SCHEDULE AT A GLANCE

Tuesday, October 25

8:00 a.m. - 9:00 a.m.
EDU 14 - Managing Challenging Cases: Bladder Cancer
Room 217

8:00 a.m. - 9:00 a.m.
EDU 15 - Integrating Radiation and Immunotherapy for the Treatment of Oligometastatic Disease
Room 217

8:00 a.m. - 9:00 a.m.
EDU 16 - Radiation and the Vasculature
Room 214

8:00 a.m. - 9:00 a.m.
EDU 17 - Multidisciplinary Management of Mesothelioma - New Combinations, New Hope
Room 304

8:00 a.m. - 9:00 a.m.
EDU 18 - Quality Payment Program (QPP) Update
Room 206

8:00 a.m. - 9:00 a.m.
Panel 14 - Management of Radiation-Induced CNS Toxicities
Hemisfair Ballroom C1

8:00 a.m. - 8:30 a.m.
SH 03 - Science Highlights 3 - Head & Neck Cancer
Room 302

8:00 a.m. - 8:30 a.m.
SH 04 - Science Highlights 4 - Hematologic Malignancies
Room 207

8:00 a.m. - 9:00 a.m.
SS 13 - Leveraging AI to Strengthen Clinical Decision Frameworks
Room 008

8:00 a.m. - 9:00 a.m.
SS 15 - DHI 3 - Management of Radiation-Induced Hemorrhage
Room 006

8:00 a.m. - 9:00 a.m.
SS 16 - Phys 5 - Imaging for Response Assessment
Room 206

8:00 a.m. - 9:00 a.m.
ST 03 - Storytelling - A Survival Kit in Time of Burnout
Room 007 A/B

9:15 a.m. - 10:15 a.m.
Keynote Address 02 - Keynote 02 - Above and Beyond Cancer: Optimal Living in Survivorship
Stars at Night Ballroom

10:15 a.m. - 11:30 a.m.
Awards Ceremony
Stars at Night Ballroom

11:30 a.m. - 12:45 p.m.
Business Meeting and Luncheon
Hemisfair Ballroom C2/C3

12:45 p.m. - 2:00 p.m.
EDU 18 - Quality Payment Program (QPP) Update
Room 006

Plenary session studies explore artificial intelligence, radiation in combination with other therapies across five major disease sites

BY LISA BRAVERMAN, ASTRO JOURNALS; LIZ GARDNER, ASTRO PRESS; AND LAURA WILLIAMSON, SCIENCE WRITER

THIS YEAR’S PLENARY SESSION included five impactful presentations; each study featured its own discussant to add perspective to the research.

Frank A. Vicini, MD, FASTRO presented the first abstract, "NRG RTOG 1005: A Phase III Trial of Hypofractionated Whole Breast Irradiation with Concurrent Boost vs. Conventional Whole Breast Irradiation Plus Sequential Boost Following Lumpectomy for High Risk Early-Stage Breast Cancer.” This study found that a three-week course of radiation therapy is as safe and effective as four to six weeks of treatment for patients with early-stage breast cancer who have a higher risk of tumor recurrence. Delivering fewer, but higher, doses of radiation following lumpectomy, while concurrently delivering a radiation boost to the surgical site, led to similar outcomes as a longer course of treatment. “This approach cuts treatment time for these patients in half,” said Dr. Vicini. “Now the comfort level is there to say to higher-risk patients, ‘I can offer you this option, and it works just as well.’”

Lori Pierce, MD, FASTRO served as the discussant for Dr. Vicini’s paper. Dr. Pierce looked back to 2011, when there was a lack of consensus regarding boosts for whole breast irradiation. This trial is crucially important for confirming non-inferiority of hypofractionation with a concurrent boost when compared with conventional treatment. “I think this was the right trial at the right time,” Dr. Pierce said. This discussion concluded with a reminder to ensure diversity in clinical trials research to support populations having the same access to the very best cancer care.

Next, Jonathan D. Tward, MD, FASTRO, presented "Prostate Cancer Risk Stratification in NRG Oncology Phase III Randomized Trials Using Multi-Modal Deep Learning with Digital Histopathology.” Dr. Tward argued there is a need for improved risk stratification tools to increase prognostication accuracy for patients with intermediate- and high-risk localized prostate cancer. They had previously developed and validated multi-modal artificial intelligence models (MMAI) that outperformed NCCN in the prediction of distant metastasis (DM) and other outcomes. The MMAI models, developed from five phase III prostate cancer trials, significantly improved discrimination of distant metastases risk when compared with NCCN risk groups. This study exemplified the importance of this year’s meeting.

