

WINTER 2024

# ASTRO *news*

## A Holistic Model of Cancer Care Merging conventional medical treatments with complementary therapies

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**Integrative Oncology in the U.S.:  
Past, Present and Future**

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**Bridging Conventional and  
Complementary Approaches:  
An Integrative Oncology View  
on Radiation Oncology**



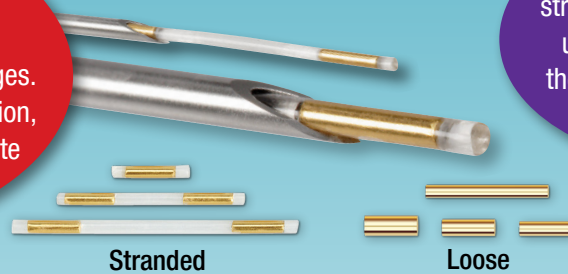
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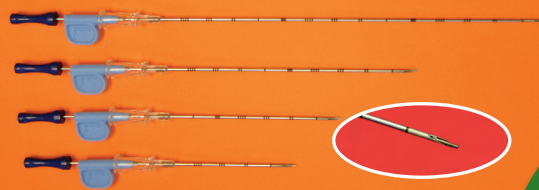
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# ASTRO news

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## EDITOR'Snotes

BY NAJEEB MOHIDEEN, MD, FASTRO  
SENIOR EDITOR, *ASTROnews*

**HAPPY 2024!** About half the world's population will be voting in elections this year. Health care affordability, the future of Medicare and Medicaid, prescription drug costs, abortion rights — there's no shortage of matters of medical importance for U.S. voters to consider. Interestingly, Medicare spending per beneficiary has leveled off in the past decade. And while overall prices in the broader economy grew 3% in June 2023 from the previous year, those for medical care increased by just 0.1%.<sup>1</sup> While that might sound like good news, those who need health care the most aren't getting the care they need and, at the other end of the spectrum, those who might consider themselves better off are struggling with spiking health insurance premiums that appear to be rising inexorably.

On a happier note, attendance at the ASTRO Annual Meeting in San Diego was almost back to pre-pandemic levels. The quality of the science presented was outstanding. The plenary session was exceptional, presenting data from practice-altering phase III randomized studies, speaking to the talent and vibrancy in our field. I'm delighted that radiopharmaceutical therapy (RPT) has been added as a subcategory within many tracks for next Annual meeting. Our practice, like many others, is collaborating with nuclear medicine and medical oncology colleagues on RPT, and I can see the benefits of this closer association for patient care.

More than 60% of cancer patients strongly believe in complementary therapies, and 71% want their

health systems to offer them, according to a survey of more than 1,000 patients and 150 oncologists.<sup>2</sup> Many oncologists are not well informed about integrative and supportive therapies. This issue on Integrative Oncology is thus timely, and I am delighted to introduce Sara Dudley, a radiation oncologist at University of Maryland and a member of the *ASTROnews* Editorial Board, as the Guest Editor.

Lastly, on a sad note, we lost Dr. Carlos Perez. A legend in our field, his contributions and accomplishments are many (see tribute, page 7). We also mourned the untimely loss of Cullen Taniguchi, a leading radiation oncology physician-scientist committed to improving treatments for patients with gastrointestinal cancers. "We are all better for having known Cullen," said Albert Koong, his division head and Chair of Radiation Oncology at MD Anderson Cancer Center. "His contributions in the lab and clinic will continue to impact our field for years to come," Dr Koong pointed out. "However, his true legacy will be shaped by the many students, residents, postdoctoral and clinical fellows that he mentored."



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**GUEST EDITOR**  
Sara Dudley, MD

**As a radiation oncologist,** I reflect upon the number of times and the sheer frequency with which I have been asked about a particular diet, this or that supplement, or any number of complementary and alternative therapies. Patients of all ages with different cancer types ask these questions. My responses have ranged anywhere from a graceful (hopefully) demur

to a more open endorsement, and there is a tacit acknowledgment that such questions touch upon a dimension of their care not typically addressed during standard oncology treatments. Regardless of the motivation, such discussions speak to the suffering in the patient experience, as well as needs which may be incompletely addressed. To dismiss or gloss over integrative care in oncology is a disservice to our patients, and we should all seek to understand and ideally integrate such practices into our care.

*Continued on page 5*






## Moving Forward to the Benefit of Our Patients: Collaborative Opportunities in Radiopharmaceutical Therapy

### GREETINGS AND BEST WISHES FOR A HAPPY, HEALTHY AND PRODUCTIVE 2024!

It has been nearly a year since the publication of our 2023 Winter *ASTROnews* which was dedicated to the role of the radiation oncologist in the field of radiopharmaceutical therapy. That issue garnered considerable interest both within and outside our specialty. Some of the articles in that newsletter were amongst the most downloaded in the history of *ASTROnews*! I believe this speaks to the clinical interests and exciting developments surrounding the burgeoning field of systemic radiotherapy. As clinical trials demonstrate meaningful improvements in both survival and quality of life with these agents, physicians that previously managed patients using local therapy for the palliation for metastatic disease now see the considerable opportunities with radiopharmaceuticals. The ALSYMPCA and VISION trials for select patients with metastatic prostate cancer, and the NETTER trials for patients with metastatic neuroendocrine tumors of the GI tract have shown striking favorable progression free and overall survival outcomes in patients for whom there were few if any treatment options remaining.<sup>1-3</sup> Now, the challenge has become getting these effective therapies to patients who may benefit from them.

One challenge has been the supply chain for these novel therapies. For several months in 2023 there was an insufficient supply of <sup>177</sup>Lutetium to make the FDA approved product available for patients with metastatic prostate cancer. The problem with <sup>177</sup>Lutetium seems to be solved for the time being but as other new agents and isotopes enter clinical trials we may see similar supply issues. A second challenge is that the number of clinics and board-certified authorized users for these agents may not be keeping pace with the demand. Thankfully, we are seeing interest and effort on the parts of both radiation oncologists and nuclear medicine physicians to make these treatments available to the large groups of patients that may benefit from them. While the ABR no longer attests to AU experience, there remains an alternative pathway for radiation oncologists to attain AU status from the NRC. Details to achieve this are posted on the August 2023 ASTRO blog.<sup>4</sup>

Numerous clinical and business models can work to bring promising radiopharmaceutical therapies to patients who will benefit from them. In some clinics where a radiation oncologist has been administering these agents, they will expand their clinic capacities and licenses to meet these needs. In other centers, nuclear medicine physicians will lead the charge and they will work with radiation or medical oncologists who refer patients to them for care. Yet other centers, such as our own at Washington University, will establish a collaborative, multidisciplinary center that is co-directed by both a radiation oncologist and a nuclear medicine physician. Which model works for any given center will depend on that clinic's history, environment, radiation safety support and practice model.

Finally, I would like to take a moment to clarify our stance on partnerships in radiopharmaceutical therapy. In last year's newsletter, John Buatti, MD, FASTRO, and I inappropriately characterized our partners in nuclear medicine as not being equal in the management of cancer patients.<sup>5</sup> That statement does not reflect my personal feelings nor my experience in three decades of working closely with nuclear medicine colleagues and I apologize for that mischaracterization. I believe that we as a specialty need to acknowledge the importance of these multidisciplinary collaborations. The word itself, THERANOSTICS, reflects the importance of scientific and clinical collaborations between our specialties. The “-nostics” implies the knowledge and interpretation of information derived from the medical imaging of patients with the diagnostic agents that are part of the treatment selection, planning and dosimetry. Furthermore, post-treatment assessments require tools and knowledge that are the domain expertise of nuclear medicine. For our patients' sake, moving forward with a sense of collaboration is in everyone's best interest. 



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## 2023 Year in Review

### CELEBRATING ACCOMPLISHMENTS AND LOOKING AHEAD

**WE'RE BACK!** That's what kept running through my mind while walking the halls of the San Diego Convention Center this past October. It was exciting to see close to *pre-pandemic attendance* at the Annual Meeting. You could feel the excitement of attendees and exhibitors to be fully back in action. It was also gratifying to offer a virtual meeting, which we will continue to do, not only to provide accessible learning opportunities, but also connection for those who cannot be present in person. 2023 gave us much to reflect on and celebrate, including these notable achievements:

ASTRO's Health Policy Council physician leaders, with the help of expert consultants, led the development of the Radiation Oncology Case Rate (ROCR) legislative initiative. ROCR seeks to stabilize Medicare payments, enhance quality and reduce disparities. Since unveiling ROCR this past summer, we have engaged with more than 1,000 radiation oncologists, representing many different practice types, to seek input and discuss the impact of ROCR on their practice. We held several webinars and a Town Hall that was open to all members and hosted a session at the Annual Meeting to further engage with members and nonmembers across different venues. This year, ASTRO will host a ROCR webinar to provide an update on the program and provide more engagement opportunities for members at ASTRO's Advocacy Day program May 20-21. We continue to seek input and feedback at [healthpolicy1@astro.org](mailto:healthpolicy1@astro.org).

In 2022, ASTRO commissioned Health Management Associates to conduct an independent analysis of the radiation oncologist workforce. The results of the study were published online in the Red Journal on March 8, 2023 and in the July 1 print issue of the journal.

Fostering research is a top priority. ASTRO awarded nearly \$1.5 million across eight research grants and four fellowships in 2023 and will soon select a recipient for the Emerging Investigator Award to Build a Diverse Scientific Workforce with the Breast Cancer Research Foundation. Expanding our work in the

DEI space, we continue to grow the Medical Student Fellowship and Leadership Pathway Program and increase programming both throughout the year and during the Annual Meeting, with a dedicated science track, DEI lounge, networking reception and many education sessions.

We also continue to expand our outreach to medical students to introduce them to the specialty. At the Annual Meeting, where we saw record attendance with more than 440 students, ARRO hosted an inaugural medical student workshop in conjunction with ARRO Day, and the Aspiring Scientists and Physicians Program (ASPP) offered both virtual and in-person attendance for the first time to expand participation. The Communications Committee held bi-monthly virtual medical student Q&As hosted by an RO faculty member and a resident. Additionally, we continue to offer free student membership, a student community on the *ROhub*, and represent the field at student association and conference meetings.

A top function ASTRO performs based on the Annual Member survey results is providing quality and safety recommendations in the form of clinical guidelines and white papers. In 2023, we published an update to the partial breast irradiation guideline and a summary of cardiac CT imaging in cardio-oncology. Together with ESTRO, we published a joint guideline on treatment of oligometastatic non-small cell lung cancer, and in collaboration with STS, we published an updated guideline on multimodality therapy for locally-advanced cancer of the esophagus or gastroesophageal junction. We recently concluded the public comment period on two more guidelines — HPV+ oropharyngeal squamous cell carcinoma and palliation for bone mets. Look for these to be released later this year.


In November and December, our Early Career Committee held four focus groups to obtain a better understanding of this cohort's needs. Watch for an upcoming blog summarizing the comments of these focus groups.



