Annual Meeting focuses on radiation oncology technology and biology
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PHOTOGRAPHS BY GALLERY D PHOTOGRAPHY
THE FIRST TIME I TRAVELED to San Francisco was as a very impressionable PGY-4 Harvard resident attending my first ASTRO meeting in 1994. Although my fondest and most vivid memories should have been centered on the outstanding science of the meeting and my first oral presentation, I am embarrassed to admit that I was a bit distracted by this amazing city, its rich wine country and the Varian evening event. I will never forget the scantily clad women on stage pretending to play the violin as back-up for some mediocre male singer … perhaps a failed attempt to mimic the epic Robert Palmer Addicted to Love video, but alas, an enduring memory of San Francisco and my first ASTRO.

Our present ASTRO meeting with its rich science and quality care offerings left little time for further tourist or festive endeavors, but I must mention a few.

Dr. Lynn Wilson, our outgoing Annual Meeting Scientific Committee Chair, who I thank for his many years of outstanding ASTRO service, hosted the first radiation oncology ‘celebrity’ ice hockey tournament. It was great fun to watch my good girlfriend, Laura Dawson, hip-check my Boston colleague, Ted Hong. Although, I did not capture this amazing feat on my iPhone, I have included an alternative shot of all the participants in full hockey garb.

Now for some ASTROnews editor disclosures. After all my previous chat about going to the Giants baseball game last issue, my main player contact has been in a long rehab for a concussion, so I sadly watched my Giants get shattered by the Dodgers on my hotel room television. However, to compensate for this loss, I managed to slip away from the meeting
for a few minutes to purchase a new pair of Jimmy Choo sparkly shoes to adorn my tired feet at the Gold Medal dinner.

While I have little recollection on the scientific data presented at the 1994 ASTRO Annual Meeting, I can share with you some personal highlights from this meeting. Dr. Bruce Haffty’s Presidential Symposium, “Local-regional Management of Breast Cancer: A Changing Paradigm,” was a wonderful success. As a rad onc who treats a fair amount of patients with breast cancer, this was an excellent review of the current practice-changing as well as evolving evidence-based data for the role of radiation in both the breast-conserving and post-mastectomy settings. I had to exit the Symposium an hour early to participate in a very interesting panel concerning innovative radiation oncology utilization and payment models. Dr. Carol Hahn, ASTRO’s Clinical Affairs and Quality Council Chair, introduced this session with a presentation on ASTRO’s next five Choosing Wisely® recommendations to ensure evidence-based, patient-centered quality radiation care. If you are curious as to how these recommendations were chosen, a work group with representation from ASTRO’s Health Policy, Government Relations, and Clinical Affairs and Quality Councils met to develop potential concepts (28), which were then narrowed down (to 9) and sent as a survey to ASTRO membership to rate the value and relevancy of each of the items and provide comments. Literature reviews were then conducted for the five Choosing Wisely items that were rated most highly from the survey, and the work group drafted verbiage, bullet points and references. The final items for submission were then approved by ASTRO’s Board of Directors, and submitted to the ABIM Foundation. For more information on ASTRO’s latest Choosing Wisely list, see the story on page 11.

The Clinical Trials and Plenary sessions were also outstanding. Noteworthy was a phase III trial from Spain, presented by Dr. Almudena Zapatero, for high-risk localized prostate cancer, randomizing patients following four months of neoadjuvant androgen deprivation (AD) and 78 Gy prostate radiation to observation versus long-term AD (additional Goserelin for 24 months). After a median follow-up of 63 months, the primary endpoint, five-year biochemical disease-free survival (BDFS), was significantly higher in the long-term AD group. Overall and metastasis-free survival were also superior in the long-term AD arm. Dr. Anthony D’Amico in his excellent discussion did question what is the optimal duration of post-radiation AD in review of the existing prospective data and in the interest of patient quality of life and the concern for late GU toxicity even with IMRT. Interestingly, investigators from Canada, reported by Dr. Abdenour Nabid, showed that patients receiving radiation for high-risk prostate cancer and then undergoing an 18-month course of AD recovered a normal testosterone level in a shorter amount of time compared to those who received a 36-month course of AD, as well as better quality of life as measured by the EORTC instruments. This secondary analysis was from a previously reported large randomized trial that demonstrated 18 months of AD to be equivalent to 24 months in terms of BDFS.

As the theme of this ASTRO meeting was “Targeting Cancer: Technology and Biology,” I would also like to share some highlights in this regard. The long-term results of RTOG 0236 confirmed excellent tumor control for T1-2N0M0 non-small cell lung cancer treated with stereotactic body radiation therapy to a dose of 54 Gy in three, 18 Gy fractions. At a median follow-up of four years (7.2 for surviving patients), only four of the 59 accrued patients had recurrences at the primary site, resulting in an estimated five-year primary tumor local control of 93 percent. Treatment-related grade 3 and 4 side effects were reported in only 15 and two patients, respectively.

For biology, radiation-induced anti-tumor immune response was an exciting theme. Dr. Andrew Sharabi described his group’s translational work combining radiation with anti-PD1 checkpoint blockade, which showed impressive tumor control in melanoma and breast cancer models. His data also suggested that radiation and anti-PD1 may affect local and systemic tumor control outside the radiation field, an intriguing and controversial concept known as the Abscopal Effect.

Overall, a huge thanks goes out to all who worked tirelessly to make this meeting such a success. I’m looking forward to seeing everyone next year in San Antonio!
SAN FRANCISCO SET THE STAGE as an exciting venue for ASTRO’s 56th Annual Meeting, held September 14-17, 2014, at the Moscone Center. The theme of this year’s meeting, “Targeting Cancer: Technology and Biology,” provided an opportunity for our members to hear about all of the latest developments in radiation oncology from both a biology and technology perspective, to view the latest products available in the expansive Exhibit Hall and to network with colleagues and exchange ideas on how these latest developments influence practice and patient care.

Throughout the meeting, participants were able to take advantage of a broad variety of ASTRO products, including CME, Self-Assessment Modules and practice improvement activities that contribute to Maintenance of Certification and continuing education. Also highlighted at this year’s meeting was the recently launched RO-ILS: Radiation Oncology Incident Learning System™, which provides members an opportunity to participate in a nationwide radiation oncology incident learning system, and an update on the status of ASTRO’s Accreditation Program for Excellence (APEx). Both of these programs will enhance safety and quality patient care, while also providing an opportunity to fulfill elements of Maintenance of Certification.

