RESPOND to the accusations that I have ostrich ancestry.

We are in the midst of epochal tipping points and cataclysmic change and pick-your-favorite-hyperbolic-metaphor-for-metamorphosis in all corners of the health care sector. And yet all I can think of for the 2017 ASTRO Annual Meeting theme is a plain vanilla, Pollyannaish slogan like, “The Healing Art and Science of Radiation Oncology.” For the glass-half-full camp, perhaps it should be more like, “Now is our chance; we must act!” Or, for the glass-half-empty doomsayers, “Get out while you can before we are all swallowed by that big monster!”

Do I have my head in the sand? Maybe.

For the record, I think we should look ahead, embrace the oncoming changes and invent a great future for our patients and ourselves. It just happens to be my opinion that since there are so many external forces beyond our control, right now we would do well to pause and consider who we are and what it is we *can* control. Hence, this meeting’s Presidential Symposium is one-part forward thinking, one-part introspective and one-part focused on what patients really want from us in their time of greatest need.

There will be new scientific ideas discussed, and I am hoping for lively ad hoc debates between presenters and audience members with contrarian and iconoclastic viewpoints to be welcomed all around. Creativity in the technology space will be highlighted with an eye toward how new devices and techniques can help us improve the quality of life and quality of care we can give to our patients. The bravest panel session of the

entire meeting, though, will be the one in which some of our own colleagues who have been diagnosed and treated for cancer will open up and share insights that only those who have stared down the barrels of that gun can truly offer. Look for that session, “When the Oncologist Is the Cancer Patient: Perspectives About the Art and Science of Patient-centered Care,” on Wednesday, September 27 at 7:45 a.m.

According to the universally respected and trusted source of so much of our shared knowledge of nature, *National Geographic*, ostriches do not bury their heads in the ground because they are scared¹. Apparently, they are actually digging holes to use as nests for their eggs, and they also need to reach down and turn the eggs several times per day to promote healthy hatching.

I sincerely hope that the theme and content of the 2017 meeting will resonate most loudly among the younger radiation oncologists

within our group, who will soon be leading the field in the exciting years to come. If this transparent motive is somehow akin to what the ostrich is working on when its head goes underground, then go ahead and call me a flightless bird.

Dr. Kavanagh is Professor and Chair of the Department of Radiation Oncology at the University of Colorado. He welcomes comments on this column at astronews@astro.org.

References

¹ National Geographic Kids, Animal Myths Busted. <http://kids.nationalgeographic.com/explore/nature/animal-myths-busted/#ostrich-closeup.jpg>, accessed June 12, 2017.



DR. KAVANAGH FEEDS A FRIEND AT OSTRICHLAND USA.

SOCIETY NEWS

ASTRO elects new leadership

Three new officers have been elected to serve on ASTRO's Board of Directors. The new officers' terms will begin at the Annual Business Meeting at ASTRO's 59th Annual Meeting in San Diego. For more information, visit www.astro.org/elections.



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The new Nominating Committee members are:



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Oregon Health and Science University, Portland, Oregon



NOMINATING COMMITTEE COMMUNITY PRACTICE PHYSICIAN

Paul Sperduto, MD, MPP, FASTRO
Minneapolis Radiation Oncology PA, Minneapolis



NOMINATING COMMITTEE RADIOBIOLOGIST

Jacqueline P. Williams, PhD, FASTRO
*University of Rochester Medical Center, Rochester,
New York*

ASTRO announces new strategic plan

Over the past year, ASTRO has solicited input from membership, committee volunteers, the Board of Directors and staff members to develop a new strategic plan to guide the specialty in the coming years.

CORE PURPOSE:

- ▶ **Advance the field of radiation oncology.**

Core Values:


- Excellence in patient care
- Improved outcomes
- Innovation
- Integrity
- Diversity and inclusion

At the Annual Meeting, stop by the Ask ASTRO booth to share your thoughts on how ASTRO members are advancing these goals.

VISION:

- ▶ **Radiation oncology is the recognized leader in quality, innovation and value in multidisciplinary cancer care.**

Goals:

- **Elevate the profile of the field:** Establish radiation oncology as an equal partner in cancer field.
- **Impact of research and innovation:** Retain and foster the intellectual research talent currently entering the field of radiation oncology.
- **Health policy development and advocacy:** Shape the health policy environment to support radiation oncologists' ability to practice to the fullest extent to benefit their patients.
- **Quality and value:** Consistently deliver the highest quality and value care to cancer patients. 

ASTRO's Immunotherapy Workshop brings cutting-edge research on combination therapies to NIH campus

BY TYLER BECK, PHD, SCIENTIFIC PROGRAM OFFICER, SCIENTIFIC AFFAIRS

LEADERS IN THE FIELDS OF RADIATION ONCOLOGY AND IMMUNOTHERAPY gathered in June to discuss the ways these two fields could join forces to better treat cancer at ASTRO's *Immunotherapy Workshop: Incorporating Radiation Oncology Into Immunotherapy* at the Natcher Conference Center on the National Institutes of Health main campus in Bethesda, Maryland.

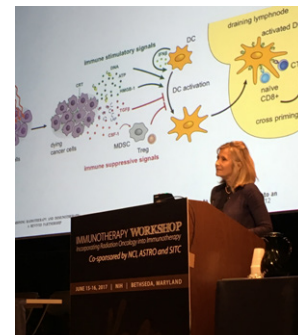
Held on June 15-16, this was the fifth annual ASTRO Science Workshop. Along with ASTRO, the National Cancer Institute (NCI) and the Society for Immunotherapy of Cancer (SITC) cosponsored the event. More than 200 government, academic, private practice, industry and professional society staff members attended talks on topics ranging from the impact of the microbiome on radiotherapy effects to understanding and harnessing the abscopal effect of radiation to enhance the effectiveness of immunotherapeutic drugs.

Each day of the conference began with an informative keynote address. The first was given by Silvia Formenti, MD, FASTRO, of Weill Cornell Medicine, focusing on combining drugs affecting the immune checkpoint blockade with radiotherapy to treat cancer patients more effectively. Day two began with a lecture by Ralph Weischelbaum, MD, from the University of Chicago, provocatively titled "Immunotherapy: End of Radiotherapy?" Spoiler alert—the answer is "no."

The workshop also included talks from many top researchers in their respective fields. Participants praised the presenters for discussing groundbreaking research, much of which was unpublished at the time of the workshop.


"As someone who is eager to adapt this exciting modality to clinical practice, I was quite encouraged to learn the very real and progressing molecular science behind the hype of combined radiation and immunotherapy," said Jerry Liu, MD, of Icahn School

of Medicine at Mount Sinai. Breakout sessions held on day two of the workshop provided an atmosphere of debate and discussion of the exciting research that had been presented over the previous day-and-a-half.



SILVIA FORMENTI, MD, FASTRO

ASTRO's first LOI workshop a success

Experts from the National Cancer Institute (NCI) and Food and Drug Administration (FDA) came together on June 16 to lead the first ASTRO Letter of Intent (LOI) Workshop. Held immediately after the Immunotherapy Workshop, this workshop was led by Charles Kunos, MD, PhD, Jeff Buchsbaum, MD, PhD, and Amanda Walker, MD, who helped researchers understand what to include—and what to exclude—in a successful LOI application. Participants, from residents in training to full professors, learned the perspectives of both the NCI and the FDA on what data are needed to start a clinical trial and what data will help lead to a successful investigational new drug application. Presentations from this workshop are available online at www.astro.org/LOIworkshop. Also check out ASTRO's research pages for more professional development opportunities at www.astro.org/researchprofessionaldevelopment. 

Lung SBRT guideline featured at Annual Meeting


SO FAR, 2017 HAS BEEN BUSY FOR ASTRO clinical practice statements authors; two ASTRO guidelines and five collaborative documents have been finished and two more guidelines are expected to be approved by the end of this year.

One of the latest to be published is the stereotactic body radiation therapy (SBRT) for early stage non-small cell lung cancer guideline. This guideline provides evidence-based recommendations for use of SBRT in challenging clinical scenarios, such as inoperable patients or tumors that are centrally located, large, multifocal or unbiopsied, as well as for salvage therapy after prior surgery or radiation.

It is also one of three ASTRO guidelines that will be featured at this year's Annual Meeting. The recommendations and evidence base for this guideline will be discussed in a panel session on Monday, September 25 at 10:45 a.m. in Room 29. In addition, the ASTRO Guidelines Highlight session, on Wednesday, September 27 at 10 a.m. in Ballroom 20,

will briefly present the conclusions of the lung SBRT, whole breast irradiation and palliative thoracic radiation therapy guidelines.

ASTRO now has published 23 clinical practice statements, either independently or in collaboration with other specialty societies, with eight in development. These projects include a range of disease sites, from brain tumors to thoracic malignancies, and address topics related to both curative and palliative applications of radiation. Guideline task forces are multidisciplinary, including radiation oncologists from academia, community practice and the Department of Veterans Affairs; radiation oncology residents; patient representatives; and medical physicists. They also incorporate medical oncologists, surgeons or other relevant specialists who are nominated by their societies.

Information on ongoing and published clinical practice statements is on the ASTRO website at www.astro.org/clinicalpracticestatements. 




Learn more about ASTRO's APEX program in San Diego

THE ASTRO ACCREDITATION PROGRAM FOR EXCELLENCE (APEX®) recently passed its two-year anniversary. This milestone has been a chance for ASTRO staff and the APEX committee to reflect on the program's many successes in its relatively short lifetime. At press time, 183 facilities in the United States are part of the APEX program—currently there are 52 facilities who have applied to the program, 74 facilities in the self-assessment phase, 10 preparing for a facility visit and 47 facilities having completed the accreditation process.

APEX has just published its first annual report, which outlines interesting data and statistics from 2016—the first full calendar year for the program. Copies of the APEX annual report can be picked up from the Ask ASTRO booth at the convention center.

The program has a four-year cycle, enabling each facility to continue with their quality improvement initiatives as part of their ongoing quality management program. Additionally, evidence indicators required for APEX accreditation map to multiple Improvement Activities in Medicare's new Merit-based Incentive Payment System (MIPS). Attestation to just one Improvement Activity in 2017 is sufficient to avoid a negative 4 percent payment adjustment in 2019. Read more about MIPS requirements on page 60.

ASTRO staff will be available at the Annual Meeting during office hours (see page 44) to discuss the program with any current or potential applicants. Stop by to discuss how the program may work for your facility. Information can be found on the ASTRO website www.astro.org/apex or you can email APExsupport@astro.org. 

2017 ANNUAL MEETING Highlights and Key Sessions



THE BUSY FLOOR OF THE EXHIBIT HALL (NOW KNOWN AS THE INNOVATION AND SOLUTION SHOWCASE) AT THE 2016 ANNUAL MEETING.

ASTRO'S 59TH ANNUAL MEETING WILL TAKE PLACE SEPTEMBER 24-27 at the San Diego Convention Center. This year's meeting will focus on the intersection of art and science in radiation oncology.

The 2017 Presidential Symposium will highlight the art and science of the field of radiation oncology. Session one, "The Scientific State of the Art," moderated by Robert Timmerman, MD, will showcase cutting-edge clinical and translational investigations. Session two, "The Art of Quality," moderated by Najeeb Mohideen, MD, FASTRO, will focus on opportunities for broader thinking and creative strategies. Session three, "The Quality of Mercy," moderated by Stephen Lutz, MD, FASTRO, will offer insights into patients' perspectives on what their deepest needs are and how we might meet them.

"This year's keynote speakers will address various topics related to the 2017 Annual Meeting theme, "The Healing Art and Science of Radiation Oncology," says ASTRO President Brian D. Kavanagh, MD, MPH, FASTRO. "With a focus on treating the whole patient with objectivity and creativity, this year's keynote speakers are sure to inspire attendees to strive for improved patient care and outcomes."

On Monday, Richard Zane, MD, chief innovation officer for UCHHealth, will discuss how disruptive new technology has begun to restructure front-line patient-doctor relationships. On Tuesday, we will experiment with a format new to ASTRO. Tracy Balboni, MD, MPH, will host a "fireside chat" with Lucy Kalanithi, MD, the widow of the late Paul Kalanithi, MD, who authored the national best-seller, "When Breath Becomes Air" and Heather Wakelee, MD, Dr. Paul Kalanithi's oncologist. On Wednesday, Vinay Prasad, MD, MPH, of Oregon Health and Sciences University and co-author of "Ending Medical Reversal," will dissect the problems at hand and offer visions for a better future in which all patients have access to high value cancer care at a price our society can afford.

Annual Meeting Scientific Committee Chair Benjamin Movsas, MD, FASTRO, and Vice-chair Lisa A. Kachnic, MD, FASTRO, and the Annual Meeting Education Committee Chair Brian Czito, MD, and Vice-chair George Rodrigues, MD, PhD, have put together an impressive program with many speakers, moderators and topics. This year there are 24 panel sessions, 50 educational sessions, 47 oral scientific sessions and 18 ePoster sessions scheduled. The program

also includes a number of joint sessions and workshops. The Plenary Session and Clinical Trials Session will offer highlights from the highest impact studies.

This year's educational sessions, special sessions and scientific panels will cover a variety of topics, several of which directly connect with the 2017 meeting theme. A number are joint sessions, which are submitted from an outside organization in collaboration with an ASTRO member. These sessions include:

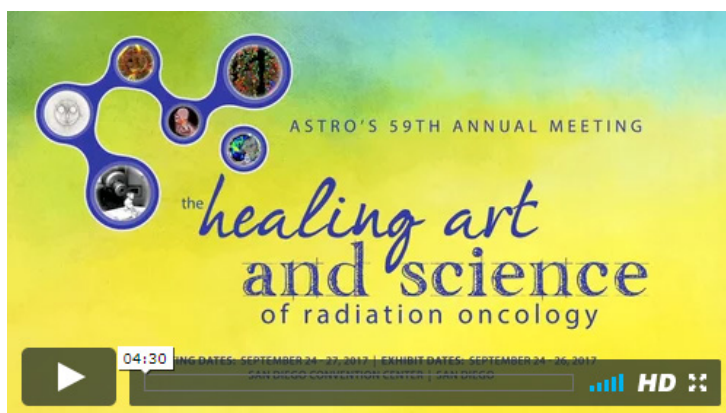
- **Joint Session One: *Clinical Implications of New Findings on the Immunogenic Effects of Radiation.***

Participants at this session will learn about recent research evidence about the most effective combinations of immunotherapeutic agents and radiation, including

the rationale for combining specific regimens of radiation therapy with immunotherapy. Various factors will be considered that affect the selection, dosage and sequencing of radiation and immunotherapy when selecting treatment options to guide clinical

decision making. This is a joint session with the Society for Immunotherapy of Cancer (SITC) on September 24 at 4:45 p.m.

- **Joint Session Two: *Mythbusting in Palliative Radiation Oncology: Overcoming Barriers to Shorter Course Palliative Radiation Therapy.*** In this session, common myths about hypofractionated palliative radiation will be dispelled. Data will be provided about common misperceptions regarding efficacy, toxicity, tolerance and life expectancy. Topics to be addressed are hypofractionated treatment of bone metastasis (yes, you can treat the whole pelvis with 8 Gy in one fraction; yes, it is durable), head and neck cancer featuring the QUAD-shot and one to two fraction regimens, lung cancer, brain metastasis and GI/GU palliation. This is a joint session with Society for Palliative Radiation Oncology (SPRO) on September 25 at 4:15 p.m.



VIEW THE 2017 ANNUAL MEETING HIGHLIGHTS VIDEO AT
WWW.ASTRO.ORG/2017-ANNUAL-MEETING.ASPX

- **Joint Session Three: *MOC Part 3: Demise of the Secure Examination and What's on the Horizon to Replace It.*** This session will consist of a brief summary of changes already instituted in MOC Parts 1, 2 and 4, followed by an in-depth discussion of why assessment of cognitive knowledge is an essential part of the MOC process, and then an introduction to the current logistical plans for the new Part 3 instrument. Details of that instrument—ABR Online Longitudinal Assessment (ABR OLA)—will be provided, including the current plans for assessment of performance and remediation of poor performance or lack of adequate participation. This is a joint session with the American Board of Radiology

(ABR) on September 26 at 4:45 p.m.

- **Joint Session Four: *Conference on the North American and European Approaches to Rhabdomyosarcoma and Hodgkin Lymphoma.*** Two speakers will discuss the North American approach to Rhabdomyosarcoma and Hodgkin Lymphoma and two speakers will discuss the European approach to these pediatric malignancies.


The trials leading up to the current approaches and the outcomes of prior trials will also be discussed. This is a joint session with Paediatric Radiation Oncology Society (PROS) on September 27 at 11:00 a.m.

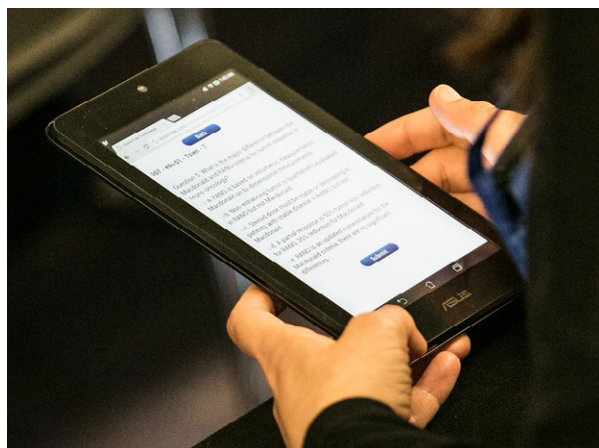
Other sessions of note:

- **Educational Session 11: *Pain, Palliative Care and the Opioid Crisis: What is the Provider Role?*** In 2013, more than 16,000 Americans died from opioid overdoses. In 2014, there were 18,893 overdose deaths related to prescription pain relievers. In 2012, 259 million prescriptions were written for opioids, which is more than enough to give every American adult their own bottle of pills. Four in five new heroin users started out misusing prescription painkillers. This session will examine what roles providers should play in addressing this crisis.

What's new at ASTRO 2017?

- **Panel Session 13: *Ethics in Radiation Oncology.*** This Live SA-CME course is broken into 20-minute sessions on fundamental principles of medical ethics; organizational structure of medical ethics; ethical issues in publications; ethical issues in practice structure; and ethical issues in clinical practice.
- **Panel Session 18: *Harnessing the Power of Mobile Computing for Radiation Oncology.*** Three panelists, led by the session chair, will present their work and understanding of mobile computing technology and the potential opportunities that exist to guide patient care, to gain insights as to patient function and outcomes from treatment and to educate patients.
- **Panel Session 23: *Artificial Intelligence and Deep Learning Within Radiation Oncology: Current Applications and Future Directions.*** An introduction to deep learning and artificial intelligence, and their potential applications in the field of radiation oncology. Deep learning and artificial intelligence have transformed the ways in which computers solve problems, ranging from depositing checks to searching the internet and even getting directions. Within radiation oncology, deep learning and artificial intelligence could revolutionize clinical decision-making, radiation physics and radiobiology.

Search for details on these and other sessions, abstracts and exhibitors and build your own individual schedule online at www.astro.org/conferenceplanner. The Online Conference Planner will be fully integrated with ASTROmobile (the official meeting app), scheduled to launch by early September, so you will have access to your schedule on either platform. 




YOU SPOKE AND WE LISTENED! In past Annual Meeting evaluations and ASTRO member surveys, you asked for more interactive learning options and additional opportunities to network. ASTRO 2017 features several new sessions that extend the learning and locations where you can connect with colleagues and experts in the field.