Continued on next page

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MRIdian Stereotactic MRI-Guided Adaptive Radiotherapy (SMART) is the only treatment that integrates diagnostic-quality MR imaging, streamlined on-table adaptive replanning, and continuous, real-time, soft tissue tracking and automated beam gating. MRIdian SMART allows clinical teams to define tighter treatment margins, deliver ablative doses in five or fewer fractions, while avoiding unwanted dose to OARs, and minimizing toxicities without relying on implanted markers.*

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SCHEDULE AT A GLANCE

Tuesday, October 25 and Wednesday, October 26

12:45 p.m. - 2:00 p.m.
EDU 19 - Multi-Vendor Environment in the Clinic: What Works, What Doesn’t, and What Next
Room 206

12:45 p.m. - 2:00 p.m.
Joint 04 - ASTRO/PROS Joint Session - Lessons Learned from Treating Children During the COVID-19 Pandemic
Room 302

12:45 p.m. - 2:00 p.m.
Panel 15 - LIVE SA-CME Challenging Cases in Breast Cancer: Rare Breast Cancer Histologies and Presentation
Room 217

12:45 p.m. - 2:00 p.m.
Panel 16 - Improving Patient Outcomes Through Employee Engagement
Room 207

12:45 p.m. - 2:00 p.m.
PQA 05 - Poster Q&A 05 - Gastrointestinal Cancer and Sarcoma
Exhibit Hall 1

12:45 p.m. - 1:45 p.m.
Panel 17 - SS 21 - Bio 5 - Normal Tissue Injury and Dose Rate Effects
Room 206

12:45 p.m. - 1:45 p.m.
Panel 18 - Panel 15 - Cybersecurity and Radiation Oncology
Room 307

12:45 p.m. - 2:00 p.m.
SS 04 - Storytelling - Using AI & EI to Improve Pediatric Cancer Care: Strategies to Work Through Challenging Cases
Room 007 C/D

12:45 p.m. - 2:00 p.m.
SS 17 - PRO 1 - Incorporating the Patient Voice: A Session Focused on PRs and Survivorship
Room 007 C/D

12:45 p.m. - 2:00 p.m.
SS 18 - Herne 2 - Biology May be King, but Selection is Still Queen: Crushing Stubborn B-cell Lymphomas
Room 214

12:45 p.m. - 2:00 p.m.
SS 19 - Lung 2 - Optimizing Thoracic RT Planning and Reducing Treatment Toxicity
Hemisfair Ballroom C1

1:00 p.m. - 3:00 p.m.
ET 04 - Text Mining and Processing in Radiation Oncology: An Untapped Resource
Industry Expert Theater 1

2:30 p.m. - 3:45 p.m.
EDU 20 - The Clinic & Beyond: Innovation in Telemedicine and Data-Driven Care
Room 007 A/B

2:30 p.m. - 3:45 p.m.
EDU 21 - Challenging Cases in Lymphoma - Modern RT for the CAR-T and Advanced Imaging Era
Room 302

2:30 p.m. - 3:45 p.m.
EDU 22 - Patient Selection and Radiation Techniques in the Management of Cutaneous Malignancies
Room 006

2:30 p.m. - 3:45 p.m.
LBA 01 - Special Session - Late-Breaking Abstracts
Hemisfair Ballroom C2/C3

3:30 p.m. - 4:35 p.m.
Panel 17 - SS 21 - Bio 5 - Normal Tissue Injury and Dose Rate Effects
Room 007 C/D

4:00 p.m. - 5:00 p.m.
EDU 23 - Considerations for Risk-Stratified, Multidisciplinary Management of the Axilla in Breast Cancer
Hemisfair Ballroom C2/C3

4:00 p.m. - 5:00 p.m.
Panel 15 - Cybersecurity and Radiation Oncology
Room 207

4:00 p.m. - 5:00 p.m.
Panel 18 - Panel 15 - Cybersecurity and Radiation Oncology
Room 307

4:00 p.m. - 5:00 p.m.
Panel 19 - The Good, the Bad and the Ugly – Natural Language Processing in the Clinic
Room 302

4:00 p.m. - 5:00 p.m.
Panel 20 - Emerging Concepts and Therapeutic Opportunities in Late Toxicity of Normal Tissues
Room 007 A/B

4:00 p.m. - 5:00 p.m.
PQA 07 - Poster Q&A 07 - Hematologic Malignancies and Digital Health Innovation
Exhibit Hall 1

4:00 p.m. - 5:00 p.m.
Panel 15 - Palliative 2 - Honing the SABR for Oligometastatic Disease and Beyond
Room 304

4:00 p.m. - 5:00 p.m.
Panel 18 - GI 3 - Colorectal Cancers: Choosing Wisely, Predicting Intelligently, Monitoring Toxicity Objectively
Room 303

4:00 p.m. - 5:00 p.m.
SS 22 - GU 4 - Improving Outcome for High-Risk Prostate Cancer
Hemisfair Ballroom C1

4:00 p.m. - 5:00 p.m.
SS 23 - Peds 2 - Providing Comprehensive Care in Pediatric Radiation Oncology - Novel Applications and Key Outcomes from Recent Investigations
Room 007 C/D

