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SUMMER 2015



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EDITOR'Snotes

ROMAN COLISEUMS, ESTRO FORUMS AND SGR REFORM: CLASSICS NOT BUILT IN A DAY



WHILE I WRITE THIS COLUMN, I am traveling in Europe participating in a rectal cancer contouring consensus meeting sponsored by ESTRO at the Università Cattolica del Sacro Cuore in Rome, Italy, and then attending the 3rd ESTRO Forum in Barcelona, Spain.

Perhaps it was my visit to the Vatican and Saint Peter's Basilica with its baroque ceiling, beautiful frescoes and spectacular mosaics and sculptures that "fondly" reminded me of my Catholic high school years. As a junior at Our Lady of Victory Academy, I recall a particular morning when the principal, Sister Mary

Margaret, summoned the top 10 academic students to her office. We were placed against the wall akin to a police lineup, in the order of our IQ scores. Sister Mary Margaret then tapped each of us with her long ruler and assigned our lifelong vocations. I happened to be anointed the physician of the group. "Physician!" I internally churned. I had important plans to become a big city news anchor, or perhaps more secretly, a MTV VJ (a.k.a. music television video jockey). Of course, I heeded the principal's announcement, entered Boston College as a pre-med student and am quite content with my present career.

Last month, I participated in ASTRO media training prior to the 12th Annual Advocacy Day in Washington. Here, well-known media trainers facilitated a discussion on the conduct of ASTRO leaders in addressing the press. Instruction was provided in staying on point and body language. I then participated in mock taped interviews, which focused on radiation oncology and ASTRO issues that were to be highlighted during Advocacy Day, such as patient safety initiatives, Medicare payment reform and physician self-referral. What did I learn? First, while my responses to the questions were generally good, my body language lacked animation and I appeared as a cold, bored and wrinkled puppet. Second, my five months of home

We need to incentivize the proper use of radiation therapy in the best interest of patient care, outcomes and quality of survivorship. kitchen remodeling, stalled by the Boston 100-plus inches of snow, had made me appear 40 pounds heavier on the camera, (20 of which are real). Third, my understanding of health care laws and policy was sorely lacking.

As part of media training and in preparation for Advocacy Day, I was provided with fact sheets that highlighted ASTRO's important issues to guide our discussions with press and members of Congress. I definitely received an excellent refresher on ASTRO's two, evidence-based *Choosing Wisely*® lists, as well as ASTRO's *Target Safely* initiative, which includes RO-ILS: Radiation Oncology Incident Learning SystemTM and APEx® (ASTRO's Accreditation Program for Excellence).

To remind you, RO-ILS is the only medical specialty society-sponsored incident learning system for radiation oncology. Launched last year, RO-ILS allows us to review practice data in a confidential manner regarding near-misses and errors, with the overarching goal of effecting positive practice changes. My department is in the process of registering with RO-ILS as part of our quality assurance program. APEx provides an objective review by radiation oncology professionals of essential functions and processes of radiation oncology practices. APEx is organized around five pillars: the process of care; the radiation oncology team; safety; quality management; and patient-centered care. Our department is currently revising our policies and procedures according to APEx's standards, and plans to begin the APEx accreditation process in early 2016.

If you were unable to attend Advocacy Day, we recap the main policy points in this issue (see "ASTRO on the Hill" on page 20). However, if you are a health care policy novice as I am, let me share with you some general definitions that will complement your reading.

First, the Medicare Sustainable Growth Rate, or SGR, is the process used by the Centers for Medicare and Medicaid Services (CMS) to control spending by Medicare on physician services. Every year, CMS advises Congress on target payments for physician services for the upcoming year in order to match the target SGR. Physician groups, including ASTRO, lobbied for a permanent SGR reform so that physician payment rates are not cut every year.

Next, the physician self-referral law, the Ethics in Patient Referrals Act, prohibits physicians from referring a patient to a medical facility in which they or a family member have a financial interest to ensure that medical decisions are made in the best interest of the patient. However, a loophole, the in-office ancillary services exception, allows physicians to refer their patients for radiation oncology treatments and certain other services in which they have a financial interest. One of ASTRO's main legislative priorities is to advocate for closing this self-referral loophole. This would significantly decrease costs for the Medicare program, as it will reduce potentially unneeded care (for example, offering watchful waiting for a 80-year-old male with low-risk prostate cancer instead of nine weeks of prostate intensity modulated radiation therapy), and provide patients with individualized cancer management options. This is the right thing for us to do for our patients. We need to incentivize the proper use of radiation therapy in the best interest of patient care, outcomes and quality of survivorship.

I very much look forward to participating in next year's 13th Annual Advocacy Day, now considerably better



(Top) The Coliseum in the center of Rome. (Bottom) St. Peter's Basilica in Vatican City

informed concerning health care policy as it relates to radiation oncology, and strongly encourage others to do so.

And yes, lastly and most importantly, I would like to thank Sister Mary Margaret for pushing me to become a physician. I would have made a horrible news reporter. Dr. Kachnic is chair of the department of radiation oncology at Boston Medical Center and professor of radiation oncology at Boston University School of Medicine. She welcomes comments on her editorial, as well as suggestions for future ASTROnews topics, at astronews@astro.org.

BY BRUCE G. HAFFTY, MD, FASTRO CHAIR, BOARD OF DIRECTORS

CHAIR'Supdate



ASTRO'S LIVE MEETINGS ARE ESSENTIAL TO THE FUTURE OF OUR SPECIALTY

LIVE FACE-TO-FACE MEETINGS are

essential to medical societies, providing the necessary educational content to keep members refreshed, present novel evolving research and provide an opportunity for colleagues to network, exchange ideas and continue their professional relationships. Interactions at live meetings go beyond what can be accomplished through written and electronic communications and frequently provide the inspiration and motivation for bringing ideas back to our practices, ultimately resulting in improvements in patient care.

Face-to-face gatherings were the roots of the founding of ASTRO, dating back to informal dinner gatherings of those radiologists focusing their practice in radiation therapy in the early 1950s, often held in conjunction with RSNA or the American Radium Society. After a number of informal meetings, The American Club of Therapeutic Radiologists (ACTR) was ratified on November 18, 1958. This initial gathering of 60 people at the Palmer House in Chicago was the largest gathering of radiotherapists in the U.S. up to that point. As radiation therapy increasingly became recognized as a separate specialty, ACTR transitioned to ASTRO in 1966. The founders likely did not anticipate the Annual Meeting would grow from that initial gathering of 60 in 1958 to current-day attendance of more than 12,000.

ASTRO's Annual Meeting is the largest, most prestigious meeting dedicated to radiation oncology in the world and remains one of our most valued assets. In addition to providing a venue for a broad array of scientific and educational sessions, the revenues generated from this meeting help to support ASTRO's other initiatives that are critical to our specialty, such as patient education, clinical guidelines, white papers, advocacy, research, awards and support for trainees. The networking and social aspects of the Annual Meeting should not be underestimated and help foster continued professional relationships with colleagues nationally and internationally.

While ASTRO's Annual Meeting is a highlight and signature of our Society, we have developed a number of smaller meetings to meet members' needs. Recognizing the importance of radiation oncology in multidisciplinary cancer care, ASTRO has strong ties to several other major oncologic societies with whom we co-sponsor multidisciplinary meetings. Two major symposia for which ASTRO has taken the lead are the Multidisciplinary Head and Neck Cancer Symposium and the Multidisciplinary Symposium in Thoracic Oncology.

ASTRO works collaboratively with ASCO and other societies on the Gastrointestinal Cancers Symposium, the Genitourinary Cancers Symposium, the Breast Cancer Symposium and the Palliative Care in Oncology Symposium. In addition, ASTRO has co-sponsored a stereotactic radiosurgery course with AANS; a lymphoma meeting with ESTRO and ILROG; and a GYN School with SGO, ABS and ASCO. ASTRO also collaborates with RSNA in co-sponsoring its BOOST course at the annual RSNA meeting, a collaborative effort emphasizing the importance of imaging and contouring in patient management. These collaborative meetings raise the profile of our specialty and provide a forum for interactions on a national level, which reflect the importance of multidisciplinary efforts in the care of our patients with cancer.

There are also a number of smaller, live meetings ASTRO has developed to meet the needs of the radiation oncology community. The popular ASTRO Annual Refresher Course, typically held in the spring, has been embraced for its value in keeping our members up-to-date on a variety of clinical topics. Initially this course was predominantly attended by residents, although practicing radiation oncologists now represent the majority of participants.

The START meeting (State of the Art Radiation Therapy) is meant to be more practical and "how-to" oriented, and participants have been very enthusiastic about its added value to their daily practice.

Best of ASTRO is the latest addition to our live meetings portfolio and has been highly rated by the attendees. For those members not able to attend the Annual Meeting, Best of ASTRO digests the key science presented at the Annual Meeting. This forum allows participants to get an overview of the most highly rated and important presentations from the Annual Meeting, with the expert discussant putting the results into practical perspective.

In collaboration with our physics and radiobiology colleagues, ASTRO has co-sponsored workshops dedicated to important science behind our specialty held in the summer at NCI. In 2013, we had a joint workshop on technology for innovation, and in 2014, we had a successful meeting bringing together basic, translational and clinical scientists to strategize on critical issues in moving the science of our specialty forward. In 2015, the Big Data Workshop is dedicated to exploring opportunities for radiation oncology in the era of big data.

Finally, each year ASTRO holds Advocacy Day, where advocacy for a broad range of issues related to the interests of our specialty are highlighted. The first day of Advocacy Day prepares our members for the following day's face-to-face meeting with congressional members and staff so that issues important to our specialty and patients are presented in a clear and consistent manner.

As ASTRO continues in its role as the preeminent society representing radiation oncology, the needs of our membership will continue to evolve. ASTRO routinely surveys our membership regarding their needs, and consistently re-assesses the value of our meetings. Live meetings provide CME required for maintenance of certification, credentialing and licensing. ASTRO is proud in its distinction of being recognized "with commendation" by the ACCME, which allows ASTRO to continue to provide CME and Self-assessment CME through March 31, 2020, for all of our continuing medical education initiatives. Our Education Council, in close collaboration with ASTRO's other four councils (Clinical Affairs and Quality Council, Government Relations Council, Health Policy Council and Science Council) strives to continue to meet the needs of our members in the development of live meetings.

ASTRO has come a long way from that first gathering of 60 participants in 1958 where the ACTR founders agreed to meet once or twice per year "preferably upon the occasion of the annual meetings of the American Radium Society or RSNA" and members of the club were "allowed to bring one guest to each meeting, including residents in training in radiology." Currently, thousands attend ASTRO's portfolio of live meetings each year. As chair of the ASTRO Board of Directors, I am deeply indebted to the ASTRO staff, volunteers, members and corporate members who continually contribute to supporting, developing, shaping and participating in our portfolio of live meetings each year.

Dr. Haffty is professor and chair of the Department of Radiation Oncology at Rutgers-Robert Wood Johnson Medical School and New Jersey Medical School and associate director of the Rutgers Cancer Institute of New Jersey. He welcomes comments on this column at astronews@ astro.org.

Interactions at live meetings frequently provide the inspiration and motivation for bringing ideas back to our practices, ultimately resulting in improvements in patient care.

BY BRUCE D. MINSKY, MD, FASTRO, ASTRO PRESIDENT

SPECIAL*report*



ASTRO'S 57TH ANNUAL MEETING will be held October 18-21, 2015 at the Henry B. González Convention Center, located in the heart of the vibrant, multicultural city of San Antonio. The city sets the stage for a very exciting meeting highlighting the latest developments in all aspects of radiation oncology as we strive to meet our mission of improving patient care through education, clinical care, the advancement of science and advocacy.