Forecasting the near-record attendance at this year’s meeting with 11,970 attendees was a record number of 2,874 abstracts submitted. The scientific abstracts were presented in the traditional oral paper sessions, posters and a newly introduced digital poster discussion format. The new digital poster discussion format was well attended and enthusiastically embraced by the participants. In addition to these sessions, 20 panels and 50 educational sessions, spanning topics ranging from multidisciplinary cancer care, basic and translational biology, novel technology, physics, patient safety, quality and patient outcomes provided a broad variety of educational activities for our membership and guests.

On Sunday morning, Dr. Richard Hoppe introduced attendees to the exciting opportunities San Francisco has to offer, leading into the Presidential Symposium, “Local-regional Management of Breast Cancer: A Changing Paradigm,” moderated by Drs. Jay Harris and Tom Buchholz. The Symposium was divided into three sessions: local management of breast cancer; management of breast cancer after preoperative systemic therapy; and the regional management of breast cancer. These general topics reflect major advances in our approach to the local-regional management of breast cancer based on recent developments in technology and biology, clinical trials and emerging clinical data. The Symposium was well attended and enthusiastically embraced by the participants.
My Presidential Address on Monday, “30 Years in Breast Radiation Oncology: 1984-2014 – Back to the Future,” kept with the topic of breast cancer. I focused on how the local-regional management of breast cancer has evolved during the 30 years since I graduated from medical school and matched in radiation oncology, noting what has changed, what remains the same and future directions. Throughout, I emphasized how clinical trials past, present and future have influenced our practice.

The most highly rated abstracts were presented in the Clinical Trials Session on Sunday and the Plenary Session on Monday, both of which were unopposed sessions allowing all participants to view these important studies and trials shaping our specialty. The Plenary Session included several landmark studies that provided new information that is likely to influence practice. This year the Plenary also included a novel basic/translational biology study, highlighting exciting data demonstrating the potential for combining radiation with immunotherapy in the fight against cancer. A panel focusing on the integration of radiation and immunotherapy was also held on Sunday, emphasizing the exciting potential of this new direction for radiation oncology.

Reflecting ASTRO’s international presence, this group’s attendance was impressive with 2,346 participants this year. In addition to the Sunday morning International Attendees Welcome Breakfast, two joint sessions were conducted in collaboration with ESTRO. The Best of ESTRO at ASTRO held on Sunday afternoon featured highlights from ESTRO’s 2014 meeting in Vienna, and a Joint ASTRO-ESTRO symposium on current challenges in breast cancer on Monday was co-moderated by ESTRO’s President Dr. Philip PoORTmans and myself.

Dr. Hedvig Hricak, chair of the Department of Radiology at Memorial Sloan Kettering Cancer Center, led off our keynote speakers on Monday with an inspiring lecture highlighting novel approaches to oncologic imaging, integrating both the biology and technology themes of the meeting. The theme of biology and how novel targeted therapy is shaping oncology and providing new directions for basic, translational and clinical studies was further emphasized in Tuesday’s keynote, delivered by Dr. Frank McCormick of the University of California San Francisco. The keynote on Wednesday was delivered by Dr. Sidney Dekker, professor and director of the Safety Science Innovation Lab at Griffith University in Australia. His dynamic and insightful address, “Human Error and Just Culture,” tied in nicely with ASTRO’s recently launched RO-ILS initiative in patient safety.

At last year’s meeting, ASTRO introduced its first Choosing Wisely® list, introducing five targeted treatment options that ASTRO recommends for detailed patient-physician discussion. This list is part of the national Choosing Wisely® campaign launched by the ABIM Foundation, aimed at ensuring that appropriate care is delivered based on available evidence and the individual patient’s situation. ASTRO is one of more than 60 medical societies participating in this campaign. This year ASTRO released a second list of five items. These initiatives directly impact delivery of appropriate, evidence-based patient care while maintaining high quality and reducing overtreatment and overutilization of our valuable resources.

The Annual Meeting also provides our Society with the opportunity to honor a number of individuals for their contributions. Congratulations to our Annual Meeting Abstract Award recipients, our new class of 30 ASTRO Fellows, our Survivor Circle Award Winner Jasan Zimmerman and our 2014 Honorary Member Dr. Angelita Habr-Gama. ASTRO’s highest honor is, of course, our Gold Medal, bestowed this year upon distinguished leaders Drs. Mary Gospodarowicz, Leonard Gunderson and Nancy Tarbell for their substantial contributions to and impact on our specialty.

It was indeed a successful meeting in San Francisco and, for me, the highlight of my professional career. I look forward to seeing you all at our 57th Annual Meeting, October 18-21, 2015, at the Henry B. González Convention Center in San Antonio.

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 his editorial at astronews@astro.org.
THE MONTHS OF FEBRUARY AND MARCH are an interesting time for radiation oncology residents. With holidays long gone, life at work is typically busy. However, two dates play strongly in their mind; the deadline for ASTRO Annual Meeting submissions and the day of in-service examinations, though the former steals the show. I have always believed that the science of oncology gallops in the two to three months prior to the ASTRO submission deadline. This is when residents and fellows are academically most active, and scientific ideas are being pushed in full gear to develop into abstracts, most often at the last minute. I have been personally guilty of this last-minute rush at times. But a closer look at the scientific program makes you realize that research projects with months, maybe years, of hard work behind them are more likely to lead to successful and high-impact ASTRO presentations.

The Annual Meeting itself can be overwhelming, especially when it’s your first ASTRO. I remember being completely lost during my first ASTRO. I came in hoping to attend all educational sessions, see all the posters and also spend quality time in the Exhibit Hall. But all I managed to do was feel disoriented. A huge convention center did not make things easy either. In retrospect, I should have known from my upbringing that only a slow, stepwise approach makes an excellent “Indian curry.”