4:00 p.m. - 5:00 p.m.
SS 24 - DEB 1 - Advancing Health Equity Along the Cancer Continuum
Room 206

4:00 p.m. - 5:00 p.m.
ST 05 - Storytelling - Zooming Ahead: The Virtual Education Revolution
Room 207

5:15 p.m. - 6:15 p.m.
EDU 26 - Challenging Cases in GI Malignancies - Caring for GI Cancer Patients Across All Practice Settings
Room 217

5:15 p.m. - 6:15 p.m.
EDU 27 - A Toolkit for Promoting Diversity, Equity and Inclusion in Your Practice
Room 302

5:15 p.m. - 6:15 p.m.
EDU 28 - The Radiation Oncologist’s Role in Locally Recurrent Prostate Cancer: “Never Gonna Give You Up”
Hemisfair Ballroom C2/C3

5:15 p.m. - 6:15 p.m.
Panel 21 - Cybersecurity and Radiation Oncology
Room 207

5:15 p.m. - 6:15 p.m.
PQA 08 - Poster Q&A 08 - Gynecological Cancer, Pediatric Cancer, and Professional Development
Exhibit Hall 1

5:15 p.m. - 6:15 p.m.
Panel 17 - SS 21 - Bio 6 - Radiation and Cancer Biology
Room 303

5:15 p.m. - 6:15 p.m.
SS 25 - GU 5 - Bladder and Kidney Preservation
Hemisfair Ballroom C1

5:15 p.m. - 6:15 p.m.
SS 26 - Phys 7 - Response Monitoring and Adaptation
Room 214

5:15 p.m. - 6:15 p.m.
SS 27 - Cancer, Patient Safety, and Nursing
Room 217

5:15 p.m. - 6:15 p.m.
SS 28 - Cancer, Pediatric Cancer, and Comprehensive Care in Pediatric Oncology
Room 302

5:15 p.m. - 6:15 p.m.
PQA 09 - Poster Q&A 09 - Gynecological Cancer, Pediatric Cancer, and Professional Development
Exhibit Hall 1

5:15 p.m. - 6:15 p.m.
Panel 15 - Cybersecurity and Radiation Oncology
Room 207

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Room 303

Continued on next page
Lower prostate cancer screening rates associated with subsequent increase in advanced cancers
Alex K. Bryant, MD, University of Michigan Rogel Cancer Center in Ann Arbor, Mich., et al.

A large, longitudinal analysis found VA medical centers with lower prostate screening rates had higher rates of metastatic prostate cancer cases in subsequent years than centers with higher screening rates.

The team analyzed data from 128 facilities from 2005 to 2019, ending with a cohort of 5.4 million men. From 2008 to 2019, PSA screening rates declined, and long-term non-screening rates increased. Lower facility-level PSA screening rates were associated with higher subsequent rates of mPCa.

The team will continue to analyze VA records to gauge whether screening rates are associated with prostate cancer mortality. Further analyses will also include racial and ethnic differences in PSA screening rates and potential disparities in how screening affects long-term outcomes among high-risk groups.

Al model/machine-learning method uses daily step counts to predict the need for additional care and unplanned hospitalizations during cancer therapy
Julian Hong, MD, University of California, San Francisco, in San Francisco, et al.

An estimated 10–20% of patients who receive outpatient radiation or chemoradiation therapy will need acute care in the form of an emergency department visit or hospital admission during their treatment. Early identification and intervention for patients at higher risk of complications can prevent these events. In response, the research team collaborated to apply machine learning approaches to data from wearable consumer devices for the purposes of identification and intervention. Step counts and other data from these patients’ records were used to develop and test an elastic net-regularized logistic regression model to predict the likelihood that a patient would be hospitalized in the next week, based on their previous two weeks of data.

Based on the information derived, additional support can be critical to reducing hospitalizations, whether scheduling more frequent follow-ups, changing something about the patient’s treatment plan or another personalized approach.

Radiation-hormone therapy combination may slow growth of oligometastatic prostate cancer
Chad Tang, MD, The University of Texas MD Anderson Cancer Center, in Houston, et al.

This study is the first randomized trial to evaluate the impact of adding radiation to hormone therapy for patients with oligometastatic prostate cancer. The study enrolled 87 participants who were on intermittent hormone therapy for prostate cancer. The patients were randomized to receive hormone therapy either with or without local therapy. The “potent synergy” between radiation and hormone therapy may be key to the combined treatment’s promise. This study introduces a new paradigm of definitive radiation therapy to all of a patients’ oligometastases in tandem with de-escalated, intermittent hormone therapy as a means to preserve quality of life while still maintaining disease control.