The theme for this year's meeting is "Technology Meets Patient Care." Radiation oncology is a technologybased specialty. Many of our most sig-

A SNEAK PEEK AT ASTRO'S 57TH ANNUAL MEETING

nificant advances have come from new and exciting technologies. At the same time, our core mission as clinicians is to maintain our clinical acumen and provide patient-centric and compassionate care. Embracing new technologies is complementary, not competitive with being a great clinician. This year, ASTRO's Annual Meeting will highlight both the latest technological advances while emphasizing the importance of using our clinical skills to provide patients the full benefit and value of radiation oncology. We will offer a robust program of educational and scientific sessions, posters, discussions, eContouring workshops, panels and keynote speakers showcasing the theme.

The meeting will begin with the Presidential Symposium, "Multidisciplinary Management of Esophageal and Rectal Cancer." Moderated by two experts in the field of gastrointestinal (GI) oncology, Leonard L. Gunderson, MD, MS, FASTRO, and Joel E. Tepper, MD, FASTRO, the Symposium will highlight the multidisciplinary approach to these diseases. Len and Joel have assembled a terrific group of gastroenterologists, GI medical, surgical and radiation oncologists from

Many of our most significant advances have come from new and exciting technologies. Our core mission as clinicians is to maintain our clinical acumen and provide patient-centric and compassionate care. Embracing new technologies is complementary, not competitive with being a great clinician. the U.S. and Europe, who will review both the current approaches and future treatment strategies.

The Presidential Address, "Technology Meets Patient Care: We Are Doctors First," will expand on the meeting theme. I hope to share a clear vision of how we, as radiation oncologists, can embrace technology while at the same time be great clinicians.

Our three keynote speakers are physicians who are experts in translational science, administration, and safety and quality and remain committed to the ideals and importance of clinical medicine. We are fortunate to have Arul Chinnaiyan, MD, PhD, professor and director of the University of Michigan Center for Translational Pathology, Francisco G. Cigarroa, MD, past president and chancellor of the University of Texas, and Gerald B. Hickson, MD, senior vice-president and assistant vice-chancellor at Vanderbilt University Medical Center. They will share their expertise with us, and we are thrilled to have them at ASTRO's Annual Meeting.

The Annual Meeting Scientific Committee Chair Benjamin Movsas, MD, FASTRO, and Vice-chair Lisa Kachnic, MD, FASTRO, and the Annual Meeting Education Committee Chair Catherine Park, MD, and Vice-chair Brian Czito, MD, have developed an outstanding program with a wide range of speakers, moderators and topics in more than 25 panel discussions and more than 50 educational sessions.

Continued on Page 34

SPECIAL*report*

BY DAVID W. EISELE, MD



THE 2016 MULTIDISCIPLINARY HEAD AND NECK CANCER SYMPOSIUM

returns to the JW Marriott Camelback Inn Resort and Spa in Scottsdale, Arizona, February 18-20, 2016. Co-sponsored by ASTRO, the American Society of Clinical Oncology and the American Head and Neck Society, the 2016 Symposium will focus on "Expanding Treatment Horizons."

During the last 20 years, survival has improved for patients with head and neck cancer; however, recurrence, secondary malignancies and co-morbidities continue to present challenges for patients and head and neck specialists. As management approaches for head and neck malignancies continue to evolve, it is vital that practitioners who are involved in caring for patients with head and neck cancer remain current on accepted treatment guidelines, the results of

HEAD AND NECK CANCER SYMPOSIUM HIGHLIGHTS THE IMPORTANCE OF MULTIDISCIPLINARY TREATMENT

clinical trials, new treatment approaches, scientific breakthroughs, and prevention and mitigation of treatment toxicities.

The issue of post-treatment survivorship has garnered increased attention recently, particularly with the Commission on Cancer's (CoC) new standard that requires CoC-accredited programs to implement survivorship care plans. It is imperative that head and neck specialists have an up-to-date understanding of the survivorship issues facing this patient population, such as locoregional recurrence, impaired oropharyngeal function, second primary cancers and co-morbidities, so that practitioners can provide the necessary post-treatment support.

This two-and-a-half day Symposium features interactive, educational sessions that focus on new multidisciplinary therapies, directed therapy, treatment guidelines, prevention, surveillance, supportive care and survivorship. Additionally, oral abstract sessions will highlight the most current evidence-based practices.

The multidisciplinary format of the Symposium fosters the continued collaboration of surgical, medical and radiation oncologists to provide the best cancer care for these patients. The program is designed for all members of the care team, including medical oncologists, radiation oncologists, surgeons, physicists, nurses, diagnostic radiologists, pathologists, radiation therapists and dosimetrists, as well as speech language scientists/pathologists, dentists and oral surgeons, swallowing and speech therapists, audiologists, physical therapists, physician scientists and rehabilitation specialists. Symposium attendees are encouraged to take advantage of the opportunity to network and share information with their colleagues in the field.

Previous attendees have commented in Symposium evaluations that: "Without a doubt, the Multidisciplinary Head and Neck Cancer Symposium is the best blend of radiation oncologists, medical oncologists and head and neck surgeons getting together in one place and working together to improve patient care" and "This conference provides the tools for practicing cancer specialists to offer patients the most modern and up-to-date treatments for their head and neck cancer."

The abstract submission site is open June 8 to September 2, 2015. Registration and housing for the 2016 Multidisciplinary Head and Neck Cancer Symposium will open in September. Visit www.headandnecksymposium.org for more information.

Dr. Eisele is the symposium chair for the 2016 Multidisciplinary Head and Neck Cancer Symposium, and the Andelot Professor of Laryngology and Otology and professor of otolaryngology-head and neck surgery at Johns Hopkins Hospital in Baltimore. He welcomes comments on this column at astronews@astro.org.

SPECIALtribute

REMEMBERING JOHN "JACK" TRAVIS, MD, DSC, FASTRO

JOHN "JACK" TRAVIS MD, DSC,

FASTRO, former president and chair of ASTRO, passed away on March 18, 2015.

Jack was born in Great Falls, Montana to John and Frances Travis. He grew up in Havre, Montana and graduated from Havre High School. Jack earned his undergraduate degree from the University of Colorado in 1951. In 1955, he was awarded a medical degree and Masters of Pharmacology, both with distinction, from Northwestern University. He served as a Lieutenant Commander in the United States Navy and Chief of Radiology during his residency at Great Lakes Naval Station.

Jack moved to Topeka, Kansas, in 1960 and was a founding member of Radiology and Nuclear Medicine PA, a combined diagnostic radiology and radiation oncology group, which bears the distinction of being only the second professional group in the country to be incorporated. The group eventually grew to 32 radiologists and radiation oncologists. Jack also established the Capital Region Radiation Oncology Department at St. Francis Hospital, serving patients throughout northeast Kansas. He was a consultant for Blue Cross Blue Shield and was active in numerous state and federal governmental organizations and task groups. Following

his retirement in 1987, he served as an adjunct professor at Washburn University in Topeka.

Jack was a leader: he served as president of the Kansas Medical Society and the Kansas division of the American Cancer Society. He was an active member of the American College of Radiology and the Radiologic Society of North America. He was instrumental in the passage of new legislation and regulations permitting radiologists to charge separately for their services. Jack served as president of ASTRO in 1979 and as chair in 1980. In 2006, he became a Fellow of ASTRO.

Above all else, Jack loved Mary Ann, his wife of 57 years, who preceded him in death; his children, Ann, Peter and John; and his five grandchildren. He also loved listening to and playing jazz music and played as a drummer in a combo in his younger years.

Jack will be remembered for his multifaceted intelligence and his unparalleled compassion. Jack's patients and colleagues benefitted immensely from his near-photographic memory of the extensive medical literature he had studied over the years. Jack's memory was far from a purely academic tool; he not only remembered practically every cancer he had treated, but also every patient's name, family, career and story. His compassion

Jack not only remembered practically every cancer he had treated, but also every patient's name, family, career and story. His compassion made him a true pioneer in recognizing and addressing the integrated needs of patients.



made him a true pioneer in recognizing and addressing the integrated needs of patients; he included Menninger Foundation psychiatrists and the entire department in weekly discussions of the psychosocial needs of every patient.

In addition to his medical knowledge and skill, he developed a keen insight into and passion for current events and history, having grown up in a family of newspaper managers. His encyclopedic knowledge of cultures and events led to lively debates with even the most esteemed adversaries. Jack had a knack for infusing every conversation with educational tidbits, such that one always left a conversation with Jack a bit smarter.

Jack was an inestimable role model and mentor physician in the community and in his practice, and he was truly beloved by his associates, members of the medical community and the Topeka community at large. He will be missed.

Dr. Greene is a member of Radiology and Nuclear Medicine LLC and director of radiation oncology at Stormont-Vail HealthCare in Topeka, Kansas.

SOCIETY NEWS

ASTRO launching new open-access journal

BY KATHERINE EGAN BENNETT, MANAGING EDITOR, SCIENTIFIC PUBLICATIONS, KATHERINE.BENNETT@ASTRO.ORG

THIS FALL, ASTRO WILL LAUNCH A NEW JOURNAL that will be a natural complement to the Society's other journals, the *International Journal of Radiation Oncology* • *Biology* • *Physics* (Red Journal) and *Practical Radiation Oncology* (*PRO*). This new journal will be published open-access, meaning it will be supported by article processing charges from authors rather than institutional subscriptions from libraries. ASTRO envisions that this new journal will fill the void for authors of articles whose work is not clinically rigorous enough for the Red Journal nor practical enough for *PRO*.

"ASTRO is proud to launch this new open-access journal that will fill a critical need to publish important radiation oncology research that exceeds the publishing capacity of our current journals," said ASTRO Chair Bruce G. Haffty, MD, FASTRO. "This open-access journal will be peer-reviewed and provide a sound distribution platform for quality studies related to our specialty. Together with Red Journal and *PRO*, this open-access journal will solidify ASTRO's role as the leading publisher of radiation oncology science, research and education."

ASTRO's two MEDLINE-listed journals combined receive about 2,400 submissions annually. Of those original manuscripts, fewer than 40 percent are ultimately accepted, leaving nearly 1,500 papers, many of which are excellent quality but not within the scope of either existing journal. ASTRO will establish a cascade between the three journals so that if the editors of *PRO* or the Red Journal receive a paper that they believe would be a better fit for the new journal, it can be transferred (with the author's permission) to the other journal, bringing with it relevant reviews. This cascade will save authors time uploading their manuscript for consideration by another journal. Likewise, bringing the existing reviews will expedite the peer review process leading to faster publication.

"This open-access journal will be peerreviewed and will provide a sound distribution platform for quality studies related to our specialty."

ASTRO is in the process of selecting a new editor for this journal, who will be approved by the Board of Directors this summer. This new editor will work closely with ASTRO's Board and the editors and staff of the Red Journal and *PRO* to finalize the concept for the new journal, build the editorial board for the journal, and begin soliciting and reviewing papers.

This new journal will be considered a Gold Open-access journal, meaning it only publishes articles that are free to anyone to read. As such, it will be indexed immediately from volume one into PubMed Central to allow the research to reach the widest audience possible.