Our work continues to grow the RO footprint into radiopharmaceuticals, by engaging a leadership task force and forming an industry roundtable to expand the dialog between ROs and industry on this topic. We've experienced great interest from companies and look forward to continuing these roundtables in 2024. Additionally, we developed RO-specific data standards, which are being incorporated by major vendors, to assist with communication, prior authorization, artificial intelligence, research and more.

Another important project undertaken by the Communications Committee is updating the Introduction to Radiation Therapy video, recorded at the Mayo Clinic Arizona, as well as other patient education materials. The new video is broken into short chapters, and translated into Spanish, so you can easily walk your patient and their caregivers through each step of the treatment process. We expanded and updated the RT for Cancer brochure, and the brochures for Lung, Lymphomas and Breast.


Lastly, I am happy to share that the Board of Directors approved two membership discounts: a 50% membership dues discount for individuals in low- and lower middle-income countries and for our graduating residents in 2024, we are expanding their discounts to \$69 for the year of residency completion, 75% discount for first full year, and 50% discount for the second full year out of residency.

None of these accomplishments would exist if it weren't for you, our members. Thank you for your membership and all you do for ASTRO. Cheers to 2024! 

Continued from **EDITOR'S NOTES**

I extend a warm thank you to our contributing authors for their thoughtful and elegant discussions of different topics relating to integrative oncology. Ting Bao, MD, MS, and Heather Greenlee, ND, PhD, MPH, speak to us on behalf of the Society of Integrative Oncology, walking us through a history of the field marked by recent explosive growth and development, giving us a sense of different models of integration, concluding with a call to establish evidence-based guidelines. Brian Lawenda, MD, and Peter Johnstone, MD, highlight sound pieces of guidance regarding dietary intake and supplements, as well as discussing a variety of mind-body techniques and their role in patients' oncologic care. Colin Champ, MD, gives us a clinical vignette all too familiar, while highlighting the issues of competing non-cancer risk factors that may contribute to poor health. His team has pioneered a one-of-its-kind Exercise Oncology and Resiliency Center, with proven results and measurable outcomes of improved body composition and overall health. He and his team make a compelling argument for including physical activity as a medicine in its own right.

Stephanie Sohl, PhD, and Lynn Felder speak to us through the lens of a patient's own empowering experience of discovering yoga during chemotherapy and walk us through the myriad evidence of yoga's benefits for improving multiple quality of life metrics. For an example of a remarkably successful integrative oncology practice in Sydney, Australia, we turn to a conversation between Sandra Turner, PhD, MBBS, and Judith Lacey, MBBS. They model a holistic approach and provide guidance for clinicians on some of the difficult and frequent questions. Finally, for those wanting concrete examples of formal training in integrative oncology, Santosh Rao, MD, Suzanna Zick, ND, MPH, and Kristina Gowan, DO, highlight six formalized programs of varying length and guide the reader toward how to access these.

We hope that our members have found these topics relating to integrative oncology thought-provoking and valuable. This is an evolving field with many exciting developments and ongoing areas of research, all of which have the potential to significantly improve our patients' experience. We look forward to hearing about new developments as they unfold, and we thank all of our co-authors for sharing their knowledge of this field. 



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## Tribute to Carlos A. Perez, MD, FASTRO

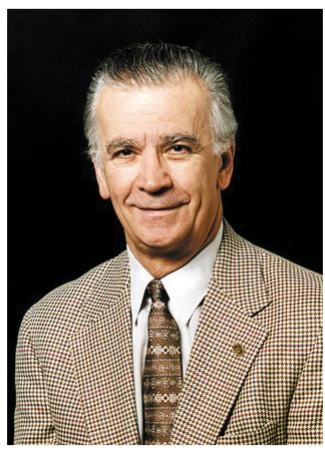
BY JEFF M. MICHALSKI, MD, MBA, FASTRO

### **CARLOS A. PEREZ, MD, FASTRO:**

his name is forever indelibly linked to our specialty, to ASTRO, and to the international oncology community. Dr. Carlos A. Perez had a career that spanned six decades in the field of radiation oncology. Born in Pereira, Colombia, he attended medical school at Universidad de Antioquia, Medellin, Colombia. After his graduation in 1960, he moved to the United States to complete a residency in Radiology at the Mallinckrodt Institute of Radiology (MIR) at Washington University in St. Louis. He then completed a radiation oncology fellowship at the esteemed MD Anderson Cancer Center in Houston and then returned to St. Louis in 1964 to join the faculty at MIR. He would spend his next 40 years as a faculty member and leader at Washington University, eventually becoming the first chairman of the Department of Radiation Oncology, established in 2001.

Dr. Perez passed away on August 21, 2023, at the age of 88 years. During his career, he made numerous contributions to the management of patients with cancers of the breast, prostate, lung, gynecological, and head and neck sites. He advanced numerous technologies in radiation oncology including computer based radiation treatment planning, brachytherapy, hyperthermia, 3-dimensional conformal radiation therapy, intensity modulated radiation therapy, electronic portal imaging, and proton therapy. Many of these therapies, groundbreaking at their inception, are now commonplace in radiation oncology clinics everywhere. Dr. Perez authored and co-authored over 370 scientific articles and contributed to more than 43 textbooks. His scientific advances undoubtedly contribute to improved survival outcomes and quality of life for countless cancer patients every day.

Dr. Perez was an exceptional educator. He established one of the largest and most competitive training programs for physician residents, many of whom have established careers in academic



medicine where they continue to pass his knowledge to future generations of trainees. His other major contributions include establishing a Cancer Information Center at Washington University, the first accredited training program for radiation therapy technologists, the first CAMPEP accredited medical physics residency program, and programs in hyperthermia and stereotactic radiosurgery. Importantly, Dr. Perez, along with his friend and colleague, Luther Brady, MD, FASTRO, edited and published the first comprehensive textbook for our specialty, “Perez and Brady’s Principles and Practice of Radiation Oncology.” This book, now in its seventh edition, can be found in libraries, on desks and bookshelves of cancer centers around the world. “Perez and Brady” is considered by many trainees and practicing physicians as “The Bible” for radiation oncology education. Carlos continued to be involved in the preparation of the eighth edition as recently as the spring of 2023.

Dr. Perez was a leader in our specialty, having served as President and Chair of the Board of Directors of ASTRO from 1981 to 1982. He was a Trustee of the American Board of Radiology and served on the National Board of the American Cancer Society. He was ASTRO’s Councilor to the American College of Radiology. His many accomplishments were recognized with numerous awards from international medical societies. He was a recipient of ASTRO’s Gold Medal in 1992, the Gold Medal of the American College of Radiology in 1997, the Círculo de Radioterapeutas Oncólogos Ibero-Latinoamericanos (CRILA) Gold Medal in 2000, the Janeway Gold Medal of the American Radium Society in 2005, the Cancer Fighter Award from the American College of Surgeons in 2006, the Marie Curie Medal from the Groupe Européen de Curiethérapie – European Society for Therapeutic Radiology and Oncology (ESTRO)

*Continued on page 10*

## Results of the 2023 ASTRO Member Survey

### REIMBURSEMENT IS A TOP CONCERN FOR U.S. RADIATION ONCOLOGISTS; LACK OF ACCESS TO RT TOPS THE LIST FOR INTERNATIONAL RADIATION ONCOLOGISTS

**THE ANNUAL ASTRO MEMBER SURVEY** is an important tool used to assess member satisfaction, identify concerns and help direct the actions of the Society. The Member Survey was fielded for eight weeks, from April 18 through June 16, and was emailed to 8,595 members. More than 1,000 members participated in the survey. As a special incentive for participating, 10 lucky individuals were randomly selected to receive a \$50 gift card. Read on for survey highlights. Additional results can be found in the online story.

#### Survey Respondents – Profession

Nearly two-thirds of the respondents were ROs, followed by medical physicists. We are pleased to see increased participation from early career members (19%, up from 17% in 2022) and resident members (10%, up from 8% in 2022).

#### Survey Respondents – Diversity

ASTRO is dedicated to diversity and expanding health equity and inclusion. The Council on Health Equity, Diversity and Inclusion, formed in 2022 and chaired by Iris Gibbs, MD, FASTRO, has multiple active committees supporting ASTRO’s strategic goal of fostering a diverse workforce and improving

access to equitable care. In 2022 and 2023, ASTRO actively solicited members to update their profile on ASTRO.org to help us better understand our member demographics.

Gender participation remained about the same as 2022 with 70% male and 30% female participation. These percentages are fairly representative of ASTRO membership (65% male, 30% female and 5% unknown).

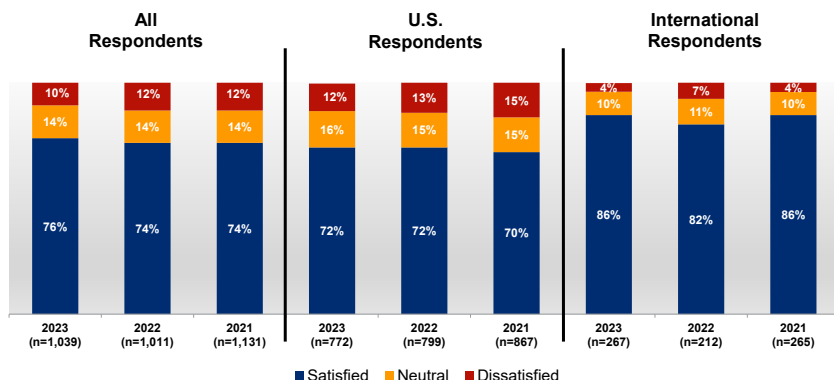
White or Caucasian is the predominant reported race followed by Asian. Nine out of 10 respondents indicated that they are not of Hispanic, Latino or Spanish origin.

#### Membership and Satisfaction

Member satisfaction is an important measure to the ASTRO Board of Directors and staff. We are pleased that overall satisfaction with ASTRO membership increased slightly in 2023 (76%, up from 74% in 2022) and look forward to continuing the upward trend in 2024. International members have the highest level of satisfaction with their ASTRO membership. Satisfaction among U.S. ROs remained steady and increased significantly for medical physicists.

### Satisfaction with ASTRO Membership

- Overall satisfaction among all members increased slightly
- Satisfaction among international members increased while staying the same for U.S. members



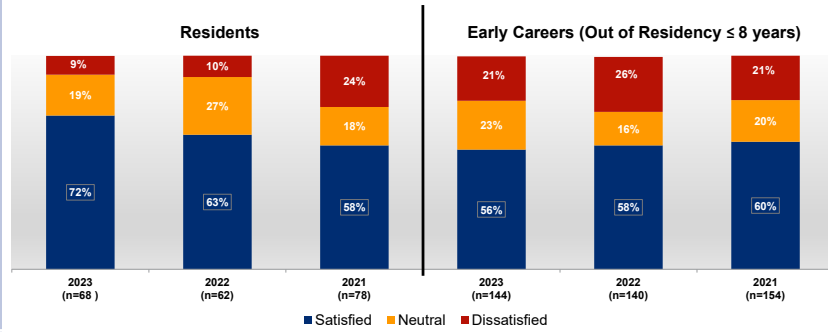
#### Q: How satisfied are you with your ASTRO membership?

Satisfaction among U.S. residents has increased significantly over the past three years. This may be due in part to the active work of ARRO. Satisfaction among Early Career members (defined as eight years or less out of residency) is a work in progress. The Early Career Committee conducted focus groups with early career physicians at the end of 2023 to understand how ASTRO can better support their needs and cultivate fuller engagement.



## Satisfaction with ASTRO Membership – U.S. based Residents and Early Career

- Satisfaction among U.S. residents increased significantly over the past three years
- Dissatisfaction is trending down among Early Career respondents, in 2023 vs. 2022



### Q: How satisfied are you with your ASTRO membership?

See responses to questions about the future of the field, day-to-day challenges, importance of ASTRO functions and more online.



Scan to read more on the results of the 2023 Member Survey.

The Annual Member Survey provides valuable information for ASTRO's continued service to our more than 10,000 members. Read the Year in Review by ASTRO CEO Laura Thevenot (page 4) to learn about ASTRO's accomplishments in 2023. Thank you

to everyone who participated in the 2023 survey. The survey is sent out every spring, so please help us by completing the 2024 survey. And, maybe you could be one of the lucky winners of the gift cards! 🎁

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Continued from **TRIBUTE TO CARLOS A. PEREZ, MD, FASTRO**

Brachytherapy Society in 2012, and the Asociación Ibero-Latino-Americana de Terapia Radiante Oncológica (ALATRO) Gold Medal in 2013.

Most importantly to me and others who had the good fortune to work with him directly, Carlos was an exceptional mentor and friend. He was meticulous and methodical in everyday life. Whether it be the color of the ink one would use to document chart reviews, one's professional attire, or the timeliness of starting and ending a meeting; he made it clear that what many might consider insignificant details made immense differences in one's professional life. With a glance at the treatment record you could tell where a patient was in their course of therapy and whether it was safe to proceed with more treatments. Efficient meetings meant everyone had an opportunity to spend more time doing things that were also valuable to them in other ways.

Dr. Perez cared deeply for his faculty and their families. He always remembered details of life events, whether it was birthdays, graduations or anniversaries. He made sure to ask about family and gave his undivided attention. Listening was important to him. He was generous with his time. What a delightful world it would be if people strived to be more like Carlos. He will be missed. 

## In Memoriam

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

**Paul G. Goetowski, MD,**  
Myrtle Beach, South Carolina

**Carlos A. Perez, MD, FASTRO,**  
Springfield, Missouri

**Cullen Taniguchi, MD, PhD,**  
Houston, Texas


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

## Newly Elected Companies to Serve on ASTRO's Corporate Advisory Council

**ASTRO'S CORPORATE MEMBERSHIP** elected the following companies to serve on the 2024 Corporate Advisory Council: Novartis, Orfit Industries, PTW North America Corporation, RaySearch Laboratories — all newly elected — and AstraZeneca and Varian, a Siemens Healthineers Company, were re-elected for another term.

The Council is a smaller, representative group of the Corporate Membership-at-large, with a proportional mix of large and small companies from the Corporate Membership base. Seats on the Council are held by high-level decision makers within the corporations and represent a broad cross section of the industry.

The Council allows for collaboration between ASTRO and its Corporate Members by focusing on issues and initiatives of mutual concern in radiation oncology. Priorities include increasing awareness of radiation therapy and advancing the science and practice of cancer treatment and patient care. In cooperation with ASTRO leadership, the Council convenes several times a year via conference call and holds an in-person meeting at ASTRO's Annual Meeting. In 2023, the following topics were brought to the forefront: Local and global disparities in care, a report on ASTRO's workforce study, and the Radiation Oncology Incidental Learning System (RO-ILS) and its continued growth. In addition, ASTRO's Advocacy division reported on the many changes in health care legislation including RT payment policy updates and its Radiation Oncology Case Rate (ROCR) program proposal.

All corporate members can nominate their company to serve on the Council. Nominations are accepted every fall with elections conducted during the winter. For more information about the Council and/or Corporate Membership, please contact Joanne DiCesare at [joanne.dicesare@astro.org](mailto:joanne.dicesare@astro.org). 

### 2024 CORPORATE ADVISORY COUNCIL

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# Integrative Oncology in the U.S.: Past, Present and Future

BY TING BAO, MD, MS, AND HEATHER GREENLEE, ND, PHD, MPH

**INTEGRATIVE ONCOLOGY** is “a patient-centered, evidence-informed field of comprehensive cancer care that utilizes mind-body practices, natural products, and lifestyle modifications from different traditions alongside conventional cancer treatments.”<sup>1</sup> In the last 20 years, there has been a remarkable surge in the adoption of integrative oncology care by cancer patients and within cancer centers. The growth in integrative oncology therapies has been accompanied by a notable rise in related research. This is highlighted by over 1,200 annual publications in the 2020s listed on the National Library of Medicine website, a striking difference from the minimal research output observed in the 1980s.

## Expansion of Integrative Oncology

The field of integrative oncology has rapidly evolved in the United States since the 1970s. In the 1970s and 1980s, patients often pursued integrative oncology on their own or in community settings. In 1991, the U.S. Congress mandated the National Institutes of Health (NIH) to study complementary and alternative medicine and established the Office of Alternative Medicine. In 1998, this office became the NIH Center for Complementary and Alternative Medicine. In parallel, the National Cancer Institute began to increase its research funding in this area. As a result, in the 1990s and 2000s, cancer centers in the U.S. initiated integrative oncology programs. In 2003, integrative oncology programs at three major cancer centers, Memorial Sloan Kettering Cancer Center, Dana-Farber Cancer Institute and MD Anderson Cancer Center, came together to form the Society for Integrative Oncology (SIO), with the mission of advancing evidence-based, comprehensive, integrative health care to improve the lives of people affected by cancer. Over the following 20 years, numerous randomized controlled trials on different types of integrative

medicine approaches, including acupuncture and mind-body research, bolstered the evidence base, enabling SIO to lead and establish clinical practice guidelines.

To establish standardized practices within the field of integrative oncology, the SIO formed the Clinical Practice Guideline Committee in 2014. Since then, multiple clinical guidelines have been developed, including the 2017 guideline on “Integrative Therapies During and After Breast Cancer Treatment,”<sup>2</sup> which was endorsed by the American Society of Clinical Oncology (ASCO) the following year.<sup>3</sup> Recently SIO and ASCO published joint guidelines, including “Integrative Medicine for Pain Management in Oncology”<sup>4</sup> and “Integrative Oncology Care of Symptoms of Anxiety and Depression in Adults with Cancer.”<sup>5</sup> These guidelines aim to standardize practice with a focus on evidence-based integrative oncology. New guidelines are in the pipeline.

SIO’s core values encompass evidence-based, interdisciplinary and patient-centered approaches, with the ultimate objective of incorporating integrative oncology into standard cancer care. The organization is structured around eight committees, each serving a distinct purpose: research, clinical practice, membership development, conference planning, communications, patient advocacy, clinical guidelines, and global communities. Furthermore, SIO features eight special interest groups dedicated to various aspects of integrative oncology, including yoga, acupuncture, Ayurveda, pediatrics, patient advocacy, program management, nursing and education. In its commitment to advancing integrative oncology, SIO has established valuable alliances, including partnerships with [cancernetwork.com](http://cancernetwork.com) and the journal *Oncology*. To further support its members, SIO offers

*Continued on the following page*



discounted subscriptions to the Journal of Integrative and Complementary Medicine. SIO also facilitates research grant funding through a partnership with the SIO-Gateway for Cancer Research collaboration.

### Multispecialty teams coordination of care


Integrative medicine programs in major oncology centers typically involve a multispecialty team of experts who employ their skills and scientific evidence to address the side effects of cancer treatments and cancer-induced symptoms using nonpharmacologic approaches. They create personalized holistic care plans for patients, offer evidence-based therapies, and conduct clinical trials to evaluate the effectiveness of integrative oncology approaches.

Services often include physician consultations, acupuncture, massage, mind-body approaches like mindfulness-based interventions, tai chi, yoga, or music therapy, and lifestyle recommendations encompassing exercise, nutrition and dietary supplement advice. During the physician consultations, discussions focus on diet, exercise, mind-body approaches, and dietary supplements, with specific recommendations tailored to individual patients based on their symptoms. Integrative oncology programs also offer virtual platform interventions and may incorporate social workers who facilitate support groups. Effective communication with the primary medical team ensures coordinated care.

This model proves financially sustainable since physician consultations are covered by insurance while integrative medicine approaches are paid via insurance reimbursement, which can differ by state, out of pocket, or subsidized by donor contributions or a combination of the three. Online programs like Memorial Sloan Kettering Cancer Center's Integrative Medicine at Home, and Dana-Farber Cancer Institute's MyZakim website, which provide virtual integrative medicine approaches, are typically affordable, offering free or low-cost options.

Although patient needs are partially met, there is still room for improvement, and these programs contribute to increased patient satisfaction and enhanced quality of life. Challenges arise when low-income patients cannot afford many integrative medicine approaches, and limited integrative oncology training programs result in long wait times. Moreover, there is a lack of standardization in how integrative oncology is practiced across the nation and the world.

### Future SIO initiatives

In the coming years, SIO's focus will remain on continuing our signature project, guideline development. Additionally, we recognize the importance of education, so we plan to concentrate on developing educational modules, an integrative oncology textbook, and an integrative oncology fellowship core curriculum, with the aim of educating all oncology professionals, not just specialists in integrative oncology. We also aspire to enhance global collaborations through these projects. In the future, we hope that integrative oncology will become an integral part of standard care worldwide, starting from the moment patients are diagnosed with cancer, with insurance covering most, if not all, integrative medicine approaches. 



*Ting Bao, MD, MS, is the co-director of the Leonard P. Zakim Center for Integrative Therapies and Healthy Living at the Dana-Farber Cancer Institute. Dr. Bao is the past president of the Society for Integrative Oncology (SIO) and the co-chair of the SIO Education Committee.*



*Heather Greenlee, ND, PhD, MPH, is an associate professor in the Public Health Sciences and Clinical Research Divisions and is the medical director of Integrative Medicine at the Fred Hutchinson Cancer Center. Dr. Greenlee is the past president of the Society for Integrative Oncology and co-chairs the SIO Clinical Practice Guidelines Committee.*

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# Bridging Conventional and Complementary Approaches: An Integrative Oncology View on Radiation Oncology

BY BRIAN D. LAWENDA, MD, AND PETER A.S. JOHNSTONE, MD, FASRO

## THE LANDSCAPE OF RADIATION ONCOLOGY

continually evolves, pushing the frontier of optimal patient outcomes further. With the progression in technology and methodologies, there is an amplified focus on ensuring patients' holistic well-being, heralding the relevance of integrative oncology. This field seamlessly blends conventional treatments with evidence-based complementary therapies. This article briefly defines integrative oncology, touches on common questions regarding the use of dietary supplements, and introduces a spectrum of mind-body wellness interventions for our radiation oncology patients.

### What is integrative oncology?

Integrative Oncology (IO) represents a patient-centered, evidence-informed approach to cancer care, merging conventional medical treatments with complementary therapies. As defined by the Society for Integrative Oncology,<sup>1</sup> this field emphasizes using mind and body practices, natural products, and lifestyle modifications from different traditions alongside standard cancer treatments. By adopting a holistic model of care, IO aims to address the physical, psychological, social and spiritual dimensions of cancer, thereby fostering a more personalized and humanistic approach to cancer care. Through this multidisciplinary approach, IO endeavors to enhance the efficacy of cancer treatments, ease side effects and improve the overall quality of life for individuals facing cancer. The following are some frequently asked questions about IO.

### Are there any supplements that can improve patients' cancer or quality of life outcomes?

Our best recommendation in this arena is to prioritize nutrient-dense, minimally processed foods with targeted micronutrient and macronutrient supplementation when these cannot be obtained adequately through dietary intake. We discuss with patients the potential use of various supplements to manage symptoms and side effects. However, we also advise that the data for these are quite limited and that concerns exist surrounding quality, safety and potential interactions. Online resources such as About Herbs, Examine.com and NatMed Pro are available for more detailed information. Before taking any of these compounds, we recommend that patients discuss potential interactions or concerns with pharmacists and other health care providers. Unfortunately, clinical trial data on whether specific supplements can improve cancer outcomes is also relatively scarce, and we uniformly advise against relying solely on this approach.

Finally, we highly recommend establishing a collaborative relationship with a naturopathic oncologist or integrative oncologist to help address these complex questions. Integrative oncologists are available through the membership of the Society for Integrative Oncology (SIO) and a naturopathic doctor who is board certified in naturopathic oncology (Fellow by the American Board of Naturopathic Oncology or FABNO) through the Oncology Association of Naturopathic Physicians (OncANP) membership.

*Continued on the following page*

## Is it safe to use antioxidant supplements during radiation therapy?

The safety of antioxidant supplement use during radiation therapy is debated among oncologists. Some express concern that these compounds may interfere with the DNA-damaging effects of radiation on cancer cells. Although numerous studies suggest that antioxidants do not reduce the effectiveness of radiation therapy, some low-quality evidence indicates a potential increased risk associated with certain supplemental antioxidants. It is worth noting that Amifostine, a potent antioxidant drug once commonly used as a radioprotector against radiation-induced xerostomia in head and neck radiation therapy before the IMRT era, has not been shown to decrease the efficacy of radiation therapy on tumors.<sup>2</sup>

To guide your counseling of patients on antioxidant supplementation or intake during radiation therapy, consider the following cautious approaches:<sup>3</sup>

- **Avoid high-dose antioxidants:** Without robust prospective clinical data (excluding those from Amifostine studies) proving a lack of radiation protection on tumors, counsel patients on the theoretical potential of reducing treatment efficacy by avoiding high-dose antioxidants during radiation therapy.
- **Natural food and beverage sources:** Recommend that patients obtain antioxidants from natural sources, such as fruits, vegetables and teas, or through low-dose supplements that do not exceed the recommended daily allowance. This method is likely to provide less protection to tumors.
- **Moderation with unique antioxidants:** For antioxidants like EGCG (green tea extract) and curcumin (turmeric extract), which do not have established required daily allowances, advise patients to consume these in moderation in their whole plant forms, for example, green tea instead of EGCG supplements, or turmeric rather than curcumin extracts.
- **Targeted intake for deficiencies:** Suggest a targeted intake of antioxidants, preferably through diet, to correct any deficiencies identified by micronutrient lab testing.
- **Consultation with oncology team:** Emphasize the importance of consulting with the oncology team before beginning any supplement regimen to ensure the approach is well-informed and safe.

- **Engagement with a knowledgeable provider:** Encourage patients to collaborate closely with a health care provider knowledgeable about the safety profiles of supplements and their potential interactions with conventional treatments, including prescription and over-the-counter medications, botanicals, chemotherapy agents, surgery and radiation therapy.

This cautious approach addresses potential risks until we have more prospective clinical data on individual antioxidant compounds. It enables our patients to make more informed decisions on using antioxidants during radiation therapy.

## Should we incorporate mind-body therapies in the care of our radiation oncology patients?

As we continue to explore avenues to enhance patient care in the domain of radiation oncology, it has become increasingly clear that the integration of Mind-Body Therapies (MBTs) offers a valuable complement to conventional treatment protocols. Evidence-based MBTs are showing promising results in improving various quality-of-life outcomes for our patients, both during and after their radiation therapy. Here, we delve into specific interventions and the scientific backing that supports their use.

- **Mindfulness meditation and mindfulness-based interventions (MBIs):** Structured programs such as Mindfulness-Based Stress Reduction have a profound impact. Endorsed in the updated 2023 ASCO guidelines for anxiety and depression,<sup>4</sup> these interventions, conducted over six to nine weeks, have been substantiated by meta-analyses and randomized clinical trials (RCTs) to alleviate psychological distress. MBIs can enhance our patients' coping mechanisms and improve sleep quality and overall well-being.
- **Yoga for the brain and body:** The evidence for yoga, particularly therapeutic or restorative Hatha yoga, as a tool for symptom reduction is robust, supported by six systematic reviews of RCTs. With a frequency of at least once or twice a week for six weeks, yoga emerges as a strong recommendation not only for anxiety and depression but also for fatigue management. (See more on yoga programs on page 20.)
- **Cognitive-behavioral therapy (CBT):** CBT's effectiveness in altering negative thought patterns equips patients better to manage sleep disturbances, depression and anxiety,




thus potentially elevating their quality of life. Incorporating CBT into patient care plans can enhance psychological support during the cancer journey.

- **Acupuncture's multifaceted role:** This ancient practice offers many benefits, from reducing xerostomia in head and neck cancer patients to alleviating fatigue, hot flashes and even arthralgias in breast cancer survivors on aromatase inhibitors. Evidence suggests that true acupuncture is more effective than sham procedures, highlighting the importance of skilled practice in delivering these benefits.
- **Music therapy and relaxation techniques:** The calming influence of music therapy and relaxation methods like progressive muscle relaxation and deep breathing techniques have been shown to attenuate anxiety and enhance the treatment experience. These interventions can serve as immediate, non-pharmacological options for stress and anxiety reduction.
- **Biofeedback and Tai Chi/Qigong:** Biofeedback empowers patients to regulate their physiological processes, which can be particularly beneficial in managing pain and anxiety. Meanwhile, Tai Chi and Qigong offer gentle movement exercises associated with stress reduction and improved physical function.
- **Massage/manipulative therapy:** Though the long-term effects remain under investigation, massage therapy is recommended for immediate pain and lymphedema relief, highlighting the need for further research into durable effects.

Integrating these MBTs into patient care requires a collaborative approach. By liaising with health care providers specialized in integrative oncology, we can tailor a mind-body wellness plan that complements primary treatment and addresses each patient's unique needs. These interventions provide symptomatic care and cater to our patients' emotional well-being.

IO in the radiation oncology sphere is evolving to embrace the whole patient, not simply the disease. IO is about merging the best conventional cancer treatments with evidence-supported therapies to enhance patients' well-being throughout their treatment journey.

Recognizing the complex needs of our patients, we are committed to collaborating with a range of health care professionals — including naturopathic oncologists, acupuncturists, massage therapists and yoga instructors — to design care plans as unique as each patient we treat.

While we explore the potential of natural supplements to ease side effects, we remain cautious, always grounding our recommendations in solid research and clear communication with our medical teams. This balanced approach ensures our patients receive comprehensive, scientifically grounded care and are attuned to their overall health and recovery. 



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*Peter Johnstone, MD, FASTRO, a radiation oncologist and acupuncturist, is vice chair and clinical director of the Department of Radiation Oncology and senior member in the Department of Health Outcomes and Behavior at the Moffitt Cancer Center. Dr. Johnstone has published some of the earliest studies on acupuncture for cancer symptom management. He was president of the Society for Integrative Oncology in 2007 and is a Fellow of ASTRO and SIO.*

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## Exercise Oncology: Improving Overall Health while Treating Cancer

BY COLIN CHAMP, MD

**WE HAVE ALL HAD THAT EXPERIENCE** — treating that low grade 2mm DCIS in a patient with multiple other health issues: overweight, chronic hyperglycemia, a fall risk from weakness and immobility, and a fracture risk from osteopenia. A week of partial breast radiotherapy may help reduce Mrs. Jones' risk of recurrence but will do little to address these other issues — the ones that are likely to shorten her life. To top it off, five years of antiestrogen treatment may be recommended, potentially worsening these issues. Perhaps, as radiation oncologists, we can do more to help?

When a study published in 2018 revealed that healthier body composition<sup>1</sup> — i.e., increased muscle mass and decreased fat mass — correlated with outcomes after the treatment for breast cancer, the field of oncology was further able to sort through the often conflicted field of nutrition, exercise and integrative oncology to provide patients with tangible recommendations to improve their outcomes after cancer treatment. Multiple studies have shown similar findings in other cancer diagnoses as well, ranging from prostate cancer to pancreatic and colorectal cancer, suggesting that preserving/increasing muscle mass, while limiting adipose tissue, may be associated with improved outcomes of all cancers.<sup>2</sup> Such findings are encouraging as both are modifiable through several lifestyle interventions and plenty of data from the noncancer world tells us how best to achieve these changes.

The only method to increase muscle mass is through resistance training while consuming adequate protein. Much like the required dose of radiotherapy to reach a therapeutic threshold, this type of exercise must surpass a quantity and intensity to promote hypertrophy via traumatic changes to myocytes. Compound movements, with substantial weights surpassing minimal thresholds to stress the body matrix, can also promote the migration of dormant osteoblasts for reinforcement with calcium and collagen to promote increased bone mineral content, potentially helping to offset bone loss from chemotherapy and hormonal therapy.<sup>3</sup> Such intense exercise also provides distinct metabolic benefits, while promoting strength, mobility and increasing functional capacity. In other words, we can target multiple areas at once to improve Mrs. Jones' overall health, all while potentially improving






her cancer-specific outcomes and offsetting side effects from treatment. But again, this “dose” of exercise must surpass a threshold for this effect to occur, and this should be performed under expert personnel.

### Allegheny Health Network Cancer Institute’s Exercise Oncology and Resiliency Center

Based on years of experience and current exercise science approaches, we established the Allegheny Health Network Cancer Institute’s Exercise Oncology and Resiliency Center. All staff at our facility are Certified Strength and Conditioning Specialists (CSCS), including myself and several exercise physiologists. We also utilize the Exercise Oncology Consortium (EOC), which includes several exercise physiologists and three radiation oncologists, all of whom are CSCS, to review exercise protocols and studies run at the EOC. As a result, cancer patients undergo exercise programs delivered by a highly skilled group of individuals, and in many cases, including the radiation oncologist that prescribed their cancer treatment. This may help account for our high adherence rates to intense programs in individuals of all ages and skillsets. For instance, of our two breast cancer protocols, EXERT-BC4 and EXERT-BCN,5 we have seen average increases in muscle mass of two to

four pounds and decreases in fat mass of five pounds in three months. All individuals at our facility are in one of several research protocols and all data is recorded, including their “dose” of exercise.

To our knowledge, this is the only facility with these capabilities. All participants undergo an in-depth workup with mobility, strength and balance assessments, body composition and muscle mass assessments, biomechanical evaluation, and metabolic assessments. We have an adjacent laboratory, and some individuals undergo proteomic and metabolomics testing along with daily heart rate variability to help guide exercise prescription of dose-escalated resistance training to achieve the required intensity in a safe environment. Individuals undergoing intense chemotherapy, for instance FOLFINIOX, will undergo daily heart rate variability assessment and have graded workouts based on their chemo dosing and daily performance status.

The results speak for themselves, including significant increases in physical function, body composition, improvement in overall health and quality of life, and decreases in depression and anxiety. The main question is, shouldn’t this be part of Mrs. Jones’ care from the start? 



A patient undergoing Adriamycin, Cytoxan and Taxol strength trained throughout their entire treatment.



*Colin Champ, MD, CSCS, established and runs the Allegheny Health Network Cancer Institute's Exercise Oncology & Resiliency Center where he is breast lead and interim chair for the Department of Radiation Oncology. He is a Certified Strength and Conditioning Specialist and diplomat of the Academy of Integrative Health & Medicine. His research focuses on nutrition and exercise as part of cancer care and survivorship.*



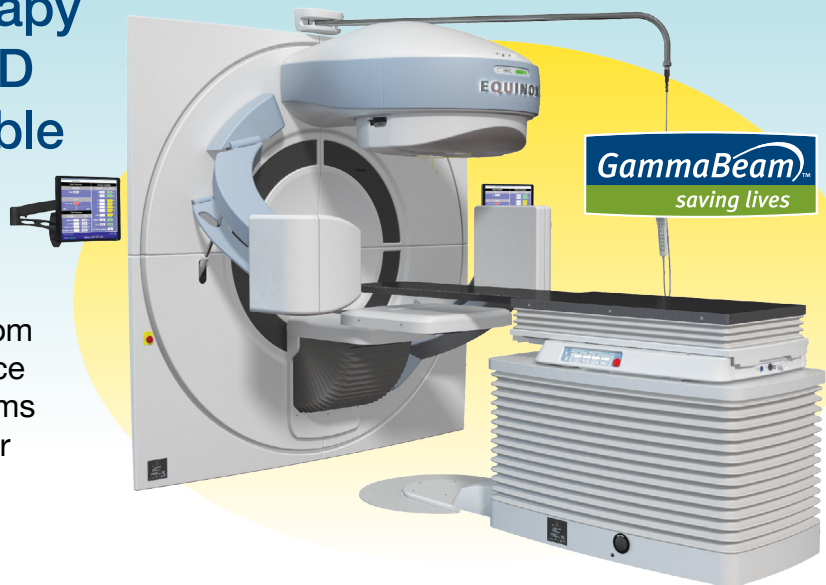
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#### Comparative Analysis of <sup>60</sup>Co Intensity-Modulated Radiation Therapy

*Christopher Fox, H Edwin Romeijn, Bart Lynch, Chunhua Men, Dionne M Aleman, and James F Dempsey, Phys Med Biol. 2008 Jun 21;53(12):3175-88.*

**Abstract:** In this study, we perform a scientific comparative analysis of using <sup>60</sup>Co beams in intensity-modulated radiation therapy (IMRT). In particular, we evaluate the treatment plan quality obtained with (i) 6 MV, 18 MV and <sup>60</sup>Co IMRT; (ii) different numbers of static multileaf collimator (MLC) delivered <sup>60</sup>Co beams and (iii) a helical tomotherapy <sup>60</sup>Co beam geometry. ... The results of the investigation demonstrate the potential for IMRT radiotherapy employing commercially available <sup>60</sup>Co sources and a double-focused MLC. Increasing the number of equidistant beams beyond 9 was not observed to significantly improve target coverage or critical organ sparing and static plans were found to produce comparable plans to those obtained using a helical tomotherapy treatment delivery when optimized using the same well-tuned convex FMO model. While previous studies have shown that 18 MV plans are equivalent to 6 MV for prostate IMRT, we found that the 18 MV beams actually required more fluence to provide similar quality target coverage.

#### Cobalt-60: An Old Modality, A Renewed Challenge

*Jake Van Dyk and Jerry J. Battista, Current Oncology, November 1995*

**Abstract:** The discovery of x-rays and radioactivity 100 years ago has led to revolutionary advances in diagnosis and therapy. However, it was not until the middle of the twentieth century that megavoltage photon energies became available through the use of betatrons, cobalt-60 gamma rays and linear accelerators (linacs). The increased photon penetration and skin sparing provided radiation oncologists with new opportunities for optimizing patient treatments. In recent years, several reports have considered various issues which define the "optimum" photon energy for the treatment of malignant disease. In many of these articles, cobalt-60 is mentioned although it is generally not recommended for radiation therapy departments in the western world. Indeed, many now consider cobalt-60 as an old modality that is only useful for palliative treatments in a large department or for developing countries with limited technical resources. ... In this commentary, we ... briefly review the arguments that have been presented both for and against the use of cobalt-60 as well as add some up-to-date insights and perspectives.



For the full articles, please visit [www.gammatherapy.com](http://www.gammatherapy.com)



# Incorporating Yoga with Cancer Treatment

Numerous studies and lived experiences support that yoga can mitigate psychological distress and improve quality of life during cancer treatment

BY LYNN FELDER, RYT, AND STEPHANIE SOHL, PHD

**CANCER CLINICAL GUIDELINES**<sup>1</sup> have been catching up to what yoga practitioners have experientially known for years — the yoga practices of awareness, movement and breathing can alleviate anxiety and depressive symptoms, and improve overall quality of life during and after cancer treatments.

In a qualitative study published by Stephanie Sohl, PhD, and team<sup>2</sup> describing participants' experience of chair yoga delivered in the clinical setting during chemotherapy, one person said, "I felt like I had truly learned a new skill and had learned to live more in the moment. Rather than thinking, 'I'm gonna feel better when these treatments are over,' you start to feel better when you're doing those exercises. And you're thinking, 'I don't have to wait until it's [treatment] over to start feeling better.' It makes me feel better right now when I'm taking these deep breaths, and that I'm doing these movements that are so relaxing."

That's the kind of response that motivates Dr. Sohl to study how yoga can help people with cancer optimize their clinical outcomes. Dr. Sohl studied to become a yoga instructor alongside completing her graduate degree in psychology at Stony Brook University in New York. She finds that her training as a yoga instructor informs how her research teams have adapted yoga to be coordinated with clinical care to meet the needs of patients. She also pursued Integral Yoga Academy's certification in Yoga for Cancer and Chronic Illness, taught at the time by the late Jnani Chapman. This program led her to connect with mentor Suzanne Danhauer, PhD, at Wake Forest University School of Medicine, and Lynn Felder.



Ms. Felder, a journalist and lifelong yoga practitioner, was diagnosed with Stage 4 ovarian cancer in 1998. She underwent extensive surgery to debulk a tumor and six months of Taxol and Carboplatin chemotherapy in 1999. Previously very active physically, Felder was shocked to find that the fatigue of cancer and treatment left her feeling depressed and anxious. However, she found relief

in gentle yoga practices that gave her a sense of ownership of her recovery.

As Dr. Sohl says, "Yoga empowers people with practices they can do to improve their own well-being, which is especially important during cancer treatment."

After treatment and recovery, Ms. Felder found



a yoga teacher training program, and began teaching mainstream flow classes in her community. After being invited to teach in a study led by Dr. Danhauer, Ms. Felder also pursued a certification in Yoga for Cancer and Chronic Illness. She has since produced two DVDs instructing yoga for people with cancer and worked with both Dr. Danhauer and Dr. Sohl on other studies of yoga for mitigating cancer-related symptoms. Ms. Felder serves as a patient advocate and yoga instructor to inform the design of these studies.


In a 2019 literature review, Dr. Danhauer, Dr. Sohl and other authors found the strongest evidence supports yoga for improving overall quality of life and fatigue. Yoga further showed promise for improving anxiety, depression, sleep disturbances and cognition. Yoga has also demonstrated that “the relative safety, low cost, and benefits of yoga suggest it is appropriate to encourage patients to participate in yoga programs to reduce symptoms and improve multiple aspects of quality of life during and after treatment. However, for many patients, accessing yoga classes can be a challenge. More recent studies are exploring innovations such as incorporating caregivers, delivering yoga in the clinical setting, offering yoga in community settings, and using technology to increase the reach of yoga.”<sup>3</sup>

Among these is an ongoing study designed to determine the efficacy of yoga for improving pain and psychological distress following surgery for suspected gynecologic malignancies (R01CA266995). The intention to maintain attention with comfort and ease is highlighted throughout this remotely delivered yoga practice, which instructs awareness, gentle movements and breathing in the bed or chair. To increase access in the surgical context, patients are able to learn yoga with a self-directed video and support from an instructor through telephone and synchronous video conferencing.

In addition, a randomized controlled trial of yoga in women with breast cancer who were specifically undergoing radiation therapy supported similar benefits to quality of life, physical functioning and fatigue.<sup>4</sup> This study did not find significant benefits to psychological distress or sleep. Yoga was taught as three 60-minute classes per week during the six weeks of radiation therapy. Classes were held near the radiation treatment center and accommodated participants’ schedules, usually one-on-one just before or after treatment.

There is considerable variability in the types of yoga available, although most incorporate some meditation, movements and breathing practices. Recommendations for dose are unclear, with the programs ranging from one to six times weekly and 20-120 minutes in

duration.<sup>3</sup> Home-based practice is also encouraged across most studies. Dr. Sohl adds the following guidance, as one of her wise teachers once said, “the best kind of yoga is the kind you will actually do.”

When seeking a yoga class to recommend for patients, it is important to ensure instructors are registered with the National Yoga Alliance, the International Yoga Therapy Association, and ideally have training specific to yoga for cancer patients. Many cancer centers offer yoga classes, which are commonly available remotely. Yet, patients do not generally know about the benefits of yoga and resources available.<sup>5</sup> It is important for health care professionals to let them know. 



*Lynn Felder, RYT, started practicing yoga in the 1960s, received her yoga teacher training at the Asheville (NC) Yoga Center in 2001, and took Yoga for Cancer Patients teacher training in 2004. Since 2004, Ms. Felder has taught and helped design research studies at Wake Forest University School of Medicine.*



*Stephanie Jean Sohl, PhD, is a Social and Health Psychologist and Assistant Professor at the Wake Forest University School of Medicine. Her research focuses on the intersection of cancer survivorship, integrative medicine and behavioral medicine.*

*X (Twitter): @sohl\_dr*

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# Talking to Patients about *Integrative Oncology*

Judith Lacey was interviewed by Sandra Turner in Sydney, Australia, November 2023.



Associate Professor Judith Lacey, MBBS, FRACGP, FACHPM (FRACP), is the Director of Supportive Care and Integrative Oncology at the Chris O'Brien Life House Cancer Centre in Sydney. The service now involves 27 practitioners: six doctors, a nurse practitioner, exercise physiologists, psychologists, lymphoedema, acupuncture and cancer massage and yoga experts. Dr. Lacey is a co-chair of the Society of Integrative Oncology Clinical Practice Committee and is an international advisor to Cancer Choices.

## ***Judith, before we start can you please explain what your background is and how you got into integrative oncology?***

I did family medicine and palliative care training, both hospice and community work. In the early 2000s, after feeling burnt out, I started looking at whole person care and did some research into what it means to support people living well with a cancer diagnosis. About 15 years ago I started traveling around the world looking at different integrative oncology providers, including Memorial Sloan Kettering and MD Anderson Cancer Center and their integrative oncology program models of care.

## ***How would you explain what integrative oncology is to a patient or colleagues?***

The definition we use was developed by a Delphi consensus, published in 2017 (JNCI Monographs): “A patient-centered evidence-informed field of cancer care utilizing mind-body practice, natural products and or lifestyle modification from different traditions alongside conventional care. The principles are to optimize health, quality of life, and clinical outcomes across the cancer continuum, and to empower patients to become active participants before, during and beyond treatment.” What we provide is an approach that considers the whole person, what stage they're at and the symptoms they're experiencing to reduce the burden of cancer treatment or the cancer itself on the person, at the same time providing them with skills to help them thrive. Exercise is key and other lifestyle modifications, engaging people from the time of diagnosis.

## ***Can you comment on referral pathways to your service?***

Some people have been sent directly for a particular

service such as lymphoedema prevention in breast cancer or an exercise program. Our team has regular meetings in which we often identify that for an individual, a more holistic approach could be beneficial. A Patient Reported Outcome Measure screening tool used around the hospital also flags those who might benefit. Radiation oncologists are our biggest referrers in fact.

## ***When a patient is referred to your service, how does a typical consultation unfold?***

When a person (often with loved ones) comes to see me, instead of my just asking about their symptoms and prescribing medication for pain, for instance, I talk to them about their diet and gut microbiome, their exercise and sleep patterns — a holistic approach. We look at the bigger toolbox, for example if they have pain or neuropathy we discuss the evidence for acupuncture, potential enrollment in an acupuncture study and their ability to afford unfunded therapies. Financial toxicity is a big part of the discussion of course. It takes an hour or longer to have this sort of conversation the first time.

## ***In general, how would you describe patients' reactions to your conversation with them?***

A few people don't want to come back to a hospital too often and might be given a personalized exercise program for example and that's enough for them. But most people say: “How come I didn't know about you sooner?” Cancer really affects the whole person so if you don't sit with them and spend time helping them assimilate what is happening, working out where they go from here, how to reduce fear of recurrence and what else they can do to live better, then it's overwhelming. There aren't many people that don't want that conversation.

### **Are there challenges in talking to patients about integrative oncology therapies?**

Let's take exercise as a great example. As you know, there's evidence that exercise from the time of diagnosis and through treatment reduces symptoms like fatigue and peripheral neuropathy. It may even improve cancer outcomes. But it's hard to tell someone who's really fatigued just to exercise so we look at other evidence-based therapies that might help. For example, for women with early breast cancer, massage and acupuncture during treatment can help fatigue. Massage is included in the NCCN early breast cancer guidelines. In the ASCO integrative therapy guidelines, oncology massage and acupuncture are included. I try to help people modify any reversible factors that might contribute to fatigue and empower them to eat well, exercise if they can and sleep well.

### **What is the most common question patients ask you?**

"What should I eat?" is by far the most common question. We screen for those who need to see a dietician for unhealthy weight loss or gain, but a lot of people want to talk about diet modification, e.g., anti-inflammatory diets, low sugar diets, and we go over the evidence. It's a big part of our consultation. If patients wish to keep following a particular diet, we make sure that it's meeting their nutritional requirements. Because so many people take supplements and herbs we built a tab on our electronic patient medical record so we can go through them, update them regularly and check any we're concerned about with our pharmacist.

### **When and how do you discharge people from your service?**

With systemic therapy advances, there's a rapidly growing group of people who are living with non-curable disease so that's now a big interest for us. We have a real challenge discharging people from our exercise program as it is so safe and because it's also a support group for people. What we're doing now is focusing on educating health professionals and therapists outside our service to safely look after cancer patients. For instance, our exercise physiologists teach students at universities about exercise for cancer patients. We've also started health coaching because it's one thing to make recommendations for change but quite another for these to be implemented. We want people to keep moving forward, go back to work and maintain their positive lifestyle changes.

### **Can you recommend any resources for patients and/or health professionals?**

The Cancer Choices website (previously called Beyond Conventional Cancer Care) organizes resources around the Seven Healing Practices of Wellness: eating well, moving more, sharing love and support, exploring what matters now, managing stress, creating a healing environment and sleeping well. <https://cancerchoices.org>

On the Memorial Sloan Kettering website, you can search by name for herbs and other supplements (useful for patients and health professionals).

<https://www.mskcc.org/cancer-care/diagnosis-treatment/symptom-management/integrative-medicine/herbs>

The Society of Integrative Oncology website includes guidelines, references and other evidence-based resources for patients and health professionals.

<https://integrativeonc.org/>

Two excellent guidelines are published in the Journal of Clinical Oncology:

- Integrative Oncology Care of Symptoms of Anxiety and Depression in Adults with Cancer: SIO-ASCO Guideline (Full text online)

<https://ascopubs.org/doi/full/10.1200/JCO.23.00857>

- Integrative Medicine for Pain Management in Oncology: SIO-ASCO Guideline (Full text online)

<https://ascopubs.org/doi/full/10.1200/JCO.22.01357> 

The 7 Healing Practices of Wellness (from the Cancer Choices website above)





# Integrative Oncology Training

BY SANTOSH RAO, MD, KRISSTINA GOWIN, DO, AND SUZANNA ZICK, ND, MPH

## DEMAND FOR INTEGRATIVE ONCOLOGY SERVICES

is increasing, due to patient interests in complementary and holistic approaches to cancer care, as well as increasing evidence to support these approaches.<sup>1</sup> Integrative oncology services are expanding in NCI-designated cancer centers, with a majority of comprehensive cancer centers offering guidance in meditation, acupuncture, yoga, massage, music therapy and integrative oncology consultations.<sup>2</sup> The American Society of Clinical Oncology (ASCO) and the Society for Integrative Oncology (SIO) have collaborated

on guidelines for integrative approaches to pain,<sup>3</sup> as well as anxiety/depression.<sup>4</sup> Furthermore, integrative approaches are well-represented in the National Comprehensive Cancer Network (NCCN) guidelines for symptoms such as pain, anxiety, depression, fatigue, hormonal symptoms and nausea.

While the demand for both services and providers continues to grow, the infrastructure of training providers to deliver such care is currently suboptimal. In the current educational landscape, there is no universally accepted training program or certification

Table 1: Examples of currently available integrative oncology training programs and certificates\*

Training Program	Description	Format	Information
Academy of Integrative Health and Medicine (AIHM)	Post-graduate clinicians	Two-year online with clinical opportunities outlined	<a href="https://aihm.org/about/">https://aihm.org/about/</a>
Andrew Weil Center for Integrative Medicine	Health care providers	Two-year online fellowship program with some in-person	<a href="https://azcim.org/education/fellowship/index.html">https://azcim.org/education/fellowship/index.html</a>
University of Michigan Integrative Medicine Faculty Fellowship Program	Post-oncology training program for those in practice	Two-year virtual Clinical in local clinical practice location	<a href="mailto:szick@med.umich.edu">szick@med.umich.edu</a>
University of Arizona and Mayo Clinic Arizona Hematology/Oncology Fellowship with Integrative Oncology Distinction Track	For oncology fellows, but could serve as model for radiation oncology as well	Fellowship training program including integrative oncology clinical program	<a href="https://cancercenter.arizona.edu/outreach-and-education/training-education/postdocs-fellows/hematology-and-medical-oncology">https://cancercenter.arizona.edu/outreach-and-education/training-education/postdocs-fellows/hematology-and-medical-oncology</a> <a href="https://college.mayo.edu/academics/residencies-and-fellowships/hematologyoncology-fellowship-arizona/">https://college.mayo.edu/academics/residencies-and-fellowships/hematologyoncology-fellowship-arizona/</a>
Memorial Sloan Kettering Fundamentals of Oncology Acupuncture	Acupuncturists who want specialty training in cancer care	Virtual 15-hour course	<a href="https://www.mskcc.org/departments/division-subspecialty-medicine/integrative-medicine/programs/fundamentals-oncology-acupuncture">https://www.mskcc.org/departments/division-subspecialty-medicine/integrative-medicine/programs/fundamentals-oncology-acupuncture</a>
TCM Academy of Integrative Medicine	Evidence-based oncology acupuncture for physician acupuncturists	Live and remote 35-hour course	<a href="https://www.tcm.ac/oncology-acupuncture-program/?v=88588bacf0da">https://www.tcm.ac/oncology-acupuncture-program/?v=88588bacf0da</a>

\*Other training programs and certificates may currently exist and/or are currently in development. This chart is for illustrative purposes and ASTRO does not endorse any specific program or provider.



*Santosh Rao, MD, ABOIM, is a medical oncologist specializing in GU malignancies and the Medical Director of Integrative Oncology at University Hospitals Connor Whole Health in Cleveland. He serves as the president of the Society for Integrative Oncology.*




*Suzanna M. Zick, ND, MPH, is a professor and co-director of Integrative Family Medicine at the University of Michigan. Her research and education area focuses on evidence-based symptom control in cancer treatment and survivorship. She is a past president of SIO and a current member of the SIO Education Committee.*



*Kristina Gowin, DO, is an associate professor of Medicine, director of the Hematology Oncology Fellowship Program, and founder/director of the Integrative Medicine in Hematology Oncology Fellowship Program at the University of Arizona, Tucson. She serves as a malignant hematologist, an integrative oncologist and as an active clinical and translational researcher.*

to practice under the umbrella of integrative oncology. Integrative oncology is a field made up of diverse professionals with different training paradigms and often different perspectives on health. As such, educational competencies for integrative oncology may differ according to practice population, provider type and philosophical approach to integrative care. Establishing universal competencies, program and practice development with respect to guidelines and seamless coordination with conventional cancer care will be essential factors in growing the field of integrative oncology.<sup>5</sup>

Radiation oncologists have played a leading role in the field of integrative oncology. Training for U.S. physicians may include an Integrative Medicine ABOIM Fellowship<sup>6</sup> training program, which includes both didactic and clinical training (in-person or electronically), or a diverse milieu of other integrative medicine training programs and/or certificates (acupuncture, Chinese medicine, functional medicine, massage, medical hypnosis, etc.). In general, comprehensive integrative oncology training should include an understanding of lifestyle management, stress management and the use of complementary therapies or natural products as it pertains to cancer care (See Table 1).

Integrative oncology is an advancing field, and patients, caregivers and cancer care providers are demanding more access to integrative oncology care. New and more specific models of integrative oncology competencies are needed, and diverse models of educational delivery are necessary to meet the growing demand of integrative oncology care. The Society for Integrative Oncology is working on developing core competencies and associated evidence-based integrative oncology curriculum that will ideally be the basis for an integrative oncology fellowship and/or certificate programs. 

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# AN OPEN LETTER TO FEAR

Dear Fear,

There is no place for you here.  
No reason for being.  
We know the anxiety you bring.  
And we loathe it.  
So, we took you on.  
Designing rigid radiation  
immobilization masks  
that allow a patient  
to see and breathe  
and feel as physically  
and mentally comfortable  
as possible.  
Because when patients  
are put more at ease,  
they're in a better position  
for better outcomes.  
You can't outrun us.  
We see you.

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## GIANTS OF RADIATION ONCOLOGY: BIOGRAPHICAL SKETCHES FROM THE ASTRO HISTORY COMMITTEE



Edith Hinkley Quimby, MA (Physics), ScD (hon. Causa) 1891 – 1982

### OLDER GENERATION RADIATION ONCOLOGISTS

and medical physicists will fondly remember Edith Quimby, MA, ScD, with nostalgia. Employing her Dosage Table for Linear Radium Sources, radiation oncology residents in the 1940s through the early 1970s were able to calculate the planned dose to be delivered by radium implants. Orthogonal X-ray films were obtained and with the help of a slide rule the magnification factor was calculated to obtain the actual distance across and along from the central axis of the sources. Dr. Quimby's tables delivered the expected dose based on this information. In the 1970s, computers became available and radiation oncology trainees have since had access to modern sophisticated calculation technology.

Edith Hinkley began her spectacular life journey in Rockford, Illinois, where she was born on July 10, 1891, four years before the discovery of X-rays by W.C. Roentgen in 1895, and seven years before the discovery of radium by Marie and Pierre Curie in 1898. She was one of three children to Arthur S. and Harriet Hinkley. In 1912, she graduated from Whitman College in Walla Walla, Washington, with a BS degree in physics and mathematics. She was subsequently granted a fellowship at the University of California where she received a master's degree in physics in 1915. It was

there that she met and married Shirley Leon Quimby, also a physics graduate student, and changed her name to Edith H. Quimby. In 1919, her husband joined the physics faculty at Columbia University, and she moved with him to New York, where she was employed as assistant physicist in the first research laboratory in the U.S. devoted to clinical applications of ionizing radiation. There, she worked with the chief physicist, Gioacchino Failla (a student of Marie Curie) at the recently established New York City Memorial Hospital for Cancer and Allied Diseases. This collaboration was a starting point for her subsequent unique career achievements.

Dr. Quimby was a pioneer in quantifying radiation doses. Prior to her meticulous and arduous work measuring and defining the absorbed dose in living tissues, ionizing radiation was expressed empirically in exposure time without any reference to comparable standards. In the 1920s, external radiation could be delivered only by orthovoltage devices, so radiation treatment for cancer was more often delivered by radium and radon sources. Dr. Quimby first thought of using photographic film as a radiation detector and relating the dose at a given site to the blackening of the film. This was the origin of film badges used by radiation workers for decades to document their radiation exposure. Using sensors, she found that beeswax absorbs and scatters radiation similar to human tissue. In this way she developed techniques and data for treating human tumors with radiation with safe handling of radioactive sources. In 1944, she published Dosage Table for Linear Radium Sources, which became the definitive resource for clinical dose calculation of radium brachytherapy, which continued to be employed into the early 1980s. Unlike the Patterson-Parker tables, Dr. Quimby's calculation model used equal linear loading distributed uniformly in each implant.

In 1941, Dr. Quimby was appointed assistant professor at Cornell University Medical College. One year later she was appointed associate professor of radiology at Columbia University College of Physicians

*Continued on the following page*

and Surgeons' Center for Radiological Research, and in 1954 she was promoted to full professor. In addition to teaching, she launched a research program investigating radioisotopes in the diagnosis and treatment of diseases, laying the foundation of modern nuclear medicine. During World War II, she participated in the Manhattan Project and with the nascent Atomic Energy Commission.

Dr. Quimby's remarkable achievements were recognized in the U.S. and internationally. In 1940, she was the first woman to receive the Janeway Medal from the American Radium Society, and in 1954, she was elected president of that society. In 1940, she was awarded an honorary doctorate from her alma mater, Whitman College (WA), and in 1956, a second honorary doctorate from Rutgers University (NJ). In 1963 she was awarded the American College of Radiology Gold Medal, only the second woman after Marie Curie to receive that honor. She was one of the first members of the American Association of Physicists in Medicine (AAPM) and received the William Coolidge Award from the AAPM in 1978. In 1996 the AAPM established an award in recognition of her lifetime achievement.

Following her retirement in 1960 she continued as emeritus professor of radiology at Columbia University until 1978. She died on October 11, 1982, at age 91. Her husband of 77 years, Shirley Leon Quimby survived her by four years, and died in 1986, at the age of 93. He was a polymath and an authority in solid state physics, worked on the Manhattan Project, was an avid amateur magician and sailor, and in retirement, studied and wrote on the mysteries of the Mayan Indian civilization. The couple resided in New York's Greenwich Village and had no children.

Dr. Quimby established calculation and rigorous investigation techniques that continue to serve as the foundations for modern brachytherapy and nuclear medicine. 🏠

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## THE ABR CONTINUES TO IMPROVE THE EXAM EXPERIENCE

### THE AMERICAN BOARD OF RADIOLOGY (ABR)

continues to upgrade and refine the tools used to assess examinees at all levels of training. Many articles have been written over the past several years regarding the transition to a remote exam for the Certifying (Oral) Exam and the fully computerized Qualifying (Written) Exam as well as the change to Online Longitudinal Assessment (OLA) and the Continuing Certification Exam (CCE) from the previous Maintenance of Certification (MOC) process.

These major updates have allowed examinees to have an experience as similar to the previous systems as possible, while improving the quality of the product and minimizing the impact on examinees' lives. These changes have not been implemented in a vacuum. They are the result of a dedicated group of ABR staff and volunteers from each specialty, including the radiation oncology trustees who oversee the process for our field. We engage the entire radiation oncology community by convening meetings with ADROP, ARRO, SCAROP, ACGME, ABMS members, and others. The feedback and recommendations that we obtain from these groups as well as from volunteers, examiners and examinees are considered very seriously and have resulted in some of the most significant changes to the exam process during the past few years.

The work of the ABR continues. We review and update the software and procedures to ensure that the exams remain at the highest quality and serve our diplomates and society as intended.

Some of the more recent changes, previously published<sup>1</sup> and presented at ASTRO 2023,<sup>2</sup> focused on the Qualifying Exam. We have described that the physics, radiobiology and clinical exams concentrate on clinical relevance and reduce minutiae. Clinical trial questions will address paradigm-shifting or practice-changing protocols and highlight those with clinical significance.

Regarding the oral exam, we continue to improve the software, exam interface and processes. The trustees and volunteer committee members emphasize consistency with respect to exam content and delivery among the eight disease categories.


With each exam administration, we identify new challenges. Some are addressed on the ABR side, such as infrequent software glitches or marginal

image quality, while others are related to the examinee or institution. For example, network connectivity or cybersecurity issues remain areas of continual enhancement. While we approach the oral exam with the intent of providing seamless delivery, we acknowledge that issues can and will arise, albeit at a remarkably low rate. We have a team of IT staff working throughout each exam to ensure that every candidate has a complete and fair exam.

We monitor in real time the connectivity of each candidate and examiner, to enable rapid engagement by the exam delivery team when needed to address an issue.

The amount of preparatory work prior to every exam is extensive. The process begins more than a year before the exam with content development, review by volunteer committee members, editing, psychometric assessment, and final review at the time of exam assembly.

Every examinee enters the exam with a different background and leaves the same exam with a different impression. While one person may believe that an exam was too heavily focused on breast questions, another may think that there were not enough. For this reason, we create a blueprint for each exam, which guides exam assembly to ensure that the content is in line with the expected clinical exposure for that examinee level. For example, an examinee in training would likely be exposed to more pediatric cases than a general practitioner; thus, the Qualifying Exam will have more pediatric cases than OLA or the Continuing Certification Exam. These blueprints are reviewed and updated on an annual basis by the trustees and volunteers on each disease site committee.

The volunteers and staff of the ABR work hard to maintain the validity of the exams and confidence in the Board. Empowering current and future diplomates who volunteer to serve the ABR is an important function of ABR leadership. Communicating how and why updates and improvements are implemented in the exam process is an important role of the associate executive director of radiation oncology. 

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2. EDU 14 - American Board of Radiology: 2023 Updates and Discussion can be found on the 2023 Annual Meeting onDemand.



## RO-ILS 2023 SAFETY STARS AND SAFETY HONOR ROLL

### “IT TAKES LEADERSHIP TO IMPROVE SAFETY,”

said Jackie Stewart, a Formula One driver who helped advance the safety of motorcar racing. While radiation oncology teams might not be traveling over 200 miles per hour, the same philosophy applies to the specialty. Leadership does not require a formal title but is rather dictated by a person or organization’s actions and attitude, and often a more formal leadership role serves to maximize their impact. To improve quality and patient safety, we need leaders, ones that come in all shapes and sizes.

New in 2023, the RO-ILS: Radiation Oncology Incident Learning System® program began identifying safety stars to promote specific individuals who have made significant contributions to patient safety. RO-ILS participants were invited to nominate their colleagues for recognition. Many fantastic individuals were nominated, and all are worthy of acknowledgement. To date, nine individuals were selected and recognized in the categories of medical dosimetrists, radiation therapists and medical physicists (see Figure 1).

The following three radiation oncologists (listed in alphabetical order) join their rank as 2023 Safety Stars.



### **John V. Hegde, MD**

Assistant Professor, UCLA  
RO-ILS Enrolled 2014  
APEX Accredited April 2018 and  
reaccredited September 2022

“Dr. Hegde is the Radiation Safety Officer for our department where we have weekly quality meetings and monthly department-wide meetings. Dr. Hegde helped launch a Lessons Learned “L&L” where teams are invited to share cases that teach an important safety issue in a case-based fashion. This has been a huge hit, something we look forward to every month! Additionally, Dr. Hegde is a wealth of information. He is available day or night to review a plan, answer questions to optimize patient care, or to bounce thoughts — both when I was a resident and now as a colleague.”  
- *Ricky R. Savjani, MD, PhD, Assistant Professor*



### **Itai M. Pashtan, MD**

Director of Quality Improvement,  
Dana-Farber Brigham Cancer  
Center  
RO-ILS Enrolled 2022

“Dr. Pashtan has been the Network QI Committee Chair for the past five years and has been instrumental in fostering a just culture framework within the department, which has resulted in a healthy safety reporting culture. To support this effort, he developed a quality improvement committee visitor program to enhance transparency and improve staff engagement with regard to safety. Dr. Pashtan is a surveyor for ASTRO’s APEX: Accreditation Program for Excellence, which reflects his dedication to maintaining and promoting excellence within the field of radiation oncology.”

- *Tara Kosak, MEd, RT(T)(CT), Quality and Safety Program Manager*



### **Terence T. Sio, MD, MS**

Professor, Mayo Clinic Arizona  
RO-ILS Enrolled February 2014

“Working with his medical physics, dosimetry and therapy teams, Dr. Sio has helped contribute to a number of respiratory motion and IGRT practices and protocols, which are now being used daily in both photon- and proton-based treatments for our department. He has been getting more involved in our safety and incident learning system programs and is helping identify areas in the clinic that can use systematic improvement. Outside of our facility, he recently worked with other experts to update ASTRO’s Safety White Paper on IGRT.”

- *Nathan Y. Yu, MD, Assistant Professor*

Congratulations to all of the 2023 RO-ILS Safety Stars and thank you for your contributions and leadership in improving patient safety.

Figure 1: 2023 RO-ILS Safety Stars

**Alyx Alfson, MS, CMD, RT(T)**  
University of Wisconsin

**Danica Bolton, RTT**  
Beth Israel Lahey Health at Exeter Hospital

**Stacey Grubb, RT(T)**  
Compass Oncology

**Timothy Hahn, RTT**  
Sutter Medical Foundation

**Ryan Manger, PhD**  
University of California San Diego

**Jason Pukala, PhD**  
Orlando Health Cancer Institute

**Scott Simmons, CMD, RT(R)(T)**  
GenesisCare

**Patricia Sponseller, MS, CMD, RTT (R)(T)**  
University of Washington

**Cassandra Stambaugh, PhD**  
Tufts Medical Center


In racing, more than just the driver with their foot on the pedals impacts safety. The manufacturers of the racecar, pit crews, organizations that create race circuits and more, all have a role to play. In radiation oncology, specialty societies and vendors that have helped develop and offset the cost of the RO-ILS program are safety stars in their own right.

Thanks to the generous financial contributions of the sponsors and supporters, any U.S.-based practice, whether a small or rural community practice or an academic center, can enroll and participate in RO-ILS for free. RO-ILS participants have access to a ready-to-use data collection tool with analysis features to aggregate and learn from their errors in a secure and protected environment. To benefit the broader community, over 50 RO-ILS educational resources have been publicly released to share de-identified events, trends and possible mitigation strategies. Thanks to the over 850 facilities enrolled in the program and those actively contributing events to the RO-ILS database for sharing your experiences and enabling lessons to be learned outside of your facility.



In June 2024, RO-ILS will celebrate 10 years since its launch. *Who will be the 2024 safety stars? Which individuals, practices and vendors will be leading radiation oncology's patient safety efforts?*

To learn more about RO-ILS and how to get involved, contact [ROILS@astro.org](mailto:ROILS@astro.org). 


The latest RO-ILS education is a detailed analysis of the most dosimetrically impactful errors that reached patients as reported to the RO-ILS database. To read the themed report, visit [astro.org/ROILS/DosiReport](https://astro.org/ROILS/DosiReport).




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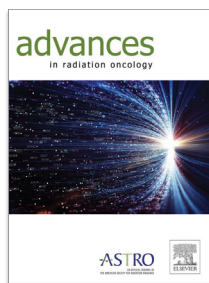



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## An Integrative Medicine Educational Program for Radiation Oncology Patients: An Interview with Kareem Fakhoury, MD

*ASTROnews* recently interviewed Kareem Fakhoury, MD, about his article “An Integrative Medicine Educational Program for Radiation Oncology Patients: Patient-Reported Outcomes.”

### Could you please give a brief overview of your study and its findings?

This study was designed to pilot an integrative medicine educational program for patients undergoing radiation therapy. Patients were invited to attend interactive sessions on meditation, yoga, self-massage and nutrition, each led by an area expert from the Osher Center for Integrative Health at Vanderbilt. Using pre- and post-session surveys, we found that patients had significant improvements in their ability to manage their own symptoms.

### Why did you engage in this project?

Patients undergoing cancer treatments often have a burden of side effects, symptoms and distress that are unaddressed by conventional approaches. Integrative medicine and its complementary health approaches are largely untapped sources that may address these needs. I was privileged to work with integrative providers to create an educational program that taught simple techniques tailored to the experience of patients undergoing radiation.

### What did you find surprising about your research/ results?

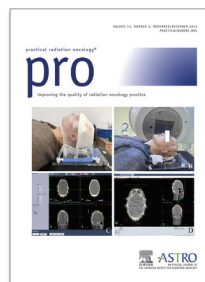
I was moved by the responses we heard from patients in the qualitative feedback portion. Patients expressed how meaningful it was to attend to their psychological and spiritual needs; that the sessions made them feel less like victims and more in control of their outcomes; that they found integrative approaches to be an important part of the healing process; and that all patients should have access to integrative resources and providers who address their health holistically.

### How can this article be used to inform clinical practice?

This article only scratches the surface of how we can incorporate integrative health into radiation oncology care. Ideally, this educational program can serve as a basis for future studies of oncology supportive care group visits. At a minimum, it adds to the growing literature base supporting integrative health approaches to address unmet needs for patients with cancer. I hope that this article will encourage fellow radiation oncologists to look for integrative resources in their institution or community that may benefit their patients.

*Kareem Fakhoury, MD, is a Radiation Oncologist at University Medical Center New Orleans and Clinical Assistant Professor at Louisiana State University Health Sciences Center. His research focuses on palliative care and integrative medicine. He is a graduate of the University of Arizona Fellowship in Integrative Medicine.*

This *Advances in Radiation Oncology* article is available at [https://www.advancesradonc.org/article/S2452-1094\(23\)00178-1/fulltext](https://www.advancesradonc.org/article/S2452-1094(23)00178-1/fulltext).



## Work-Life Balance in Radiation Oncology: An Interview with Sara Beltrán Ponce, MD, Leah Katz, MD, MPH, and Crystal Seldon, MD

Sara Beltrán Ponce, MD, chief resident at the Medical College of Wisconsin, Leah Katz, MD, MPH, assistant professor at Columbia University, and Crystal Seldon Taswell, MD, assistant professor at the University of Miami, have a shared interest in time management, work-life balance, and well-being in the field of radiation oncology. In pursuit of these interests, they have worked to increase the presence of wellness topics at national meetings, author editorial and research initiatives outlining current barriers to balance within our field, and start a podcast titled “Time Titans,”



which focuses on practical strategies to manage schedules. We spoke with the team about their recent article in *Practical Radiation Oncology*, “Achieving the Unachievable: Work-Life Balance in Radiation Oncology.”

### Could you please give a brief overview of your study?

“Achieving the Unachievable: Work-Life Balance in Radiation Oncology” delves into the intricate intersection between professional demands and personal life within the field of radiation oncology. We aimed to highlight the complexities and stressors that are unique to our careers and begin a discussion on strategies to better integrate work and personal needs into a cohesive, full and balanced life.

### Why did you engage in this project?

This piece stems from an internal realization that “doing it all” is hard. Though many within our specialty struggle to feel like they have optimized the balance between all aspects of their lives, there continues to be an external perception that radiation oncologists shouldn’t be experiencing burnout. We engaged in this work in part to help normalize the existence of burnout and work-related stressors in our field, despite the preconceived notion that an established “lack of clinical work on nights and weekends” exempts us from this phenomenon. We work in a fast-paced environment with high emotional and cognitive demands. Strategies

such as flexible scheduling, mindfulness practices, and support from colleagues and family help with coping, alongside organizational and workplace culture. Though not directly impacting clinical practice, proposing novel policies to promote a healthier work-life integration and a culture of balance can lead to decreased physician stress and improved quality of life which can, in turn, improve patient care.

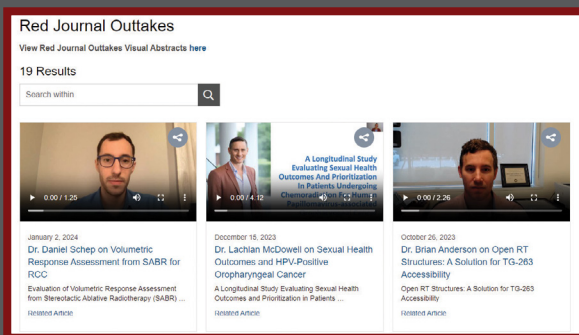
### How can this article be used to inform clinical practice?

In recognizing the stressors faced by radiation oncologists, health care institutions can tailor interventions aimed at mitigating burnout and enhancing the overall quality of life for physicians. Moreover, the strategies identified within our paper can be integrated into policies and professional development programs to enable individuals to adopt effective approaches to managing work-related stress and maintain a healthier sense of balance. Our goal is to offer actionable insights that can positively impact clinical practice by promoting a more sustainable and fulfilling work environment while sparking additional discussion about the need for wellness-focused leadership and programming in the field of radiation oncology. 🚀

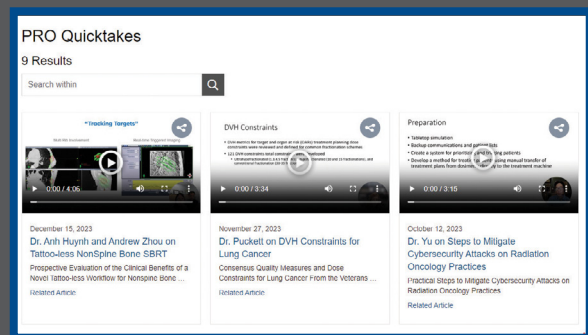
This *PRO* article is available at [https://www.practicalradonc.org/article/S1879-8500\(23\)00212-6/fulltext](https://www.practicalradonc.org/article/S1879-8500(23)00212-6/fulltext).

## ASTRO Journal Videos

We now offer the opportunity to produce a short video explanation of your article, which is featured prominently on the journal website. To learn more and receive instructions, please contact the editorial office at [journals@astro.org](mailto:journals@astro.org).



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### **KEY DATES**

#### **March 12, 2024**

- Abstract Submissions Site Closes
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#### **Early June 2024**

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#### **June 26 - July 12, 2024**

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