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Patients who received radiation in addition to intermittent hormone therapy lived longer without their disease progressing, and they were able to take longer breaks from the drug treatments. They also experienced normal testosterone levels longer than those who did not receive local therapy. The “potent synergy” between radiation and hormone therapy may be key to the combined treatment’s promise. This study introduces a new paradigm of definitive radiation therapy to all of a patients’ oligometastases in tandem with de-escalated, intermittent hormone therapy as a means to preserve quality of life while still maintaining disease control.

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PLENARY SESSION STUDIES EXPLORE ARTIFICIAL INTELLIGENCE, RADIATION IN COMBINATION WITH OTHER THERAPIES ACROSS FIVE MAJOR DISEASE SITES (CONTINUED)

theme, demonstrating how artificial intelligence and machine learning can stratify patients more precisely. This study was discussed by Amar U. Kishan, MD. Dr. Kishan explained why patients must be stratified in the most precise manner: so much of treatment is dependent upon risk prediction. Using improved data from MMAI models, the treatment team may more easily communicate the percentage risk of distant metastases based upon different courses of treatment.

The third study of the session, “NRG/RTOG 1112: Randomized Phase III Study of Sorafenib vs. Stereotactic Body Radiation Therapy (SBRT) Followed by Sorafenib in Hepatocellular Carcinoma (HCC) (NCT01730937),” was presented by Laura A. Dawson, MD, FASTRO. The randomized trial found that adding radiation therapy to systemic therapy for patients with advanced liver cancer can extend overall survival and delay tumor progression without compromising patients’ quality of life. Findings indicated that radiation therapy should be a standard treatment option for patients with liver cancer who are ineligible for resection and other standard local-regional therapies. These findings are especially important as rates of HCC are increasing around the world, including in the United States. “The benefits of SBRT were seen regardless of liver function,” Dr. Dawson said.

Mary Feng, MD, discussing the abstract Dr. Dawson presented, echoed the sentiment that liver cancer is a global problem. In fact, this trial enrolled patients from three continents. RTOG 1112 remains a landmark study, as treatments for HCC have historically been so limited. This is a new standard of care for patients who are on sorafenib and similar drugs, Dr. Feng noted. “[Dr. Dawson] and her colleagues must be congratulated for initiating and completing this really important study; a global study to combat a global problem,” said Dr. Feng.

In "Radiotherapy with Durvalumab vs. Cetuximab in Patients with Locoregionally Advanced Head and Neck Cancer and a Contraindication to Cisplatin: Phase II Results of NRG-HN004,” Loren K. Mell, MD, shared how investigators explored the optimal treatment for patients with locoregionally advanced head and neck squamous cell carcinoma (HNSCC) and contraindication to cisplatin. This trial (NCT03258554) tested the primary hypothesis that radiation therapy with concurrent and adjuvant durvalumab, a PD-L1 inhibitor, improves progression-free survival (PFS) compared to standard RT with cetuximab. Radiation therapy with durvalumab did not show a signal toward improved PFS and led to significantly worse locoregional failure, compared to RT with cetuximab in HNSCC patients with a contraindication to cisplatin. The trial will not move to phase III.

Delving into why durvalumab underperformed, Sana Karam, MD, PhD, explained that the reasons the drug failed are far from clear-cut. Dr. Karam explored the biological aspects of this failure and mentioned a forthcoming paper comparing elective nodal irradiation (ENI) with tumor-only irradiation, with and without durvalumab. It takes time to prime the immune system, Dr. Karam said, and less may be more in terms of kitchen-sink approaches to treatments with immunotherapy. “The take home message from this is that immune checkpoint blockade needs T-cells and T-cells are primed in the nodes so be careful treating all these elective nodal perhaps the next generation trials we have to focus on that,” said Dr. Karam.

Jyoti Mayadev, MD, presented the final study discussed in the Plenary session, “Durvalumab in Combination with Chemoradiotherapy (CRT) in Locally Advanced Cervical Cancer (LACC): Radiotherapy (RT) Delivery and Subgroup Analyses from CALLA.” CALLA was the first global, placebo-controlled, phase III study evaluating durvalumab (D), in combination with and following chemoradiotherapy, in LACC. CALLA integrated a quality assurance/control strategy to ensure global protocol compliance, showing high-quality RT delivery is achievable with high compliance. Although D+CRT did not significantly improve progression-free survival when compared with a placebo, Dr. Mayadev argued CALLA illustrates the importance of strong multidisciplinary collaboration for optimal CRT delivery in high-risk LACC. “This was truly a global technology trial for cervical cancer,” Dr. Mayadev said, as more than 80% of participants received image-guided therapy.

Cervical cancer remains a global problem, Stephanie Markovina, MD, PhD, said during a discussion of the abstract Dr. Mayadev presented. Cervical cancer remains a leading cause of death worldwide for women. This trial took place in 15 countries, many of which experience a high mortality rate from cervical cancer. Dr. Markovina noted there is a great deal of molecular heterogeneity in this disease, and suggested this study revealed more opportunities for trials in this space.