CHALLENGING CASES FOCUS OF ROHUB COMMUNITY

RADIATION ONCOLOGY PRACTITIONERS frequently encounter challenging clinical cases for which there is no clear answer in the literature. ASTRO has created a Challenging Cases Community on RO*hub* (http://rohub.astro.org) where members can get an opinion from radiation oncology colleagues across the country and beyond.

The Challenging Cases Community was created to facilitate dialogue about the current controversies in radiation oncology practice across many clinical sites and to allow individual ASTRO members to post de-identified difficult cases they face in their own practice for discussion with the radiation oncology community. The recently launched community already has a number of complex cases that were presented during the 2012 and 2013 ASTRO Annual Meetings. These cases are organized by disease site and give a brief synopsis of the case with a question to guide initial discussion.

To see the cases being discussed or to submit a case from your own practice, please login to RO*hub* today with your ASTRO user name and password.

SOCIETY NEWS

ASTRO'S 2015 Board of Directors ballot is now open

The ballot is now open for eligible members to cast votes in the 2015 Board of Directors elections. The Nominating Committee, chaired by Colleen A. F. Lawton, MD, FASTRO, developed a list of candidates for each open position and reviewed their service to ASTRO and participation in ASTRO activities. The Nominating Committee considered the criteria for each position, the strategic goals of the Society, and current and future challenges facing health care and radiation oncology. Following deliberations and approval, Dr. Lawton presented the slate of nominees to the Board of Directors.



Members eligible to vote

include active, affiliate and

international. ASTRO has a Web-based electronic process of voting that

ensures the authenticity and secrecy

of votes. View biographical data and

policy statements for each nominee by visiting

www.astro.org/vote.

The voting deadline is

5:00 p.m. Eastern time on July 1, 2015.

PRESIDENT-ELECT (pictured at left)

Carol A. Hahn, MD, Duke University Medical Center, Durham, North Carolina Brian D. Kavanagh, MD, MPH, FASTRO, University of Colorado, Aurora, Colorado

VICE-CHAIR, HEALTH POLICY COUNCIL

Michael R. Kuettel, MD, PhD, MBA, FASTRO, Roswell Park Cancer Institute, Buffalo, New York

VICE-CHAIR, SCIENCE COUNCIL

Daniel Low, PhD, University of California, Los Angeles Write-in Candidate: Steven E. Finkelstein, MD, 21st Century Oncology, Scottsdale, Arizona

NOMINATING COMMITTEE ACADEMIC PHYSICIAN

Quynh-Thu Le, MD, FASTRO, Stanford University, Stanford, California Nina A. Mayr, MD, FASTRO, University of Washington Medical Center, Seattle

NOMINATING COMMITTEE COMMUNITY PRACTICE PHYSICIAN

John W. Rieke, MD, FACR, MultiCare Regional Cancer Center, Tacoma, Washington Felicia E. Snead, MD, UPMC St. Clair Hospital Cancer Center, Pittsburgh

NOMINATING COMMITTEE PHYSICIST

Indrin J. Chetty, PhD, MS, Henry Ford Hospital/Wayne State University, Detroit Ying Xiao, PhD, Jefferson Medical College, Thomas Jefferson University, Philadelphia

IN MEMORIAM

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

Gordon Edgar Cotton, MB A. Eugene Jackson, MD Jacques Ovadia, PhD Edward J. Quinlan, MD John (Jack) W. Travis, MD, DSc, FASTRO

The Radiation Oncology Institute (ROI) graciously accepts gifts in memory of or in tribute to individuals. For more information, call 1-800-962-7876 or visit www.roinstitute.org.

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Shifting residency education to an outcomes- and competency-based system

BY MIRANDA KIM, MD, MBA, AND LYNN D. WILSON, MD, MPH, FASTRO

GRADUATE MEDICAL EDUCATION (GME) accreditation in the U.S. is changing. High reliance on structure and process measures and the heavy burden of clerical duties associated with the prior accreditation process led the Accreditation Council for Graduate Medical Education (ACGME) to roll out the Next Accreditation System (NAS). The NAS presents an opportunity for a substantial improvement in GME with a more pronounced focus on resident and faculty mentoring, a learning environment with outcomes-based feedback and educational career development. While the long-term impact of the NAS on radiation oncology residency training remains to be seen, changes are on the horizon. Here we review the salient points of the NAS and the possible implications of its implementation on our specialty.

CATALYST FOR CHANGE

Residency programs in the U.S. are accredited by the ACGME, a nonprofit organization whose goal is to assess compliance, improve resident training and protect patients. Each medical and surgical specialty within ACGME is represented by its own Residency Review Committee (RRC), which is charged with performing resident program reviews. The Radiation Oncology RRC consists of six radiation oncology faculty members, including many past or present program directors (PDs) and one resident member.

While the program review process has been in place for several decades, several high profile cases reported in the media served as a catalyst for reform in the way residency programs are evaluated. As early as 1978, Stephen Bergman, MD, DPhil, writing under the pseudonym Samuel Shem, MD, published *The House of God*, which outlined major residency education issues including lack of supervision, autonomy of residents without appropriate oversight and subsequent resident burnout. Further concerns regarding unsupervised resident education were uncovered by the death of 18-year-old Libby Zion in 1984, which raised questions about the role of overworked resident physicians and the lack of supervision for interns and residents causing or leading to medical errors. The 1999 Institute of Medicine report, "To Err is Human," highlighted preventable medical errors and examples of resident fatigue.

In response to these events, in 1999, ACGME established six core competencies (listed in Table 1). In 2009, the organization created a multi-year plan to restructure the accreditation process to assess programs and education goals based on these six competencies. Per ACGME, the elements critical to demonstrating full compliance with the mandate to evaluate core competencies is threefold: personal observation, 360-degree evaluations and portfolios. With more attention highlighting increased medical error rates associated with physician fatigue, ACGME also implemented resident and intern duty hour restrictions in 2011.

THE NEXT ACCREDITATION SYSTEM

In the previous accreditation system, PDs and coordinators prepared a voluminous document known as the Program Information Form (PIF), which contained details on the operations of their program including institutional infrastructure, inter-institutional agreements, teaching and learning activities, and details about the teaching and leadership of faculty. The

Table 1. ACGME Six Core Competencies	
Patient care and procedural skills	
Medical knowledge	
Professionalism	
Interpersonal and communication skills	
Practice-based learning and improvement	
Systems-based practice	



PIF was supplemented with a site visit, the resident surveys and case logs for evaluation by the RRC that yielded one of several outcomes: continued accreditation with or without citations, request for more information, probation or loss of accreditation. In contrast to the previous system's focus on structure and process measures, the NAS aims to incorporate outcomes measures. (Table 2 lists the metrics collected for the NAS¹.) With annual accreditation, the ACGME hopes to identify underperforming programs early, allow programs in good standing the freedom to innovate and provide public accountability for outcomes. The primary differences between the previous and the new accreditation system for all programs is the abolishment of the PIF and scheduled site visit every two to five years, and implementation of the annual program status updates supplemented by a focused or full site visit as needed, and a self-study visit every 10 years. Additionally, the Clinical Environment Learning Review is an important new initiative that is not directly linked to the accreditation process. It will involve periodic site visits of the institution to ensure compliance with teaching and learning about patient safety and clinical quality.

THE MILESTONE PROJECT

Competency-based medical education has gained traction over the last few decades, driven by a recognition among educators and policymakers that reforms in undergraduate and graduate medical education were needed, the desire to adopt outcomesbased assessment and accreditation, and the demand for an expanding set of physician skills (e.g., quality improvement, population health management, interdisciplinary teamwork, systems approaches, etc.)². The traditional educational system is teacher-centered and progression is based on time, while a competency-based system is learner-centered and progression is based on mastery of certain knowledge, or Milestones³. Hence, the ACGME Milestone definition includes "specific behaviors, attitudes, or outcomes in the general competency domains to be demonstrated by residents by a particular point in residency." The progression follows a Dreyfus model of expertise acquisition (e.g., novice, beginner, advanced beginner, competent, proficient and expert). In 2009, the ACGME Radiation Oncology Milestones Working Group developed the outcomes-based Milestones of clinical education for radiation oncology within the six domains of clinical competence. *Continued on Page 16*

Table 2. Trended performance metrics in the NAS	
Program data: Annual Accreditation Data System upda	te
Resident and faculty scholarship	
Clinical experience (case logs)	
Resident survey	
Faculty survey	
Semi-annual resident evaluation on Milestones with a	
Clinical Competency Committee	
Rolling board certification examination pass rates	
Program self-study and site visit (every 10 years)	

There are two distinctions with competency-based education and training: 1) Even though experience and time are still important in a competency-based program, residents could progress through the training program at different speeds: the quick learners who attain sufficient knowledge and skills could be ready for independent practice sooner than others; and 2) there is an increased focus on ongoing assessment, allowing the faculty and staff to more accurately determine the progress of the resident through Milestones and help the resident through frequent feedback, coaching and adjustments.

To move training programs toward competency-based education, the NAS organizes specific Milestones focused on resident skill knowledge and abilities along a continuum, which are individualized for each specialty. In order to foster innovation and creativity, the ACGME has provided programs with minimal guidelines regarding the optimal way to approach these Milestones. The Clinical Competency Committee (CCC), composed of core faculty, the program director and other key stakeholders, is charged with monitoring and tracking performance of residents and faculty. The CCC is responsible for monitoring and verifying progress for resident Milestones.

What does this mean for training programs? At these early stages, it is very difficult to determine exactly what shape the Milestones program will assume in the long run. Since ACGME only set very general guidelines for implementation of the Milestones, individual residency programs may come up with a wide spectrum of solutions of how to implement it. At least at the onset, many faculty members may not feel adequately



prepared to provide continuous, timely, meaningful feedback regarding resident performance using the competency-based system. Giving feedback is a skill that takes time to develop, likely requiring significant additional training. Given the apprenticeship model in radiation oncology of residents working one-on-one with attendings, anonymity of evaluations is difficult to maintain, especially in small departments. This could pose as a barrier to meaningful use of the Milestones, leading to grade inflation. However, when done appropriately, the Milestones may provide residents with constructive and frequent feedback to hone their skills and knowledge.

CONCLUSION

The NAS hopes to reduce programmatic burden and paperwork, shorten accreditation cycle length and improve programs through timely and informative feedback. Many questions remain unanswered in the minds of program leaders around the country as we embark on the NAS. Will the time burden for PDs and the RRC be decreased? Will this foster the actual development and implementation of educational innovation beneficial for residents? Can the trended, annual performance indicators identify programs in distress? Will the lack of a site visit create a gap in understanding of a program's health? Only with time will we know whether the aspirational goals of the NAS will be met and whether the NAS will provide more value for graduate medical education compared to the prior accreditation system, but higher value is certainly the targeted outcome.

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Dr. Wilson and Dr. Kim serve on the ACGME Radiation Oncology Residency Review Committee. This article does not express views of the ACGME.

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BY SARA BETH DAVIS, SENIOR MANAGER, ELEARNING, SARABETH.DAVIS@ASTRO.ORG

ASTRO'S EDUCATION Portection evolves to meet MEMBERS' NEEDS

ASTRO's educational programming must continuously evolve to reflect the changing needs of the Society's membership. To keep abreast of these changing needs, ASTRO analyzes data from the annual member survey, activity evaluations and various publications. Information from these sources helps guide new and updated topic areas and delivery methods, including the additions of *Practical Radiation Oncology (PRO)* journal CME, Live SA-CME, webinars and practice quality improvement (PQI) templates within the past five years.