Using the benefit of hindsight, I believe the key to getting the most out of the Annual Meeting is to plan it based on the residency year. Medical students (thanks to ARRO’s initiatives, students increasingly represent a visible population at ASTRO), PGY-3 and PGY-4 residents would benefit from attending the ARRO Annual Seminar on the Saturday of the meeting. This is an excellent avenue to meet other residents in addition to listening to excellent sessions that the ARRO Executive Committee organizes. After a long day of sessions, it’s great to unwind at the ARRO reception and learn more about other residency programs.

Despite the evening parties, it is worthwhile for residents to attend the early morning education sessions. With so many different disease sites being discussed, it is easy to find something that interests everyone. Challenging case sessions are great for more senior residents and practitioners. For the remaining days, PGY-3s may benefit from attending at least a few oral presentations in the scientific sessions. The goal of this is to get an idea regarding the kind of research topics being selected for oral presentation. A spot on the podium can definitely boost the prospects of appearing bright during job interviews as PGY-4 or PGY-5.

With only 15 percent of roughly 2,400 abstract submissions selected for oral presentation, it is important to start planning ahead, so that next summer when you see the much awaited email from ASTRO, you open it with a big smile. An hour or two viewing the posters

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Exhibit Hall. The Exhibit Hall offers excellent educational avenues to learn how better to modernize the current practice. I would especially recommend this for residents interested in transitioning to community practice, for the PGY-5s who have already managed to finalize a job even before coming to ASTRO and, of course, for early career faculty.

My own personal journey was shaky starting up, as it took two consecutive years of accepted submissions before getting funding support to actually attend a meeting. Finally when I did attend my first ASTRO as a PGY-3, I returned back thoroughly overwhelmed by the breadth of ASTRO’s Annual Meeting. Gaining experience from the previous ASTRO, garnished with some luck and creativity, I was fortunate to work on a series of excellent research projects in the last two years of residency that lead to two submissions as a PGY-4, one of which got selected for an oral presentation, and four submissions as a PGY-5 that lead to one second author oral, but most importantly, a first author digital poster with the honor of being selected for a Resident Digital Poster Recognition Award.

Connections developed at ASTRO also opened the doors to my current position as faculty and introduced me to my future collaborators. And as I came into San Francisco this year, finally having an “Abstract Award Winner” ribbon on my badge, I perceived the true essence of ASTRO’s Annual Meeting. The core base continues to be advancing patient outcomes and patient quality of life through scientific advances, but the critical spices that give a unique flavor are the professional collaborations and personal friendships.

Dr. Mohindra is a former chief resident at the University of Wisconsin in Madison, Wisconsin and is currently assistant professor at the University of Maryland in Baltimore. He was selected for the 2014 Resident Digital Poster Recognition Award at ASTRO’s 56th Annual Meeting.
ASTRO's second list of *Five Things Physicians and Patients Should Question*, part of the *Choosing Wisely*® campaign, was released on Sunday, September 14, and flyers with the 2013 and 2014 lists were available at the booth. The goal of the campaign is to promote conversations between physicians and patients before treatment.

Attendees had a chance to pick up sample copies of the popular patient brochures, including the newly updated brochures, *Radiation Therapy for Breast Cancer*, *Radiation Therapy for Prostate Cancer* and *Radiation Therapy for Lung Cancer*. The new patient video, *Radiation Therapy for Breast Cancer*, was also available for preview on the Resource Center computers. This nine-and-a-half-minute video gives a general overview of radiation therapy treatment for breast cancer. Patient brochures and videos, available for purchase on ASTRO’s website or free from RTAnswers.org, are a key part of ASTRO’s expanding patient advocacy resources.

Several nonmember attendees took advantage of the free gift offer and received an embossed ASTRO tablet cover with their on-site application for ASTRO membership. A professional photographer was on hand again this year in the Resource Center taking photos of many ASTRO members. These members received copies of their photos on complimentary USB flash drives, and their photos will be uploaded to the ROhub, ASTRO’s private online member community. Accessible through the ASTRO website, ROhub allows members to make connections, share information and documents within restricted online communities, and also provides open community forums for members, to encourage dialog and networking on a variety of topics.

The Survivor Circle, created in 2003, was again located in the Resource Center. The Survivor Circle honors cancer survivors and raises funds for local patient support organizations through the popular Passport Program. This year’s donations benefited the Breast and Gyn Health Project and Kids Konnected.
ASTRO releases second list of five radiation oncology treatments to question as part of national Choosing Wisely® campaign

ON SUNDAY, SEPTEMBER 14, ASTRO released its second list of five radiation oncology-specific treatments that are commonly ordered but may not always be appropriate as part of the national Choosing Wisely® campaign, an initiative of the ABIM Foundation. The list identifies five targeted treatment options that ASTRO recommends for detailed patient-physician discussion before being prescribed.

ASTRO’s five recommendations are:

• Don’t recommend radiation following hysterectomy for endometrial cancer patients with low risk disease.
• Don’t routinely offer radiation therapy for patients who have resected non-small cell lung cancer negative margins N0-1 disease.
• Don’t initiate non-curative radiation therapy without defining the goals of treatment with the patient and considering palliative care referral.
• Don’t routinely recommend follow up mammograms more often than annually for women who have had radiotherapy following breast conserving surgery.
• Don’t routinely add adjuvant whole brain radiation therapy to stereotactic radiosurgery for limited brain metastases.

For more information about ASTRO’s involvement in the Choosing Wisely campaign, visit www.astro.org/choosingwisely.

Sessions on safety help demonstrate value of RO-ILS

SAFETY-RELATED SESSIONS at ASTRO’s Annual Meeting in San Francisco highlighted the value of participating in RO-ILS: Radiation Oncology Incident Learning System™.

RO-ILS is the only medical specialty-sponsored incident learning system for radiation oncology. Developed under the auspices of the Patient Safety and Quality Improvement Act of 2005, RO-ILS facilitates safer and higher quality care in radiation oncology by providing a mechanism for shared learning in a secure and non-punitive environment. RO-ILS became available to the full radiation oncology community on June 19, 2014.

The RO-ILS Luncheon, held on Sunday, September 14, discussed lessons learned from two medical specialty societies and patient safety organizations (PSOs). Carrie Bosela, RN, from the Society for Vascular Surgery Patient Safety Organization, and Donald Tyler, MD, MBA, from Wake Up Safe, were on hand to share insights into how the implementation of a PSO made their respective specialties safer and more effective.

The Society for Vascular Surgery Patient Safety Organization has grown to 300 participating centers since becoming federally listed in February 2011. Bosela highlighted that patient safety data collected within their PSO helped identify best practices and other improvement opportunities for participating institutions.

Wake Up Safe, a component of The Pediatric Anesthesia Quality Improvement Initiative, has grown to 26 participating institutions and 1,763 submitted events since becoming a federally listed PSO three years ago. During its development, Wake Up Safe created initial quality measures, including the timely administration of antibiotics and maintenance of patients’ normal body temperature.

The RO-ILS educational session on Wednesday, September 17 included Suzanne Evans, MD; Gary Ezzell, PhD; Eric Ford, PhD; and Lawrence Marks, MD, FASTRO, as panelists. Their presentations focused on the value of RO-ILS as an instrument to address the major unmet clinical need for a national system to collect and share information.
Important update on radiation oncology coding and reimbursement

ON SUNDAY, SEPTEMBER 14, ASTRO CPT Advisor David C. Beyer, MD, FASTRO, and ASTRO RUC Advisor Michael Kuettel, MD, MBA, PhD, FASTRO, provided an important update on radiation oncology coding and reimbursement at the Annual Meeting’s Health Policy Socioeconomic Luncheon. They presented new and revised 2015 CPT codes, as well as reimbursement proposals in the 2015 Medicare Physician Fee Schedule (MPFS) and Hospital Outpatient Prospective Payment System (OPPS) proposed rules.

On August 28, 2014, the American Medical Association released the 2015 CPT code changes that will go into effect January 1, 2015. There were several significant changes relevant to radiation oncology, including a rewrite of all the external beam treatment delivery codes and the creation of new IMRT codes for different levels of complexity. A new, technology-independent IGRT code has also been created, and the brachytherapy and teletherapy planning codes have been updated and revised to include basic dosimetry calculations. More detail and information on these coding changes are available on ASTRO’s website at www.astro.org/2015-CPT-Update-for-Radiation-Oncology.aspx.

On July 3, 2014, the Centers for Medicare and Medicaid Services (CMS) issued the 2015 MPFS and OPPS proposed rules. In the 2015 MPFS proposed rule, radiation oncology faces the highest cuts of all specialties, the impact ranges from negative 4 percent to negative 8 percent, with an estimated 6 percent cut to freestanding radiation oncology centers. The most significant proposal contributing to these payment cuts is the removal of the radiation treatment vault as a direct practice expense input from radiation treatment procedure codes.

ASTRO’s comment letters to CMS on the 2015 MPFS and OPPS proposed rules are available on ASTRO’s website at www.astro.org/Practice-Management/Reimbursement/Medicare/Index.aspx. These proposals are expected to be finalized in November. ASTRO will host a Final Rules Webinar on Thursday, December 11 at 3:00 p.m. Eastern time to inform members on the finalized changes and impact on radiation oncology for 2015 reimbursements. More details are available on ASTRO’s website.

The session is available in the Virtual Meeting.

HEALTH POLICY

THANKING THE ASTRO BOARD OF DIRECTORS

ASTRO recognized the members of the 2013-2014 Board of Directors during the Awards Ceremony on Tuesday, September 16.
Attendees visiting the Exhibit Hall at ASTRO’s 56th Annual Meeting were treated to a fantastic display of products and services in radiation oncology and cancer care. We’d like to take this opportunity to recognize some of our Corporate Ambassadors and Annual Meeting supporters.

1. Accuray – James Galvin, DSc, FASTRO, and Bruce D. Minsky, MD, FASTRO, thank Gregory E. Lichtwardt, Andy Kirkpatrick, Lionel Hadjadjeba, Kelly J. Londy, Joshua H. Levine, Calvin R. Maurer, Robert W. Hill and Professor Eric F. Lartigau for their Corporate Ambassadorship.

2. Brainlab – Rahul Parikh, MD, Stephen Milito, MD, Colleen A.F. Lawton, MD, FASTRO, and Amar Rewari, MD, MBA, thank Rainer Birkenbach, Stephan Froehlich, Jason Chandler and Sean Clark for their Corporate Ambassadorship.

3. Bayer Healthcare – Ron Allison, MD, Tim R. Williams, MD, FASTRO, Francine Halberg, MD, FASTRO, and Zejian Liu, PhD, meet with Gary Lunger, Ross Downing and Jeff Bova in thanks for their Corporate Ambassadorship.

4. CIVCO Medical Solutions – James Galvin, DSc, FASTRO, Bruce D. Minsky, MD, FASTRO, Tim R. Williams, MD, FASTRO, and Laura Thevenot thank Mike Marshall, Nat Geissel, Hap Peterson, David Schultz, Scott Richardson and Charles Klasson for their Bronze level support.

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5. Elekta – Stephen Milito, MD, Amar Rewari, MD, MBA, Colleen A.F. Lawton, MD, FASTRO, Tim R. Williams, MD, FASTRO, and Rahul Parikh, MD, thank Jay Hoey, Laurent Leksell and Niklas Savander for their Corporate Ambassadorship.

6. IBA – Zejian Liu, PhD, Tim R. Williams MD, FASTRO, Francine Halberg, MD, FASTRO, and Ron Allison, MD, meet Jean-Marc Bothy, Pierre Mottet, Yves Jongen and Olivier Legrain in thanks for their Corporate Ambassadorship.

7. Mevion Medical Systems – Stephen Milito, MD, Colleen A.F. Lawton, MD, FASTRO, Amar Rewari, MD, MBA, and Rahul Parikh, MD, meet with Skip Rosenthal, PhD, Michael Cogswell, Lionel Bouchet, PhD, Joseph K. Jachinowski, Don Melson and George Rugg in thanks for their Gold level support.


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THANK YOU TO OUR 2014 ASTRO AMBASSADORS AND ANNUAL MEETING SUPPORTERS

9. **Sun Nuclear** – Zejian Liu, PhD, Ron Allison, MD, Tim R. Williams, MD, FASTRO, and Francine Halberg, MD, FASTRO, thank Jennifer Hamilton, Stacey Geier and Stephen Rose for their Copper level support.

10. **Varian Medical Systems** – Amar Rewari, MD, MBA, Stephen Milito, MD, Rahul Parikh, MD, Colleen A.F. Lawton, MD, FASTRO, and Tim R. Williams, MD, FASTRO, thank Kolleen T. Kennedy, Dow Wilson and Chris Toth for their Corporate Ambassadorship.

11. **Vertual** – James Galvin, DSc, FASTRO, Tim R. Williams, MD, FASTRO, Bruce D. Minsky, MD, FASTRO, and Laura Thevenot thank James Ward, Arthur Kay, Andy Beavis, Thomas Swayne and Jan Antons for their Copper level support.

12. **Viewray** – James Galvin, DSc, FASTRO, Bruce D. Minsky, MD, FASTRO, and Laura Thevenot thank Gopinath Kuduvalli, PhD, James F. Dempsey, PhD, Michael Brandt, Mike Saracen, Prabha- kar Tripuraneni, MD, FASTRO, Chris A. Raanes, Stephen J. Strunk and Garth M. Nobis for their Silver level support.
ASTRO president addresses the evolution of breast cancer treatment

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


Dr. Haffty discussed the evolution in the treatment of breast cancer during the past 30 years, from when he matched in radiation oncology to today, highlighting what has changed, what has not changed and projections for the future.

He explained how clinical research and trials have shaped the practice of radiation oncology, particularly in breast cancer treatment. Dr. Haffty focused on the past, present and future of ductal carcinoma in situ (DCIS), early-stage invasive breast cancer and regional nodal management.

Dr. Haffty provided background on the changes in the systemic treatment of breast cancer during the past 30 years.

“The systemic treatment of breast cancer has evolved dramatically during the past 30 years,” he said.

For DCIS in 1984, which was represented in less than 5 percent of breast cancers at the time, mastectomy was the treatment of choice, the use of tamoxifen or hormonal therapy was not considered and estrogen receptors and other molecular markers were not routinely obtained or used in decisions about treatment, Dr Haffty explained.

Now, he added, DCIS represents 20 to 30 percent of breast cancers with the treatment of choice being lumpectomy with radiation therapy and lumpectomy without radiation therapy for select patients. In addition, the use of tamoxifen or hormonal therapy is routinely recommended in estrogen receptor-positive cases.

Dr. Haffty questioned whether the field has gone backward, and said, “If the use and frequency of screening mammography decreases, we will likely see a decrease in the percentage of patients diagnosed with DCIS and a corresponding increase in invasive cancers.”

In 1984, mastectomy was the treatment of choice for early-stage breast cancer, with breast-conserving surgery combined with radiation therapy as an “experimental” option, he explained.

Currently, for early-stage breast cancer, lumpectomy with radiation therapy is the treatment of choice. He added that patients now have alternatives to standard whole breast radiation therapy, including accelerated partial breast irradiation, balloon-based brachytherapy and intraoperative radiation therapy.

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“The systemic treatment of breast cancer has evolved dramatically during the past 30 years.”
“Radiation techniques have been refined substantially with 3-D planning, resulting in substantially lower doses to the heart and lung.”

Dr. Haffty said that the future of treatment for early-stage breast cancer includes “profiling tumors with the elimination of radiation therapy in selected patients, the replacement of lumpectomy with radiosurgical approaches and even more aggressive hypofractionation.”

Dr. Haffty looked at regional nodal management from three perspectives: management of the clinically negative axilla, management of the pathologically positive axilla and management of the clinically positive axilla/locally advanced breast cancer.

He explained that the complete or extensive dissection of the axillary was routine for clinically negative axilla in 1984. Now, sentinel node sampling is the standard procedure, and axillary dissections are eliminated if the sentinel node is negative. “The future of management of the axilla includes refined imaging techniques in combination with molecular profiling of tumors to assess the risk of disease in the axilla,” Dr. Haffty said. “Treatment of the axilla and nodes will only occur in patients who are at risk based on molecular profiling and novel imaging.”

The standard treatment of pathologically node positive breast cancer in 1984 was full extensive nodal dissection and extensive nodal irradiation, he said. Now, sentinel node positive patients can be spared nodal dissection and observed or treated with axillary radiation.

“Radiation techniques have been refined substantially with 3-D planning, resulting in substantially lower doses to the heart and lung,” Dr. Haffty said.

In 1984, management of the clinically positive axilla was typically treated with surgery for operable breast cancer, and extensive nodal dissection was used for nodal control. Today, preoperative systemic therapy is commonly used, yielding high rates of complete response in the breast and regional nodes, and breast-conserving surgery with radiation therapy is routinely used to achieve a response with a cosmetically acceptable result.

“In the future, selected patients with a good or complete response may avoid postmastectomy radiation therapy or regional nodal irradiation. Patients even remaining sentinel node positive can avoid complete nodal dissection,” Dr. Haffty said.

He cited several lessons learned during the past 30 years, including that local-regional control of disease matters and that despite surgical removal of gross disease and aggressive systemic therapy, radiation is still required in a majority of cases to control subclinical microscopic local-regional disease.

“Given the known biology of cancer and the importance of eradicating subclinical microscopic disease, radiation therapy will remain a critical component of cancer treatment for at least the next 30 years as it has for the last 30 years,” Dr. Haffty said. “The role of radiation in controlling local disease is likely to become even more critical as systemic therapy becomes more effective in controlling systemic disease. However, we must remain open to alternative strategies, including the de-escalation or elimination of radiation through well-designed prospective clinical trials.”

Dr. Haffty concluded his address with the message that the “future is bright for radiation oncology.”

“Our patients are well served by the treatment we deliver, and ongoing and future clinical and translational research will continue to improve outcomes and the quality of life for patients undergoing radiation treatment,” he said.

Dr. Haffty's address can be viewed in its entirety in the Virtual Meeting.
Keynote address highlights advances in oncologic imaging

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

HEDVIG HRICAK, MD, PHD, chair of the Department of Radiology at Memorial Sloan Kettering Cancer Center in New York, delivered the first keynote address during ASTRO’s 56th Annual Meeting on Monday, September 15.

Dr. Hricak’s address, “New Horizons in Oncologic Imaging – Unraveling Pathways to Synergy,” focused on oncologic imaging and radiogenomics and the emerging areas of potential synergy between radiology and radiation oncology, as well as the need for interdisciplinary collaboration to overcome obstacles to progress.

“We are witnessing an unprecedented convergence of life sciences, physical science and engineering,” she said. “As a result of advances in imaging, we can talk about offering precision tumor targeting and biological properties.”

Dr. Hricak’s address focused on five topics and objectives: 1) tumor localization and tumor volume; 2) tumor biology; 3) monitoring tumor biological response; 4) nodal metastasis; and 5) distant metastasis.

She used prostate cancer as an example of how advances in technology and oncologic imaging have allowed for greater definition of zones and better tumor definition because the normal anatomy is so well-defined.

Dr. Hricak also compared the use of T2WI (T2 weighted imaging) and DWI (diffused weighted imaging) to provide the ability to better detect tumors, adding that more proficiency is needed as technology advances.

“The more technology advances, the greater the complexity it has and the greater expertise that is required to get the most out of the technology,” Dr. Hricak said. “We need to work together, particularly in radiation oncology, to get the most from the technology we have.”

Dr. Hricak encouraged the use of molecular imaging to offer better treatment options to patients and the development of new biosignature tools to visualize tumor heterogeneity.

“As we think to combine radiation therapy with modern targeted therapy, we need to understand tumor heterogeneity,” she said. “Precision medicine includes an understanding of tumor morphology and biology to provide biomarker-driven, evidence-based radiation therapy treatment.”

She used the example of detecting lymph node metastases with the creation of cross-sectional imaging that improved imaging, but not enough to precisely target. Dr. Hricak explained the advances in smart probes that are improving the ability to detect lymph node metastases.

“Knowing the extent of the disease is the essence of the future of truly precise targeting,” Dr. Hricak said.

She added that part of the challenge in using new technology is the lack of experts in oncologic imaging, and also emphasized the need for imaging guidelines for radiation oncology.

“We have technology that’s ahead of our regular practice,” Dr. Hricak said. “We need to look ahead and know we will improve patient outcomes tomorrow.”

Dr. Hricak delivers a keynote address on oncologic imaging during ASTRO’s 56th Annual Meeting.
Keynote speaker discusses role of K-Ras protein in human cancers

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

FRANK MCCORMICK, PHD, FRS, professor emeritus and the David A. Wood Distinguished Professor of Tumor Biology and Cancer Research of the University of California at San Francisco Helen Diller Family Comprehensive Cancer Center, continued the Annual Meeting emphasis on biology with his keynote address, “New Approaches to Targeting K-Ras,” on Tuesday, September 16.

Dr. McCormick’s keynote address provided background information on the RAS protein and why it is so difficult to find drugs to target this particular protein.

“While we understand how Ras works on a molecular level, we have failed to find drugs that target the Ras protein directly and have failed to develop therapies to target Ras-driven cancers,” he said. “These cancers remain the most difficult to treat using any kind of protocol. We need a better understanding of the system to come up with some new, innovative ways of targeting this problem.”

Dr. McCormick explained how the Ras protein transmits receptors to cells and when Ras gets stuck in an active state it leads to Ras-driven cancers.

“Having the protein locked in the active state is at the heart of maybe 20 to 30 percent of all human cancers,” he said. “It’s a huge problem, but a rather simple machine, yet trying to fix this machine has proven much more difficult than we expected.”

Dr. McCormick added that targeting Ras-driven cancers is more difficult because Ras controls more than one protein. Researchers need to determine which pathways are important to shut down in order to target the cancer. He also discussed some specific studies that are targeting the “downstream of Ras” because Ras locked in the active state does not respond to upstream signals.

He explained research interests in neurofibromin because the protein puts Ras in the active state, and the loss of neurofibromin 1 leads to hyperactive Ras, which is a difficult problem to address.

“We think it [neurofibromin 1] senses something really fundamental in cells, and it regulates Ras accordingly, but we can’t figure out what that is,” Dr. McCormick said. “We think if we find therapies to target hyperactive Ras, we could treat neurofibromatosis.”

He also shared information on how many human tumors are caused by “mutant Ras” with Ras involved in 95 percent of pancreatic tumors, 45 percent of colorectal tumors and 35 percent of lung tumors. Melanoma, bladder cancer and thyroid cancer can also have Ras involvement.

Dr. McCormick explained that K-Ras is a more malignant protein, is better at forming tumors and is more difficult to treat, in part because K-Ras binds to calmodulin.

“New understanding and insights into K-Ras can lead to new ways of targeting K-Ras-driven cancers,” he said. “We are hopeful we can get a handle on these types of cancers through current ongoing research.”

Dr. McCormick’s keynote address can be viewed in its entirety in the Virtual Meeting.

“New understanding and insights into K-Ras can lead to new ways of targeting K-Ras-driven cancers.”
SIDNEY DEKKER, PHD, MA, MSC, professor and director of the Safety Science Innovation Lab at Griffith University in Brisbane, Australia, spoke to Annual Meeting attendees about “Human Error and Just Culture” during his keynote address on Wednesday, September 17.

Dr. Dekker is known for his groundbreaking work in human factors and safety, and is the best-selling author of several books on patient safety and just culture. His keynote address focused on the need to establish a culture of safety, a culture of learning and a culture of justice.

In order to address the safety problem, according to Dr. Dekker, there needs to be trust, especially when it comes to reporting safety events.

“To get people to report [safety events], you need trust [from them] that it won’t be used against them,” he said. “But trust is not enough to keep people reporting. Your organization needs to do something with the reporting, and make sure people are aware you are using the reports and doing something with the information.”

Dr. Dekker emphasized that one of the hindrances to creating a culture of safety is oversimplifying the safety problem in thinking that inserting another “layer of defense” will fix the issue.

“Oversimplification is the idea that you can simply put in one more barrier in a social system and think that is manipulating just one variable in an otherwise fixed and stable system. This is an illusion,” Dr. Dekker said. “Inserting an extra layer of defense is not independent of other layers of defense. It creates all kinds of reverberations across the social system. The safety problem is hard because it relies on people and these social dynamics.”

For Dr. Dekker, a culture of safety is a culture that allows the boss or supervisor to hear bad news. He also stressed that words matter when discussing bad news, explaining that using words like “issues” and “matters” turn bad news into “normal news.”

“Normal news is not worthy of learning, not worthy of reflection,” he said. “We need to first, and most importantly, acknowledge that we do good things and bad things. Bad news is good because those are ‘free lessons.’”

Dr. Dekker also spoke about creating a culture of learning and explained that human error is connected to the features of people’s tools rather than a person making a mistake.

“Human error forces us not to ask who is responsible but what is responsible for going wrong,” he said. “If we start asking that question, there will be much more learning to do.”

Dr. Dekker emphasized that people believe safety problems can be solved by putting in rules, sanctionable errors and violations, but that does not remove the complexities, conflicts and constraints that are placed on people when they are using specific tools to complete a task or job.

“We need to look at what creates the error and ask, ‘Given what has happened, what do we do now?’ That forward-looking accountability recognizes that it is not about punishment or sanction, but it is about learning,” he said.

The third element Dr. Dekker addressed was creating a culture of justice to encourage a climate where people feel free to talk about problems they see or experience. He divided a culture of justice into two ideas: natural justice and an objective judge.

“Natural justice is based on a jury of peers. Don’t let the line be drawn by someone that does not know how the work is done,” he said. “You also need an objective judge, someone who has no stake in the outcome. If there is no objective judge, there is no natural justice and that will hinder any culture where people feel free to talk about the problems they see or experience.”

Dr. Dekker encouraged the audience to think of justice as restorative rather than retributive to help rebuild relationships and trust and to meet “hurt with healing rather than meeting hurt with hurt.”

“Error is systematically connected to the tools and tasks with which you give people to work,” he said. “The safety problem is hard, but it’s not impossible.”

Dr. Dekker’s keynote address can be viewed in its entirety in the Virtual Meeting.
ARRO Annual Seminar focused on issues facing radiation oncology residents

BY NIMA NABAVIZADEH, MD, ON BEHALF OF THE ARRO EXECUTIVE COMMITTEE

ON SATURDAY, SEPTEMBER 13, the Association of Residents in Radiation Oncology (ARRO) Annual Seminar was held at San Francisco’s Moscone Center with record-breaking resident attendance. The day was filled with informative and provocative presentations on topics pertinent to radiation oncology residency training.

Kosj Yamaoh, MD, a resident at Thomas Jefferson University and Hospitals and a 2014 Global Health Scholars awardee, shared his recent experience working in Accra, Ghana and discussed strategies to improve prostate cancer treatment delivery and outcomes in Ghana, with an emphasis to move past “onco-tourism.”

Tracy Sherertz, MD, of Case Western Reserve University and a 2012 Global Health Scholar awardee, shared her experience in Cambodia and discussed how to design a radiation oncology related project in a developing nation. Dr. Sherertz’s talk was opportune, as the ASTRO/ARRO Global Health Scholars Program is currently accepting applications for the 2015 scholarship, which has increased its funding to awards of $2,500 each.

Bhisham Chera, MD, assistant professor and director of patient safety and quality at the University of North Carolina, shared his insight regarding radiation oncologist engagement in quality and safety leadership and provided many tangible examples on how this is implemented at his institution and nationally.

Dr. Chera encouraged residents to always prioritize quality and safety. He expressed that physicians hold a unique and essential position in the expanding complexity of the broader health care system and the value proposition of cancer care based on outcome measurements.

Dr. Hahn presented an interactive and stimulating talk on the rapid adoption of new technologies within our field (including IMRT and proton therapy), their subsequent economic impact within the health care system and the value proposition of cancer care based on outcome measurements.

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system and that substantial improvements in quality and safety can only be set forward with robust physician involvement.

The keynote speaker for the ARRO Annual Seminar was Stephen Hahn, MD, FASTRO, chair of the Department of Radiation Oncology at the University of Pennsylvania. Dr. Hahn presented an interactive and stimulating talk on the rapid adoption of new technologies within our field (including IMRT and proton therapy), their subsequent economic impact within the health care system and the value proposition of cancer care based on outcome measurements. He also discussed and delineated “reference pricing” for proton therapy, which establishes a common level of payment for therapies with similar outcomes. Dr. Hahn’s talk concluded by challenging residents to ensure continued innovation and improved patient outcomes within our field.

Lisa Kachnic, MD, FASTRO, chair of the Department of Radiation Oncology at Boston Medical Center, moderated the annual job panel, which featured young radiation oncologists across the country that recently navigated the daunting job application and interview process. Panelists included Gautam Prasad, MD, PhD, Marka Crittenden, MD, PhD, Aaron Spalding, MD, PhD, Siavash Jabbari, MD, and Albert Chang, MD, PhD. Job positions for this year’s panelists ranged from private practice to academics to hybrid arrangements combining basic science research with private practice clinical work.

As many residents are interested in participating in clinical trials, Charles Thomas Jr., MD, chair of the Department of Radiation Medicine at Oregon Health and Science University, presented a strategy primer to address young investigator skill set gaps for clinical research. Dr. Thomas has moderated clinical trial workshops both in the United States and Europe. He described his experiences with young trainees across the country, as well as opportunities available internationally, to participate in clinical trial workshops.

Loren Mell, MD, associate professor at the University of California San Diego and an associate editor of the Red Journal, presented a new method of submission to the Red Journal. This new form of submission, termed “prospective review,” will initially be available only to residents. It is designed so that many critical elements of a research project (e.g., hypothesis, study design, statistical methods and data presentation) are evaluated a priori. The hope is that this submission process will both increase the quality of publications submitted as well as decrease publication bias toward negative studies.

Finally, the much-anticipated Practice Entry Survey results were presented by a founding member of ARRO, Terry Wall, MD, JD, FASTRO. As in prior years, Dr. Wall presented interesting commentary on the job process as synthesized from survey results from recently employed attendings across the country.

Overall, the 2014 ARRO Annual Seminar was a very successful, information-rich Saturday, which provided valuable insight and material that is applicable to current and future residents and medical students.

The ARRO Annual Seminar sessions are available in the Virtual Meeting.
San Francisco Bay Area cancer survivor recognized for his volunteer efforts in the community

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

FOR JASAN ZIMMERMAN, GIVING BACK to cancer support groups and supporting other cancer survivors in his community has become an important part of his own healing process, in addition to the positive impact it has had on those he helps.

This dedication to helping cancer survivors by drawing from his own experiences earned him ASTRO’s 2014 Survivor Circle Award, which recognizes a cancer survivor who lives in the ASTRO Annual Meeting host city and who has dedicated his or her time and energy in service and support of their local community.

“Volunteering was always a part of my life, instilled in me by my parents, so when I was finally comfortable enough to share my story, it was easy to find volunteer opportunities in the cancer advocacy world,” Zimmerman said. “The benefits of volunteering are two-fold for me: every time I share my story, it helps me come to terms with and accept my experiences a little more, and externally, I can see positive changes in the lives of other people based on the work that I have done, whether directly or indirectly.”

Zimmerman was diagnosed in 1976, at six months old, with neuroblastoma of the left neck. The tumor was removed, and he was treated with upper mantle radiation therapy at Loma Linda University Medical Center. In 1991, at age 15, Zimmerman was then diagnosed with thyroid cancer and had a thyroidectomy at the University of California Irvine Medical Center and radiation therapy at Eisenhower Medical Center in Rancho Mirage, California. He experienced a recurrence of thyroid cancer in 1997 at age 21 and underwent radiation therapy at the University of California Irvine Medical Center.

In 2004, after Zimmerman finished graduate school and moved to the Bay Area, he felt like something was missing in his life. He read about a local support group in the paper and decided to attend. For the first year or two of meetings, Zimmerman did not speak up much beyond sharing his name and cancer history. During those meetings, he met other group members who were involved in advocacy for cancer patients, and Zimmerman realized that he had experiences and knowledge to share as a pediatric and young adult cancer survivor.

“For me, volunteering has been a way to use my experiences to help others,” Zimmerman said. “I enjoy helping people connect with resources that can make their lives easier.”

Zimmerman has been a member of the Palo Alto Medical Foundation.

“I never had a conscious ‘moment of inspiration,’ but slowly, I became more and more involved in advocating for the psychosocial support of pediatric and young adult cancer survivors,” Zimmerman said. “I don’t want people to have the negative experiences that I had when I was sick, such as depression, anger and being treated as a child instead of as a young adult who could make my own decisions. I really enjoy helping people and connecting them with resources that can make their lives easier.”

Colleen A.F. Lawton, MD, FASTRO, then-chair of ASTRO’s Board of Directors, presented Jasan Zimmerman with the 2014 Survivor Circle Award.

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Cancer Patient Advisory Council since 2010; and since 2012, a member of the planning committee for Courageous Kids, an annual American Cancer Society event that is “a day for kids away from cancer;” a member of the Alumni Advisory Board of First Descents, which offers free outdoor adventure camps for young adult cancer patients and survivors; and a co-facilitator of Healthy Young Attitude, the monthly young adult patient and survivor support group in Mountain View, California that he first attended in 2004.

Zimmerman has also served as a Super Advocate for the National Coalition for Cancer Survivorship from 2008-2011; an Advisory Board member of Yoga Bear, a nonprofit organization dedicated to promoting more opportunities for wellness and healing to the cancer community through the practice of yoga, from 2008-2012; and a Patient Services Committee member for Cancer CAREpoint in San Jose, California from 2011-2013. He has also reviewed cancer research grants for the Congressionally Directed Medical Research Program and spoken about survivorship to various groups, including the Palo Alto Medical Foundation, Relay for Life and Stupid Cancer’s 2014 OMG! Cancer Summit for Young Adults.

“For most of my life, I did not want to think or to talk about cancer, and I was really uncomfortable when I had to tell my story. Now, it gets easier every time I tell my story. Doing so has helped me come to terms with what I’ve been through,” Zimmerman said. “Volunteering has also helped me learn about resources that impact my own survivorship, like seeking out a treatment summary and survivorship care plan. I’ve met lots of great people who have educated and mentored me, and I’m so grateful for their support, care and leadership.”

“I really enjoy helping people and connecting them with resources that can make their lives easier,” Zimmerman said.

“Every time I share my story, it helps me come to terms with and accept my experiences a little more.”

For more information on the Survivor Circle Award, visit www.ranswers.org/survivorcircle.
ASTRO recognized its 2014 award recipients and Fellows during the annual Awards Ceremony at the Annual Meeting in San Francisco on Tuesday, September 16. Colleen A.F. Lawton, MD, FASTRO, then chair, Board of Directors, presided over the ceremony, which honored the 2014 Gold Medalists, Honorary Member, class of Fellows and Survivor Circle Award winner.

For more information on the 2014 Gold Medalists and Honorary Member, view the Annual Meeting Special Edition 2014 of ASTROnews on the ASTRO website at www.astro.org/astronews. For more information on the 2014 Survivor Circle winner, see the related story on page 23 of this issue. For more information on how to nominate individuals for ASTRO recognition awards, visit www.astro.org/Recognition-Awards.

1. (From left) Nancy J. Tarbell, MD, FASTRO, Leonard L. Gunderson, MD, MS, FASTRO, and Mary K. Gospodarowicz, MD, FASTRO, celebrate receiving the 2014 ASTRO Gold Medal, the highest honor given to ASTRO members who have made outstanding contributions to the field of radiation oncology.

2. Colleen A.F. Lawton, MD, FASTRO, then-chair, ASTRO’s Board of Directors, and Daniel T. Chang, MD, congratulate Angelita Habr-Gama, MD, PhD (center), on being recognized as ASTRO’s 2014 Honorary Member.

3. The 2014 class of Fellows included 30 distinguished members that have been a part of ASTRO for at least 15 years, have given significant service to ASTRO and have made a significant contribution to the field of radiation oncology.

4. Jasan Zimmerman (center) received ASTRO’s 2014 Survivor Circle Award from Colleen A.F. Lawton, MD, FASTRO, then-chair, ASTRO’s Board of Directors, and Bruce G. Haffty, MD, FASTRO, then-president, ASTRO’s Board of Directors.