As with the Clinical Trials session, the Plenary was moderated by Andrea Ng, MD, MPH, FASTRO, and Felix Feng, MD. Dr. Ng reflected on the studies presented, saying, “The favorable results from the long-awaited NRG RTOG 1005 trial will likely bring forth a new standard in the way we deliver tumor bed boost for patients with breast cancer. I think findings from NRG/RTOG 1112 are very exciting for our field, adding to the growing data that improved local control with radiation therapy can translate into overall survival differences. Although the two trials on durvalumab for locally advanced head and neck cancer and cervical cancer, respectively, are negative, they provide vital information guiding future trial designs in incorporating immune check-point blockade with anticancer therapy. I’m also highly intrigued by the study from our GU colleagues on the MMAI model and its superior performance over standard prognostic tools for patients with prostate cancer, giving us a glimpse into how artificial intelligence may transform future health care.”
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artificial intelligence (AI), machine learning, deep learning. “computational depth without historical or sociological depth is superficial learning.”

Analog example illustrates this notion powerfully. With the harsh image of a park bench cast with spikes, Dr. Benjamin shared the concepts of “hostile architecture” and “discriminatory design.”

German artist Fabian Brunsing created this bench as a critical commentary on the metering of areas like education and health care, where the design has harms and exclusion built into it. Regarding technology and medicine, the question was raised, “What are the spikes that we’re building into our work?” Or, looking back, “What are the spikes that we inherited?”

As ASTRO 2022 gives insights into the promises of AI, we must also be mindful of “spikes” in our field’s “benches,” such as, less accurate diagnosing of dark skin — where racism has led to Black patients being underdiagnosed or misdiagnosed.

The temptation is to think that a computer-mediated decision is neutral, and yet a combination of coded bias and imagined objectivity has led to the opposite. We assume that while we can identify racism in a doctor’s treatment, that a computer-mediated decision is free of biases and history. It may be true that a sign may not be telling a Black patient to find their medical services elsewhere, but the same impact can be had when a doctor tells them they don’t need to return, or they are referred to a general service rather than a specialty.

Thankfully, these issues are coming to light. Most recently, in February, the Algorithmic Accountability Act was introduced, requiring new transparency and accountability for automated decision systems. And resources are increasingly available to equip us to aid our understanding, such as Advancing Racial Literacy in Tech by Jesse Daniels. This resource covers how structural racism operates in algorithms and calls for a commitment to take action to reduce harms to communities of color.

So, how do we engage in racism correction in our daily practice? Dr. Benjamin shared three actions that focus on how to halt damaging behaviors:

1. Challenge biological determinism
2. Refute cultural determinism (the assumption that an action is intrinsic to certain cultural groups, for example when we associate distrust with certain groups)
3. Resist technological determinism

She followed with two capacities that we need to cultivate more:

1. Structural competency (structuralcompetency.org)
2. Cultural humility (developed by Melanie Turvalon)
PHOTOS OF ASTRO 2022
A clinical trial for people with head and neck cancer.

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To learn more, please visit ClinicalTrials.gov
https://clinicaltrials.gov/ct2/show/NCT04459715

The TrilynX study is using an investigational compound that has not been proven to be safe or effective by any health authority.

KEYNOTE SPEAKER RUHA BENJAMIN, PHD, INSPIRES AND EQUIPS (CONTINUED)

Dr. Benjamin shared an example of a study done at Brigham and Women's Hospital, revealing the disparity in Black and Latinx patients being recommended for cardiology services much less than white patients, attributed to white patients asking for the referral more. Furthermore, physicians admitted that they were more apt to respond to their white patients asking for the referrals.

In response, a Healing ARC framework was implemented. One outcome of this was a prompt built into a patient's EMR, where a pop-up note reminds a physician seeing Latinx and Black patients about the history of inequity. After all, she posed: "It's not about their distrust, it's about our trustworthiness. How do we cultivate trustworthiness rather than pathologizing the patients' tendencies?"

"If inequity is woven into the very fabric of society, then each twist, coil and code is a chance for us to weave new patterns, practices and politics...Because the problem is so vast, we need to figure out what our area of influence is. What are the spikes and patterns that have been passed down to us? We can resist and reimagine them."

Dr. Benjamin armed the audience with the following response to the natural question, now what?

1. IDENTIFY forms of coded inequity ("spikes") in your work, draw on the scholarship that has long been reviewed and study what is actually going on rather than rely on common sense.
2. IMAGINE new patterns of thought and action in the fine print, build back the social fabric of our society and the relationship between the hospital and community.
3. ENACT just alternatives with those most impacted by the harmful status quo. We need to believe and listen to those most harmed, and trust that patients can communicate what is going on in their own bodies.