JOURNAL CME

ASTRO has been offering journal CME courses for 10 years as a way to help members stay up-to-date with the latest scientific information in the field. Red Journal courses were first launched in 2005, with *PRO* journal courses added in 2011. Each journal course is available for a two-year period on the ASTRO website. A course catalog of all available journal CME courses is available online and is sortable by disease site to help you quickly find articles that pertain to your practice. To learn more, visit www.astro.org/ journalcme.

LIVE SA-CME

Providing ASTRO members with opportunities to earn Maintenance of Certification (MOC) Part 2: Lifelong Learning and Self-Assessment credits has always been a high priority for ASTRO leadership. While members have long been able to earn CME credit for their attendance at in-person meetings, ASTRO also wanted to provide opportunities for members to earn self-assessment credit.

In 2011, two Live SA-CMEs (formerly Live SAMs) were held at the Spring Refresher Course and three Live SA-CMEs were held at the

Annual Meeting. In 2013, the American Board of Radiology (ABR) increased the required number of Self-Assessment CME (SA-CME) credits from eight in a 10-year period to 25 in a three-year period. To accommodate this change, ASTRO began increasing the number of Live SA-CME sessions held at each meeting and the number of meetings at which Live SA-CMEs were held. This vear, the ASTRO Annual Refresher Course had five Live SA-CMEs and the Annual Meeting is slated to have 10 Live SA-CME sessions. Live SA-CMEs have been added to the State of the Art Radiation Therapy (START) meeting and will also be held for the first time at the 2015 Best of ASTRO meeting.

WEBINARS

After listening to member feedback, ASTRO launched two webinar series in 2010. The first was the residentfocused ASTRO-ARRO Journal Club and the second was the annual Final Rules webinar. Since then, ASTRO has added stand-alone coding and clinical *Continued on Page 18*

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practice webinars. In 2013, ASTRO launched two *e*Contouring webinar series. One was directed at the general membership, and one was directed at residents and sponsored by the del Regato Fund through the Radiation Oncology Institute. In 2015, ASTRO will launch a webinar series that will focus on practice-changing content for specific disease sites. To learn more about ASTRO's live or on-demand webinars, visit www.astro.org/webinars.

PRACTICE QUALITY IMPROVEMENT

PQI is an integral part of the ABR's MOC program. In 2008, ASTRO launched an ABR-qualified Webbased PQI module called PAAROT (Performance Assessment for the Advancement of Radiation Oncology Treatment). At the time, PAAROT fulfilled the Type 2 (society-based) PQI requirement established by the ABR. However, in 2013, the ABR streamlined its MOC Part 4 (PQI) requirements by removing the society-based requirement.

As PAAROT was nearing the end of its qualification period, the ASTRO Board of Directors reevaluated ASTRO's PQI commitment and determined a shift was needed from specially designed, fee-based projects to free-ofcharge templates. The goal behind this shift was to provide members with the opportunity to meet the PQI requirements related to an activity they are already doing, rather than have to participate in a specially designed module to satisfy a PQI requirement.

Today, ASTRO offers four PQI templates that can be accessed free-ofcharge to anyone participating in the associated activities: PQRS Oncology Measures Group, RO-ILS: Radiation Oncology Incident Learning System,



Attendees participate in a Live SA-CME session at ASTRO's 2014 Annual Meeting. This year's Annual Meeting is scheduled to offer 10 Live SA-CME sessions.

Live *e*Contouring and Accreditation Program for Excellence (APEx®) Facility Self-assessment. As new templates are made available, they are posted online with the current templates at www.astro.org/pqi.

ACCREDITATION

ASTRO has been an Accreditation Council for Continuing Medical Education (ACCME) CME provider since 1999. In 2014, ASTRO's accreditation status was changed from the long-held Accreditation to Accreditation with Commendation. This status is given to approximately 20 percent of ACCME accredited medical organizations.

"To be recognized by the ACC-ME with 'Accreditation with Commendation' is an honor and testament to the significant depth and value of ASTRO's investment in its comprehensive education programs. ASTRO is committed to providing meaningful learning opportunities that equip the multidisciplinary treatment team with up-to-date knowledge and techniques, resulting in high quality cancer care for our patients," said Bruce G. Haffty, MD, FASTRO, chair of ASTRO's Board of Directors.

LOOKING FORWARD

In addition to the new initiatives/activities discussed earlier, there are several additional education-related items on ASTRO's horizon. First, ASTRO will launch an eContouring Case Library this summer. By purchasing the case library, registrants will be able to practice contouring in multiple disease sites and compare their contours to the contours of a faculty expert. Second, ASTRO is moving the Annual Meeting CME, CAMPEP and MDCB evaluations into the meeting's mobile app. This change will allow attendees to easily complete the general meeting survey and evaluate each session from the convenience of their personal mobile device. Third, ASTRO will launch a new website in 2016 that will improve search functionality for educational activities and allow members to participate in online activities from their personal mobile devices. 🗛

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ASTRO ON THE HIL MEMBERS TAKE PART IN 12TH ANNUAL ADVOCACY DAY



BY BRITTANY ASHCROFT, COMMUNICATIONS MANAGER, BRITTANY.ASHCROFT@ASTRO.ORG

AS PART OF ASTRO'S continued efforts to advocate on behalf of Society members and cancer patients, ASTRO held its 12th annual Advocacy Day, March 23-24, 2015, in Washington.

Nearly 90 ASTRO members, including radiation oncologists, residents, nurses and administrators, spent the first day of the meeting learning about ASTRO's legislative priorities and took part in more than 130 meetings with congressional leaders during the meeting's second day.

On Monday, March 23, several speakers addressed attendees on a range of topics related to ASTRO's current legislative priorities, including physician self-referral, Medicare payment issues, a discussion about the sustainable growth rate (SGR) formula, an update from the National Cancer Institute and an in-depth look at ASTRO's patient safety initiatives related to *Target Safely*.

ASTRO staff and leaders also helped prepare attendees for their meetings with members of Congress and their staff during a first-timers orientation, a federal issues briefing and an address from ASTRO Chair Bruce G. Haffty, MD, FASTRO.

"In-person visits from constituents are very influential to members of Congress, so it's important that you are here," said Whitney Warrick, JD, ASTRO congressional relations manager. "When we meet with members of Congress and



their staff throughout the year, they remember you, and they ask about you. They see you as representing more than one person because you are also treating their constituents."

THE LEGISLATIVE PRIORITIES

This year's Advocacy Day focused on five legislative priorities: 1) protect patients and Medicare by ending physician self-referral abuse; 2) stabilize

Medicare physician payments and protect access to radiation oncology services; 3) increase investments in radiation oncology research; 4) preserve and increase funding and residency slots for graduate medical education; and 5) improve patient safety, highlighting ASTRO's *Target Safely* initiative.

End physician self-referral abuse

For the past several years, closing the in-office ancillary (IOAS) exception and ending physician self-referral abuse has been one of ASTRO's main legislative priorities. This year's "ask" was to include language in the SGR repeal legislation that closed the self-referral loophole and to use the savings to help pay for the SGR fix.

For the third consecutive year, President Barack Obama's budget proposed closing the self-referral loophole, and the Congressional Budget Office has estimated that closing the self-referral loophole will save an estimated \$3.5 billion over 10 years.

ASTRO staff also reviewed the reports from the Government Accountability Office and the study published in *The New England Journal of Medicine* that support ASTRO's position to close the loophole by demonstrating increased utilization from self-referring practices.

"Our arguments are well supported by data," Dr. Haffty said during his Chair's Address, which focused on self-referral. "When you eliminate self-referral, there are dollars to be saved, not only in radiation oncology, but in other areas as well."

Additionally, in December 2014, AARP endorsed closing the self-referral loophole as a way to "save taxpayers and Medicare beneficiaries money and reduce unnecessary care."

"We want to make sure patients are receiving the proper treatment and that they have choices," Warrick said. "Focus the message on the patients."

Dr. Haffty also encouraged members to use patient stories to illustrate why closing the self-referral loophole is necessary. "It's important that we let the public and Congress hear these anecdotes and let them know these things are happening," he said. "Patient choice and safety are strong arguments to close the loophole."

Stabilize Medicare physician payments and protect access to radiation oncology services

A permanent fix of the SGR formula was still one of ASTRO's top legislative priorities. Advocacy Day occurred at an opportune time, as the House of Representative considered legislation to repeal the SGR.

On March 26, the House passed the Medicare Access and CHIP Reauthorization Act of 2015 (H.R. 2) with a vote of 392-37, which would permanently repeal the SGR. On April 15, just hours before physicians were to receive a 21 percent cut in Medicare payments, the Senate voted 92-8 to pass H.R. 2. President Obama signed the bill into law on April 16.

"This legislation is a critical component to Medicare reform that allows Congress to focus on additional improve-*Continued on Page 22*



Clockwise from top left: Representative David Price (D-N.C.) (second from left) meets with ASTRO members from North Carolina (front: Aaron Falchook, MD, Michael Eblan, MD, Vipul Thakkar, MD; (back) Carol A. Hahn, MD, William Bobo, MD, Lawrence B. Marks, MD, FASTRO); John E. Marvel, MD, MS, of Cancer Care Group PC in Logansport, Indiana, takes a moment with Representative Susan Brooks (R-Ind.); Brian Kavanagh, MD, MPH, FASTRO, of the University of Colorado in Aurora, Colorado, talks with Leif Brierley from the office of Senator Michael Bennet (D-Colo.); Kenneth Rosenzweig, MD, FASTRO, Bruce G. Haffty, MD, FASTRO, ASTRO chair, and Ronald D. Ennis, Goverment Relations Committee chair, all part of the New Jersey delegation, share ASTRO's legislative priorities with Michael Dobias from the office of Representative Frank Pallone (D-N.J.); Matthew H. Bertke, MD, MS, of the University of Louisville in Louisville, Kentucky, discusses various issues with Representative John Yarmuth (D-Ky.). ments that will strengthen Medicare and protect patients' access to care," said Shandi Barney, congressional relations manager at ASTRO.

Prior to the bill's passage, ASTRO members lobbied on Capitol Hill to drive home the importance of fixing Medicare physician payments permanently as opposed to the patches that have been previously used.

In addition to urging Congress to support H.R. 2, ASTRO staff encouraged members to speak about the need to maintain patient access to radiation oncology care and avoid any Medicare cuts to cancer care. In 2014, the Centers for Medicare and Medicaid Services (CMS) proposed cuts to radiation oncology in the proposed rule. At ASTRO's urging, 166 members of Congress supported a letter to CMS asking Medicare to stop these cuts.

"Be sure to express gratitude to those members of Congress who signed the letter to CMS. Their signatures were vital in influencing CMS's decision that ultimately ensured access to critical cancer care," Barney said.

In the final Medicare Physician Fee Schedule, the cuts were delayed. However, ASTRO staff emphasized that Medicare may revisit these payment cuts this year, and if that happens, ASTRO will once again need congressional support to help prevent the cuts.

Increase investments in radiation oncology research

ASTRO continues to advocate for increased funding for radiation oncology research.

For FY 2014, the National Institutes of Health (NIH) determined that only 0.9 percent of the total budget was spent on radiation oncology research. In FY 2012, 4.73 percent of the National Cancer Institute's (NCI) budget was spent on radiation oncology-specific projects.