This year's program includes special "Science Highlights" sessions on Monday, Tuesday and Wednesday mornings. These sessions will highlight four to five of the highest rated abstracts by disease site track. Experts will present the information, highlighting clinically applicable information and comparing the abstract with similar studies. If you are unable to attend some of the scientific sessions during the meeting, these sessions will give you the chance to get the abstract highlights from each of the top disease sites.

Another new addition this year is the "Poster Viewing Q&A Sessions." To give attention to the large paper poster display, authors will answer questions at a separate time from the Poster Viewing Session and Reception. In 90-minute time blocks on Sunday, Monday and Tuesday, authors will stand next to their posters to field questions about their posters. Posters from one to five diseases sites will be available during each time slot, giving all authors ample time to discuss their posters with attendees.

Beginning this year, the Exhibit Hall has been renamed the Innovation and Solution Showcase. Make sure to visit the many companies displaying the latest products and services in cancer treatment. This year, there will be five ASTRO Connect areas located in the hall, each with a different focus: Breast, GI, GU, Lung and Physics. Each area offers attendees a chance to network with colleagues with similar interests while recharging electronic devices or checking email. Be sure to stop by the Meet the Expert sessions, where experts will be on hand during designated hours to meet with attendees, answer questions and discuss new science and interesting sessions.

Located just outside the Innovation and Solution Showcase is another new feature, the Product Showcase. This area will highlight many unique products in an interactive digital display. You will be able to search for featured products by product category and view specifics on each product. See page 56 for a listing of the vendors displaying their wares in the Product Showcase.

Let us know what you think of these enhancements or share your feedback for other new Annual Meeting elements by emailing meetings@astro.org. 

SCIENTIFIC SESSIONS AT THE 59TH ANNUAL MEETING FEATURE TOP-RATED ABSTRACTS

BY BENJAMIN MOVSAS, MD, FASTRO, ANNUAL MEETING SCIENTIFIC COMMITTEE CHAIR



THIS YEAR'S 59TH ANNUAL MEETING IN SAN DIEGO will offer attendees a wide variety of sessions with cutting-edge clinical and research-based scientific presentations. The sessions are offered in several different ways, from interactive ePoster sessions to oral presentations. There are also two new types of sessions

this year: Science Highlights and Poster Viewing Q&A sessions. Both are designed to encourage networking with colleagues from around the world. See story on page 17 for more information on these and other new features to the 2017 Annual Meeting.

There are multiple workshops, panels and educational sessions. To see the latest science, you'll want to attend the scientific sessions, which will feature more than 1,800 paper posters and 160 ePosters with 365 oral abstract presentations covering all the major disease sites. Then we'll have "late-breaking abstracts" that will be collected just before the meeting to enhance the highest-level Plenary and Clinical Trials sessions.

The new Science Highlights sessions will feature expert discussants' summaries of the top-scoring abstracts in six disease sites: GU, Lung, Head and Neck, CNS, GI and Breast.


The Poster Viewing Q&A sessions will be offered at scheduled times throughout the day when you can meet the poster authors and discuss their studies. Poster Viewing Q&A sessions will be held for all disease sites in the Poster Hall. See page 42 for more information.

The ePosters, now in their fourth year, feature discussants' opening remarks and then six-minute presentations from each ePoster author, followed by an interactive poster viewing discussion with the authors using touch screen monitors. Posters include video and visual aids to enhance the interactive experience.

Across all presentation types, here are some of the top-scoring abstract presentations:

- "*High-risk meningioma: Initial outcomes from NRG Oncology/RTOG-0539*," **C. Leland Rogers, MD, FASTRO**, of Barrow Neurological Institute in Phoenix
- "*Two-year Clinical Outcomes of De-intensified Chemoradiotherapy for Low-Risk HPV-associated Oropharyngeal Squamous Cell Carcinoma*," **Bhisham S. Chera, MD**, of University of North Carolina at Chapel Hill
- "*NRG Oncology/RTOG 0529: Long-term Outcomes of Dose-painted Intensity Modulated Radiation Therapy (DP-IMRT), 5-Fluorouracil (5FU) and Mitomycin-C (MMC) in Anal Canal Cancer*," **Lisa A. Kachnic, MD, FASTRO**, of Vanderbilt-Ingram Cancer Center in Nashville, Tennessee
- "*Quality of Life (QOL) Outcomes in a Phase III Randomized Trial of Optimization of Treatment of Advanced Non-small Cell Lung Cancer Using Radiotherapy and Chemotherapy: LAEA Multicentric Randomized Phase III Study (NCT00864331)*," **Shrinivas Rathod, MD**, of CancerCare Manitoba in Winnipeg, Canada
- "*Phase II Study of Dose-reduced Consolidation Radiation Therapy in Patients with Diffuse Large B-cell Lymphoma*," **Chris R. Kelsey, MD**, of Duke University Medical Center in Durham, North Carolina

Please note that abstracts are embargoed until the date and time of presentation.

We encourage you to build your schedule online using the Online Conference Planner before you arrive in San Diego in order to get the maximum benefit of attending the Annual Meeting: www.astro.org/conferenceplanner. 



NEW LIVE SA-CME OFFERINGS *at 2017 Annual Meeting*

ONE OF THE SEVERAL EDUCATIONAL SESSIONS THAT OFFERED LIVE SA-CME FROM THE 2016 ANNUAL MEETING.


ASTRO WILL BE OFFERING LIVE SELF-ASSESSMENT CME (SA-CME) for select sessions at this year's Annual Meeting. To help physician and physicist attendees meet the requirements of the American Board of Radiology (ABR)'s Part II Maintenance of Certification (MOC) requirements, this year there will be numerous new topics available for Live SA-CME. Various Education, Panel and Joint Sessions have been selected. Live SA-CME sessions are available for purchase during your online registration or on-site for \$50 each.

Below, find a sampling of what is available for Live SA-CME at the 2017 ASTRO Annual Meeting:

- **Educational Session 18: *Advances in Endometrial Cancer***, Monday, September 25, 4:15 p.m. to 5:45 p.m.
- **Panel Session 2: *Why Smart People Do Dumb Things: Decision Making, Bias and Medical Error***, Sunday, September 24, 1:15 p.m. to 2:45 p.m.
- **Educational Session 24: *Esophagus and Gastric Cancer: Contemporary Treatment Approaches***, Tuesday, September 26, 1:00 p.m. to 2:30 p.m.
- **Educational Session 30: *Diversity and Inclusion: Leadership Imperatives in Radiation Oncology***, Tuesday, September 26, 2:45 p.m. to 4:15 p.m.
- **Educational Session 37: *Advancements in Clinical Brachytherapy***, Wednesday, September 27, 7:45 a.m. to 9:00 a.m.

Additionally, two *e*Contouring sessions (Gastrointestinal Cancers on Monday, September 25, at 10:45 a.m. and Prostate on Monday, September 25, at 4:15 p.m.) will offer SA-CME. SA-CME for the *e*Contouring sessions is included in registration fees.

The Live SA-CME sessions will also be recorded and converted to online SA-CME. The online SA-CME activity will be part of the ASTRO Academy after the conference. Online SA-CME activities afford ASTRO members who are unable to attend the meeting the opportunity to obtain SA-CME credits toward the ABR MOC requirements.

For more information about Annual Meeting SA-CME sessions, please visit www.astro.org/AMLivesacme or contact education@astro.org. 





HAVE A QUESTION? ASK ASTRO HAS THE ANSWER

Check out the Ask ASTRO booth, the information and member services one-stop shop, at the 2017 Annual Meeting.




The Ask ASTRO booth will be located in Lobby D, on the ground level of the San Diego Convention Center, just outside the entrance to the Innovation and Solution Showcase (Exhibit Hall).

ASTRO staff will be available on-site at the Annual Meeting to answer questions and provide information on topics, including:

- Technical questions related to the ASTROmobile app and the Online Conference Planner.
- Membership renewals, how to join ASTRO and the benefits of membership.
- The ASTRO Accreditation Program for Excellence (APEX[®]), MIPS (Merit-based Incentive Payment System), RO-ILS: Radiation Oncology Incident Learning System[®], upcoming specialty meetings and other ASTRO programs.
- ASTRO's patient brochures and new patient videos.
- General Annual Meeting questions.

Already an ASTRO member? Bring a nonmember to the Ask ASTRO booth, and if he or she joins on-site, both of you will receive a free gift from ASTRO.

Staff will be on hand to take photographs of ASTRO members and post them on the ROhub, ASTRO's online directory and member community. 


THE MILLION GRAY QUESTION

What is the most important research question that must be answered in the next three to five years?

How do we combine radiation with immunotherapy most effectively? What role does the tumor stroma have in responses to radiation treatment? What dosing and scheduling do we follow for adjuvant radiation in combination with chemotherapy?

Be prepared! We are looking for what you think is the MOST important research question that MUST be answered in the next three to five years in order to significantly accelerate the field.

Researchers, clinicians, nurses, dosimetrists, meeting attendees: We want and need to hear from you. Answer this question, **“What is the most important research question that must be answered in the next three to five years,”** by clicking on the 1M Gy Question icon in the 2017 ASTROmobile Annual Meeting app.

Answers will be posted on www.astro.org/astroblog during the meeting. Be sure to check the blog often to see what ideas your colleagues are suggesting. 

SIX INTERNATIONAL SESSIONS FEATURED AT 2017 ASTRO

ASTRO'S INTERNATIONAL EDUCATION


SUBCOMMITTEE (IES) MEMBERS have compiled a series of outstanding educational offerings for the 2017 Annual Meeting in San Diego.

On Saturday, September 23, the international program will kick off with a Latin American Refresher Course that will touch on updating radiation therapy management for common malignancies seen in Latin America. The course will be presented in Spanish.

On Sunday, ASTRO and the European Society for Radiotherapy and Oncology (ESTRO) will host a joint session, "Cutting-edge Combined Modality Therapies," which will focus on non-small cell lung cancer.

Also on Sunday, there will be a session presented in Chinese entitled, "Implementation of Prospective Multidisciplinary Tumor Board to Optimize Each Individual Patient's Care."

On Monday, the international program will continue with three additional sessions on Global Health. The first session Monday morning will be "Global Perspectives on Challenging Cases in Radiation Oncology: Snapshot of Breast, Lung and Cervix Cancer from your Local Clinic to Site-Specific Thought Leaders." This session will combine the grassroots clinician's viewpoint with thought leaders in the three most common cancers worldwide. Attendees interested in learning how to manage certain challenging but common clinical scenarios in the resource-limited setting should attend this session. The second session, "Managing Acute and Late Side Effects in Resources-constrained Environments," will cover and discuss appropriate side-effect management pathways that will provide the best possible outcomes for head and neck, thoracic and gastrointestinal cancers, and will demonstrate the steps for the safe implementation of more advanced technology.

The last session, "Global Collaboration in Clinical Trials; Opportunities and Challenges," will highlight opportunities for physicians to make international connections, review lessons learned from successful global trials and discuss strategies to mitigate technical and quality assurance challenges. 

CORPORATE AMBASSADORS

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





MEMBERS OF ASTRO'S COMMITTEE ON HEALTH EQUITY, DIVERSITY AND INCLUSION WITH AWARDEES OF THE ASTRO SUMMER FELLOWSHIP AT THE 2016 ANNUAL MEETING

ASTRO-NCI DIVERSITY SYMPOSIUM ADDRESSES IMPACT OF THE ACA

BY MALIKA SIKER, MD

AS THE POLITICAL LANDSCAPE CONTINUES TO CHANGE AND EVOLVE, radiation oncologists must be aware of the impact that government health programs have on our patients, especially the most vulnerable ones. Medically underserved populations are groups that may confront economic, cultural or linguistic barriers resulting in a shortage of health care services. Underserved and underinsured patients may potentially have more difficulties accessing appropriate cancer care as a result of government initiatives. This year's ASTRO-NCI Diversity Symposium and Breakfast, titled "The Impact of the Affordable Care Act on Cancer Care for Underserved Communities: The Good, the Bad and the Unknown," will focus on how the Affordable Care Act and future federal health care programs may affect cancer care in underserved populations.

Attendees of this session will learn firsthand from experts in cancer disparities and improving access to cancer care in underserved populations, who will discuss current and future challenges. Featured speakers include Usama Mahmood, MD, who will analyze the impact of insurance and socioeconomic status on cancer outcomes.

While these policies can significantly impact cancer care for underserved patients, oncology providers may not know how to get involved in policy decision-making to better the lives of their patients. In addition to lectures from the expert panel, attendees will have an opportunity to participate in an interactive discussion with the panel and an ASTRO Political Action Committee (PAC) representative who will highlight how advocacy can result in changes in policy. Upon completion of this session, participants will have a better understanding of how health policy can impact cancer disparities and how to get involved in policymaking.

Once again, continuing education credits will be offered at this special ticketed event, and there will be a question-and-answer period at the end of the session. Awardees of the ASTRO Minority Summer Fellowship will be recognized at the start of the session. Please add this ticketed event to your Annual Meeting itinerary and join us for this important conversation. Attendance is capped, so register early! [A](#)

ANNUAL ARRO SEMINAR PROVIDES PRACTICAL CAREER ADVICE FOR THE DEVELOPING RADIATION ONCOLOGIST

BY KALEIGH DOKE, MD, ARRO EXECUTIVE COMMITTEE CHAIR, ON BEHALF OF THE ARRO EXECUTIVE COMMITTEE

THE ASSOCIATION OF RESIDENTS IN RADIATION ONCOLOGY (ARRO) is excited to sponsor several upcoming events specifically for residents at the 2017 ASTRO Annual Meeting in San Diego. The ARRO Executive Committee has worked diligently to develop the Annual Seminar, a day filled with programming for residents of all interests and career goals. Topics will address contemporary issues facing radiation oncology residents as they prepare to begin their new careers.

The ARRO Annual Seminar will take place on Saturday, September 23, from 10:00 a.m. to 5:15 p.m. The morning will begin with presentations from our Global Health Scholars, Shefali Gajjar, MD, Steven Lau, MD, PhD, and Puja Venkat, MD, who will share their international experiences involving radiation oncology.

John Suh, MD, FASTRO, will then give a talk regarding safety on behalf of the Nuclear Regulatory Commission's Advisory Committee on the Medical Uses of Isotopes (ACMUI).

The keynote address will be delivered by Reshma Jaggi, MD, PhD, a prior ARRO Executive Committee Chair. We are proud to have her as the first woman to give the keynote speech at the ARRO Seminar. She will be speaking about her research and framing how she discovered the importance of mentorship in shaping one's career.

After lunch, the program will continue with the ever-popular jobs panel, moderated by Lisa Kachnic, MD, FASTRO, consisting of a panel of recent graduates starting careers at both private practice and academic institutions. The panel will include the following radiation oncologists:


- **Andrew Hoover, MD**, University of Kansas Medical Center, Kansas City
- **Kimberly Creach, MD**, Mercy Hospital, Springfield, Missouri
- **Arya Amiri, MD**, City of Hope, Duarte, California

- **Joshua Mondschein, MD**, Roper St. Francis Hospital, Charleston, South Carolina
- **Paul Romesser, MD**, Memorial Sloan Kettering Cancer Center, New York

Following the jobs panel is an educational session filled with practical advice for early graduates, covering various legal and financial aspects important for beginning a career in radiation oncology. Benjamin Falit, MD, JD, will be following up his incredibly popular talk from last year with more economic guidance. Jerry Jaboin, MD, PhD, will discuss starting a career from his perspective as someone who recently worked in private practice and now serves as Vice-chair at Oregon Health and Science University in Portland. Terry Wall, MD, JD, FASTRO, will conclude the educational session with a talk entitled, "The Legal Aspects of Practice Entry."

Allen Chen, MD, will then address the residents on wellness, drawing on his time as a residency director and this year's incoming ADROP president. Colleen Lawton, MD, FASTRO, will present on how ARRO and the Radiation Oncology Institute (ROI) can work together. Dr. Wall will conclude by presenting his annual Practice Entry Survey results.

The day will be capped off with the ARRO Reception at Don Chido, a restaurant in the nearby Gaslamp Quarter, where all residents and medical students are invited to meet. Updates from the ARRO Executive Committee will be delivered at the ARRO Luncheon on Sunday, where David Beyer, MD, FASTRO, chair of ASTRO, will also be addressing the residents. The annual Meet the Professor Reception will take place Sunday afternoon, giving residents a chance to network with faculty from across the country. Finally, the Poster Walk with a Professor will be taking place on Monday for those interested in discussing relevant abstracts with an expert in the field.

We look forward to seeing you at this year's Annual Meeting! 



THE ASSOCIATION OF RESIDENTS IN RADIATION ONCOLOGY (ARRO) EXECUTIVE COMMITTEE.


ASTRO DAILY NEWS WILL HIGHLIGHT ANNUAL MEETING NEWS, EVENTS, PROGRAMS

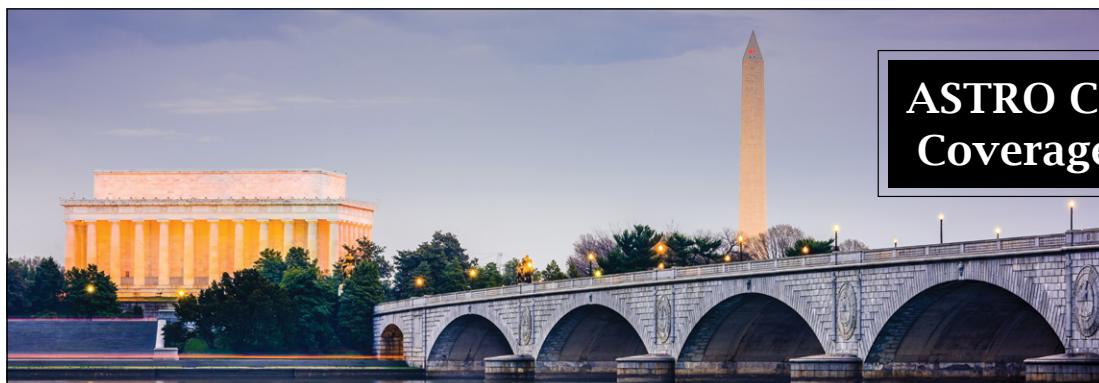


AS AN ADDED MEETING ATTENDEE BENEFIT, the popular ASTRO Daily News will be back at this year's Annual Meeting. Attendees will be able to pick up the free publication throughout the San Diego Convention Center to read Annual Meeting news, including a schedule of events and selected session summaries, as well as previews of upcoming sessions.

The publication will feature interviews with presenters and highlights of the program, including special events. The newspapers, called

“dailies,” will not only cover the meeting, but also offer information about the Accreditation Program for Excellence® (APEX), RO-ILS: Radiation Oncology Incident Learning System® and ASTRO guidelines.

Two separate newspapers will be printed on-site in San Diego and distributed on Sunday (the Sunday/Monday edition) and Tuesday (for the Tuesday/Wednesday edition). ASTRO also will continue its tradition of sending a special ASTROgram daily email to all attendees and members, filled with coverage of meeting highlights. 



ASTRO Coding and Coverage Seminar

Taught by the writers of the ASTRO Coding Resource, this two-day seminar will address the many factors that affect this complex and ever-changing aspect of clinical practice, making clinical coding easier to understand and apply for your practice.

Attend this seminar and learn:

- Coverage and coding policies specific to the field of radiation oncology.
- How codes for radiation oncology are developed.
- How to assign accurate coding to a clinical case study.
- How to apply coding for radiation oncology by modality.
- How ongoing changes in health care policy may affect coding and coverage.
- What health care reforms are on the horizon, and how they will affect RO reimbursement.
- How ASTRO advocates on behalf of radiation oncology.

December 8-9, 2017
ASTRO Headquarters
Arlington, Virginia

All seminar registrants will receive a print and electronic version of the 2018 ASTRO Coding Resource – an \$800 value!

Space is limited, so register now!
www.astro.org/codingseminar



SPRINTING TOWARD THE FUTURE

Running the ROI 5K supports innovation focused on practical needs

BY EMILY CONNELLY, ROI GOVERNANCE AND RESEARCH ADMINISTRATOR

GET ON YOUR FEET FOR THE FUTURE OF RADIATION ONCOLOGY. The Running Strong 5K Run for the Future to benefit the Radiation Oncology Institute (ROI) will be held on Monday morning, September 25. Join hundreds of other runners and walkers to enjoy competition and camaraderie on a course with views of beautiful San Diego Bay.


Together, you will be helping to support ROI researchers who are working to improve safety and quality, demonstrate the value of radiation therapy and enhance patient outcomes. All registration fees and sponsorships from the five-kilometer run directly support the research and education programs of the ROI because race host Radiation Business Solutions (RBS) covers all costs of the event.

“Some investments mature over time,” says Dan Moore, chief executive officer of RBS. “After eight years of sponsoring the 5K, it is gratifying for us to see our investment in the ROI growing in the form of groundbreaking research in cancer care and treatment. It is exciting for us to think that this event not only promotes a little health and wellness for the folks attending the ASTRO Annual Meeting, but at the same time has a much broader impact on cancer patients all over the world.”

“RBS’s generous support of the ROI 5K is truly an investment in the future of radiation oncology. ROI is focused on identifying the practical needs of the field

and funding research that promises to provide solutions that will improve practice,” says ROI President Deborah A. Kuban, MD, FASTRO. “I invite all of the 5K participants to visit the ROI booth (3639) in the Innovation and Solution Showcase to learn more about the ROI and meet the researchers they are supporting by registering for the race.”

Fittingly, one of the ROI’s researchers is exploring how staying active and walking can improve outcomes for patients undergoing concurrent chemoradiotherapy. Nitin Ohri, MD, MS, of the Montefiore Einstein Center for Cancer Care and the Albert Einstein College of Medicine, is conducting a randomized trial on this topic. “We are investigating whether instructing patients to meet daily customized step count goals, which will be displayed on their fitness trackers, can reduce the number of missed treatments, decrease treatment-related toxicities and improve quality of life,” explains Dr. Ohri. His work and that of the other researchers who ROI supports is only made possible through the generosity of donors, including the 5K sponsors and participants.

For more information and to register for the 8th annual 5K Run for the Future to benefit the ROI, visit www.roi5K.com. Race registration will also be available on-site from 10:00 a.m. to 5:00 p.m. on Sunday, September 24, at the RBS booth (2425) in the Innovation and Solution Showcase. 

A Doctor's Tour *of San Diego*

**SUN
SAND
AND SURF**

IN AMERICA'S FINEST CITY

BY PRABHAKAR TRIPURANENI, MD, FASTRO, AND CATHERYN YASHAR, MD



Welcome to beautiful, sunny San Diego, known as “America’s finest city.” It’s situated at the southern tip of SoCal—the local name for Southern California. With 263 days of sun, the weather is perfect *almost* all the time. Be prepared for the UV rays with hats, sunglasses and sunscreen!

It is a city of microclimates, so plan ahead if you wander far from downtown. Despite all that sun, the coastal daytime temperature is mild, typically in the mid-70s, but it cools off into the 60s at night—so don’t forget a jacket. We hope you get to catch one of our spectacular sunsets or even a rare “green flash.” The green flash only occurs under the right conditions as the sun disappears over the horizon. It is a green spot that is visible at the solar apex, but only for a second or two. For the nerds among us, the flash is caused when the atmosphere refracts the sunlight into different colors. Although blue light is the most refracted, it is scattered out of our line of sight and what is left is the famous green flash.



USS MIDWAY MUSEUM

Photo Credit: Prabhakar Tripuraneni, MD, EASTRO



Did you know the world-famous San Diego Zoo, housed in Balboa Park, was started by a physician? In 1916, after the animals from the Panama-California Exposition needed new homes, Harry Wegeforth, MD, decided that San Diego needed a zoo. The 100-acre zoo now houses more than 3,700 animals and sports an impressive exotic plant collection with more than 700,000 species.

A little more than 30 miles north is the renowned San Diego Zoo Safari Park, formerly known as the San Diego Wild Animal Park. The park boasts 1,800 acres stocked with an array of wild animals from North and South America, Africa, Asia, Europe and Australia, including many that are endangered species. More than 2,600 animals representing more than 300 species reside in the park, which is visited by more than 2 million people annually.

If you want to go to the beach, there are so many options, it's difficult to choose where to go. Travel north and hit some great beaches along the way, each with its own local flavor. Coronado Beach is a beautiful spot overlooking the Point Loma peninsula. Continuing up the coast, Ocean Beach, or OB to locals, is mellow and the vibe is very retro.

North of Ocean Beach is Mission Beach. Famed for its wide sandy shores, it also has a boardwalk along the eastern side for walking, jogging, biking or rollerblading. Be on the lookout for a famous local resident, Slomo. Slomo is really John Kitchin, MD, a retired neurologist who has risen to fame for his

slow-motion dance on rollerblades. We love our local color! Here, you can see or play beach volleyball. At the stores just across Mission Boulevard, you can rent beach equipment or book your first surf lesson. At the south end is an amusement park with rides suitable for small ones and, for the brave, a rollercoaster.

Pacific Beach (PB in local parlance) is the hangout for college students and young professionals. Continuing north into La Jolla, Windansea Beach's surf culture is immortalized in the 1968 Tom Wolfe book of essays, "The Pump House Gang." It is still a scene for waves, sunbathing and the iconic thatch-roofed surf shack. Don't be fooled though—to surf there, you must be outstanding and the surfers are just as territorial almost 50 years later.

The La Jolla Cove has several small beaches for ocean swimmers, seal watching and a fun sea cave to visit. Black's Beach is a steep hike down from the Torrey Pines Gliderport. (A fun activity to book. Don't worry: the ride includes an instructor strapped with you in the harness.) Because of its isolated location, you may see more of the Black's Beach sunbathers than in other parts of town—nude sunbathing is common in this area. Swami's in Encinitas, just north of San Diego, is a prime surfing location and one of the beaches immortalized in the Beach Boys song, "Surfin' USA."

Typical of SoCal, we are a sprawling city with no good public transportation. The trolley is making some strides toward better public transport, but we have a long way to go! If you plan to venture beyond Gaslamp



SUNSET AT LA JOLLA COVE BEACH, SAN DIEGO, CALIFORNIA

Quarter and downtown, you will need a rental car or Uber. We are a military town with Naval Air Station North Island, Marine Corps Base Camp Pendleton, Marine Corps Air Station Miramar (where scenes from the movie “Top Gun” were filmed) and many other military installations. While we can’t visit those, the USS Midway Museum, featuring the retired aircraft carrier, is open to the public and is within walking distance of the convention center. It is a must-see with its impressive array of Naval aircraft and just for its sheer size.

Also within walking distance from downtown hotels, you will find fine dining, a variety of shopping and entertainment options, plus trails for walking, hiking, jogging and biking. Nearby points of interest include Seaport Village, Broadway Pier, Gaslamp Quarter, Horton Plaza, Little Italy and Petco Park.

Balboa Park is a 1,200-acre urban cultural park (larger than New York’s Central Park) and only a short Uber ride away from downtown. In addition to open space areas, walking paths and gardens, it’s also home to 16 museums, several theaters and the aforementioned San Diego Zoo.

To the northwest of Balboa Park, the Hillcrest area is eclectic and full of character, home to many one-of-a-kind restaurants. Continuing west, you’ll find Old Town, the birthplace of San Diego and the first permanent Spanish settlement in 1769. Today, it celebrates San Diego’s rich heritage and is one of the best places to sample Mexican cuisine.

North of downtown, La Jolla is a nice, sleepy suburb, known for its natural beauty and the rich and famous that live there. In fact, another “doctor” lived there and immortalized some of the local residents. Theodore Geisel (better known as Dr. Seuss, famous for his ever-popular children’s books) lived there and painted eleven paintings spoofing local residents called the La Jolla Birdwomen series. There is an architecturally amazing library on the campus of the University of California, San Diego, that bears his name in La Jolla.

Beyond the university, La Jolla is also home to Salk Institute for Biological Studies, Sanford Burnham Prebys Medical Discovery Institute, Scripps Research Institute and many startups in Torrey Pines Science Park for biological research and world-class medical care.

Nestled between La Jolla and Del Mar, Torrey Pines State Natural Reserve, about a 30-minute drive from downtown San Diego, is the place to go for hiking. It is a small state park of about 2,000 acres with unique Torrey Pines, the sole location of *Pinus torreyana torreyana*, the rarest of pines in North America. This area is also known for its Torrey Pines Golf Course, if you happen to bring your clubs.

Please take time to explore our “finest city in America,” complete with almost-perfect weather and fantastic outdoor activities, museums, heritage and fine dining. 🏠



Photo Credit: Prabhakar Triparaneni, MD, EASTRO

DR. SEUSS SCULPTURE AT THE GEISEL LIBRARY

General Information

SAN DIEGO CONVENTION CENTER

111 W. Harbor Drive
San Diego, CA 92101
<https://visitsandiego.com>

All activities take place at the San Diego Convention Center unless otherwise stated.

All information is correct as of July 19, and is subject to change.

ATTENDEE REGISTRATION

Lobby D, Ground Level

Attendee registration hours:

Saturday, September 23	8:30 a.m. – 5:00 p.m.
Sunday, September 24	6:30 a.m. – 5:00 p.m.
Monday, September 25	7:00 a.m. – 6:00 p.m.
Tuesday, September 26	7:00 a.m. – 5:00 p.m.
Wednesday, September 27	7:00 a.m. – 2:00 p.m.

EXHIBITOR REGISTRATION

Lobby D, Ground Level

Exhibitor registration hours:

Thursday, September 21	8:00 a.m. – 5:00 p.m.
Friday, September 22	8:00 a.m. – 5:00 p.m.
Saturday, September 23	8:00 a.m. – 5:00 p.m.
Sunday, September 24	7:00 a.m. – 5:00 p.m.
Monday, September 25	8:00 a.m. – 5:00 p.m.
Tuesday, September 26	8:00 a.m. – 5:00 p.m.



AFFILIATED MEETINGS

41ST ASRT RADIATION THERAPY CONFERENCE

September 24–26, 2017
Manchester Grand Hyatt San Diego

The 41st ASRT Radiation Therapy Conference will take place at the Manchester Grand Hyatt San Diego. ASTRO-registered attendees may attend ASRT sessions by paying a reduced registration fee of \$195. Proof of registration (registration confirmation or badge) is required to receive this reduced rate. If you have not registered to attend the ASRT conference, but would like to do so, please register on-site at the Manchester Grand Hyatt San Diego.

34TH SROA ANNUAL MEETING

September 24–27, 2017
Hard Rock Hotel San Diego

The 34th SROA Annual Meeting will take place at the Hard Rock Hotel San Diego. ASTRO-registered attendees may attend the SROA general session by paying a reduced registration fee of \$240. Proof of registration (registration confirmation or badge) is required to receive this reduced rate. If you have not registered to attend the SROA conference, but would like to do so, please register on-site at the Hard Rock Hotel San Diego.

ABSTRACTS AND EMBARGO POLICY

The full text of the abstracts selected for oral, ePoster and poster presentations will be available on the Annual Meeting Online Conference Planner and ASTROmobile beginning Saturday, September 23. All abstracts are published in a supplement of the October 1, 2017, issue of the *International Journal of Radiation Oncology•Biology•Physics* (www.redjournal.org).

All abstracts are embargoed and remain confidential until the date and time of presentation at the ASTRO Annual Meeting. If you have any questions about the embargo policy, please contact ASTRO's media relations team at press@astro.org.



ASTRO Bistro

We are offering a dining experience for attendees in the Innovation and Solution Showcase (Exhibit Hall)—the ASTRO Bistro. The ASTRO Bistro will provide buffet-style meals with different cuisine options offered each day. The ASTRO Bistro provides a comfortable place to eat, meet and network with colleagues and exhibitors.

Hours of operation:

Sunday, September 24	11:00 a.m. – 2:30 p.m.
Monday, September 25	11:00 a.m. – 2:30 p.m.
Tuesday, September 26	11:00 a.m. – 2:30 p.m.

Price

Individual attendee lunch ticket (per person/day): \$25
Individual attendee three-day lunch ticket package*: \$75

**This ticket package provides an individual with a lunch ticket for Sunday, Monday and Tuesday for the ASTRO Bistro.*

Menu

The ASTRO Bistro will offer a variety of food items with menu items changing daily. See a sample menu to the right. **Menus are subject to change at any time.**

HOW TO PURCHASE LUNCH TICKETS

Attendees may purchase ASTRO Bistro tickets online via the attendee registration website. Exhibitors may purchase ASTRO Bistro tickets online via the exhibitor registration website. Exhibitors who are interested in purchasing ASTRO Bistro tickets should contact their company representative who manages their booth. The exhibitor's booth contact will have access to the exhibitor registration website.

IMPORTANT ASTRO BISTRO TICKET INFORMATION

ASTRO Bistro tickets are valid only for lunch on the day requested. **ASTRO Bistro tickets that are not redeemed cannot be used for the following day and are nonrefundable.**

ASTRO Bistro tickets are only redeemable at the ASTRO Bistro and cannot be used at other concessions within the San Diego Convention Center. Purchased tickets will be included in your registration materials. Additional tickets may be purchased on-site at the ASTRO Bistro in the Innovation and Solution Showcase (Exhibit Hall), adjacent to the 500 Aisle in the San Diego Convention Center.

SAMPLE ASTRO BISTRO MENU

California garden salad **V** **GF**

Shredded carrots, shredded red cabbage, grape tomatoes, cucumbers and red radishes with a choice of dressing

Broccoli salad **V** **GF**

With raisins and carrots

Pan-seared chicken breast **GF**

Marinated in lemon and extra virgin olive oil with white wine caper reduction

Vegetarian gourmet flatbread **V**

With tomato, olives, grilled artichokes, goat cheese and fresh herbs

Steamed jasmine rice and orzo medley **V**

Chef's selection of fresh seasonal vegetables **V** **GF**

Hand-baked rolls and butter

Gourmet assortment of fresh-baked cookies and brownies

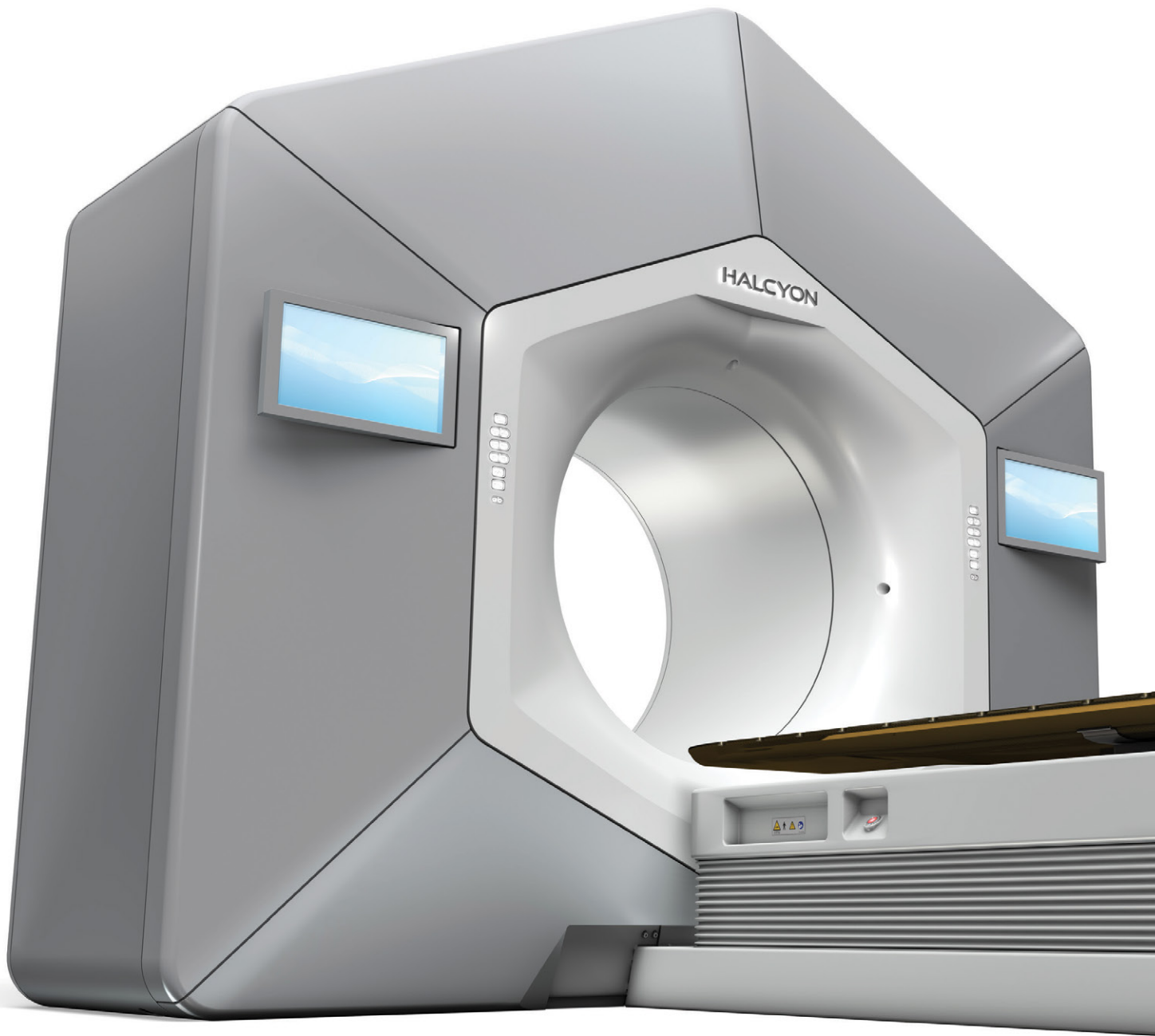
Self-service beverage station

Freshly brewed iced tea and lemonade

V Vegetarian and Vegan

GF Gluten Free

INTRODUCING
HALCYON



Safety Information: Radiation may cause side effects and may not be appropriate for all cancers.

POWERFUL SUBTLETY

Stop for a moment to think about your fight against cancer. Look at it differently. Take a new approach. Start mixing things up. We did.

To develop the Halcyon™ system, we considered all the possibilities—and the impossibilities—to design a patient-centered radiotherapy treatment system that's focused on the essentials your clinic needs to deliver a high quality of care.

We set out to rethink the way we approached radiotherapy, so you can redefine the way you fight cancer.

We can't wait to see what you achieve.

Visit us at ASTRO 2017 Booth #717
Learn more at Varian.com/Halcyon



VARIAN
medical systems

ASK ASTRO INFORMATION AND MEMBER SERVICES BOOTH

Lobby D, Ground Level

ASTRO representatives are available to answer questions about the Annual Meeting and membership in ASTRO and provide information on any of ASTRO's products and services. They will also offer assistance with ASTRO 2017 technology tools, such as ASTROmobile and the Online Conference Planner.

Hours of operation:

Saturday, September 23	8:30 a.m. – 5:00 p.m.
Sunday, September 24	6:30 a.m. – 5:00 p.m.
Monday, September 25	7:00 a.m. – 6:00 p.m.
Tuesday, September 26	7:00 a.m. – 5:00 p.m.
Wednesday, September 27	7:00 a.m. – 4:00 p.m.



Innovation and Solution Showcase (Exhibit Hall),
Ground Level

New this year is a series of ASTRO Connect areas, located throughout the Innovation and Solution Showcase (Exhibit Hall).

Each location will have a different focus—breast, GI, GU, lung and physics—and offer attendees a comfortable spot for networking with colleagues with similar interests, as well as a place to recharge electronic devices and check email. In addition, top posters will be on display electronically and experts will be available during designated hours to answer your questions. Visit www.astro.org/conferenceplanner for a schedule of Meet the Experts that will take place in the ASTRO Connect areas.

Breast – Booth 530
GI – Booth 2619
GU – Booth 3047
Lung – Booth 3417
Physics – Booth 1548

ASTRO JOB BOARD

Lobby D, Ground Level

A new job board is available in Lobby D with interactive connection to the ASTRO Career Center. Employers who are attending the Annual Meeting can flag job postings online prior to the meeting and connect with job seekers on-site. Job seekers can bring copies of their resumes to post on the on-site Job Board in addition to posting it online.

ASTRO PAC POD

Lobby D, Ground Level

ASTRO's political action committee (PAC) pod allows members to get information on ASTRO's advocacy and political giving, contribute on-site and charge their electronic devices. ASTRO PAC provides ASTRO with the opportunity to more fully participate in the political process and ensure our members' voices are being heard by key policymakers on Capitol Hill. Stop by the ASTRO PAC pod to get the most recent legislative updates. For more information, please email kaitlin.leddy@astro.org or visit www.astro.org/astropac.

Hours of operation:

Sunday, September 24	10:00 a.m. – 5:00 p.m.
Monday, September 25	10:00 a.m. – 5:30 p.m.
Tuesday, September 26	10:00 a.m. – 5:00 p.m.
Wednesday, September 27	7:00 a.m. – 4:00 p.m.

ASTRO PRIVATE INTERVIEW ROOMS

Private interview rooms are available for rent. These rooms are ideal if you have multiple interviews to conduct or prefer to interview applicants in a private setting. A limited number of private interview rooms are available for three-hour periods, Saturday, September 23 through Tuesday, September 26. To rent a room, contact Todd Karstaedt at todd.karstaedt@astro.org. On-site, stop by the Ask ASTRO booth located in Lobby D to reserve a room or check availability.

Connect with attendees.



Tweet
#ASTRO17

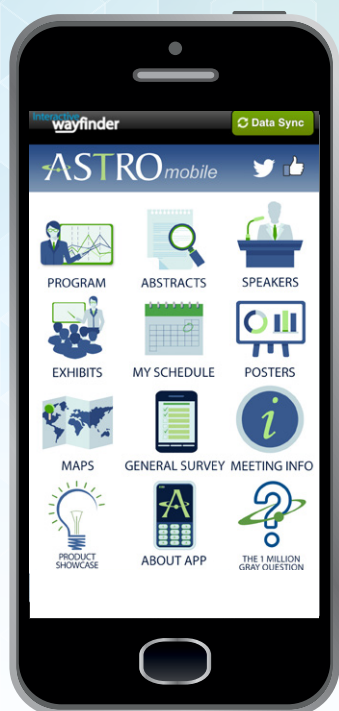
ASTROmobile

YOUR ANNUAL MEETING GUIDE

ASTROmobile gives you access to the meeting program and ability to customize your meeting experience with personalized maps and planners:

- Search sessions by day, track or speaker.
- Search exhibitors by name, booth number or product/service category.
- Check out innovative products in the Product Showcase.
- Locate sessions and exhibitors with customized maps.
- Search and view the full abstracts.
- Preview general meeting information.
- Access “My Schedule”—your personal Annual Meeting schedule.
- View convention center maps.
- Answer the “Million Gray Question”—see page 20 for more information.
- Take notes on a session or exhibitor and access your notes from your mobile device.

ASTROmobile is integrated with the Online Conference Planner, so you can start your Annual Meeting planning early.



ASTROmobile Login Instructions

An account has been created for all registered attendees. Please log in as follows:

iPhone Users	Android Users	Smartphone Users
<ol style="list-style-type: none"> 1. Download “ASTROmobile17” from the App Store. 2. Log in with your ASTRO credentials: <p>Username: Email address</p> <p>You can retrieve your password by clicking “Forgot Password?”</p>	<ol style="list-style-type: none"> 1. Download “ASTROmobile17” from the Google Play Store. 2. Log in with your ASTRO credentials: <p>Username: Email address</p> <p>You can retrieve your password by clicking “Forgot Password?”</p>	<ol style="list-style-type: none"> 1. Go to www.astro.org/ASTROmobile in your mobile web browser. 2. Log in with your ASTRO credentials: <p>Username: Email address</p> <p>You can retrieve your password by clicking “Forgot Password?”</p>

BUSINESS CENTER

Lobby D, Ground Level

A FedEx office is conveniently located inside the San Diego Convention Center on the Ground Level – Hall D. Here you can ship, mail, fax, photocopy or create a last-minute presentation. To contact the business center, please dial 619-525-5450 or email usa1324@fedex.com.

Hours of operation:

Saturday, September 23	9:00 a.m. – 5:00 p.m.
Sunday, September 24	9:00 a.m. – 5:00 p.m.
Monday, September 25	8:00 a.m. – 5:00 p.m.
Tuesday, September 26	8:00 a.m. – 5:00 p.m.
Wednesday, September 27	8:00 a.m. – 5:00 p.m.

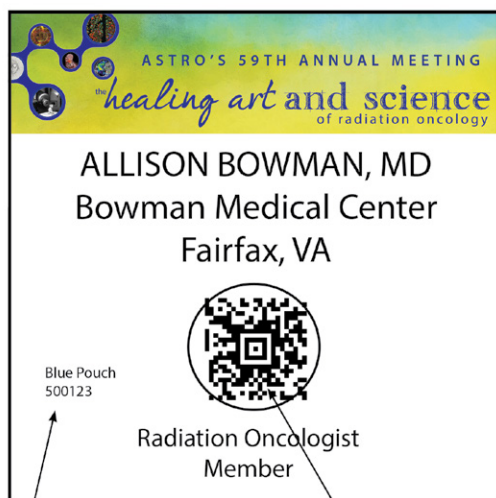
BUSINESS MEETING AND LUNCHEON

Tuesday, September 26

11:30 a.m. – 1:00 p.m.

Room 6 A, Upper Level

ASTRO voting members (Active, Affiliate and International members) are invited to attend the Annual Business Meeting. Leaders of the Society will discuss topics of interest to ASTRO members. Lunch will be served.



Sample Badge Number

Aztec code

CE CENTRAL

Ballroom 6 Lobby, Upper Level

Staff from ASTRO and the ABR will be on hand during the meeting to answer your individual questions about continuing education and MOC requirements, including:

- How to complete an evaluation.
- ASTRO's SA-CME offerings.
- Current MOC participation status.
- MyABR attestation and documentation guidance.
- Transferring credits between ASTRO and the ABR.

CE Central computer stations provide access for you to:

- Complete your continuing education and meeting evaluation.
- View or print a session tracking form.
- Search abstracts.
- Search exhibitors.
- Update your Online Conference Planner.
- Print your boarding pass.
- Print your registration receipt.
- Print your Certificate of Attendance.
- Check email.
- Browse the internet.

Hours of operation:

Saturday, September 23	8:30 a.m. – 5:00 p.m.
Sunday, September 24	6:30 a.m. – 5:00 p.m.
Monday, September 25	7:00 a.m. – 5:00 p.m.
Tuesday, September 26	7:00 a.m. – 5:00 p.m.
Wednesday, September 27	7:00 a.m. – 4:45 p.m.

EXHIBITOR PRODUCT INFORMATION

Your registration badge will include an Aztec code that contains your contact information. This code (see left for sample) can be scanned by exhibitors in the Innovation and Solution Showcase (Exhibit Hall), so that you may request information on products and services offered by the company. Your contact information will include your email address, unless you opted not to include it during the registration process. Please stop by Attendee Registration located in Lobby D if you would like to change your contact information.

FACULTY/VIP OFFICE

Room 22, Upper Level

Faculty members and VIPs should check in at the Faculty/VIP Office to pick up registration materials and receive last-minute updates and program changes. The Faculty/VIP Office is conveniently located next to the Speaker Ready Room. Faculty and VIPs are welcome in the Faculty/VIP Office throughout the meeting.

Faculty members include:

- Educational session speakers.
- Panel moderators and presenters.
- Scientific program moderators and discussants.
- eContouring learning lab presenters.
- Presidential Symposium speakers.
- Keynote speakers and introducers.
- International symposium speakers.

Note: Presenters of abstracts are not classified as faculty and should follow attendee registration instructions.

Hours of operation:

Saturday, September 23	6:45 a.m. – 6:00 p.m.
Sunday, September 24	6:45 a.m. – 6:15 p.m.
Monday, September 25	6:45 a.m. – 5:45 p.m.
Tuesday, September 26	6:45 a.m. – 6:15 p.m.
Wednesday, September 27	6:45 a.m. – 4:30 p.m.

FIRST AID

Box Office E, near Lobby D, Ground Level

First Aid: 619-525-5490 or extension 5490 from a house phone

Urgent Building Emergency: 619-525-5911 or extension 5911 from a house phone

First Aid is located in Box Office E, near Lobby D. In an emergency, please dial 619-525-5490 to contact First Aid or go to ASTRO Registration and have a staff person contact security.

Hours of operation:

Monday, September 18	8:00 a.m. – 5:00 p.m.
Tuesday, September 19	8:00 a.m. – 5:00 p.m.
Wednesday, September 20	8:00 a.m. – 5:00 p.m.
Thursday, September 21	8:00 a.m. – 8:00 p.m.
Friday, September 22	8:00 a.m. – 8:00 p.m.
Saturday, September 23	8:00 a.m. – 8:00 p.m.
Sunday, September 24	6:30 a.m. – 6:00 p.m.
Monday, September 25	7:00 a.m. – 7:00 p.m.
Tuesday, September 26	7:00 a.m. – 12:00 a.m.
Wednesday, September 27	7:00 a.m. – 8:00 p.m.
Thursday, September 28	8:00 a.m. – 12:00 p.m.

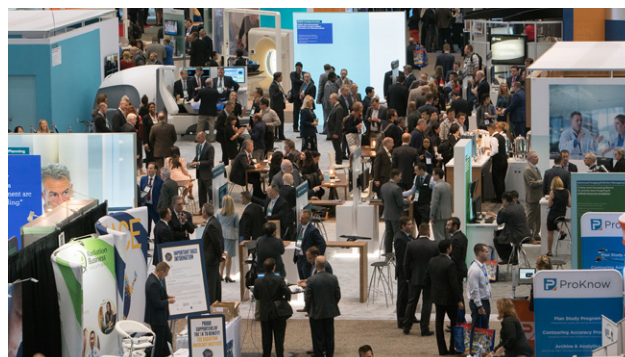
INNOVATION AND SOLUTION SHOWCASE (EXHIBIT HALL)

Halls B2-G, Ground Level

Learn about the latest products in cancer treatment and care in the Innovation and Solution Showcase.

Hours of operation:

Sunday, September 24	10:00 a.m. – 5:00 p.m.
Monday, September 25	10:00 a.m. – 5:00 p.m.
Tuesday, September 26	10:00 a.m. – 5:00 p.m.



Connect with attendees.



Tweet
#ASTRO17

LOST AND FOUND

Lobby D, Ground Level

To report a missing item, check if an item has been turned in to security or turn in a lost item, stop by the Ask ASTRO booth located in Lobby D.

Hours of operation:

Saturday, September 23	8:30 a.m. – 5:00 p.m.
Sunday, September 24	6:30 a.m. – 5:00 p.m.
Monday, September 25	7:00 a.m. – 6:00 p.m.
Tuesday, September 26	7:00 a.m. – 5:00 p.m.
Wednesday, September 27	7:00 a.m. – 4:00 p.m.

LUGGAGE/COAT CHECK

Lobby G/H

Luggage and coat check will be available in the San Diego Convention Center in Lobby G/H for \$5.

Hours of operation:

Saturday, September 23	7:30 a.m. – 6:00 p.m.
Sunday, September 24	6:00 a.m. – 6:30 p.m.
Monday, September 25	7:00 a.m. – 7:00 p.m.
Tuesday, September 26	7:00 a.m. – 6:30 p.m.
Wednesday, September 27	7:00 a.m. – 5:00 p.m.

NEWS BRIEFINGS AND PRESS OFFICE

Room 24 B/C, Upper Level

Accredited journalists are provided with press materials and access to cover ASTRO’s 59th Annual Meeting. For more information about ASTRO’s press program and policies, or to view the news briefing schedule, please contact ASTRO’s media relations team at 703-286-1600 or press@astro.org or visit www.astro.org/AMpress.

Hours of operation:

Sunday, September 24	8:00 a.m. – 5:00 p.m.
Monday, September 25	8:00 a.m. – 5:00 p.m.
Tuesday, September 26	8:00 a.m. – 5:00 p.m.
Wednesday, September 27	8:00 a.m. – 12:00 p.m.

2017 ANNUAL MEETING UNRESTRICTED EDUCATIONAL GRANT SUPPORTERS

Amgen

Astellas

AstraZeneca

Genomic

Lilly

Merck

Novocure

Pfizer

As of July 19, 2017

RADIATION ONCOLOGY INSTITUTE (ROI) BOOTH

Exhibit Hall - Booth 3639



Visit the ROI booth to learn how YOU can help push forward significant, practice-changing radiation oncology research.

Hours of Operation:

Sunday, September 24	10:00 a.m. – 5:00 p.m.
Monday, September 25	10:00 a.m. – 5:00 p.m.
Tuesday, September 26	10:00 a.m. – 5:00 p.m.

INDUSTRY-EXPERT THEATER

Theaters 1 and 2 are located in the rear of the 3600 and 3700 aisles in the Innovation and Solution Showcase (Exhibit Hall) via the Hall C Entrance on the Ground Level. **Room 14 A** is located on the West Mezzanine Level.

This activity allows companies to present their noteworthy products and services through a live presentation. Seating is available on a first-come, first-served basis. The Industry-Expert Theater content and views expressed therein are those of the exhibitor and not of ASTRO.

Lunch will be provided by the companies, which may subject you to reporting under the Federal Sunshine Act (the "Open Payments Program) or other state laws. Otherwise, food will be available for purchase prior to the start of the event in the ASTRO Bistro and concession area located in the rear of the 3200 aisle.

Sunday, September 24, 2017	Monday, September 25, 2017	Tuesday, September 26, 2017
<p>Theater 1, Exhibit Hall</p> <p>Title: <i>Six Facts on Xofigo (radium Ra 223 dichloride) in a Challenging Era of Prostate Cancer</i> Time: 12:15 p.m. - 1:15 p.m. Company: Bayer Contact: Steven Black Phone: 212-201-6864 Email: sblack@medreviews.com</p>	<p>Theater 1, Exhibit Hall</p> <p>Title: <i>Present and Future Role of Hydrogel Spacing in the Treatment of Prostate Cancer - 3 and 5 Year QOL Evidence and SBRT Experience</i> Time: 12:30 p.m. - 1:30 p.m. Company: Augmenix Contact: Eileen Gardner Phone: 781-902-1625 Email: egardner@augmenix.com</p>	<p>Theater 1, Exhibit Hall</p> <p>Title: <i>MRIdian Linac: Initial Clinical Experience</i> Time: 12:30 p.m. - 1:30 p.m. Company: ViewRay Contact: Meredith Johnson Phone: 408-396-2355 Email: mjohnson@viewray.com</p>
<p>Theater 2, Exhibit Hall</p> <p>Title: <i>CyberKnife® System: Confidence to Drive Innovation in Stereotactic Radiotherapy</i> Time: 12:15 p.m. - 1:15 p.m. Company: Accuray Contact: Diane Hobaugh Phone: 408-789-4265 Email: dhobaugh@accuray.com</p>	<p>Theater 2, Exhibit Hall</p> <p>Title: <i>Radixact™ System: Innovation for Everyday, Confidence in Every Outcome</i> Time: 12:30 p.m. - 1:30 p.m. Company: Accuray Contact: Diane Hobaugh Phone: 408-789-4265 Email: dhobaugh@accuray.com</p>	<p>Theater 2, Exhibit Hall</p> <p>Title: <i>A Novel Option for Biochemically Recurrent Prostate Cancer Localization</i> Time: 12:30 p.m. - 1:30 p.m. Company: Blue Earth Diagnostics, Inc. Contact: Maura Harrigan Phone: 855-298-6461 Email: m.harrigan@blueearthdx.com</p>
<p>Session Room 14 A</p> <p>Title: <i>Exploring the Scientific Rationale of Radiotherapy with Immunotherapy in Locally Advanced NSCLC and HNSCC</i> Time: 12:15 p.m. - 1:15 p.m. Company: AstraZeneca Contact: Stephan E. Wall Phone: 301-398-1457 Email: stephan.wall@astrazeneca.com</p>		



INDUSTRY SATELLITE SYMPOSIA

ASTRO has reviewed and approved this symposium as appropriate for presentation. This symposium represents the content and views of the supporters and is not part of the official ASTRO Annual Meeting.

Monday, September 25

6:45 p.m. – 7:15 p.m.: Dinner and Registration

7:15 p.m. – 8:45 p.m.: Symposium

**Understanding the Impact of Immunotherapy on Head and Neck Cancer:
A Look at the Science, Practice and Future of Multimodal Treatment**

Venue Location:

Hilton San Diego Bayfront

Dinner will be provided.

Accreditation:

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Medical Learning Institute, Inc. and PVI, PeerView Institute for Medical Education.

Physicians

The Medical Learning Institute is accredited by the ACCME to provide continuing medical education for physicians.

Nurses

Medical Learning Institute, Inc. Provider approved by the California Board of Registered Nursing, Provider Number 15106, for 1.5 contact hour(s).

Pharmacists



The Medical Learning Institute, Inc. is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. Completion of this application-based activity provides for 1.5 contact hours (0.15 CEUs) of continuing pharmacy education credit. The Universal Activity Number for this activity is 0468-9999-17-011-L01-P.

CME/CE/CPE Credits

Medical Learning Institute designates this live activity for a maximum of 1.5 *AMA PRA Category 1 Credits™* as well as contact hours for nurses and pharmacists. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



For more information or to register, please visit www.peerviewpress.com/hnc17 or contact live@peerviewpress.com.

This activity is supported through educational grants from Bristol-Myers Squibb and Merck & Co, Inc. This CME activity is jointly provided by Medical Learning Institute and PVI, PeerView Institute for Medical Education.

2017 ANNUAL MEETING PROMOTIONAL SPONSORS

	HOLOGIC
	ALLIANCE ONCOLOGY VERTUAL

PARKING

On-site private vehicle parking is located below the San Diego Convention Center. Enter the garage on Harbor Drive between First Avenue and Fifth Avenue. Parking rates range from \$15 to \$35. Payment is due upon entry and there are no in-and-out privileges. No overnight or recreational vehicle parking is permitted. For parking questions, please call ACE Parking at 619-237-0399.

In addition, directly across the street from the convention center, on the corner of Harbor and 8th Avenue, there is a 2,000-space parking structure. Off-site parking is available at numerous nearby parking lots and garages in downtown San Diego; many are within walking distance of the convention center. Lots and garages are individually owned and operated; prices vary by location.

Metered street parking is available in some areas. Parking meters are enforced Monday through Saturday, from 8:00 a.m. until 6:00 p.m., unless otherwise posted. Metered spots are free on Sunday and designated holidays. Meters accept nickels, dimes, quarters and prepaid electronic debit cards.

Hilton San Diego Bayfront

1 Park Boulevard
619-564-3333

Located next to the San Diego Convention Center

Daily rates: Self-parking: \$35
Valet parking: \$50

Parking type: Indoor, self-park and valet, in-and-out privileges

San Diego Marriott Marquis and Marina

333 West Harbor Drive
619-234-1500

Daily rates: On-site parking: \$10 hourly; \$35 daily
Valet parking: \$50

Parking type: Indoor, self-park and valet, in-and-out privileges

POSTERS

Poster setup and removal

Hall A-B1, Ground Level

Poster setup hours:

Saturday, September 23	12:00 p.m. – 5:00 p.m.
Sunday, September 24	7:30 a.m. – 10:00 a.m.

Poster removal hours:

Tuesday, September 26	6:15 p.m. – 7:30 p.m.
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Poster viewing

Hall A-B1, Ground Level

ePosters and paper posters will be on display during the poster viewing hours below. Please note that ePosters will not be available for viewing during ePoster discussion session times as the screens will be used for these sessions. See the schedule of events or use the Online Conference Planner or ASTROmobile for the ePoster session schedule.

Poster viewing hours

Sunday, September 24	10:00 a.m. – 6:15 p.m.
Monday, September 25	10:00 a.m. – 6:45 p.m.
Tuesday, September 26	10:00 a.m. – 6:15 p.m.

Poster pickup

Hall A-B1, Poster Information, Ground Level

For those poster presenters who chose to use ASTRO's poster printing service, please pick up your posters at the Poster Information Desk in the Poster Hall.

Hours of operation:

Saturday, September 23	12:00 p.m. – 5:00 p.m.
Sunday, September 24	7:30 a.m. – 6:15 p.m.
Monday, September 25	10:00 a.m. – 6:45 p.m.
Tuesday, September 26	10:00 a.m. – 6:15 p.m.

Poster Viewing Session and Reception

Hall A-B1, Ground Level

Monday, September 25	5:30 p.m. – 6:45 p.m.
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All conference attendees are invited to attend this poster viewing session and reception. During this time, poster presenters will be available by their poster to answer questions and discuss their research. Beverages will be available for purchase. You must be 21 or older to purchase alcoholic beverages.

2017 NEW SESSION DESCRIPTIONS

New
this year!

Science Highlights

These sessions will highlight up to five of the highest rated abstracts in six disease site tracks. Experts will highlight clinically applicable information and compare the abstract with similar studies.

Monday, September 25

Science Highlights 1: GU	7:45 a.m. – 8:15 a.m.
Science Highlights 2: Lung	8:30 a.m. – 9:00 a.m.

Tuesday, September 26

Science Highlights 3: Head and Neck	7:45 a.m. – 8:15 a.m.
Science Highlights 4: CNS	8:30 a.m. – 9:00 a.m.

Wednesday, September 27

Science Highlights 5: GI	7:45 a.m. – 8:15 a.m.
Science Highlights 6: Breast	8:30 a.m. – 9:00 a.m.

Poster Viewing Q&A

To highlight the paper posters, authors will be available to answer questions during the following times in the Poster Hall, located in Hall A-B1:

Sunday, September 24

GU, Biology	1:15 p.m. – 2:45 p.m.
Nonmalignant, Palliative Care, Patient-reported Outcomes, Patient Safety, Informatics, Health Services Research	4:45 p.m. – 6:15 p.m.

Monday, September 25

Breast, GYN Nursing	10:45 a.m. – 12:15 p.m.
Physics	4:15 p.m. – 5:45 p.m.
Poster Viewing Reception	5:45 p.m. – 6:45 p.m.

Tuesday, September 26

Lung, Pediatrics, Education	1:00 p.m. – 2:30 p.m.
CNS, Head and Neck, Sarcoma	2:45 p.m. – 4:15 p.m.
GI, Hematologic	4:45 p.m. – 6:15 p.m.

Poster Awards

Poster award winners will be presented with their awards at the beginning of the Poster Viewing Session and Reception and will provide a short oral presentation of their abstract in the poster presentation area within the Poster Hall.

Poster categories:

- Biology
- Breast
- Central Nervous System
- Gastrointestinal
- Genitourinary
- Gynecologic
- Head and Neck
- Health Services Research
- Hematologic/Lymphoma/Leukemia
- History/Education/Social Media
- Informatics/Bioinformatics
- Lung
- Non-malignant
- Nursing
- Palliative Care
- Patient-reported Outcomes/Quality of Life
- Patient Safety
- Pediatrics
- Physics
- Sarcoma

ePOSTER DISCUSSION SESSIONS

Session format

The ePoster discussion sessions take advantage of touch-screen technology to present more in-depth information and allow for easy viewing of data and discussion with colleagues. Sessions will begin with oral presentations followed by poster viewing and interaction with authors.

- **54 minutes** – Nine authors have six minutes each to present their posters at the podium.
- **24 minutes** – Discussants provide additional information to compare the abstracts, highlight key points and moderate questions and answers.
- **12 minutes** – Authors stand by ePosters and answer questions.

ePoster presenter check-in

Outside of Rooms 5A and 5B, Upper Level

ePoster presenters must check-in at the ePoster check-in booth located between the ePoster session rooms at least two hours prior to their presentations. Staff will be available to assist presenters with uploading any last-minute changes and to help them prepare for their oral presentations. Presenters are required to stand by their posters for the last 10 minutes of the session. Once the session begins, presenters should sit in the front row and wait for the discussant to call them up to the podium for their presentations. ePoster discussion sessions are 90 minutes long.

SAN DIEGO TRAVEL INFORMATION

Off of Lobbies B and E, Ground Level

Attendees can stop by either one of the two San Diego Restaurant and Concierge Booths to receive restaurant recommendations, San Diego visitor guides, maps, local directions and more.

Hours of operation:

Saturday, September 23	9:00 a.m. – 5:00 p.m.
Sunday, September 24	9:00 a.m. – 5:30 p.m.
Monday, September 25	9:00 a.m. – 5:30 p.m.
Tuesday, September 26	9:00 a.m. – 5:30 p.m.
Wednesday, September 27	9:00 a.m. – 5:00 p.m.

SMOKING

The San Diego Convention Center is a nonsmoking facility.

SPEAKER READY ROOM

Room 23 A/B, Upper Level

Faculty members and abstract presenters should upload their PowerPoint presentations in advance of their sessions. To ensure presentations have been properly uploaded, faculty members and abstract presenters are asked to check in at the Speaker Ready Room to review the information and make any last-minute edits.

Every speaker should also save their presentation on a portable device and bring it to the Speaker Ready Room at least 24 hours in advance of the presentation or upon arrival at the San Diego Convention Center.

Hours of operation:

Saturday, September 23	6:45 a.m. – 6:00 p.m.
Sunday, September 24	6:45 a.m. – 6:15 p.m.
Monday, September 25	6:45 a.m. – 5:45 p.m.
Tuesday, September 26	6:45 a.m. – 6:15 p.m.
Wednesday, September 27	6:45 a.m. – 4:30 p.m.

SURVIVOR CIRCLE

Lobby D, Ground Level

In 2003, ASTRO created the Survivor Circle as a way to honor cancer survivors. Each year, ASTRO awards two grants to patient support organizations located in the state hosting the ASTRO Annual Meeting. Grants are made possible through generous donations from exhibitors. This year, ASTRO is proud to recognize Cancer Angels of San Diego and The Seany Foundation for their work with cancer patients and their families. Please stop by to learn more about this year's Survivor Circle Grant recipients.



PASSPORT PROGRAM

ASTRO introduced the Survivor Circle Passport Program in 2006 to help raise money for local patient support groups selected by ASTRO. In addition, the program helps drive traffic to passport participant's booths. Be sure to get your passport stamped at the Survivor Circle Passport Program participant exhibit booths listed on your ASTRO Passport. Only registered attendees are eligible to participate.

DROP-OFF LOCATIONS:

Drop off your completed passports at the Ask ASTRO booth in Lobby D for a chance to win a prize. Prize drawings will occur daily at 4:00 p.m. on Sunday, September 24, through Tuesday, September 26. The generous donations from these participating companies help fund the Survivor Circle grants to help support cancer survivors in San Diego.



As of
July 19,
2017

TRANSPORTATION

San Diego offers a number of convenient transportation options to help attendees easily get around the city. For more information on transportation services, visit www.astro.org/travel.

Rental car reservations

Avis and Hertz are offering ASTRO attendees special rates on car rentals during the Annual Meeting.

Avis Rent-A-Car

To reserve your Avis rental car, call 1-800-311-1600. Be sure to mention the Avis Worldwide Discount number, J657704, when making your reservation.

Hertz

To reserve your Hertz rental car, call 1-800-654-2240 or 405-749-4434 or go to www.hertz.com. Be sure to mention the CV ID number, 04840017, in order to receive the discounted rate.

To and from the airport

San Diego International Airport is approximately three miles, or seven minutes, from the San Diego Convention Center and less than one mile from the Amtrak station. The San Diego Trolley has two stops directly in front of the convention center at Harbor Drive/First Avenue and Harbor Drive/Fifth Avenue.

Taxi

On average, a one-way taxi ride from San Diego International Airport (SAN) to the San Diego Convention Center is approximately \$25.00 (gratuity not included).

Public transportation

The Metropolitan Transit System (MTS) offers fast and convenient service from the airport to the convention center. MTS operates the San Diego Trolley, with a stop right outside the convention center. The Flyer, MTS bus route 992, directly services the airport and the downtown area. Please visit the MTS website for information on various routes, fares and schedules at www.sdmts.com.

Ride-booking services

San Diego has ride-booking service options such as Uber or Lyft. The city also has short-term rental car services, such as Zipcar.

VIRTUAL MEETING

Extend your learning experience with access to the 2017 ASTRO sessions long after the meeting is over. All full conference attendees receive the Virtual Meeting with their registration at no additional cost. You will receive professionally recorded, streaming content as well as downloadable MP3 and PowerPoint files for each presentation.* Full conference attendees will have access to the recorded presentations 24 hours after each session.

**Presentations are included in the Virtual Meeting as approved per faculty.*

WIRELESS INTERNET ACCESS

Complimentary wireless internet access is provided in all common areas, session rooms and the Innovation and Solution Showcase (Exhibit Hall). Attendees can bring their laptop to check email, complete the evaluation or surf the internet. Laptops must have a Wi-Fi card to connect.

APEX, MIPS, AND RO-ILS OFFICE HOURS

Room 9, Convention Center

Do you have questions about ASTRO's quality programs, APEX and RO-ILS, or the new Medicare Merit-based Incentive Payment System (MIPS)? ASTRO staff are available for one-on-one support or team meetings. Whether you are just beginning or currently working on implementing a plan, we are here to help. For individualized APEX assistance, we recommend emailing apexsupport@astro.org to schedule an appointment. However, all inquiries are welcome for all programs.

Hours of operation:

Sunday, September 24	2:30 p.m. - 4:00 p.m.
Monday, September 25	10:00 a.m. - 11:00 a.m. 2:30 p.m. - 3:30 p.m.
Tuesday, September 26	10:30 a.m. - 11:30 a.m. 2:00 p.m. - 3:00 p.m.

SHUTTLE SERVICE TO THE SAN DIEGO CONVENTION CENTER

This is preliminary information only, which is subject to change at any time without notice. Visit the ASTRO website at www.astro.org/annualmeeting for the most current schedule.

Hours of Operation	
Saturday, September 23	7:30 a.m. – 6:30 p.m.
Sunday, September 24	6:30 a.m. – 7:00 p.m.
Monday, September 25	6:30 a.m. – 7:30 p.m.
Tuesday, September 26	6:30 a.m. – 7:00 p.m.
Wednesday, September 27	6:30 a.m. – 5:15 p.m.

Hotels and Boarding Locations

All travel times are approximate pending time of day, day of week and traffic conditions.

Route	Hotel	Boarding Location at Hotel	Approximate one-way travel time
1	Embassy Suites San Diego Bay Downtown	Curbside on Pacific Hwy.	13-18 minutes
	Manchester Grand Hyatt San Diego	Curbside on Harbor Dr.	
	Wyndham San Diego Bayside	Curbside on Harbor Dr.	
2	Bristol Hotel, The	At The Westin Gaslamp Quarter	17-22 minutes
	US Grant Hotel, The	Curbside on 4th Ave.	
	Westgate Hotel, The	At U.S. Grant Hotel	
	Westin San Diego Gaslamp Quarter	Curbside on 1st Ave.	
3	Best Western Plus Bayside Inn	Curbside on Columbia	17-22 minutes
	Renaissance (formerly W San Diego Hotel)	At the Westin San Diego	
	Sofia Hotel San Diego, The	At the Westin San Diego	
	Westin San Diego, The	Curbside on Broadway	
4	Andaz	Curbside in front	17-22 minutes
	Courtyard by Marriott San Diego Downtown	Curbside on 6th Ave.	
	Hotel Indigo	Curbside on 9th Ave.	
	Kimpton Palomar San Diego	At Courtyard San Diego Downtown	
Walk Hotels	Courtyard San Diego Gaslamp/Convention Center	Shuttle service is not provided to hotels located within walking distance of the San Diego Convention Center.	
	Hard Rock Hotel San Diego		
	Hilton San Diego Bayfront		
	Hilton San Diego Gaslamp Quarter		
	Horton Grand Hotel		
	Hotel Z		
	Kimpton Solamar Hotel		
	Omni San Diego Hotel		
	Pendry San Diego		
	Residence Inn San Diego Downtown/Gaslamp Quarter		
	San Diego Marriott Gaslamp Quarter		
	San Diego Marriott Marquis & Marina		

AND HOTELS

MAP LOCATION	HOTEL	DISTANCE TO CONVENTION CENTER	SINGLE - DOUBLE DOUBLE/DOUBLE
1	Andaz	0.57 mile	\$296
2	Best Western Plus Bayside Inn	1.30 miles	\$189
3	Bristol Hotel, The	0.60 mile	\$218
4	Courtyard by Marriott San Diego Downtown	0.70 mile	\$269
5	Courtyard San Diego Gaslamp/ Convention Center	0.33 mile	\$279*
6	Embassy Suites San Diego Bay Downtown	0.45 mile	\$294
7	Hard Rock Hotel San Diego	0.09 mile	Studio \$299/ Suite \$329
8	Hilton San Diego Bayfront (HQ)	0.04 mile	\$304
9	Hilton San Diego Gaslamp Quarter	0.07 mile	City \$299/ Bay \$329
10	Horton Grand Hotel	0.33 mile	\$199
11	Hotel Indigo	0.80 mile	\$289
12	Hotel Z	0.70 mile	\$229
13	Kimpton Palomar San Diego	0.65 mile	\$310
14	Kimpton Solamar Hotel	0.35 mile	\$290 S/D \$310 D/D & Sky
15	Manchester Grand Hyatt San Diego	0.32 mile	\$299
16	Omni San Diego Hotel	0.12 mile	\$285
17	Pendry San Diego	0.30 mile	\$315
18	Renaissance (formerly W San Diego Hotel)	1.1 miles	\$279
19	Residence Inn San Diego Downtown/ Gaslamp Quarter	0.30 mile	\$269**
20	San Diego Marriott Gaslamp Quarter	0.33 mile	\$279
21	San Diego Marriott Marquis & Marina (HQ)	0.05 mile	City \$319/Bay \$342
22	Sofia Hotel San Diego, The	0.55 mile	\$208 S/D \$218 D/D
23	US Grant Hotel, The	0.65 mile	\$289
24	Westgate Hotel, The	0.61 mile	\$255
25	Westin San Diego, The	0.60 mile	\$264
26	Westin San Diego Gaslamp Quarter	0.48 mile	\$274
27	Wyndham San Diego Bayside	1.4 miles	City \$219/Bay \$259

Note: Rates quoted are for one night and excludes taxes and additional fees. Most hotels will charge for three or more people to a room. Some hotels with premium rooms may charge additional fees for a specific room type.

*Rooms are not large enough for three or four people to a room.

**Hotel rooms with one bed only.

Innovation and Solution Showcase Exhibitor List

(As of July 19, 2017)

For the most current exhibitor information or to view the floor plan of the Exhibit Hall, please visit www.astro.org/annualmeeting.

21st Century Oncology	Desert Harvest	Miaderm Radiation Relief at Aiden Industries LLC*	Shielding Construction Solutions, Inc.
3D Bolus	DIACOR	Micropos Medical AB*	Siemens Healthineers
AAPM	DoseOptics, LLC	MIM Software	Siris Medical
AB Staffing Solutions	DOSIsoft	Mirada Medical	Sirtex Medical Inc.
Acceltronics/RadParts	e+CancerCare	Mission Search*	Sky Factory
AccuBoost	e2v	Mobius Medical Systems	SonaCare Medical, LLC
Accuray Inc.*	Eckert & Ziegler BEBIG s.a.	Modus Medical Devices Inc.	Sons Automation
AEP Linac	EhmetDX	MPM Medical Inc.*	Spectrum Pharmaceuticals, Inc.*
Aktina Medical Corporation	Elekta	MuCheck-Oncology Data Systems	Spellman High Voltage Electronics Corporation
Alliance Oncology*	Elsevier	My Girls Skin Care	Springer
Alpha Tau Medical LTD.	Equicare Health Inc.*	Myriad Genetic Laboratories	Standard Imaging*
American College of Radiology	Everson Tesla Inc.	NELCO*	Stratpharma Switzerland
American Joint Committee on Cancer	Foss Therapy Services Inc.	NordicNeuroLab	Sumitomo Heavy Industries, Ltd.
American Medical Accounting and Consulting (AMAC)*	Gamma-Service Recycling GmbH	NORVISION LLC	Sun Nuclear Corporation
American Society of Clinical Oncology (ASCO)	GE Healthcare	NovaGray	Suremark Company
Anatom-e XRT Information Systems, Ltd.	GenomeDx - Decipher	Novocure*	Theragenics Corporation
Anzai Medical Co., Ltd.	Gold Anchor*	Oncology Services International*	Toshiba Medical Systems
AQUILAB SAS	Guangzhou Renfu Medical Equipment Co., Ltd.	Oncology Systems Limited	TRG Oncology Equipment
architection	H&H Design-Build*	Orfit Industries America*	TS Medical USA
ARCHON design + construction	Hamamatsu Corporation	P-Cure Ltd.	Unitech Medical, Inc.*
Ashland	Hayes Locums	PalabraApps	US Oncology Network, the
AstraZeneca	Head and Neck Cancer Alliance	Phantom Laboratory, the	Varian Medical Systems
Assured Radiotherapy, Inc.	Hermes Medical Solutions, Inc.	Philips Healthcare	Veritas Medical Solutions*
Augmenix	Hitachi, Ltd.	Pitts Little Corp.	Vertual, Ltd.
Bard Medical	Hologic, Inc.*	POLL Medical	ViewRay, Inc.
Bayer Healthcare Inc.	humediQ GmbH	Precision X-ray	Vision RT, Ltd.*
Beijing Top Grade Medical Equipment Co., Ltd.	IBA (Ion Beam Applications)	ProTom International*	VisionTree Software Inc.
Best Medical International, Inc.	Imaging Technology News (ITN)	Provision Healthcare	Water-Jel International
Bionix	Infra-Red Light Pro	Prowess, Inc.	Wolters Kluwer
BioProtect Ltd.*	Integrated Medical Technologies	PTW-New York	Xcision
Blue Earth Diagnostics, Inc.	IntraOp Medical Corporation	Pyraxar Medical	Xecan
Bogardus Medical Systems, Inc.	IOP Publishing	Qfix*	Xoft-a subsidiary of iCAD, Inc.*
Boiron	Iron Medical Systems, Inc.	QLRAD Inc.	Xstrahl Limited
Brainlab*	iRT Systems GmbH	Rad Onc Solutions	
Bristol-Myers Squibb*	ISOAid*	RAD Technology Medical Systems	
BTG	IsoRay Medical, Inc.	Radformation	
C4 Imaging LLC	James L. Davis*	RadiaDyne	
Cancer CarePoint, Inc.	Kaiser Permanente*	Radiation Business Solutions	
Carl Zeiss Meditec, Inc.	Klarity*	Radiation Oncology Institute (ROI)	
CDR Systems, Inc.*	Kunshan GuoLi Electronic Technology Co., Ltd.	Radiation Products Design, Inc.*	
Cemar Electro Inc.	Landauer, Inc.	Radiological Imaging Technology - RIT*	
Central Care Cancer Center	LAP of America Laser Applications LLC*	Radiology Oncology Systems, Inc.	
CIRS	Liberty Medical Inc.	RaySearch Laboratories	
Citibank	Lifeline Software, Inc.*	Remote Dosimetry Services, LLC*	
CivaTech Oncology, Inc.	Lightning Bolt Solutions	Revenue Cycle, Inc.*	
CIVCO Medical Solutions	LinaTech, LLC	RS&A, Inc.	
Cleveland Clinic Taussig Cancer Institute	Linbeck Construction	RTOG Foundation, Inc.	
Cold Shot Chillers*	LKAB Minerals, Inc.	RTsafe P.C.	
C-RAD Inc.*	Logos Systems Int'l	S.E. International Inc.	
Crux Quality Solutions, LLC (CruxQS)*	MacroMedics BV	S+S Par Scientific	
Cumberland Pharmaceuticals Inc.	MagnetTx Oncology Solutions	Samsung*	
D3 Oncology Solutions	Marquis Medical	ScandiDos	
Demos Medical Publishing	Mayo Clinic	Sensus Healthcare	
	Medical Mediation Services	Shandong Xinhua Medical Instruments Co., Ltd.	
	MedLever, Inc.	Shenzhen Tengfei Yu Technology Co., Ltd.	
	Medspira, LLC*		
	Merck & Co., Inc.*		
	Mevion Medical Systems		

*Enhanced ROMarketplace listing • Ambassadors are in **Bold**

INNOVATION AND SOLUTION SHOWCASE (EXHIBIT HALL) Halls B2-G, Ground Level

Learn about the latest products in cancer treatment and care in the Exhibit Hall. More than 200 companies will be displaying the latest products and technologies. To find an exhibitor, use the Interactive Map Kiosks conveniently located in the Exhibit Hall or ASTRO's Online Conference Planner at www.astro.org/conferenceplanner.

HOURS OF OPERATION:

Sunday, September 24
10:00 a.m. – 5:00 p.m.

Monday, September 25
10:00 a.m. – 5:00 p.m.

Tuesday, September 26
10:00 a.m. – 5:00 p.m.



THREE GIANTS IN THE FIELD OF RADIATION ONCOLOGY NAMED 2017 ASTRO GOLD MEDALISTS

Radiation oncology society announces its highest honor for its members at 59th Annual Meeting in San Diego

BY LEAH KERKMAN FOGARTY, *ASTRONEWS* MANAGING EDITOR

ASTRO IS PLEASED TO ANNOUNCE THE 2017 ASTRO GOLD MEDALISTS. Søren M. Bentzen, DSc, PhD; Louis B. Harrison, MD, FASTRO; and Michael L. Steinberg, MD, FASTRO, have been awarded the highest honor bestowed upon ASTRO members. They will be recognized for their achievements at the Awards Ceremony on Tuesday, September 26.

ASTRO awards its annual Gold Medal to individuals who have made outstanding lifetime contributions in the field of radiation oncology, including achievements in clinical patient care, research, teaching and service to the profession. In the award's 41st consecutive year, the new awardees join an exclusive class of 81 Gold Medalists selected over the decades from the Society's more than 10,000 members.

"It is a privilege to bestow the ASTRO Gold Medal upon these three great men, who have all contributed to the specialty in a myriad of ways," said ASTRO Board of Directors Chair David C. Beyer, MD, FASTRO. "Honoring these colleagues is a highlight of my role as Board Chair, made even more so by the fact that they are selected for this highest accolade by their peers."



Søren M. Bentzen, DSc, PhD, is passionate about science and math. By the numbers, this passion has led to more than 400 published articles, around 1,400 scientific citations per year, more than 300 invited talks at international scientific meetings, 54 visiting professorships, 15 trial steering committee memberships and four clinical trial or research group chairmanships.

With stats like those, it's no wonder that his nominating letters for the ASTRO Gold Medal

contained descriptions of Dr. Bentzen like, "leader in the field," "one of the top scientists" and "preeminent researcher in the world."

Dr. Bentzen is currently a professor and director of the Division of Biostatistics and Bioinformatics in the Department of Epidemiology and Public Health at the University of Maryland School of Medicine in Baltimore. He holds a secondary faculty appointment there as a professor of radiation oncology and is a member of the University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center, as well.

After earning his doctorate in medicine and medical physics from the University of Aarhus in Denmark, Dr. Bentzen was a visiting scientist at the University of Texas MD Anderson Cancer Center from 1987–1988. While in Houston, he studied under radiation oncology stalwarts, such as Howard Thames, PhD, FASTRO, Lester Peters, MD, FASTRO, and K. Kian Ang, MD, PhD, FASTRO, all ASTRO Gold Medalists themselves.

From there, he held appointments at University of Aarhus, the Gray Laboratory and the University of Wisconsin before taking the post at University of Maryland.

"I came into this field at a great time," said Dr. Bentzen. "Radiation therapy has undergone quite a renaissance. The progress we've made in understanding radiation biology and molecular cancer biology has revolutionized the way radiation oncology is practiced." Indeed, Dr. Bentzen has played a large role in that understanding. For years, he has studied the long-term effects of normal tissue toxicity as a result of radiation treatment. According to one nominating letter, "Søren's work on normal tissue injury is probably the most important work of this type in the radiation oncology literature."

This work led him to consider dose-fractionation schedules and how radiation therapy might be best tailored to maximize tumor control while minimizing toxicity to normal tissue. In another nominating letter, the writer concludes, “His work on modeling and fractionation have been essential to how we can use radiation safely in the clinic.”

Dr. Bentzen is now focusing on a new frontier of cancer care: personalized medicine using big data to better tailor treatments. He said, “At the end of the day, it’s about optimizing the treatment for each individual. There are so many new possibilities that we didn’t have 15 years ago. With population-level registry data and electronic health records and then with what we know about genomics—combining data and knowledge across all of those fields is challenging and also very exciting.”



Louis B. Harrison, MD, **FASTRO**, is a renaissance man of radiation oncology. From developing a customized high-dose-rate (HDR) radiation therapy applicator to writing a textbook to leading multidisciplinary teams, Dr. Harrison’s accomplishments in the field are varied and far-reaching.

Dr. Harrison began his medical career in surgery, receiving the Clarence Dennis Society Prize for Surgical Scholarship for the State University of New York (SUNY) Downstate College of Medicine’s class of 1982. But he soon switched paths to radiation oncology, saying, “I thought radiation oncology had the best opportunity for curing cancer while optimizing functional outcome and quality of life.”

His surgical background has proven effective for forging partnerships with clinicians across all oncologic specialties. As more people see the value in multidisciplinary cancer care, Dr. Harrison gladly welcomes them to the club—he has been a leader in comprehensive cancer care for decades.

“Radiation oncology is one of those specialties that mixes strongly with many other areas—surgery, medical oncology, imaging, pathology, genomics, immunology, biology, mathematics—but none of us can cure cancer by ourselves,” said Dr. Harrison.

From 1999–2014, he served as the Physician-in-Chief of Continuum Cancer Centers of New York and was instrumental in developing multidisciplinary programs across all cancer sites in the Continuum health care system. Under his leadership, the cancer

program received Gold Level Accreditation for the Continuum Network from the American College of Surgeons Commission on Cancer, one of the few health systems to earn this level of accreditation.

Dr. Harrison’s desire to treat cancer while preserving function led him to specialize in head and neck and skin cancers. “In head and neck and skin cancer, radiation therapy is used as a primary modality. The aspiration to achieve excellent functional and cosmetic outcomes is very important to patients.”

Dr. Harrison is an authority in the field of head and neck and skin cancer: he literally wrote the book on it. Dr. Harrison is the lead editor of the major textbook, “Head and Neck Cancer: A Multidisciplinary Approach,” currently in its fourth edition. According to one of Dr. Harrison’s nominating letters, “his contributions in brachytherapy and intraoperative radiation therapy (IORT) have shaped the field.”

Developing novel therapies and new ways to deliver treatment has always been a motivator for Dr. Harrison. He was one of the first investigators to combine concomitant chemotherapy with radiation therapy for head and neck cancer, now a standard of care. Along with Lowell Anderson, DSc, and Felix Mick, Dr. Harrison created the Harrison Anderson Mick (HAM) Applicator, a medical device used to deliver HDR brachytherapy or HDR IORT treatments.

Never one to rest on his laurels, Dr. Harrison brought his entrepreneurial spirit to the Board of Directors of ASTRO from 2005–2009. As President and Chair, he advocated for a name change for the Society to stress the importance of cancer care to its members. At ASTRO’s 50th Annual Meeting in Boston in September 2008, the membership voted to change its name from the American Society for Therapeutic Radiology and Oncology to its current name, the American Society for Radiation Oncology.

After spending most of his career in New York, Dr. Harrison joined the H. Lee Moffitt Cancer Center and Research Institute in Tampa, Florida, in 2014. He serves Moffitt as the Chair of Radiation Oncology, as well as Deputy Physician-in-Chief.

“Coming to Moffitt was a big decision for me. I think Moffitt is a great place to collaborate with outstanding multidisciplinary colleagues and pursue team science,” said Dr. Harrison. “That’s an integral step to fulfill our dream of developing personalized radiation therapy.”



Michael L. Steinberg, MD, FASTRO, is driven by his professional commitment to provide excellence in patient care through his expertise in health policy, and he has worked tirelessly in service to the specialty of radiation oncology as an advocate and leader.

“I am grateful and humbled to receive this recognition from my peers,” Steinberg said. “For me, this award celebrates the incredible advances we have achieved in radiation oncology and cancer treatment, but also underscores the continued need to combine clinical research with effective health policy to best provide our patients with state-of-the-art care.”

Following his graduation from the University of Southern California School of Medicine, Dr. Steinberg completed a postgraduate year in surgery at LAC+USC Medical Center, before entering the radiation oncology residency and fellowship program at the University of California at Los Angeles (UCLA).

“Early in my medical training, I found that I was most comfortable taking care of patients with the most significant and severe health problems,” Dr. Steinberg said of his decision to specialize in radiation oncology. “I quickly learned that cancer patients are among the most heroic patients one can see in the practice of medicine.”

In the early years of his private medical practice, Dr. Steinberg developed an expertise in health care economics and health policy through teaching and working in health services research at UCLA and the Rand Corporation. Dr. Steinberg was tapped to serve as a representative to the Relative Value Update Committee (RUC) for ASTRO from 1997–2002 and as the radiation oncology representative to the CPT Editorial Committee from 2002–2010. As one of his nominating letters put it, “There is a debt owed to Dr. Steinberg by all radiation oncologists for the many tireless years of work he put in to the CPT Panel, due to his deep understanding of complex health care and reimbursement issues.”

Dr. Steinberg understood and foresaw the increasing demands of managing health care economic issues for the specialty of radiation oncology. “This is not just about billing, this is also about access to radiation oncology care and the quality of that care,” Dr. Steinberg would say. In 2002, the Health Policy Council was formed as part of the reorganization of ASTRO governance. Dr. Steinberg was subsequently


elected to the ASTRO Board of Directors as the inaugural Chair of the Health Policy Council, from 2003–2007.

In 2008, Dr. Steinberg’s career took a turn when he left community practice to become Professor and Chair of the Department of Radiation Oncology for the David Geffen School of Medicine at UCLA, a post he still holds. “Although it is unusual for someone to go from private practice to a leadership position in one of the great research universities, Dr. Steinberg has all of the qualities needed and it rapidly became clear that he was made for the position,” wrote one of his nominators.

Under Dr. Steinberg’s leadership, the department has become a leader in radiation oncology research and education. “The residency program expanded and all divisions of the department have seen a significant increase in extramural research funding,” added another of his nominators. “The department is now clearly a marquee program within a marquee institution.”

In 2010, Dr. Steinberg was elected to the presidential track of ASTRO. In addition to his advocacy for the specialty of radiation oncology on Capitol Hill and with the Centers for Medicare and Medicaid Services, Dr. Steinberg introduced the notion of the Value Proposition in health care for radiation oncology. He also led ASTRO Board initiatives such as “Choosing Wisely” and the RO-ILS: Radiation Oncology Incident Learning System®.

Dr. Steinberg is considered a national expert in the value in cancer care and he has been invited to speak at the Institute of Medicine and numerous academic cancer centers about the topic. He currently serves on national technology assessment forums, bringing valuable representation for the specialty to the process. Dr. Steinberg has also been appointed to a number of leadership posts, including Director of Clinical Affairs for UCLA’s Jonsson Comprehensive Cancer Center and, after election by his peers, to the Chair of Clinical Chairs for the David Geffen School of Medicine at UCLA. He also sits on the executive governing group for UCLA Health.

At UCLA’s Jonsson Comprehensive Cancer Center, he oversees projects in comparative effectiveness research and in the demonstration of patient-centered value. Dr. Steinberg specializes in the use of advanced treatment modalities such as Stereotactic Body Radiation Therapy (SBRT) and MRI-guided radiation therapy. 



CHEMORADIATION RESEARCHER RECEIVES ASTRO HONORARY MEMBERSHIP

EDITH PETERSON MITCHELL, MD, a leading researcher, medical oncologist and proponent of combined modality treatment, has been chosen as the 2017 ASTRO Honorary Member. Dr. Mitchell will receive this award, which is the highest honor ASTRO awards to distinguished cancer researchers and leaders in disciplines outside of radiation oncology, radiobiology or radiation physics, at the 59th Annual Meeting in San Diego on Tuesday, September 26, 2017.

“Dr. Edith Mitchell has been a longtime proponent of combined modality treatment—using chemotherapy and radiation therapy together in order to provide cancer patients with the best possible outcomes,” says ASTRO Chair David C. Beyer, MD, FASTRO. “Our specialty is privileged to have a champion such as Dr. Mitchell, who is a widely respected clinician as well as decorated military veteran. Her service to both our country and our field is laudable.”

Dr. Mitchell is board certified in internal medicine and medical oncology and serves as a clinical professor of Medicine and Medical Oncology at the Sidney Kimmel Medical College at Thomas Jefferson University in Philadelphia. She also serves as the associate director for diversity programs and director of the Center to Eliminate Cancer Disparities for the Sidney Kimmel Cancer Center at Jefferson. Additionally, Dr. Mitchell served as the 116th president of the National Medical Association.

Her work on chemoradiation for gastrointestinal cancers has helped raise the profile of radiation oncology by providing clinical evidence for the merits of combined modality treatment. Through the NRG Oncology/Radiation Therapy Oncology Group (RTOG), she has provided medical oncology leadership for prospective chemoradiation trials defining standards of care for gastrointestinal malignancies. As a result, Dr. Mitchell has authored several peer-reviewed publications on the RTOG trials 0012 and 0247.

“The RTOG trials helped break new ground for radiation oncology,” says ASTRO Immediate Past Chair


Bruce D. Minsky, MD, FASTRO, who nominated Dr. Mitchell for this award. “Edith is a strong advocate and friend of radiation oncology. I can think of no other medical oncologist who has made more significant positive contributions to our community.”

She has also had leadership positions in trials examining breast, colon and pancreatic cancers involving new drug evaluation and chemotherapy, development of new therapeutic regimens, patient selection criteria and supportive care for patients with gastrointestinal cancer.

Dr. Mitchell graduated from Tennessee State University in Nashville with a Bachelor of Science in biochemistry. She went on to the Medical College of Virginia, in Richmond, and completed her internship and residency at Meharry Medical College followed by a fellowship in medical oncology at Georgetown University.

Dr. Mitchell received a commission through the Health Professions Scholarship Program in 1973 to join the Air Force while in medical school. She entered active duty after completing her fellowship at Georgetown. Dr. Mitchell is now a retired brigadier general, the first female physician to attain this rank in the history of the U.S. Air Force. Over her military career, she has been awarded more than 15 service medals and ribbons, including the Legion of Merit, Meritorious Service Medal and Humanitarian Service Medal, among others.

In her medical career, Dr. Mitchell has authored or co-authored more than 130 articles, book chapters and abstracts on cancer treatment, prevention and cancer control. She has served on several National Cancer Institute review panels, including the Clinical Trials and Translational Research Advisory Committee and the Blue Ribbon Panel convened to advise the National Cancer Advisory Board on former Vice President Biden's National Cancer Moonshot Initiative. She was awarded the American Cancer Society's Cancer Control Award for her significant commitment to research, education and diversity.

She says she is honored to receive this award. 

ASTRO JUNIOR FACULTY AND RESIDENT SEED GRANT AWARDS: FUNDING RESEARCH TO ADVANCE RADIATION ONCOLOGY

EACH YEAR, ASTRO FUNDS junior faculty and resident research as part of the organization's overall effort to foster clinical innovation. ASTRO's research awards support work in radiation and cancer biology, radiation physics and translational research, while establishing research careers for younger members.

ASTRO grantees are successful at turning the ASTRO awards into subsequent grant opportunities. Recent awardees reported that more than 70 percent have secured funding from organizations including the National Institutes of Health, the Wellcome Trust and other funding sources after ASTRO's initial award.

Competition for the awards this year was fierce. From more than 35 applicants, the Research Grants committee selected one Junior Faculty Award and three Resident Seed grant recipients. All winners will be recognized at the 59th Annual Meeting.

Junior Faculty Career Research Training Award (JFA)

The JFA is a two-year, \$200,000 grant that is awarded to an early career physician or researcher. This provides them the opportunity to focus on a research project in radiation oncology. The 2017 JFA recipient is:



Erina Vlashi, PhD, from the University of California, Los Angeles

Dr. Vlashi is interested in how ionizing radiation induces the reprogramming of breast cancer cells into breast cancer initiating or stem cells that can lead to increased tumor growth and treatment resistance. Understanding the steps in how radiation alters the metabolic state of breast tumor cells can provide key insights into the way that breast cancer cells will respond to subsequent IR exposure.

Residents/Fellows in Radiation Oncology Research Seed Grant

This grant is a one-year award of \$25,000 to support residents or fellows who are planning a career in basic science or clinical research in radiation oncology.

The three Resident/Fellow Seed Award recipients are:



Devarati Mitra, MD, PhD, from the Dana-Farber Cancer Institute

Dr. Mitra will investigate how administration of hypofractionated radiation modulates the immune response in head and neck carcinoma. She will explore if such modulation can increase the efficacy immune checkpoint inhibitors when combined with radiation.




Shushan Rana, MD, from the Oregon Health and Science University

Dr. Rana will investigate how microRNA, specifically miR-15a, affects endothelial radiosensitivity through regulation of acid sphingomyelinase ceramide-induced apoptosis, a pathway which is preferentially induced at higher doses of radiation. He hopes to ultimately prevent the development of immune cell anergy and/or exhaustion to improve tumor responses to anti-tumor treatment.



Ye Yuan, MD, from the University of California, Los Angeles

Dr. Yuan's interest is in how tumors evade the immune system through upregulation of PD-L1 and PD-L2 expression. Mediators that inhibit gene expression including micro-RNA molecules can be activated by radiation treatment. How radiation activates miR-34 that subsequently binds to and downregulates PD-L1 and PDL-2 expression still remains unclear and may be an effective way to stimulate the immune response to kill tumor cells. 



2016 CLASS OF ASTRO FELLOWS

FIRST ROW, LEFT TO RIGHT: LAURA A. DAWSON; THEODORE L. DEWEESE; JENNIFER R. BELLON; NANCY P. MENDENHALL.

SECOND ROW, LEFT TO RIGHT: TIMOTHY D. SOLBERG; JOHN H. SUH; TODD PAWLICKI; H. JOSEPH BARTHOLD; WILLIAM M. MENDENHALL; SHALOM KALNICKI.

TWENTY-THREE ASTRO FELLOWS WELCOMED INTO THE 2017 CLASS

ASTRO HAS SELECTED 23 DISTINGUISHED MEMBERS to receive the ASTRO Fellow designation during the Awards Ceremony at ASTRO's 59th Annual Meeting.

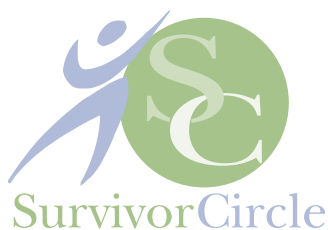
The Fellows Program, started in 2006, honors those that have been an Active or Emeritus or, beginning this year, International member of ASTRO for at least 15 years, have given the equivalent of 10 years of service to ASTRO and have made significant contributions to the field of radiation oncology in the areas of research, education, patient care or service and leadership. A total of 269 ASTRO members have received the FASTRO designation, not counting this year's 23.

Candidates must be nominated by a current ASTRO Fellow, accompanied by three letters of support from a selected subset of ASTRO members. A committee reviews all nominations and presents a slate to ASTRO's Board of Directors for approval.

The 2017 Fellows are:

- Douglas W. Arthur, MD, Virginia Commonwealth University
- Jeffrey D. Bradley, MD, Washington University School of Medicine
- Kevin Camphausen, MD, Radiation Oncology Branch, National Cancer Institute
- Hak Choy, MD, UT Southwestern Medical Center
- Brian Czito, MD, Duke University
- Patricia Harrigan Hardenbergh, MD, Shaw Regional Cancer Center
- Eric M. Horwitz, MD, Fox Chase Cancer Center

- Kenneth Shung Hu, MD, New York University Langone Medical Center
- Peter Anthony Spencer Johnstone, MD, Moffitt Cancer Center
- Jonathan P.S. Knisely, MD, Weill Cornell Medicine
- Albert Koong, MD, PhD, Stanford University School of Medicine
- John J. Kresl, MD, PhD, Phoenix CyberKnife and Radiation Oncology Center, Palo Verde Cancer Specialists
- Nancy Lee, MD, Memorial Sloan Kettering Cancer Center
- Simon S. Lo, MB, ChB, University of Washington School of Medicine
- Richard D. Lovett, MD, University of Vermont College of Medicine
- Alvaro Martinez, MD, 21st Century Oncology
- Lorraine Portelance, MD, Sylvester Comprehensive Cancer Center, University of Miami
- George Rodrigues, MD, PhD, London Health Sciences Centre
- Alphonse G. Taghian, MD, PhD, Massachusetts General Hospital
- Bin S. Teh, MD, Houston Methodist Hospital, Cancer Center and Research Institute
- Wolfgang A. Tomé, PhD, Montefiore Medical Center/Albert Einstein College of Medicine
- Frank A. Vicini, MD, 21st Century Oncology
- Fang-Fang Yin, PhD, Duke University Medical Center 



TWO SAN DIEGO NONPROFITS RECEIVE 2017 ASTRO SURVIVOR CIRCLE GRANTS

ASTRO awards grants to Cancer Angels of San Diego and The Seany Foundation

ASTRO WILL AWARD ITS ANNUAL SURVIVOR CIRCLE GRANTS to two San Diego-based cancer support charities: Cancer Angels of San Diego and The Seany Foundation. Each organization will receive an \$8,500 grant for their patient support programs and will be recognized during ASTRO's Annual Meeting in San Diego.

"The Survivor Circle Grant Program is ASTRO's way of recognizing the great work that these nonprofits do to support cancer patients and their families," said ASTRO President Brian D. Kavanagh, MD, MPH, FASTRO. "We are honored to give back to the organizations that work in the communities where we hold our Annual Meeting. This year's grantees—the Cancer Angels of San Diego and The Seany Foundation—are eminently worthy recipients."

Cancer Angels of San Diego was founded in 2007 after founder and president Eve Beutler met a single mother with stage IV breast cancer who was having trouble making rent while she was receiving treatment. Beutler decided to start a nonprofit aimed at providing financial assistance to stage IV cancer patients for necessities that health insurance doesn't cover, like rent or mortgage payments, groceries and gas.

"This grant will help us get school supplies and clothing for children whose parents are battling cancer and would not be able to afford back-to-school shopping otherwise," said Beutler.

Every month, Cancer Angels of San Diego pays the rent or mortgage payments, plus a grocery gift card and gas gift card, for between 25 and 30 San Diego County families, many of whom are headed by single mothers with cancer. They reassess their caseload monthly and offer ongoing financial assistance, if needed. Since Cancer Angels of San Diego is run entirely by volunteers, they have no administrative costs and every dollar goes toward helping the hundreds of cancer patients and their families they support each year.

Beutler said many of the cancer patients they work with were middle-class before their diagnoses—but their illnesses created financial devastation for these families. And Beutler said the problem is not uncommon—according to one study, 68 percent of cancer patients reported financial burden due to medical bills.

"Without our help, most of our clients would be homeless," said Beutler. "We have gotten many families that were previously living in their cars into homes."



JULIET MITCHELL AND HER DAUGHTER RECEIVED HELP FROM CANCER ANGELS OF SAN DIEGO.

Beutler hopes to bring attention to this problem. "We want to build an awareness that this is happening in every community," Beutler said.

The Seany Foundation's mission is to fund projects that enhance the lives of children and families affected by cancer, mainly through camps designed for pediatric cancer patients and their siblings; children of cancer patients; or children who have lost a family member to cancer.

"Cancer doesn't just suddenly stop one day," said Bernard Mauricia, director of development for The Seany Foundation. "Families continue to feel the toll that cancer takes on them for years. Our goal through our camps is to bring joy back into these children's lives and to allow them to experience a sense of normalcy that they likely haven't felt since before their cancer diagnoses."

The organization's chief executive officer and his wife founded The Seany Foundation in 2006 to honor their son, Sean Robins, who passed away after battling Ewing sarcoma. Its initial goal was to fund pediatric cancer research but now focuses on projects that help kids cope with cancer.

Known as Seany's Camp Reach for the Sky, the camps are free for kids with cancer and their siblings. There are three sessions every summer in Southern California—one for children with cancer; one for siblings of children with cancer; and one day camp for both pediatric cancer patients and their siblings.

They also host weekend camps for teen patients, survivors and siblings, as well as camps for families with a parent with cancer and families who have lost a parent or child to cancer.

With the grant from ASTRO, The Seany Foundation will be able to cover the cost of 12 campers to attend its weeklong overnight camp, Resident Oncology Camp (ROC), for children ages 8 to 17 who have cancer or are cancer survivors. Due to the need for round-the-clock medical equipment and care at this camp, its annual cost is \$65,400.



ONE OF THE SEANY FOUNDATION'S CAMPS.

They also hope to expand support of other patient care projects they are involved with, like Art from the Heart, an annual art show for children with cancer and their siblings held at Rady Children's Hospital–San Diego, with the help of the ASTRO grant.

“Pediatric cancer survivorship rates are going up, which means it’s important to put resources toward helping kids deal with their new realities of living

with cancer,” says Mauricia. “This grant from ASTRO will help us fund more programs and support a greater number of kids and their families—increasing the long-term impact of our work.”



ASTRO 2017

Product Showcase

New for 2017, the Product Showcase will feature exciting products and services in the radiation oncology industry.

Located outside of the Innovation and Solution Showcase (Exhibit Hall), attendees will be able to search products by category to view photos, videos and detailed information about each product.

Company Name: Equicare Health Inc.

Booth Number: 2455

Product Name: Equicare CS™ (ECS)

Company Name: Radiological Imaging Technology -RIT

Booth Number: 1631

Product Name: RITG135

Check out the Online Conference Planner at www.astro.org/conferenceplanner to see an updated list of companies who will be featured in the Product Showcase, as more are being added weekly.



2017 SURVIVOR CIRCLE AWARD WINNER IS AN INSPIRATION

San Diego County lung cancer patient continues to volunteer

THE WINNER OF ASTRO'S 2017 SURVIVOR CIRCLE AWARD is many things—a former pro baseball player, a retired UPS driver, a family man and, yes, a current cancer patient.

ASTRO has selected Rocky Craig, a resident of La Mesa, California, to receive the 2017 ASTRO Survivor Circle Award, an annual recognition of a cancer survivor who has dedicated his time and energy in service and support of his local community. Craig will be presented with this award, along with \$1,000, during the awards ceremony at the 59th Annual Meeting, taking place September 24–27 at the San Diego Convention Center.

Every year, ASTRO selects a cancer survivor in the community in which it holds its Annual Meeting. This year's awardee, Rocky Craig, is battling lung cancer but still volunteers his time as a shuttle bus driver for Sharp Grossmont Hospital.

“ASTRO is privileged to present this meaningful award to such an inspiring man. Rocky Craig could have been bitter about his diagnosis, having led a healthy life. Instead, he has found courage and actively shares his positivity with other patients battling cancer,” said ASTRO President-elect Paul M. Harari, MD, FASTRO. “Despite his ongoing treatment for lung cancer, he continues to volunteer for the hospital where he is being treated—and his story and encouragement helps spread hope to others.”

Craig began volunteering at Sharp Grossmont three years ago—even before his December 2016 diagnosis of Stage III lung cancer. He was encouraged to volunteer after his pastor asked the congregation, “What gifts do you have that you're not using that can help others?”

Being retired, Craig said the first thing that popped into his head was that he has the gift of time. But his resume also helped guide his search for a volunteer position. Following a seven-year stint in professional baseball, playing for ball clubs like the Kansas City Royals, Houston Astros and even his home team, the San Diego Padres, Craig spent 28 years as a UPS delivery truck driver. Craig now puts those driving skills to good use in his role at Sharp Grossmont.

“I knew right away that driving would be the perfect


way to give back while having a chance to connect with people around me,” Craig said.

Even now, Craig keeps his weekly Wednesday shift as a Grossmont “Blue Angel,” a volunteer stationed at the hospital's main entrance to greet and drive patients and visitors around the Grossmont campus.

“As soon as I could get back to volunteering after my treatment, I did it,” says Craig. “It takes away any concern about what's going on with me. I have a wonderful day when I'm working out there, every day.” Craig says he sometimes will pick up an extra shift or two and work two to three days a week. His favorite part is being around other people, learning their stories and helping them with their own struggles. “I don't look sick—it surprises other people when they learn I have cancer,” says Craig. “And I think it encourages them as they are going through their own problems.”

Kristi Vetrand, the cancer patient navigator at the David and Donna Long Center for Cancer Treatment, agrees. “Rocky always has a smile and positive attitude. He provides support, comfort and a listening ear to those who need it. Even after he completed treatment, he came back to visit with patients he knew were still in treatment, to check on them and provide hope and encouragement.”

Craig underwent a concurrent treatment of chemotherapy and radiation at Sharp Grossmont Hospital's David and Donna Long Center for Cancer Treatment. He completed his first round of treatment in March 2017 and his doctors will re-evaluate in August to determine future treatment options.

Even in receiving the award, Craig defers the honor, pointing to the staff at the hospital where he was treated. “It's very humbling to receive this recognition,” Craig said. “When you're a volunteer, you're not looking for recognition. You do it because you want to help people. But I think the people who work at Sharp Grossmont need this award. Every day, they make you feel comfortable. It takes special people to do that.” 



RECIPIENTS

Resident Clinical/Basic Science Research Award

Aadel Chaudhuri, MD, PhD (*Biology*)
 James Bates, MD (*Clinical*)
 Sanjay Aneja, MD (*Physics*)

Basic/Translational Science Abstract Award**Radiation and Cancer Biology**

Stephanie Markovina, MD, PhD
 Sophia Kamran, MD
 Fei-Fei Liu, MD
 Catherine Park, MD

Clinical

Narek Shaverdian, MD
 Christopher Corso, MD, PhD
 Erica Bell, PhD
 Anurag Singh, MD

Radiation Physics

Gang Yin, PhD
 Sang Ho Lee, PhD
 Hao Zhang, PhD
 Hao Han, PhD

International Annual Meeting Scientific Abstract Award

Indranil Mallick, MD

Annual Meeting Nurse Abstract Award

Antonia Pryor, MSN, RN, FNP-BC, AOCNP

Resident ePoster Recognition Award

Ariel Marciscano, MD, Johns Hopkins University
(Biology)
 Richard Cassidy, MD, Emory University (*Clinical*)
 Noah Kalman, MD, MBA, VCU Health System
(Physics)

Annual Meeting Travel Award**Radiation and Cancer Biology**

George Grass, MD, PhD
 Harish Vasudevan, PhD, BS
 Wen Jiang, MD, PhD
 Kathy Han, MD, MS
 Jonathan Leeman, MD

Clinical

Shrinivas Rathod, MD
 Monica Serban, MSc
 Antoine Schernberg, MD
 Shankar Siva, PhD, MBBS, FRANZCR
 Rohann Correa, MD, PhD

Radiation Physics

Mireia Crispin-Ortuzar, PhD
 Leith Rankine, MS
 Penny Fang, MD, MBA
 Giuseppe Palma, PhD
 Olga Green, PhD

Resident Poster Viewing Recognition Award**Radiation and Cancer Biology**

Jenna Kahn, MD, VCU Medical Center
 Michael Farris, MD, Wake Forest
 Linda Chen, MD, Johns Hopkins

Clinical

Corbin Helis, MD, Wake Forest
 George Q. Yang, MD, University of South Florida
 Chan Woo Wee, MD, Seoul National
 University Hospital

Radiation Physics

Sanne Blinde, MD, ErasmusMC Center Institute,
 Netherlands
 Seung Hyuck Jeon, MD, Seoul National University
 Hospital, Korea

Annual Report | 2016

TREASURER'S REPORT

In 2016, ASTRO moved their offices to Arlington, Virginia, combining both the Washington, D.C., and Fairfax, Virginia, facilities. ASTRO achieved several successful initiatives in 2016 meeting the Society's mission of being the premier radiation oncology society in the world providing educational and professional development opportunities to members and promoting excellence in patient care. Among these are the Annual Meeting in Boston, the Coding Resource and online learning activities. The ASTRO Accreditation Program for Excellence (APEX®) also reached \$1 million in application fees since its inception.

For the third straight year, ASTRO engaged Raffa, an independent auditor, to conduct an audit of ASTRO's 2016 financial statements. The auditors expressed an unmodified, "clean opinion," the highest opinion available. ASTRO's Finance/Audit Committee, which meets regularly to discuss investment and other financial matters, reviewed the report in detail with the auditors. The report was submitted to ASTRO's Board of Directors at the June 2017 meeting.



PROFIT AND LOSS STATEMENT

ASTRO's meetings revenue (Annual Meeting with \$8.9 million and specialty meetings with \$1.9 million) represents 54 percent or \$10.8 million of the total 2016 operating revenue of \$19.8 million. Other major revenue sources include individual and corporate membership dues and subscriptions representing 18 percent, or \$3.7 million; journal royalties representing 13 percent, or \$2.6 million and online learning representing 4 percent, or \$896,000. ASTRO had a \$568,070 loss from its operating activities; however, after accounting for the investment portfolio earned income, ASTRO generated a \$397,925 profit for the year.

BALANCE SHEET

As of December 2016, ASTRO sustained a strong financial position with \$37.6 million in total assets and \$10.5 million in total liabilities, resulting in a net debt-to-equity ratio of .38. The 2016 market continued to show volatility, with ASTRO's investment performance net of fees generating a year-end balance of \$31.8 million, making up much of ASTRO's assets. Deferred revenue (\$3.8 million) makes up most of ASTRO's liabilities, as members take advantage of ASTRO's multiple-year membership dues payment options and Annual Meeting exhibitors pre-purchase for the following year's booth registrations.

ASTRO maintains its strong commitment to serve members of the organization, the specialty and cancer patients worldwide, positioning ASTRO to be a leader in the industry.

It has been my pleasure serving as ASTRO's Secretary/Treasurer for the last three years. And I happily pass this honor on to Geraldine Jacobson, MD, MBA, MPH, FASTRO, who will continue to monitor and ensure the financial health of ASTRO.

JEFF M. MICHALSKI, MD, MBA, FASTRO
ASTRO Secretary/Treasurer

**Click here
 for the entire
 2016 financial
 report**

ASTRO ANNUAL MEETING PROGRAM ON QUALITY PAYMENT PROGRAM TO FEATURE RADIATION ONCOLOGY APM AND MIPS

THE FIELD OF RADIATION ONCOLOGY HAS EXPERIENCED SIGNIFICANT REDUCTIONS to reimbursement over the past decade. The pinch has been felt in both freestanding and hospital-based settings. The steady decline shows no signs of abating as the Centers for Medicare and Medicaid Services (CMS) rolls out the Quality Payment Program (QPP), which transitions the current fee-for-service system to one based on value and quality performance.

Freestanding radiation oncology clinics experienced Medicare payment cuts of approximately 20 percent from 2008 to 2015. Hospital-based facilities continue to see reimbursement decline as the Comprehensive Ambulatory Payment Classification (C-APC) system expands, bundling more services and reimbursing them at lower rates.

In 2015, ASTRO worked with Congress to pass the bipartisan Patient Access and Medicare Protection Act (PAMPA), which brought some much-needed payment stability to freestanding radiation oncology clinics. The freeze on rates afforded by the passage of PAMPA is set to expire January 1, 2019, and ASTRO is working with CMS and Congress to ensure there are no further reimbursement cuts.

At the same time, Medicare is transitioning physician payment from fee-for-service to the QPP. Physicians will be paid based on their performance in either the Merit-based Incentive Payment System (MIPS) program or through participation in Alternative Payment Models (APMs).

Alternative Payment Models

An APM is a payment model that requires physicians to take responsibility for cost and quality performance and receive payments for providing high-value care, defined as high-quality care at a low cost. Advanced APMs are a category of APMs that allow practices to earn a five percent incentive payment for increased accountability.

ASTRO has developed a Radiation Oncology APM

(RO-APM) that could help stabilize reimbursement rates for practices over a five-year period. Without it, many eligible radiation oncologists would be relegated to participating in the MIPS program, which could lead to more significant shifts in reimbursement over time. The RO-APM is designed to help establish an episode-based payment, which would be based on a practice's historical reimbursement rate that is blended with regional and national averages. The resulting base rate is set for a period of five years and it provides participants the opportunity to secure a five-percent bonus for participation under the QPP, an added incentive for delivering efficient, high-quality care.

The RO-APM was developed in collaboration with other radiation oncology stakeholder groups. It provides radiation oncologists an alternative to the Oncology Care Model (OCM)—currently the only oncology care Advanced APM eligible for bonuses. The features of the RO-APM include:

- Adherence to existing radiation oncology clinical practice guidelines to reduce waste and unnecessary care, resulting in better patient outcomes and lower costs.
- Application of a common, episode-based payment framework applicable to each of seven disease sites: Breast, Lung, Prostate, Colorectal, Head and Neck, Brain Mets and Bone Mets.
- Establishment of shared savings for meeting meaningful, relevant quality benchmarks
- Incentives to deliver the most appropriate care, regardless of modality and reimbursement levels.

ASTRO has submitted the model to the Centers for Medicare and Medicaid Office of Innovation (CMMI) for consideration as the agency prepares a report to Congress on APMs in radiation oncology in compliance with PAMPA.

In addition to collaborative efforts with CMMI, ASTRO has also submitted a letter of intent

describing the RO-APM to the CMS Physician Focused Payment Model (PFPM) Technical Advisory Committee (PTAC). The PTAC is expected to review, comment on and provide recommendations to the Secretary of Health and Human Services regarding PFPMs presented by specialty societies and other stakeholder groups.

For more information about the RO-APM, please visit the ASTRO website at <https://www.astro.org/apm>.

Merit-based Incentive Payment System (MIPS)

In 2017, the inaugural year of QPP, most radiation oncologists will participate in MIPS. MIPS replaces and consolidates previous Medicare quality initiatives including Physician Quality Reporting System (PQRS), Value-based Modifier (VM) and EHR Incentive/Meaningful Use (MU) Program into one comprehensive program.

2019 Medicare Part B reimbursement will be based upon performance in three MIPS categories in 2017. The overall payment adjustment is determined by the Composite Performance Score (CPS), ranging from 0 to 100. For 2017, the CPS score is based on three weighted performance categories:

- Quality (replacing PQRS) will make up 60 percent,
- Advancing Care Information (replacing MU) will make up 25 percent and
- Improvement Activities (no prior legacy program) will make up 15 percent.


In future years of the program, there will be a fourth category, Cost, which will replace VM.

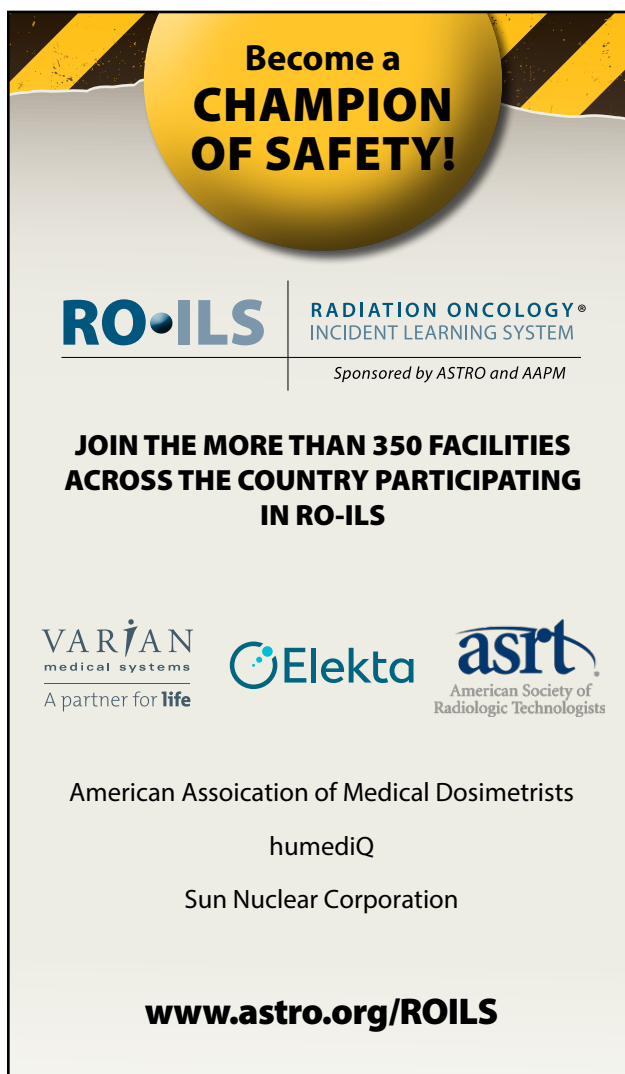
MIPS is designed as a competitive program. Based on a provider's CPS score and how he or she compares to other providers, there will be a positive or negative payment adjustment. Unlike the previous legacy programs that defined success simply by the act of reporting data, MIPS success will partially depend on the relative performance on submitted data. Additionally, CMS will publicly release physician's scores and make performance data available to consumer websites. To achieve success under MIPS, clinicians need to continually improve to stay ahead of the competition.

There are multiple paths to MIPS participation with varying levels of involvement, and there are additional nuances on MIPS participation based on how your Medicare billing is structured. ASTRO has developed educational materials including webpages and videos

on each of these categories and toolkits to help navigate the program.

ASTRO also provides programs to help meet the Quality and Improvement Activities performance categories. ASTRO is collaborating with the American Society of Clinical Oncology (ASCO) on a Quality Oncology Practice Initiative (QOPI) Qualified Clinical Data Registry (QCDR) that collects and reports data to CMS. Physicians can also utilize two ASTRO programs, RO-ILS: Radiation Oncology Incident Learning System® and Accreditation Program for Excellence (APEX)®, to meet the Improvement Activity performance category requirements.

For more information about MIPS, please visit the ASTRO website: www.astro.org/mips. For questions, please email mips@astro.org. Detailed information about the Quality Payment Program will be presented at the Annual Meeting session, "Are you down with QPP, You'd Better if You Want Money," scheduled for Monday, September 25 at 10:45 a.m. in Room 6 D. 



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RESIDENT SEED GRANT AWARDEE WORKS TO UNDERSTAND THE ROLE OF METABOLISM IN RADIATION THERAPY



CHIRAYU G. PATEL, MD, MPH

CHIRAYU G. PATEL, MD, MPH, ONE OF THE RECIPIENTS OF THE 2016 ASTRO RESIDENT SEED GRANT, is Chief Resident at Vanderbilt University Medical Center in Nashville, Tennessee, beginning his final year of radiation oncology residency. His life's passion is making a difference in the lives of cancer patients and their

families by improving therapies in radiation oncology through clinical practice and translational research. His interest in cancer research began after spending a summer as an undergraduate research assistant at Columbia University with Siddhartha Mukherjee, MD, DPhil, author of Pulitzer Prize-winning nonfiction book, "The Emperor of All Maladies: A Biography of Cancer."

During his early years of medical school, Dr. Patel continued to work with Dr. Mukherjee, who encouraged Dr. Patel to take a year off from the traditional medical school curriculum to study multidrug resistance in acute myeloid leukemia as a Howard Hughes Medical Institute-National Institutes of Health (HHMI-NIH) Research Scholar. While working in the laboratory, he often wondered about how to design appropriate clinical trials and how to study the toxicities of treatment in cancer survivors, so he pursued his Master of Public Health degree in Quantitative Methods from Harvard University prior to finishing medical school at Brown University.

"I went to medical school to become an oncologist. I wanted to be the physician that patients would turn to during the most difficult times of their lives, to be able to guide them and their families through the increasingly complex world of cancer care," says Dr. Patel.

Choosing a specialty within oncology, however, was a more nuanced decision. Dr. Patel found a way to connect his desire for patient connection and treatment to radiation oncology, by using high-tech imaging and treatment delivery to design customized treatment plans


based on patient anatomy.

"While seeing patients in the clinic is immediately gratifying, too many of our patients do not survive long-term, so research is of paramount importance—clinical care and research enrich each other."

So Dr. Patel sought to expand on his knowledge base in radiation oncology by following a career in translational research. Through the outstanding support of his faculty mentors at Vanderbilt, he decided to embark on the Holman Research Pathway for Clinical Training in Radiation Oncology, and is spending a consecutive 18 months under mentorship by Pierre Massion, MD, an accomplished R01-funded leader in the field of tumor metabolism and early detection in lung cancer. Dr. Patel is being co-mentored by Michael Freeman, PhD, a pre-eminent radiobiologist.

Dr. Patel has developed a project to tie together radiation therapy, which Dr. Massion's lab had not previously studied, with the laboratory's work on glutamine metabolism. Markers of glutamine metabolism correlate with a worse prognosis in non-small cell lung cancer (NSCLC). As glutamine is crucial to formation of glutathione, which scavenges reactive oxygen species (ROS), Dr. Patel hypothesized that disrupting this metabolic pathway through metabolic, genetic and pharmacologic means would radiosensitize lung cancer cells by increasing DNA damage from ionizing radiation.

So far, his experiments seem to corroborate this hypothesis and the drug he is using in his laboratory studies, CB-839, provided by Calithera Biosciences, has undergone early phase clinical trials with a favorable safety profile. Dr. Patel said, "Through my translational research findings, my ultimate goal is to design an investigator-initiated trial focused on metabolism and radiation therapy to extend the lives of these patients, and eventually, to study metabolism in other types of cancer."

If you know a researcher doing cutting-edge work related to radiation oncology, please send an email to Tyler Beck at tyler.beck@astro.org with their name, contact information and brief description of their work for consideration for a Research Spotlight article. 

JOURNALS

HIGHLIGHTS

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

May 1, 2017

Stereotactic radiosurgery and fractionated stereotactic radiation therapy for the treatment of uveal melanoma

Yazici et al

These authors report a retrospective study on patients with uveal melanoma treated by either stereotactic radiosurgery (SRS) or fractionated stereotactic radiation therapy (FSRT). Local tumor control was achieved in 75 percent of the patients. The tumor size and SRS/FSRT dose were the most important prognostic factors. Doses of more than 45 Gy in three fractions were sufficient, even for large tumors. The rate of late toxicity was comparable with the prior studies in the literature.

Preliminary results of a phase 1 dose-escalation trial for early-stage breast cancer using five-fraction stereotactic body radiation therapy for partial breast irradiation

Rahimi et al

These authors report the initial outcomes from a phase 1 clinical trial for adjuvant five-fraction stereotactic partial breast irradiation (S-PBI). Typically, partial breast irradiation is performed via an interstitial or intracavitary invasive technique with fractions delivered over five days, twice daily. Three-dimensional external beam PBI can also be performed; however, preliminary reports hint at adverse cosmesis, perhaps because of the large margins required for this technique. This manuscript reports results on 75 patients treated with S-PBI, escalating from 30 to 40 Gy in five fractions. Low levels of fat necrosis were observed and physician and patient assessment of cosmesis was high.

June 1, 2017

ASCENDE-RT: An analysis of treatment-related morbidity for a randomized trial comparing a low-dose-rate brachytherapy boost with a dose-escalated external beam boost for high- and intermediate-risk prostate cancer

Rodda et al

The authors examined the genitourinary (GU) and gastrointestinal (GI) morbidity and erectile dysfunction in a randomized trial comparing two methods of dose escalation for high- and intermediate-risk prostate cancer. Their results indicated that the incidence of acute and late GU morbidity was higher after low-dose-rate prostate brachytherapy boost, and there was a nonsignificant trend for worse GI morbidity. No differences in the frequency of erectile dysfunction were observed.

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5.133



Novel super-resolution approach to time-resolved volumetric four-dimensional magnetic resonance imaging with high spatiotemporal resolution for multi-breathing cycle motion AssessmentGo

Li et al

These authors have developed and evaluated a super-resolution approach to reconstruct time-resolved four-dimensional magnetic resonance imaging (TR-4DMRI) with a high spatiotemporal resolution for breathing cycle motion assessment. They achieved this with adequate temporal and spatial resolution. Further improvement will be necessary before this can be routinely applied in the clinic.

July 1, 2017

Directly improving the quality of radiation treatment through peer review: a cross-sectional analysis of cancer centers across a provincial cancer program

Rouette et al

Rouette and colleagues identified all peer-reviewed, curative treatment plans delivered in Ontario within a three-month study period using a provincial cancer treatment database, and collected additional data on peer review outcomes. Three percent of plans had changes recommended; 41 percent of these were major and 48 percent were minor. By identifying important clinical and planning changes, peer review of treatment plans directly affected the quality of care, and provincial strategies are underway to optimize its conduct in radiation oncology.

First results of a phase 2 trial of once-weekly hypofractionated breast irradiation for early-stage breast cancer

Dragun et al

Over the last decade, evidence has grown for the use of a wide variety of alternative radiation regimens in the treatment of early stage breast cancer. These authors present early results of a phase 2 trial of once-weekly hypofractionated breast irradiation delivering 28.5 or 30 Gy in five weekly fractions with or without an additional boost. The primary endpoint was ipsilateral breast tumor recurrence (IBTR). At a median follow-up of three years, few in-breast recurrences were seen. Of the women, 82 percent reported excellent cosmesis results.

July 15, 2017

Special Issue: Radiation Therapy in the Elderly

Editors: Zietman and Yom

This special edition of the Red Journal explores trends, challenges and new approaches in treating cancer in elderly patients with radiation therapy. With the elderly population growing, so, too, is the number of cancer patients: this group unfortunately holds a disproportionate share of cancer incidence. Concerns specific to this population are addressed in a variety of ways, including survivorship, treatment de-intensification and curative versus palliative approaches to treatment.

HIGHLIGHTS FROM PRACTICAL RADIATION ONCOLOGY

May-June 2017

Building a palliative radiation oncology program: From bedside to B.E.D

Stavas et al

A growing body of evidence supports the integration of palliative care with standard cancer treatments. In these situations, patients often experience a better quality of life, better quality of care, decreased cost and, in some cases, improved survival with the addition of palliative care services to traditional treatment pathways. The authors explored the integration of radiation oncology with palliative care. As we move away from fee-for-service and toward bundled and global-based strategies, there will be further emphasis on supportive and palliative care services at the end of life, the authors say.

Impact of treatment year on survival and adverse effects in patients with cervical cancer and paraortic lymph node metastases treated with definitive extended-field radiation therapy

Osborne et al

Treatment for locoregionally advanced cervical cancer has changed dramatically since 2000. In that year, delivery of radiation therapy with concurrent chemotherapy became standard, and in the early 2000s, use of intensity modulated radiation therapy (IMRT) and positron emission tomography (PET) became more prevalent. The authors examined the impact of these changes on disease-specific survival (DSS) and treatment-related adverse effects in patients with cervical cancer with paraaortic lymph node (PAN) metastases treated with definitive extended-field radiation therapy.



Assessment of hepatic function decline after stereotactic body radiation therapy for primary liver cancer

Toesca et al

This study aims to determine how the albumin-bilirubin (ALBI) score compares with the Child-Pugh (CP) score for assessing liver function following stereotactic body radiation therapy (SBRT). In total, 60 patients, 40 with hepatocellular carcinoma (HCC) and 20 with cholangiocarcinoma (CCA), were treated with SBRT. Liver function panels were obtained before and at one, three, six and 12 months after SBRT. Laboratory values were censored after locoregional recurrence, further liver-directed therapies or liver transplant. ALBI score was similarly able to predict hepatic function decline compared with CP score, and both systems correlated with survival.

HIGHLIGHTS FROM ADVANCES IN RADIATION ONCOLOGY

April-June 2017

Sociodemographic disparities in the utilization of proton therapy for prostate cancer at an urban academic center

Woodhouse et al

Despite increasing use, proton therapy (PT) remains a relatively limited resource. This study assessed clinical and demographic differences in PT use for prostate cancer compared to intensity modulated radiation therapy (IMRT) at a single institution. The PT and IMRT cohorts varied by age, race, poverty, distance, treatment year and treating physician. On multivariable analysis, black and other race, treatment years 2011 relative to 2010, and a single treating physician relative to the reference physician with the highest rate of use were associated with PT use, whereas clinical factors such as prostate-specific antigen, prostate volume, International Index of Erectile Function and androgen deprivation therapy were not.

A comparison of interfraction setup error, patient comfort and therapist acceptance for two different prostate radiation therapy immobilization devices

Pang et al

This study investigated the interfraction setup error of the immobilization device required to implement transperineal ultrasound compared with the current, standard immobilization device. The intervention group was immobilized using the Clarity Immobilization System (CIS), comprising a knee rest with autoscan probe kit and transperineal ultrasound probe, and the control group using a leg immobilizer (LI). Interfraction setup errors were compared for both groups. Weekly questionnaires using a 10-point visual analog scale were administered to both patient groups to measure and compare patient comfort. RT acceptance for both devices was also compared using a survey. Patient comfort and radiation therapist (RT) satisfaction were also assessed.

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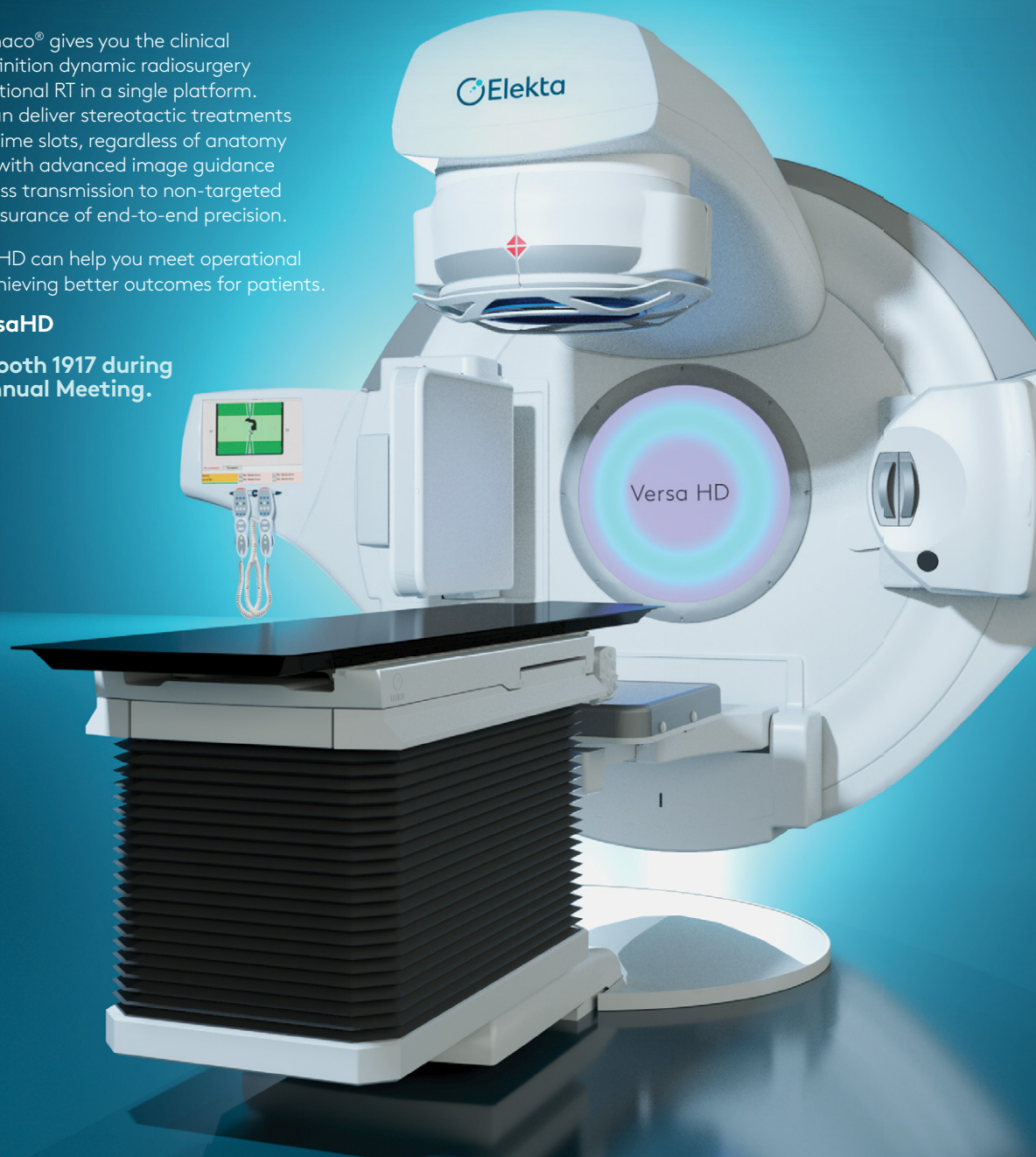
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