Dr. Benjamin's practical and principled approach to transforming our communities made for a memorable keynote, equipping us to return to our practices to help build a more just and joyful world.
THANK YOU
TO OUR SOCIAL CHAMPIONS FOR SHARING THE EXPERIENCE.
2022 ASTRO Grant and Fellowship Program Recipients

ASTRO IS PLEASED TO SUPPORT the careers and research of residents, fellows and junior faculty in alignment with our strategic goal to retain and foster the intellectual research talent currently entering the field of radiation oncology. Additionally, through the ASTRO-Industry Radiation Oncology Research Training Fellowship Program, ASTRO offers unique one-year training opportunities within the industry settings. ASTRO and our funding partners stay committed to supporting the career development of junior researchers in radiation oncology, advancing science for improved patient outcomes. Please join us in congratulating the 2022 ASTRO Grant and Fellowship recipients!

ASTRO-ACS Clinician Scientist Development Grant
Principal Investigator: Adam Mueller, MD, PhD
Mentors: Scott Waldman, MD, PhD, Sana Karam, MD, PhD
Institution: Thomas Jefferson University
Project Title: Investigating ADAM10 Mediated Radiation Resistance and EMT through Notch

ASTRO-AAPM Physics Residents/Postdoctoral Fellows Seed Grant
Principal Investigator: Muhammad Ramish Ashraf, PhD
Mentor: Billy Loo Jr., MD, PhD
Institution: Stanford University
Project Title: Methods for Accurate Beam Monitoring and Safe Dose Delivery for FLASH-RT

ASTRO-BCRF Residents/Fellows in Radiation Oncology Seed Grant
Principal Investigator: Juhi Purswani, MD
Mentors: Naamit Gerber, MD, Erik Sulman, MD, PhD
Institution: NYU Grossman School of Medicine
Project Title: Objective Color Analysis during and after Breast and Chest Wall Radiotherapy and Correlation with Radiation-Induced Skin Toxicity

ASTRO-BCRF Residents/Fellows in Radiation Oncology Biology Seed Grant
Principal Investigator: Morgan Freret, MD, PhD
Mentors: Adrienne Boire, MD, PhD, Jonathan Yang, MD, PhD
Institution: Sloan-Kettering Institute for Cancer Research
Project Title: Hypoxia and the Cancer Stem Cell Niche in Leptomeningeal Metastasis

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Project Title: Hypoxia and the Cancer Stem Cell Niche in Leptomeningeal Metastasis

ASTRO-LUNGevity Residents/Fellows in Radiation Oncology Seed Grant
Principal Investigator: Peter Hendrickson, MD, PhD
Mentor: Maximilian Diehn, MD, PhD
Institution: Duke University
Project Title: Ewing-Like Sarcoma: Targeting the CIC-DUX4 Oncogene through Epigenetic Regulators

ASTRO-AstraZeneca Radiation Oncology Research Training Fellowship
Principal Investigator: Omoruyi Credit Irabor, MD, MPH
Mentor: Maria Werner-Wasik, MD
Institution: Thomas Jefferson University

ASTRO-Varian Radiation Oncology Research Training Fellowship
Principal Investigator: Kareem Rayn, MD
Mentor: David Horowitz, MD
Institution: Columbia University Vagelos College of Physicians and Surgeons

ASTRO Emerging Investigator Award
Principal Investigator: Shearwood McClelland III, MD
Mentors: Eleanor Harris, MD, Janice Lyons, MD
Institution: University Hospitals Cleveland Medical Center
Project Title: Navigator-Assisted Hypofractionation (NAVAH) to Address Radiation Therapy Access Disparities Facing African Americans with Breast Cancer

2022 ASTRO Grant and Fellowship Program Recipients

*Conditional upon institutional agreement with the Terms of Award.
Monday afternoon, ASTRO President Geraldine Jacobson, MD, MPH, MBA, FASTRO, gave her Presidential Address, offering a forward-looking message on how artificial intelligence (AI) and emotional intelligence (EI) can shape the future of radiation oncology.

Dr. Jacobson began by sharing an “aha” moment that she had as a third-year medical student, hearing about radiation oncology for the first time. She realized that entering this field would give her the opportunity to help patients with serious but treatable disease, across all genders, ages and disease sites. What she couldn’t possibly grasp then is how the field would be transformed by innovation. Between then and now, she noted the two biggest differences: 1) the speed and volume of communication and 2) the exponential pace of technological change.

Dr. Jacobson shared that there have been times when she felt like the technology was changing her. What does this mean for us as doctors in how we treat our patients? As curators and communicators of data, how do we interact with our patients?

Clearly, the accelerating developments of computer power and AI offer tremendous opportunities for advancement and treatment breakthroughs. RO is uniquely situated to embrace and optimize these opportunities, and Dr. Jacobson shared words from Virginia Eubanks, PhD: “The future is already here. It’s just not evenly distributed.”

AI endeavors to replicate or simulate human intelligence in machines, a concept that reaches back into millennia and fast forwards to advances in computer power and the creation of massive data sets. The volume and accessibility of this data has led to the development of learning algorithms designed to take advantage of large data sets. However, technology can have positive or negative effects and applications.