The "ask" during Advocacy Day this year was for Congress to pass legislation that would raise the NIH budget caps and allow a 10 percent increase for NIH in FY 2016, which

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SOUTHEAST RADIATION ONCOLOGY GROUP CONTRIBUTES \$23,500 TO ASTRO PAC

BY WHITNEY WARRICK, JD, CONGRESSIONAL RELATIONS MANAGER, WHITNEY.WARRICK@ASTRO.ORG

Recognizing that supporting ASTRO PAC is critical to strengthening ASTRO's voice in Congress, each radiation oncologist from the Southeast Radiation Oncology Group (SERO), a practice based in Charlotte, North Carolina, donated to ASTRO PAC in January for a total of \$23,500.

"ASTRO PAC is critical to our specialty, and SERO's contribution speaks to their commitment and leadership in helping to pave the way for our continued success," said Bruce G, Haffty, MD, FASTRO, chair of ASTRO's Board of Directors.

"Our group is indebted to ASTRO and the government relations staff for their tireless efforts on behalf of our specialty and most importantly our patients. ASTRO's advocacy efforts continue to produce results year after year, and this is one small way that we can demonstrate our support for everyone's hard work," said Vipul V. Thakkar, MD, who attended ASTRO's 12th Annual Advocacy Day on behalf of SERO with William E. Bobo, MD, his partner at SERO.

ASTRO applauds the physicians at SERO for recognizing that contributions such as these give ASTRO the opportunity to ensure radiation oncology's priority legislative issues are heard by key policy makers in Washington. When ASTRO PAC makes a campaign contribution, it sends a strong message from a unified voice on issues important to the practice of radiation oncology.

For example, in 2014 ASTRO advocacy efforts, supported



Sameer Keole, MD (left), ASTRO PAC chair, and Bruce G. Haffty, MD, FASTRO, chair of ASTRO's Board of Directors, accept a check from William E. Bobo, MD, and Vipul V. Thakkar, MD, from SERO, for \$23,500 for ASTRO PAC.

by ASTRO PAC contributions, led to 166 members of Congress signing a letter asking the Centers for Medicare and Medicaid Services (CMS) to stop proposed cuts to radiation oncology, which CMS did.

To learn more about ASTRO PAC, visit www.astro.org/ ASTROPAC. The contributions made to ASTRO PAC provide support for members of Congress on a bipartisan basis who serve on committees and positions in Congress that are critical to radiation oncology and cancer patients and that support radiation oncology's legislative issues and concerns.

A FIRST-TIME RESIDENT PERSPECTIVE AND EXPERIENCE IN THE POLITICAL TRENCHES

BY PATRICK RICHARD, MD, MPH, TOBIAS R. CHAPMAN, MD, AND SHILPEN PATEL, MD

MANY RESIDENT AND ATTENDING PHYSICIANS remember the day they pledged the Hippocratic Oath, specifically the most famous message: "first, do no harm." Hidden within this oath are the aforementioned words that as physicians we are also called to prevent intentional injustice to our patients. Although this oath was originally written in the late 5th century B.C. and in a much different context than our present health care environment, the message still resonates and was embodied during ASTRO's annual Advocacy Day.

Advocacy Day is a unique, two-day gathering of radiation oncology physicians, residents and ASTRO staff, spanning multiple generations, levels of expertise and practice settings. What we lacked in unity of level of training or experience, we made up for in our unified goals and message throughout the campaign. The event commenced with introductory lectures highlighting ASTRO's specific agenda, which we would later address with members of Congress. We were presented with details regarding the sustainable growth rate (SGR), the in-office ancillary services (IOAS) exception, radiation oncology research funding estimates and GME radiation oncology funding. Like a sponge, we absorbed the complex policy talking points and numbers necessary to function in our meetings with legislative authorities. We were left with the impression that success in these meetings would hinge upon our clear understanding of these issues and the ability to regurgitate the exact details of the lectures on demand.

Advocacy Day participants were divided into groups from each state, and structured meetings were arranged with legislators and their assistants throughout the day. As junior members of our team and first-time Advocacy Day participants, we initially were apprehensive to attend these visits, given the importance of our message and the political stature of our audience. Along with the senior members of our team, we brainstormed approaches and produced a structured discussion, highlighting the major points in our agenda. During our first visit, our efforts were somewhat disjointed and lacked cohesiveness; we simply focused too much on abstract details and dollar values. While the legislative staff were initially engaged, we could sense a lack of connection with the issues at hand. As radiation oncologists, we could understand the importance of these issues to our national organization and patients; however, it took a deeper inspection and a recollection of the

Hippocratic Oath to put it all in perspective, thus carrying the most valuable message to our legislative members.

Taking a step back, we realized that at the center of each and every message were the people we vowed to protect and serve in the oath ... our patients. While the details of our message were of obvious importance, the overarching theme was one of patient stewardship. As true, patient-centered oncologists, we have to care for them clinically and advocate for them politically. Whether advocating for repeal of the SGR (with potential drastic cuts in physician reimbursement) or physician self-referral (with perverse financial incentives underpinning treatment decision-making), the numbers fade in relevance when compared to the impact on the patient. The patients matter, and they truly are the people most affected by the actions of our elected officials.

Our message evolved over the course of Advocacy Day focusing less on the dollars and cents of the issues, while adopting a more patient-centered approach. Our political audience became more receptive and interested when we revealed how the current laws prohibit truly patient-centered approaches to care. We realized that all stakeholders in the meetings had a common goal: to improve patient access to high-quality, safe radiation oncology within our health care system. While the SGR is in part an economic issue, it also would greatly impact access to care for Medicare patients. In addition, while closing the self-referral loophole is admittedly partly about costs, it also severely undermines the patient-physician relationship and shared decision-making. During our time on Capitol Hill, while we couldn't all agree on the fine details and costs of these programs, we could agree on the impact on our patients. Aligning our political message with our patient-centered clinical training proved to be the most effective approach during our visits, and the most rewarding.

Our participation in Advocacy Day was a unique, invigorating experience that confirmed the oath we took not long ago at medical school graduation. Advocacy Day is an event which provides valuable perspective for residents at all stages in training. It allows for us to fully embody the Hippocratic Oath and develop skills necessary to fight for patient-centered care on a completely different level. We learned that the message of "first, do no harm" certainly applies clinically, and also politically, and we embodied this message in Washington, D.C. BY DIRK RADES, MD, HEAD OF THE DEPARTMENT OF RADIATION ONCOLOGY, UNIVERSITY-HOSPITAL SCHLESWIG-HOLSTEIN, CAMPUS LÜBECK, GERMANY

Improving cancer research and patient care through cross-border collaboration: The Fehmarn Belt Project

This article is part of the "News from the Old World" series, created by ASTROnews Editorial Board member Dirk Rades, MD, to help build a bridge between radiation oncologists in Europe and North America.



Prof. Jürgen Dunst (left) and Dr. Niels Henrik Holländer (right) present the final results of the Fehmarn Belt project.

THE REGIONS ZEALAND IN SOUTHERN DENMARK AND SCHLESWIG-HOLSTEIN

IN NORTHERN GERMANY are separated only by the 10-mile-wide Fehmarn Belt. Although these regions are neighbors, their health structures and systems are quite different. The question arose whether each side could benefit from its neighbor's experiences and differences. Therefore, two centers, the Regional Hospital Naest-ved in Denmark and the University Hospital Schleswig-Holstein (Lübeck campus) in Germany, have developed a collaboration initiative and applied for partial funding from the European Union, i.e., from the European Regional Development Fund. The concept, which included several work packages, was convincing and the project partners received a total funding of 1.4 million Euros from the European Union for a period of 2.5 years (from July 2011 until January 2014).

Both Naestved in Zealand and Lübeck in Schleswig-Holstein are historic places. Naestved, with its currently 42,000 inhabitants, is well known for its historic city center with impressive buildings from the 13th to 19th century. Lübeck, with its currently 210,000 inhabitants, received its town privilege in 1160 and became the main city of the Hanseatic League in the 14th century. Due to its many medieval buildings including several churches and the world famous Holsten Gate, Lübeck became part of the UNESCO World Heritage in 1987.

The Fehmarn Belt project has been led by Dr. Niels Henrik Holländer, head of the department of clinical oncology in Naestved, and has been supported by several health care professionals and teams from both Naestved and Lübeck, most of all from Prof. Jürgen Dunst, the director of the department of radiation oncology at the University Hospital Schleswig-Holstein. The Fehmarn Belt project aimed to cover two aspects: the improvement of cancer research and the improvement of patient care.

WORK PACKAGE 1: CLINICAL STUDIES

In order to be able to perform common studies, a specific study center was founded and staff members from Denmark and Germany underwent particular training regarding the structures, options and limitations of their neighbors regarding the performance of clinical studies. Staff members who underwent training included



The Holsten Gate is a city gate marking off the western boundary of the old center of the Hanseatic city of Lübeck.

physicians, nurses, technicians, lab assistants and office staff members. To facilitate communication and collaboration between the project partners, language courses in Danish and German were offered. Furthermore, a common Internet platform was established, which is still in use.

When the project partners applied for the funding from the European Union, participation in clinical studies was part of the agreement. Since both participating centers have expertise in the treatment of colorectal cancer, it was decided to take part in the SCOT trial, which compared 12 weeks to 24 weeks of adjuvant chemotherapy in patients with colorectal cancer. The Regional Hospital in Naestved was nominated as national investigator for the SCOT trial in Denmark. The University Hospital Schleswig-Holstein (at the Lübeck campus) was a study coordinator for one or two additional German centers.

The original study protocol from the United Kingdom was adapted to the Danish and German regulations within the Fehmarn Belt project. To be able to participate in this trial, both partners had to fulfill the nation-specific requirements including approval by ethic committees and health authorities. Close communication between Naestved and Lübeck within the project revealed how different these requirements were, although Denmark and Germany are neighbor countries both belonging to the European Union. In contrast to Denmark, clinical studies in Germany require additional approval by the Federal Office for Radiation Protection if the treatment or the diagnostic procedures according to the study protocol include exposing the patients to radiation (X-ray, computed tomography, etc.), which is considered beyond standard procedures. Between November 2011 and November 2013, 311 Danish patients were included in the SCOT trial under the national lead of the Regional Hospital in Naestved.

In addition to the participation in clinical studies, a working group was formed including physicians and nursing staff members in order to develop cross-border standard operating procedures for the treatment of radiationrelated side effects.

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WORK PACKAGE 2: CANCER REGISTRY

Denmark has a long tradition regarding cancer registration, which was first established in 1943. In 1968, the unique personal identifying number was introduced. The data of patients from the Danish region of Zealand can be extracted from the national cancer registry and includes age and gender, as well as tumor stage, tumor morphology and tumor topography. Information regarding the cause of death is available from the Cause of Death Registry, and information regarding the treatment is available from the National Patient Registry.

In Schleswig-Holstein, a population-based cancer registry was established in 1998, which will be expanded to a clinical cancer registry. Data regarding mortality are available from the statistical office (cause of death, aggregated) and the local health authorities (individual data). Taking into account the German data protection laws, two independent institutions are involved in the cancer registry in Schleswig-Holstein. One institution (located in the Medical Association of Schleswig-Holstein) is responsible for the collection and storing of the data, and another institution (located in the Institute of Cancer Epidemiology of the University of Lübeck) is responsible for the registration and analysis of the data. Before cancer treatment begins, the patient can decide whether his or her data will be filed anonymously or by indication of the patient's birth date. If data are used for research purposes, they may only be used in pseudonymized form.

The major goal of this work package was a comparison of the cancer registries in Zealand and Schleswig-Holstein in order to further improve treatment processes and quality. Specialized epidemiologists from both

countries, who were also partners within the Fehmarn Belt project, analyzed and compared the registries. This comparison, which revealed significant differences between both countries, is currently an article in press in the European Journal of Cancer (Storm H, Engholm G, Pritzkuleit R, et al. Less pitfalls and variation in population based cancer survival comparisons within the European Union: Lessons from colorectal cancer patients in neighbouring regions in Denmark and Germany -The Fehmarn Belt project. Eur J Cancer. 2014; doi: 10.1016/j.ejca.2014.11.006). In this paper, the authors concluded that higher quality and better comparability are required in large international studies on the survival of cancer patients. In order to be able to obtain data from a much larger cohort for statistical evaluations as well as for retrospective studies, the project partners in Zealand and Schleswig-Holstein agreed on the development of a common cross-border database including colorectal cancer, breast cancer and lung cancer. This particular collaboration is still ongoing after the completion of the Fehmarn Belt project.

WORK PACKAGE 3: EXCHANGE OF STAFF AND KNOWLEDGE

In order to identify and compare job profiles and areas of competence in both Naestved and Lübeck, external auditors were engaged. This work package included a desk research phase followed by job shadowing and many interviews. Online bulletin boards were established in both institutions. Representatives of all professions involved in cancer treatment discussed the results of the external audits and developed strategies to benefit from the experiences and knowledge.

The studies and audits were supplemented by several visits of staff members and medical students in the



Karrebaek Church in Naestved. Photo courtesy of Visit Naestved.

partner country. In 2012, 15 nurses and office staff members from Naestved visited Lübeck. In the same year, medical physicists from Lübeck visited their colleagues in Denmark and discussed several issues of quality assurance. Until the end of the Fehmarn Belt project, more than 50 additional staff members spent some time in the partner institution. These visits led to many positive discussions regarding treatment approaches and work flows as well as national characteristics, options and limitations with respect to patient care.

OVERALL SUCCESS

In summary, the Fehmarn Belt project has been considered a great success by the representatives of the European Union, by local politicians in both countries and by the staff members of the participating institutions. Due to that success, the institutions in Naestved and Lübeck are continuing their cross-border collaboration and have applied for a follow-on project partially funded by the European Union. The Fehmarn Belt project demonstrates the importance of cross-border collaboration in Europe to be able to provide the best available treatment for cancer patients. 🕂

Best of ASTRO

BEST OF ASTRO LICENSING EXPANDS ACCESS TO RESEARCH

ASTRO has expanded its educational offerings through a new Best of ASTRO licensing program.

The program allows organizations to license Best of ASTRO content and hold an officially licensed, live meeting in their own country. The licensing program will officially launch with the 2015 Best of ASTRO meeting. Three pilot sites (Turkey, Mexico and India) were approved to hold officially licensed 2014 Best of ASTRO meetings.

ASTRO held the first Best of ASTRO meeting in 2013. The meeting presents the top-rated abstracts from the ASTRO Annual Meeting, chosen by a selection committee. Discussants also put the studies' findings into perspective. This meeting allows people who may not have been able to attend ASTRO's Annual Meeting to learn from this important research. Those who did attend the Annual Meeting can benefit from hearing scientific presentations in a smaller setting and from interacting with the discussants.

The Best of ASTRO licensing package provides organizations with the scientific abstracts and original slide presentations, as well as faculty and discussant slide presentations (as released for inclusion by the presenters) from the Best of ASTRO meeting. In addition, organizations may select up to 10 additional Annual Meeting abstracts not included in the Best of ASTRO content. This allows the organization to tailor additional content or focus on a particular disease site.

The Turkish Society of Radiation Oncology held the first officially licensed Best of ASTRO meeting on March 7 in Istanbul to help radiation oncologists in Turkey fill competency gaps and increase interdisciplinary communication.

"ASTRO's Annual Meetings have always been exciting to attend because of the ideas, guidelines and professional opportunities available; however, expenses, such as international flights, accommodations and registration, have allowed only a select few people from Turkey to attend," said Ugur Selek, MD, a professor of radiation oncology and organizer of Best of ASTRO -Turkey. "Best of ASTRO – Turkey allowed Turkish radiation oncologists to get a glimpse of the scientific updates and high-quality, practice-based studies presented during ASTRO's Best of ASTRO meeting."

The Mexican Society of Radiation Oncologists presented Best of ASTRO – Mexico on March 27 and 28 as a way to share Best of ASTRO content to those in Mexico and Central America.

"We are sure that the content that is selected for inclusion in the program is the highest-rated and most impactful to the field," said Adela Poitevin Chacón, MD, chief of the department of radiation oncology at Médica Sur in Toriello Guerra, México, and vice-president of the Mexican Society of Radiation Oncologists. "Our ability to present this research from the Best of ASTRO meeting is beneficial to our attendees."

Kokilaben Dhirubhai Ambani Hospital in Mumbai, with the support of the Association of Radiation Oncologists of India, hosted the third pilot meeting on May 2 and 3 in Mumbai and received positive feedback



from attendees, who were excited to hear presentations of some of the top abstracts from Best of ASTRO.

"A large number of radiation oncologists from India want to attend and be a part of ASTRO's Annual Meeting or Best of ASTRO meeting; however, they cannot do so because of the distance and logistics involved," said Kaustav Talapatra, MBBS, MD, head of the department of radiation oncology at Kokilaben Dhirubhai Ambani Hospital and organizer of Best of ASTRO – India. "This meeting allowed us to provide a platform for radiation oncologists in India to discuss the most important abstracts from ASTRO."

Organizations interested in holding an officially licensed Best of ASTRO meeting must complete an application, which includes detailed information on the program's agenda, proposed faculty and budget. The officially licensed program must occur after the Best of ASTRO meeting. The application deadline is approximately six weeks prior to ASTRO's Annual Meeting. Applications are reviewed by a task force comprised of International Education Subcommittee members from the applying organization's country/region, the Best of ASTRO chair and vicechair, and the Annual Meeting Steering Committee chair and vice-chair.

For more information about officially licensed Best of ASTRO meetings, visit www.astro.org/BOAlicensing.

GUIDELINES

NEW GUIDELINE EXAMINES ROLE OF DEFINITIVE AND ADJUVANT RADIATION THERAPY IN LOCALLY ADVANCED NON-SMALL CELL LUNG CANCER

ASTRO HAS ISSUED AN EVIDENCE-BASED GUIDELINE, "Definitive

and adjuvant radiotherapy in locally advanced non-small cell lung cancer: An American Society for Radiation Oncology (ASTRO) evidence-based clinical practice guideline," developed by a panel of experts in lung cancer, including radiation oncologists, a medical oncologist, a thoracic surgeon and a radiation oncology resident.

The guideline's recommendations were based on 74 English medical literature studies from PubMed published from January 1, 1966 to March 15, 2013. An additional 27 published clinical practice guideline documents that were relevant to one or more of the five Key Questions were used to ensure the guideline panel obtained all appropriate clinical trial reports.

Five Key Questions regarding the role of definitive and adjuvant radiation therapy for locally advanced nonsmall cell lung cancer (LA NSCLC) are addressed in the guideline.

The first Key Question addresses the ideal external beam dose fractionation for curative-intent treatment of LA NSCLC with radiation therapy alone. Radiation therapy alone has been shown to be superior to observation strategies or chemotherapy alone in terms of overall survival at the cost of treatment-related side effects. Radiation therapy may be used alone as definitive radical treatment for patients with LA NSCLC who are ineligible for combined modality therapy. A minimum dose of 60 Gy is recommended to optimize clinical outcomes such as local control. The second Key Question examines the ideal external beam dose fractionation for curative-intent treatment of LA NSCLC with chemotherapy. The standard thoracic radiation therapy dose fractionation for patients treated with concurrent chemotherapy is 60 Gy given in 2 Gy fractions once a day for six weeks. It has not been demonstrated that dose escalation beyond 60 Gy with conventional fractionation is associated with any clinical benefits, including overall survival.

The third Key Question details the ideal timing of external beam radiation therapy in relation to systemic chemotherapy for curative-intent treatment of LA NSCLC. There is Phase III evidence demonstrating improved overall survival, local control and response rate with concurrent chemoradiation compared to sequential chemotherapy followed by radiation therapy.

The fourth Key Question examines the indications for adjuvant postoperative radiation therapy for curativeintent treatment of LA NSCLC. The use of post-operative radiation therapy for completely resected LA NSCLC with N2 mediastinal disease is associated with improved local control but not improved overall survival. There is no routine role for patients with N0 or N1 mediastinal disease. Patients with microscopic or macroscopic residual primary and/or nodal disease should receive post-operative radiation therapy to improve local control.

The fifth Key Question examines when neoadjuvant radiation therapy or chemoradiation prior to surgery is



indicated for curative-intent treatment of LA NSCLC. There is no Level I evidence recommending the routine use of pre-operative neoadjuvant radiation therapy or chemoradiation for the management of LA NSCLC. However, the guideline provides information on ideal patient selection, operation type and radiation dose for patients selected to receive this treatment.

"The overall goal of this guideline is to provide radiation oncology practitioners with a source document that they can refer to for the best evidence to guide clinical practice given the state of knowledge in this challenging patient population. Ideally, this guideline may lead to more homogeneity of clinical care irrespective of practice location and situation," said George Rodrigues, MD, PhD, co-chair of the guideline panel.

The guideline was approved by ASTRO's Board of Directors in June 2014 and has been endorsed by the American Society of Clinical Oncology. The executive summary is available in the May-June issue of *Practical Radiation Oncology (PRO)* and the executive summary and supplemental material are available on the *PRO* website as open-access articles at www.practicalradonc.org.

NROR

JUSTIN BEKELMAN, MD, JASON EFSTATHIOU, MD, PHD, PETER GABRIEL, MD, AND CHRISTOPHER ROSE, MD, FASTRO

NATIONAL RADIATION ONCOLOGY REGISTRY PILOT: A LEARNING EXPERIENCE

THE VISION AND CONCEPTION OF A NATIONAL RADIATION ONCOLOGY

REGISTRY (NROR) began in 2010 and culminated in the launch of a national pilot in prostate cancer on August 1, 2014. The road to development has been long and dynamic, including a shift in oversight and staffing from the Radiation Oncology Institute to ASTRO in July 2014. The pilot has been an important exercise in learning about motivation for and barriers to participation in a national, scalable data collection project.

The motivation driving the NROR pilot is the desire to improve the health of cancer patients by capturing real-world information on the delivery and outcome of their care. This common vision is shared by the pilot sites.

"We are motivated to participate in the NROR due to our interest in making a difference for future patients and the opportunity to compare our work to other like organizations," said Robin Supinger, a prostate cancer patient navigator and NROR coordinator at Dayton Physicians LLC in Dayton, Ohio.

The pilot has illustrated several barriers to participation. Of the 30 sites chosen for the pilot, only 19 were able to complete the necessary legal and regulatory process to participate, which includes obtaining IRB approval and signing legal agreements. This infor-

NROR PILOT PARTICIPATING FACILITIES
California Cancer Center at Woodward Park
Center for Radiation Therapy of Beverly Hills
Coastal Carolina Radiation Oncology
Coborn Cancer Center
Dayton Physicians LLC
Froedtert Hospital
Gulf Coast Oncology Associates
Hartford Hospital
Illinois Proton Center
Lake Region Healthcare
Long Island Jewish Medical Center, North Shore-LIJ Health System
Lowell General Hospital
Massachusetts General Hospital
Medical University of South Carolina Hollings Cancer Center
Orange Grove Radiation, Arizona Oncology
Pomona Valley Hospital Medical Center, Cancer Care Center
University of California, Los Angeles
University of Pennsylvania
Wenatchee Valley Medical Center

mation has helped inform ASTRO's thinking about the regulatory frame-work for future projects.

Early successes of the pilot have proven to be robust training and ASTRO's dedicated staff who have worked with participants to answer questions and resolve issues. Principle investigators identified at least one registry coordinator who would act as the data manager, entering and submitting data into the NROR's secure, online Gateway portal. In addition to completing required paperwork, sites underwent extensive training on the protocol, Gateway infrastructure and electronic data transfer process designed by their Oncology Information Systems (OIS) vendor.

Margaret Mangaali, the NROR coordinator at University of Pennsylvania acknowledged ASTRO staff's continual support: "I believe that the effort of the NROR staff at ASTRO has made participating in the project much easier. The lines of communication are always open, whether it be through asking questions of the staff via email or the quarterly conference calls, I have never felt alone while working on this project."

To assist registry coordinators in data entry, ASTRO developed a variety of tools and continues to provide facilities with ongoing technical support. The Data Quality Report presents a summary of the patient data entered into the system and flags possible data errors. This real-time report ensures the highest possible quality of data is submitted to the registry. Additionally, ASTRO

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From the ABR

BY PAUL E. WALLNER, DO, FASTRO, DENNIS C. SHRIEVE, MD, PHD, FASTRO, AND ANTHONY L. ZIETMAN, MD, FASTRO

INCORPORATION OF NON-CLINICAL SKILLS TOPICS INTO INITIAL CERTIFICATION AND MAINTENANCE OF CERTIFICATION EXAMINATIONS

IN 1999, the Accreditation Council on Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS) adopted a series of six core competencies that were felt to form the foundation of the knowledge and skills necessary for physicians to provide high-quality care¹⁻².

These competencies included:

- Practice-based learning and improvement.
- · Patient care and procedural skills.
- Systems-based practice.
- Medical knowledge.
- Interpersonal and communication skills.
- Professionalism.

Detailed consideration of each of these competencies is beyond the scope of this report; however, it is evident that the competencies, which have now been generally adopted for all medical undergraduate and graduate education, anticipate acquisition of knowledge and skills well beyond those traditionally examined in previous initial certification (IC) and maintenance of certification (MOC) examinations. In addition to the requirements placed on medical students, specialty trainees and certified physicians by the various ABMS member boards, it has become increasingly apparent that the public and policymakers expect acquisition and demonstration of this additional knowledge from their health care providers.

In recognition of these additional expectations of the knowledge and skills critical to the modern practice

of medicine, ABMS and its member boards determined that testing as previously designed, limited to clinical information, skills and case material alone, within IC and MOC programs, were insufficient to address these needs. Previous IC and MOC examinations had included limited elements of various "non-clinical" topics, currently termed non-clinical skills (NCS) for radiation oncology programs (noninterpretive skills/NIS for diagnostic radiology candidates and diplomates); however, future examinations will include an increased emphasis on these items.

In October 2016, for the first time, the radiation oncology MOC Part III examination will be constructed in a modular format. The examination will consist of three modules, one of which in "general" radiation oncology is required of all participants, and will consist of 140 questions that we feel would be reasonable basic knowledge for any practicing radiation oncologist regardless of sub-specialization. Of that total, 20 items (14.3 percent) will consist of NCS topics. Two additional modules of 30 questions each will be preselected by participants from the list of the eight ABR radiation oncology clinical categories. Based on their own practice interests and their own personal preferences, diplomates may either select specific modules in one or two categories, or may select one or two available "general" radiation oncology modules.

The ABR will design NCS questions that truly relate to contemporary practice. The exam will include items related to quality assurance/quality improvement at the individual and departmental levels, patient and personnel safety, bioethics and biostatistics. In addition, future examinations are expected to include items related to "normal" topics, such as normal radiographic anatomy, differentiation between tumor and normal adjacent structures, and tumor versus benign imaging findings, as well as appropriate choice of imaging modalities for tumor staging, treatment management and follow-up. Every effort will be made to include in the exam only information relevant to the routine practice of radiation. Additional NCS items will also be embedded in the IC clinical qualifying (computer-based) examination beginning in 2015.

Many of the NCS topics considered have not been routinely included in undergraduate or postgraduate curricula in the past. As they design the examination, the ABR is working closely with specialty societies to assist them in creating educational content to allow candidates and diplomates to prepare adequately for the new examination material. A critical element of this preparation includes extensive revision of the Web-based IC and MOC study guides³⁻⁴ to further assist candidates and diplomates in understanding the scope of the new material. It is anticipated that the revised study guides with the new NCS material will be available by the end of 2015. We do not anticipate that these changes to the exam will be

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SCIENCE*bytes*

THE HEART OF THE MATTER: CARDIAC DOSE IN MODERN BREAST CANCER RADIATION THERAPY

IN THE FORMATIVE YEARS OF BREAST CANCER RADIATION, large cardiac doses caused by hockey stick internal mammary nodal treatment, the absence of three-dimensional planning and our reliance on total breast coverage regardless of stage or tumor bed location caused both morbidity and mortality for women with left-sided breast cancer. As techniques have improved, so has cardiac dose, which has important implications for cardiac morbidity and mortality.

Darby et al was able to demonstrate, despite the absence of dosimetric records, that for every 1 Gy increase in mean heart dose, relative risk of a major coronary event increased by 7.4 percent¹. As such, mean heart dose has become the surrogate of choice for cardiac risk. Interestingly, the left anterior descending artery (LAD) is frequently stenosed after tangential breast radiation therapy² and can cause major cardiac events. It is likely that LAD dose may be impactful in the genesis of cardiac toxicity. However, as the LAD is a segmentation challenge, mean heart dose is a reasonable target for radiation oncologists in their organat-risk evaluation.

Planning with computed tomography allows for optimum gantry angle placement, entry points and collimation to provide both maximum cardiac avoidance as well as ideal breast coverage. There is evidence that heart blocks are acceptable in clinical practice⁴, provided they do not block the tumor bed. There is also evidence that hypofractionation may have a more favorable, biologically equivalent cardiac dose⁵.

Given this evidence, cardiac avoidance techniques are essential. These include reducing cardiac dose by respiratory manipulation or patient positioning; precise targeting with image guided radiation therapy (IGRT); highly conformal therapy using intensity modulated radiation therapy (IMRT); proton therapy (PBRT); or redefining the treatment volume, such as with accelerated partial breast irradiation (APBI). Shah et al⁶ have published a comprehensive review of cardiac sparing techniques in breast cancer radiation therapy. The techniques identified were the coordination of treatment delivery with respiration (breath-hold or respiratory gating), prone positioning, IMRT, PBRT and partial breast irradiation.

Respiratory gating or breathhold allow the operator to administer treatment at a particular respiratory phase. For breast radiation therapy, end inspiration is the respiratory phase of choice, as this increases the distance between the chest wall and the heart. These techniques can also be combined with IMRT, IGRT, prone patient positioning⁷ or PBRT. They have demonstrated reductions in the cardiac volume treated, the dose to the LAD and the predicted probability of cardiac mortality overall from 4.8 percent to 0.1 percent⁸. By treating patients in a prone position, the breast tissue falls away from the chest wall, increasing the distance between the heart and the treatment volume in most patients⁹. Of all the techniques mentioned here, this technique is arguably the most operator-dependent and can be susceptible to difficulties with positioning and consistent delivery.

IMRT allows the beam to be modulated for more precise delivery of the high- and low-dose treatment areas. It can be used in combination with gating or prone positioning. Careful planning with IMRT is essential as higher contralateral breast, lung and heart doses for right-sided cases can be observed, particularly with helical delivery. PBRT, which can be gated or intensity modulated, has the advantage of a rapid dose fall off when compared to photon therapies, thus reducing low-dose regions and cardiac doses. Clinical data remains limited, and the cost effectiveness of this strategy is currently unknown.

APBI breaks from the convention of treating the whole breast and chest wall by treating the tumor bed regionally following lumpectomy. This technique is only appropriate for early-stage patients meeting specific criteria. As a

Using modern radiation therapy techniques, it is possible to reduce cardiac doses without compromising the target doses.

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localized form of radiation therapy, it facilitates the reduction of cardiac dose due to its reduced target volumes. Using modern radiation therapy techniques, it is possible to reduce cardiac doses without compromising the target doses; however, this is still an active area of clinical research that requires ongoing discussions.

This article was submitted on behalf of the Clinical, Translational and Basic Science Advisory Committee.

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The APEx Facility Self-assessment PQI template is qualified by the American Board of Radiology in meeting the criteria for practice quality improvement toward the purpose of fulfilling requirements in the ABR Maintenance of Certification program. The activity was qualified on April 23, 2015.



HISTORY



EIGHTY-TWO DAYS after its discovery, application of X-ray to mammary carcinoma produced clinical benefits. Efforts ensued, continuing even today, to optimize radiation therapy for breast cancer.

First textbooks described success treating breast carcinomas. Williams (1902) opined that "X-rays may render service in the treatment of certain forms of cancer of the breast." Other early radiation therapists also treated patients with resectable cancers for cure electively, or if they had refused surgery. After 1950, pioneering surgeons and therapeutic radiologists challenged mandatory en bloc resection for breast cancer. By 1970, many advocated abandoning radical mastectomy for simpler surgery followed by breast irradiation.

Prospective trials in the 1970s validated breast conserving therapy (BCT) equivalency to mastectomy-based treatment. Results became core knowledge for all breast cancer specialists and have been repeatedly cited to support recommendations for BCT. An historic NIH Consensus Development

BREAST CONSERVING THERAPY: "UNDER THE GUN"

Conference (1990) identified BCT as a preferred treatment and was repeated in widely adopted clinical guidelines thereafter. The first Joint Cancer Management Standard (1992) for BCT reflected interdisciplinary concordance around a specific treatment approach for the first time.

Today one may ponder, "Who painted the bulls-eye on breast conserving therapy?" Utilization rates of BCT are inexplicably trending downward in major referral centers and nationally. Yet decline in the breast cancer mortality rate by 34 percent after 1980 is attributed to improved detection and treatment methods. One might conclude that women with breast cancer needed broader implementation of what was already known to work rather than further scientific progress. Clinical trials rendering BCT less toxic, more convenient, less costly or unnecessary have as yet had no discernible impact on maintaining or increasing BCT utilization.

Research is unlikely to reveal why many women, in a reversal of preferences, seek mastectomy, with or without reconstruction, for early-stage breast cancer when it is known that BCT offers equivalent or superior cure rates with anatomical preservation and minimal toxicity. Evidence of improved survival or reduced treatment-related toxicity with mastectomy has not justified a shift away from BCT.

To achieve the new national goal of value-driven health care, clinical efficacy of locoregional management of breast cancer will be weighed against factors defining high value, including costs of care, treatment toxicity and patient-reported outcomes. Complex socio-economic, political and ethical issues will play out during the process. Reimbursement for complex care episodes will consolidate to support only highly valued care; however, it is unknown what options will be approved.

We need to refocus on messaging to American women the why rather than the how of breast radiation therapy. Anecdotal patient care experiences are often misinterpreted by others faced with the same diagnosis. It is our responsibility to preemptively and regularly correct biased or inaccurate perceptions of BCT. Several decades after the evidence came in, lay and professional media seem to register surprise by reports of excellent results of BCT. Is the "good news" story of BCT lacking sufficient drama to attract media attention compared to other more heroic measures?

Future breast cancer patients entering care must be better informed. One-third of Americans have never heard of a radiation oncologist or know what we do. Professional societies must address this gap appropriately. Social media as a patient education tool for informing healthy women about BCT should be exploited. Awareness of patient numeracy as a factor influencing comprehension of medical evidence should enhance our patient-physician discussions. Discussion of the costs of treatment options that confront patients with breast cancer is essential.

More than 230,000 new breast cancers will be diagnosed in Ameri-*Continued on Page 34*

HISTORY Continued from Page 33

can women this year; two-thirds with disease stages for which BCT is a preferred treatment. Most (>70 percent) will receive care in CoC-approved hospitals, including 500 National Accreditation Program for Breast Centers-approved programs. Radiation oncologists must be directly involved in the multidisciplinary evaluation and counseling of all patients. No alternative to our direct engagement in this critical phase of patient decision making will emerge. It is a professional responsibility that cannot be abrogated to non-radiation oncologists, however well intentioned. This goal will not be easily achieved in the consolidated health care systems that are forming. New strategies, including telemedicine approaches, to assure timely and direct patient interaction with a radiation oncologist may be necessary.

Most importantly, we must fully integrate into the processes defining the breast cancer management pathways adopted by our particular health care system and nationally. Absent such involvement, the future radiation oncology focus may be on the techniques employed to treat selectively referred patients rather than on patients themselves. While expert application of appropriate radiotherapeutic techniques is a compelling necessity, if that is our only role, BCT utilization will ebb to unacceptably low levels. Dramatic gains of the last half century in the remarkable ability to cure breast cancer with simultaneous cosmetic and esthetic preservation could be lost until a future time when BCT is again identified as high value care.

For more information on BCT, read the full version of this article at www. astro.org/astronews.

This article was submitted on behalf of the ASTRO History Committee.

SPECIALreport Continued from Page 8

The scientific oral and poster presentations will be engaging and informative, as always, with 2,580 abstract submissions received this year. The Plenary Session will highlight the highest impact studies, and will be followed by thoughtful commentary. The popular Clinical Trials Session, which also features important, highly rated, clinically related studies, will run unopposed again this year, along with two unopposed guidelines sessions.

In addition to the scientific and educational program, I encourage you

From the ABR Continued from Page 30

in any way burdensome and, in fact, are likely to improve the relevance of the exam and focus the study from being broad and diffuse to something narrower and more specific. Many of the new NCS questions will be simply answerable from personal clinical experience.

Examples of relevant NCS topics include:

- Bioethics obtaining consent to treat from an impaired patient, HIPAA guidelines and issues related to human research.
- Biostatistics significance and p-value, risk ratios, interpretation of randomized trials, and factors associated with meta-analyses.
- Patient safety appropriate patient identification, communication within the treatment team and root-cause analysis of errors.
- Quality assurance (QA) routine versus exceptional-circumstance QA, QA following equipment service, and the value and elements of peer review.

to take advantage of time in between sessions to network with colleagues and friends and to visit the Exhibit Hall to explore the latest radiation oncology techniques, services and publications available to you and your practice. Registration opens in mid-June. We look forward to your participation in ASTRO's 57th Annual Meeting. See you in San Antonio!

Dr. Minsky is professor of radiation oncology and holds the Frank T. McGraw Memorial Chair at MD Anderson Cancer Center in Houston. He welcomes comments on this column at astronews@ astro.org.

The ABR recognizes the anxiety that can be engendered by the addition of new and sometimes unfamiliar material to any examination. In anticipation of these concerns, there will be a panel discussion at the 2015 ASTRO Annual Meeting, which will present in detail much of the important information. Staff will also answer questions at the CE Central booth at the meeting. In addition, the study guides, when available, will form the basis from which the examination content will be drawn.

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- Initial Certification Radiation Oncology Study Guide. The American Board of Radiology website. http://theabr.org/ ic-ro-study
- Radiation Oncology MOC Study Guide. http://www.theabr.org/the-ABR/sites/all/themes/abr-media/pdf/ moc_ro_study.pdf

NROR Continued from Page 29

created Data Collection Forms to provide sites with an easy-to-use format of gathering data for manual entry.

"So far, the data collection forms have been a great resource in allowing us to see what data is needed beforehand so that we can manually enter any data that does not transfer over from the EMR via the data extraction tool. The only barrier has been the data extraction tool not always communicating with the EMR system and the Gateway, and/or vice versa," said Latrina Aupont, MPH, RN, a clinical research nurse manager at the Center for Radiation Therapy of Beverly Hills in Beverly Hills, California.

In this exploratory pilot, ASTRO sought to work with the OIS vendors and NROR IT vendors to optimize electronic data transfer; however, there has been only limited success due to limited resources and competing priorities.

As of March 31, 2015, 576 patients have been registered in NROR's Gateway system, and 253 complete patient records have been submitted for analysis. ASTRO will provide each participating physician with a Data Analysis Report, which will compare the individual physician rate to the total NROR rate for performance measures and patient statistics, including patient demographics, diagnosis and treatment. This report will identify patterns of care at various institutions and inform quality improvement efforts.

"The most rewarding aspect has been the opportunity to work closely with our PI and other participants to hear how they collect data and plan to use the information to benefit their quality of care programs," Aupont said. The NROR pilot has been instrumental in informing ASTRO's future decisions and endeavors focused on real-world, real-time data capture aimed at improving quality of care.

ASTRO on the Hill

Continued from Page 22

would provide a total budget request of \$33 billion. Additionally, ASTRO is urging prioritization of funding for NCI and for NCI's budget to receive at least a 10 percent increase to \$5.75 billion.

As part of the increased investment in radiation oncology research, ASTRO is encouraging Congress to urge NCI to work with radiation oncology experts and other cancer disciplines to determine a more appropriate funding level for radiation oncology projects within NCI's budget.

ASTRO staff also talked briefly about the impact the recently introduced 21st Century Cures legislation may have on research funding. The legislation, which was introduced by the House Energy and Commerce Committee in late January this year, includes reforms on a wide variety of topics, including Food and Drug Administration and National Institutes of Health regulations, Medicare coverage and coding policies, quality improvement and clinical data registries. ASTRO staff are reviewing the legislation and will likely submit comments urging the committee to include language in the final bill that would redirect more funding to radiation therapy research projects.

Preserve and increase funding and residency slots for graduate medical education

For the second year, ASTRO is advocating for preserved and increased graduate medical education (GME) funding and an increase in residency slots.

The President's FY 2016 budget proposed a 10 percent reduction to indirect medical education, which would cut funding for teaching hospitals by approximately \$16.3 billion over 10 years. Additionally, there is concern about the number of residency slots available. For the 2014-2015 academic year, 87 Accreditation Council for Graduate Medical Education (ACGME)accredited radiation oncology residency programs had 186 training positions for U.S. senior medical school students. In 2014, 20 of these students did not match into one of the programs.

The "ask" members took to the Hill this year was for Congress to support legislation that would increase the number of residency slots available each year, which would, in turn, increase the number of practicing physicians.

Target Safely

It has been five years since the launch of *Target Safely* in 2010, an ASTRO initiative to improve patient safety and reduce the chances of medical errors during radiation therapy treatments.

During Advocacy Day, ASTRO staff encouraged members to discuss *Target Safely* during their congressional meetings and emphasize ASTRO's achievements during the past five years to help improve patient safety.

Key elements of Target Safely include: 1) the development of **RO-ILS: Radiation Oncology Incident** Learning SystemTM, the first medical specialty society-sponsored incident learning system for radiation oncology; 2) the creation of APEx: Accreditation Program for Excellence®, ASTRO's practice accreditation program; 3) the opportunity for radiation oncology equipment vendors to test compatibility through Integrating the Healthcare Enterprise-Radiation Oncology (IHE-RO); 4) the expansion of educational programs to include courses on quality assurance and safety; and 5) the development of tools for cancer support organizations to provide cancer patients and caregivers for use in their discussions with their radiation oncologist. 🕂

JOURNALS

HIGHLIGHTS FROM PRACTICAL RADIATION ONCOLOGY

JANUARY-FEBRUARY 2015 Practice Patterns for Peer Review in Radiation Oncology

By Hoopes et al

ASTRO surveyed its physician members to establish current peer review practice patterns, to evaluate interest in recommendations for peer review and to establish a framework for future recommendations.

MARCH-APRIL 2015 Canadian Radiation Oncologists' Opinions Regarding Peer Review:

A National Survey By Hamilton et al

A 26-item anonymous survey was electronically distributed to all current practicing radiation oncologists in Canada through the Canadian Association of Radiation Oncologists to obtain their opinions regarding peer review.

FROM THE INTERNATIONAL JOUR-NAL OF RADIATION ONCOLOGY • BIOLOGY • PHYSICS

FEBRUARY 1, 2015

PSA Persistence After Radical Prostatectomy as a Predictor of Relapse-free and Overall Survival: 10-year Data of the ARO 96-02 Trial

By Wiegel et al

ARO 96-02 was a prospective clinical trial examining adjuvant and salvage radiation in node negative prostate cancer patients following prostatectomy. This secondary analysis looks at those men who never achieved an undetectable prostate-specific antigen after surgery and compares their salvage rates to the rates of those who did.



Nanoparticle-based Brachytherapy Spacers for Delivery of Localized Combined Chemoradiation Therapy By Kumar et al

The authors studied the concept of replacing normally inert prostate brachytherapy spacers with spacers tailored for the in situ release of drugeluting nanoparticles.

MARCH 1, 2015 Evaluation of FDG Uptake Methodology in Post-radiation Therapy Response Assessment for Head and Neck Squamous Carcinomas By Anderson et al

The authors assessed a novel methodology and showed that a kinetic imaging approach to FDG-PET/CT performed approximately three months after radiation can accurately differentiate malignant from nonmalignant tissues.

Prospective Phase 2 Trial of Reirradiation with SBRT Plus Cetuximab for Squamous Cell Carcinoma of the Head and Neck

By Vargo et al This phase 2 study evaluated stereotactic body radiation therapy plus cetuximab for unresectable locally recurrent, previously irradiated, squamous cell carcinoma of the head and neck. There appeared to be the potential for improved patient compliance and fewer treatment-related toxicities.

Single-fraction Regimens in Palliative Radiation Therapy for Bone Metastases Still Underutilized in U.S.

By Rutter et al

Many randomized trials have established single-fraction radiation therapy is an effective, cost-conscious means for palliating bone metastases. This study assessed trends in single-fraction treatment using the National Cancer Data Base.

RTOG 0424: Preliminary Results of Phase 2 Study of Temozolomide-based Chemoradiation Regimen for Highrisk, Low-grade Gliomas

By Fisher et al

There is emerging information that the addition of chemotherapy to radiation therapy has survival benefits for low-grade gliomas. RTOG 0424 is a phase 2 study of a high-risk, low-grade glioma subpopulation.

MARCH 15, 2015 SRS Alone for Patients with 4 or Fewer Brain Metastases

By Sahgal et al

This meta-analysis evaluates SRS alone versus whole-brain radiation therapy plus SRS in patients presenting with one to four brain metastases. The authors conclude that SRS alone is supported in patients with up to four brain metastases.

Metabolic Tumor Volume as Prognostic Imaging-based Biomarker for Head and Neck Cancer

By Schwartz et al

This report is a secondary study of RTOG 0522 that looks at the correlation between PET/CT findings pre- and post-treatment and cancer outcome.

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