Dr. Jacobson said, “We need to maintain our empathy as human doctors helping human patients who need our care” and not look at patients as collections of data. Furthermore, a balance between our enthusiasm for AI and Big Data with an awareness of their limitations and potential misuse is critical. “It’s up to us as health professionals to influence the way AI is used in our field.”

Thus, Dr. Jacobson embarked on the importance of emotional intelligence, the ability to recognize one’s emotions and to understand and influence the emotions of others. For health care in particular, patients value practitioners who are confident, empathetic, compassionate, good communicators, collaborative and advocates. Patients’ assessments of where their team falls regarding these traits could contribute to their health outcomes.

When the 2021 ASTRO member survey asked ROs and resident members about the future of the field, nearly two-thirds of both U.S. and international respondents identified a lack of influence of radiation oncologists as leaders in cancer care. Mindful of this, Dr. Jacobson selected this year’s theme, as AI is an area that ASTRO members can directly influence.

The areas of authorization, documentation, ensuring safety precision and quality all lead to an increased requirement for resources. Shorter courses of treatment care are beneficial for patients but limit interaction between the physician and patient. Furthermore, the ease and brevity of treatments may cause patients to underestimate the true extent of time and expertise required to deliver the treatments. They might become less likely to consider the radiation oncologist “Their Doctor,” translating into less appreciation of our specialty by the public.

Of course, advancing our technology is a worthy goal, but the meta issues such as public perception can only be improved by using our EI skills. Some recent developments on how the field has and will use their EI to multiply impact, include the International Atomic Energy Agency (IAEA) and the International Radiation Oncology Network (IRON). In 2020, IAEA sponsored a technical meeting on cancer care to promote global collaboration in radiation oncology. Regarding IRON, its purposes are to share information and connections in the field in the interest of patients and the specialty and provide a framework to pursue identified common interests. ASTRO is a founding member of IRON. A presentation of the newly formed network will be presented at the joint ASTRO-ESTRO session today.

To close, Dr. Jacobson shared, “In my imagined future, ROs will continue to use science and technology to deliver optimal care. We will employ our human powers of empathy and connection to develop healing relationships with our patients and influence health policy. It is our human skills that will determine the future of our specialty.”

Dr. Jacobson concluded with Abraham Lincoln’s words, “The best way to predict the future is to create it.” And indeed, while ASTRO 2022 is future-oriented, it is the past that brought us here.
Challenges and optimism in analysis of aggregate incident learning data

BY SUSANNE EVANS, MD, FASTRO, AND SHERI WEINTRAUB, PHD

WITH OVER 25,500 SAFETY EVENTS in the RO-ILS: Radiation Oncology Incident Learning System database, there is a lot of data to work with. However, that volume doesn’t make aggregate analysis of safety data trends easy.

In April, RO-ILS released an ASTRO blogpost titled “2021 Safety Error Reporting Trends. Noise or Cause for Concern?” (www.astro.org/roilsblog), which focused on where in the radiation therapy workflow RO-ILS events occurred. Between 2017 and 2020, event occurrence during treatment delivery (including imaging) has traditionally comprised an average of 26%. This increased to 41% in 2021.

In an initial analysis, the RO-ILS patient safety organization (PSO) and Radiation Oncology Healthcare Advisory Council (RO-HAC) tried to answer one of the many questions posed in the blog: “Did changes in reporting patterns among RO-ILS enrolled practices impact the overall national trends?” In reviewing the top 10 contributing practices from 2019-2021, changes occurred in the number of submitted reports from these practices. A couple of practices reduced overall engagement while the remainder actually increased event reporting in that time period.

In the United States, incident learning is voluntary, a crux of the legal protections afforded by the Patient Safety and Quality Improvement Act of 2005 and participation in a PSO. The reasons for why practice-level participation changes may occur are endless. Changes in staffing and/or clinical priorities, which would have been impacted by the pandemic, could have diverted attention and resources away from incident learning. Each practice has its own patient volume, separate mandatory reporting expectations (e.g., for hospital level programs), and safety culture, which can also impact event volume. Additionally, there are variations in individuals’ and practices’ threshold for reporting. RO-ILS encourages practices to report any error that passed through the first checkpoint where it could/should have been caught. However, reporting is likely not done by all practices. Published data demonstrates stark differences in the volume of events collected by institution-specific incident learning systems, with safety events per patient ranging from 0.7% (reporting only actual incidents) to 112% (more comprehensive reporting).

The challenge of varying participation levels highlights the importance of detailed investigative work before drawing conclusions on safety data trends. By working with a PSO, RO-ILS has tools at its disposal to explore separate hypotheses while working in a protected space with the sensitive information. RO-ILS continues to produce a variety of educational materials, including case studies, themed reports and presentations to disseminate information to the radiation oncology community. RO-ILS users also have access to members-only user meetings to share experiences and best practices among RO-ILS users and the RO-HAC.

Interestingly, in the first half of 2022, another shift has taken place in the workflow step of occurrence, with a return to more historical norms. Could this be a settling of COVID-related issues? Could there be more reports of care coordination being reported to RO-ILS, hence the increase in events outside of the radiation therapy workflow? More work for RO-ILS remains.

REFERENCES

Attend Panel 25 - Improving Interoperability to Mitigate Errors: Experiences from RO-ILS and IHE-RO

Wednesday, October 26
10:30 a.m. – 11:45 a.m.
Room 007 A/B
ASTRO is pleased to present the 2022 Class of ASTRO Fellows (FASTRO). This distinguished honor is conferred on the following ASTRO members in recognition of their outstanding leadership and significant service to ASTRO and contributions to the field of radiation oncology.

Mark K. Buyyounouski, MD, MS
Stanford University

Daniel T. Chang, MD
University of Michigan

Bhishamjit S. Chera, MD
Medical University of South Carolina

Deborah E. Citrin, MD
National Cancer Institute

Thomas J. Dilling, MD, MS
Moffitt Cancer Center

Suzanne B. Evans, MD, MPH
Yale University School of Medicine

Steven J. Frank, MD
The University of Texas MD Anderson Cancer Center

Alan C. Hartford, MD, PhD
Geisel School of Medicine, Dartmouth Health

Karen E. Hoffman, MD, MHSc, MPH
The University of Texas MD Anderson Cancer Center

Randall J. Kimple, MD, PhD
University of Wisconsin, Madison

Bridget F. Koontz, MD
GenesisCare US

Alexander Lin, MD
University of Pennsylvania

Douglas Martin, MD
The Ohio State University Wexner Medical Center

Charles Mayo, PhD
University of Michigan

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University of Rochester

Eduardo G. Moros, PhD
Moffitt Cancer Center

Firas Mourtada, PhD
Sidney Kimmel Medical College at Thomas Jefferson University

Paul Nguyen, MD
Dana-Farber Cancer Institute

Peter F. Oriol III, DO, MS
Dana-Farber Brigham Cancer Center

William F. Regine, MD
University of Maryland School of Medicine

Peter J. Rossi, MD
Calaway Young Cancer Center at Valley View Hospital

Scott Soltys, MD
Stanford University

Roy B. Tishler, MD, PhD
Dana-Farber Cancer Institute/Brigham and Women’s Hospital

Minh-Tam Truong, MD, MBBS
Boston University School of Medicine

Richard W. C. Tsang, MD
Princess Margaret Cancer Centre

Jonathan Tward, MD, PhD
Huntsman Cancer Institute at the University of Utah

Fen Xia, MD, PhD
University of Arkansas for Medical Sciences

Join your colleagues in honoring leaders of the field at today’s Awards Ceremony in the Stars at Night Ballroom from 10:15 a.m. to 11:30 a.m.
The Department of Radiation Oncology at the University of Texas Southwestern Medical Center is recruiting a senior biology faculty member and/or physician-scientist in biology to join, build, and lead the department’s Radiation and Molecular Oncology section. The section has existing strengths within mechanistic studies of DNA damage/repair and radiotherapy translation in combination with novel systemic therapies, and there is a strong desire to expand/enhance research into realms of immune and metabolic modulation of cancer behavior and therapy responsiveness.

Vice Chair & Director of the Radiation and Molecular Oncology Section

The director will provide section leadership and oversee research investigators and day-to-day operations of a large research infrastructure, including existing core facilities and 25,000 sq. ft. of laboratory space assigned to multiple researchers in the department. Candidate will report directly to the department Chair. The section currently has 18 faculty, including 10 principal investigators. Successful candidate will be provided resources to develop integrated programs with both the Clinical and Medical Physics and Engineering divisions of the department as well as the ability to pursue novel investigations and treatments. Candidates should have an interest in initiating new translational projects and collaborative research both within and outside the department, as well as those associated with the Harold C. Simmons Comprehensive Cancer Center. If close to promotion timeline, associate professor candidates may be taken.

Skills & Qualifications:

- Required record of excellence in research accompanied by a strong publication and funding history.
- Interest in some of the following topics that include but are not limited to radiation biology/oncology, cancer biology, immunology, metabolic study, DNA repair, combination therapies, and the development of biomarkers.
- Open to initiating translational projects and collaborative research with clinicians and scientists across disciplines.
- Strong interpersonal skills and motivation for program building, as well as interests in basic and translational science training.
- Must have a Ph.D., M.D., or M.D./Ph.D. degree or equivalent. Candidates who intend to maintain a clinical practice must have a medical degree from an ACGME-approved medical school or equivalent and have completed a radiation oncology residency program from an approved institution.

To learn more about this position or to apply: