Department of Radiation Oncology Newsletter



Winter 2024

Updates		Presentations	Review		What Our Patients Are Saying 15			
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Message from the Chair



As we embark on a new year, I am proud to share a few of the many professional, clinical, and operational achievements of our department in 2023. In October, we were very well represented at several key conferences with eight oral and nine poster presentations by our physicians and radiation therapists at the ASTRO,

ASRT, and SROA annual meetings. Our team covered such topics as promoting the field of radiation oncology and radiation sciences to students, creating the first Advanced Practice Radiation Therapist role in the country, and developing initiatives that foster the well-being of providers and staff. In this issue, we also highlight new research initiatives and accomplishments of our physician scientists.

I am pleased to note that Maria Dimopoulos, PhD, MBA, RT(T), Program Director for Radiation Therapy, and Associate Director, Mount Sinai Center for Radiation Sciences Education, has received a faculty appointment as Assistant Professor of Radiation Oncology with the Icahn School of Medicine at Mount Sinai – the first radiation therapist at Mount Sinai to achieve this milestone. In 2022, Dr. Dimopoulos was a co-founder and served as the inaugural president for the newly formed Radiation Therapy Association of New York State, an affiliate of the American Society of Radiologic Technologists. Samantha Skubish, MS, RT(R)(T), Chief Technical Director for Radiation Oncology at Mount Sinai, has now assumed this prestigious role. Congratulations also to Rendi Sheu, PhD, Clinical Assistant Chief Physicist, who has recently assumed the role of President of the Radiological and Medical Physics Society of New York.

The Department of Radiation Oncology and the School of Health Professions at Stony Brook University continues its vibrant association preparing the next generation of radiation therapists and dosimetrists. The Mount Sinai Center for Radiation Sciences Education provides students with academic coursework at Stony Brook that is complemented by clinical rotations within our department.

During the year we also took time out for some fun and get-togethers, including our annual excursion to Citi Field and holiday celebrations. We hope you enjoy this issue.

Kenneth Rosenzweig, MD Professor and Chair, Department of Radiation Oncology

Leading the Way

ACCC Presents Innovator Award to Department of Radiation Oncology



In 2022, The Mount Sinai Hospital became the first hospital in the United States to introduce the new position of the advanced practice radiation therapist (APRT) and continues to lead the national effort to promote and establish this important role.

(continued)

Members of the Radiation Oncology team who helped to establish the APRT position include (from left) Kimberly Smith, MPA, FACHE; Sheryl Green, MBBCh; Samantha Skubish, MS, RT(R)(T); Kenneth Rosenzweig, MD; Clodagh Starrs, MSc, RTT; Karyn Goodman, MD, MS; Kavita V. Dharmarajan, MD; Maria Dimopoulos, PhD, MBA, RT(T); and Danielle McDonagh, MS, RT(T).

ACCC Presents Innovator Award (continued)

The innovative model of inpatient radiation therapy care, created by a team of radiation therapists, leadership, and faculty in the Department of Radiation Oncology, increases the technical skills of radiation therapists and expands the level of services the department is able to provide our patients.

For this significant achievement, the Association of Community Cancer Centers (ACCC) presented its prestigious 2023 Innovator Award to the Department of Radiation Oncology at the ACCC 40th National Oncology Conference in Austin, Texas, in October 2023. The Innovator Award recognizes visionary and compelling ideas in oncology from ACCC cancer program members nationwide.

"Mount Sinai Radiation Oncology recognized a need to identify a solution that would create a better model focusing on Value Based Care, which ultimately reduces the cost of care, improves the quality of care, and increases workflow efficiency for both the patients and the providers," says **Kimberly Smith, MPA, FACHE**, Vice President, Radiation Oncology Services, Mount Sinai Health System. "By following a specific business model and providing a justification for senior leaders that addressed quality, safety, and cost efficiencies, we received approval to move forward with this novel position. Our hope is this will pave the way for future APRT positions throughout our health system and also throughout the country."

"An advanced practice radiation therapist is a radiation therapist who, through training, education, and competency, possesses the knowledge, skills, and judgment to provide a higher level of care," says **Samantha Skubish, MS, RT(R)(T)**, Chief Technical Director, Department of Radiation Oncology, Mount Sinai Health System, who along with department colleagues accepted the award. "Decades of international evidence-based practice proves that by inserting an elevated radiation therapy skillset at integral points along a care pathway provides outcomes that are clinical, professional, and organizational."



Kimberly Smith, MPA, FACHE, Vice President, Radiation Oncology Services, Mount Sinai Health System, and Samantha Skubish, MS, RT(R)(T), Chief Technical Director, Department of Radiation Oncology, Mount Sinai Health System, accept the 2023 ACCC Innovator Award. Working in tandem with a rotation of radiation oncologists, the APRT aims to save physician time - and reduce physician burnout - by task-shifting and assuming responsibilities that support the care of resource intensive patient populations. An already key member of the Radiation Oncology team, Clodagh Starrs, MSc, RTT, Assistant Chief for Radiation Therapy, completed a master's degree in advanced clinical practice internationally and worked under the mentorship of the department's radiation oncologists to gain the skills and knowledge of an advanced practice radiation therapist, the first radiation therapy professional in the United States to hold an advanced practice role. "I think it's crucial to elevate the skill set of a radiation therapist," says Ms. Starrs. "Especially in my own case, it offers us a clinical advancement in our careers. My Irish colleagues led me to Sheffield Hallam University's master's program for advanced clinical practice in radiation oncology. That then led us to research this role."

Notes **Kavita V. Dharmarajan, MD**, "Working in partnership with an APRT has freed up my time and effort that I previously spent coordinating logistics and communication with inpatient teams so that I can work more fully at the top of my medical license as a radiation oncologist."

According to Ms. Skubish, the collaboration of the department's team of radiation therapists, educators, physicians, and leadership working together through their respective domains of expertise was integral to effectively establishing the APRT model. This included receiving grant funding from the American Society of Radiologic Technologists to study the model's effectiveness with support from their radiation therapy educators and researchers. "We have also established a national working group garnering a network of individuals across the country who are focused on the work to prove the advanced practice radiation therapy model in the United States," says Ms. Skubish.

"When my team presents a novel solution to a challenging problem, I am always there to support them and to help them implement the idea," adds **Kenneth Rosenzweig, MD**, Chair, Department of Radiation Oncology. "This is just one example of how we've been able to rise to a challenge and implement an exciting new solution. That's what makes us a cutting-edge department."

Excerpts from "Leading Innovation Through the Role of the Advanced Practice Radiation Therapist at Mount Sinai Hospital," https://vimeo.com/857652793

New Appointments

Maria Dimopoulos Appointed to ISMMS Faculty



Maria Dimopoulos, PhD, MBA, RT(T), has been named Assistant Professor, Radiation Oncology, at the Icahn School of Medicine at Mount Sinai, the first radiation therapist at Mount Sinai to achieve this distinction. Dr. Dimopoulos, Associate Director, Radiation Oncology, Mount Sinai Center for Radiation

Sciences Education, Medical Dosimetry, and Radiation Therapy Programs, is also Clinical Assistant Professor at Stony Brook University. Dr. Dimopolous, who joined the Department of Radiation Oncology at Mount Sinai in 2018, earned an undergraduate degree in human biology from

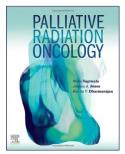
Hot Off the Press

North Carolina State University and an MBA in healthcare from Simmons University. She went on to pursue a PhD in Health Professions Leadership and Education at Pacific University, followed by radiation therapy education at Memorial Sloan Kettering Cancer Center.

Ds. Dimopoulos served as the inaugural president of the Radiation Therapy Association of New York State, and is currently Chair of the Board, 2022-2024. She is a member of the ASRT Foundation Research and Grants Advisory Panel, is a peer reviewer for ASRT's *Radiation Therapist* journal, and serves as an ASRT mentor.

The Department of Radiation Oncology is pleased to announce that two textbooks have recently been published by faculty members.

Palliative Radiation Oncology, First Edition by Neha Vapiwala, MD (Editor), Joshua Jones, MD, MA (Editor), **Kavita Dharmarajan, MD** (Editor)



Palliative Radiation Oncology provides practical, comprehensive coverage of the many nuanced technical and clinical aspects of this growing field, integrating basic science, pathologies, and research with clinical applications. The textbook advises on approaches to tumor assessment, precise target

definition, and dosing-specific guidelines to minimize side effects, and reviews decision-making algorithms to guide individualized palliative radiation oncology treatment plans. Machine Learning and Artificial Intelligence in Radiation Oncology: A Guide for Clinicians, First Edition by **Barry S. Rosenstein** (Editor), Tim Rattay (Editor), John Kang (Editor)

Machine Learning and Artificial Intelligence in Radiation Oncology addresses practical concepts in machine learning applied to clinical radiation oncology and how machine learning can be used to improve clinical outcomes. The textbook covers three main areas: fundamental concepts of machine



fundamental concepts of machine learning and radiation oncology; translational opportunities, such as in radiogenomics and autosegmentation; and current applications in clinical decision making.

New Course on Medical Dosimetry



Vishruta Dumane, PhD, DABR,

Medical Dosimetry Program Director, is offering a new course for students: Motion Management in Stereotactic Body Radiation Therapy of Thoracic and Abdominal Sites. The course will cover methodologies to quantify organ motion during patient simulation; incorporating the impact of motion through adequate target margins during treatment planning; and patient setup during treatment.

For more information, or to register for the course: https://edu.medicaldosimetry.org/education/catalog/ detail.cfm?id=559

The Mount Sinai Center for Radiation Sciences Education

We are extremely proud of the accomplishments and commitment of our students to pursuing excellence on their journey to becoming radiation therapists and medical dosimetrists. Following is a glimpse of their activities in 2023.

Pathway to a Dosimetry Career



Anthony Machuca, a graduate of the Medical Dosimetry Class of 2023, was featured in the 2022-2023 Annual Report of Stony Brook School of Health Professions, which documented his journey from an undergraduate student at Stony Brook University to his appointment as a medical dosimetrist

in our Department of Radiation Oncology. After earning his Bachelor of Science degree in Health Science with a medical dosimetry concentration at Stony Brook University, Anthony spent an additional year in clinical rotations at Mount Sinai complementing the didactic studies in medical dosimetry completed in his senior year.

An Exceptional Conference Experience

Our radiation therapy students were active participants in the Fall 2023 Annual Conference of the New York State Society of Radiologic Sciences and Radiation Therapy Association of New York State. Their weekend was filled with presentations by radiation therapy and medical imaging experts from across the region, student poster and essay competitions focused on pediatric radiation oncology, and wonderful opportunities to socialize and network.



The opportunity was made possible through the innovative partnership between Mount Sinai Health System's Department of Radiation Oncology and the School of Health Professions that led to the establishment of The Mount Sinai Center for Radiation Sciences Education at Stony Brook University.

"Witnessing and learning of the profound impact of radiation therapy on patients and its role in cancer treatment inspired me to pursue specialized training in this field," noted Anthony in the article. "The program provided me with intensive hands-on training in treatment planning and delivery, solidifying my decision to become a medical dosimetrist."





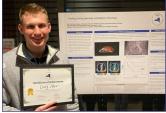
Maria Dimopoulos, PhD, MBA, RT(T); Rubi Landestoy, BS, RT(T); and Jason Pineiro, BS, RT(T)

Joseph Whitton, MS, RT(R)(CT) (MR), and Maria Dimopoulos, PhD, MBA, RT(T)

We are delighted to announce that two of our radiation therapy students, **Zyhra Casero** and **Craig Utter**, took first and second place, respectively, in the student scientific poster competition where they presented 15-minute case studies to more than 150 professionals from the tri-state region. Zyhra's research addressed technological advancements in play therapy to minimize the use of anesthesia in pediatric patients. Craig's presentation focused on treating Ewing sarcoma in radiation oncology.



Zyhra Casero



Craig Utter

Education Highlights

The Mount Sinai Center for Radiation Sciences Education (continued)

Congratulations!

Samuel Hammel, certified medical dosimetry student, has been awarded the ASRT Foundation Memorial Scholarship, which supports entry-level medical imaging and radiation therapy students entering the profession. Samuel was



also awarded the AAMD Medical Dosimetry Foundation's Sullivan Family Foundation Scholarship, which assists young people in creating a life vision.

Danielle McDonagh, MS, RT(T),

Clinical Coordinator for Radiation Therapy Education and Research, has received the ARRT Professional Education and Growth Scholarship, sponsored by the ARRT and administered by the ASRT Foundation. Danielle continually seeks to advance



and grow in her profession. She is currently pursuing her clinical doctorate, leading a number of research projects, and serving as a role model in educating our students.

A Day in the Life of RT Students



RTT students spent an informative afternoon with the Radiation Oncology Astoria team during which they were introduced to the principles of MV portal imaging, rose criterion, attenuation coefficients, and clinical field placements for 3D planning.



Lead and senior RTT students conducted a breast lab for fellow students to expose them to challenging clinical simulation, treatment, and imaging breast setup scenarios. Students also learned the principles and practices behind extended SSD (source-to-skin distance) and received a tutorial on the concept of a half beam block.



Education Highlights

On Their Way: Graduating Class of 2023 Radiation Oncology Residents

A celebration was in order for graduating residents, **Brianna Jones, MD**, who has now joined Northwell Health in New Hyde Park, NY, and **Eric Lehrer, MD**, who has taken a position with the Mayo Clinic in Rochester, MN. Also receiving kudos was **Robert Samstein, MD, PhD** (top right with Dr. Lehrer and Dr. Jones) on receiving the ARRO Educator of the Year Award presented by the Association of Residents in Radiation Oncology.

Dr. Robert Samstein with graduating residents Dr. Eric Lehrer, Dr. Brianna Jones, and Radiation Oncology faculty members



2023 Conference Presentations

October 2023 featured key annual conferences in radiation oncology. Our faculty, residents, and radiation therapists were out in force, lending their expertise in panels and sharing their research in oral and poster presentations, as you will read below.

ASTRO: American Society for Radiation Oncology

Co-Moderator

Clinical Trials Plenary Session Kenneth Rosenzweig, MD, Chair



The plenary session focused on promising new advances in delivering radiation therapy more rapidly and effectively while preserving patients' quality of life. The presenters discussed findings from several clinical trials investigating the following: prophylactic cranial irradiation for small cell lung cancer (SCLC); high dose compared to standard dose of hyperfractionated thoracic radiotherapy for limited stage SCLC; stereotactic body radiotherapy to conventionally fractionated or moderately hypofractionated external beam radiotherapy for localised prostate cancer; postoperative radiotherapy with or without cetuximab for intermediate-risk squamous cell carcinoma of the head and neck; and hypofractionated versus normofractionated accelerated radiation therapy with or without cisplatin for locally advanced head and neck squamous cell carcinoma.

Panelists

Career Pathways Panel: Aspiring Scientists and Physicians Program for Underrepresented in Medicine Oscar Padilla, MD

Carlos Rodriguez-Russo, MD, Radiation Oncology Resident

ASTRO's annual Radiation Oncology Aspiring Scientists and Physicians Program (ASPP) hosts undergraduates and graduate medical students who are from communities underrepresented in medicine and science. The workshop provided students with opportunities in the field of radiation oncology and introduced them to the radiation sciences – medical physics, radbio, and MD/PhD – pathways.

ASTRO: American Society for Radiation Oncology (continued)

2023 ASTRO-ARRO Medical Student Workshop

Interview Season Panel

Carlos Rodriguez-Russo, MD, Radiation Oncology Resident

The Medical Student Workshop complements the Aspiring Scientists and Physicians Program for Underrepresented in Medicine with a goal to introduce medical students to radiation oncology and related fields. The program enables students to engage in the radiation oncology community and also serves to increase the visibility of the field.

"I could not be more excited to participate in these two events. Together, ASPP and the ASTRO-ARRO Medical Student Workshop will expose trainees to radiation oncology who otherwise might miss out on the nuances and exciting future of our field."

 Carlos Rodriguez-Russo, MD ASPP Program Planning Team Member and ARRO Speaker

Oral Presentations

Cancer Treatment Considerations and Management of Sexual Health Sequelae in Individuals with a Vagina Deborah Marshall, MD

Panelist

Dr. Marshall and her co-panelists spoke on the sexual health needs of cancer patients, including those unique to sexual and gender minority (SGM) patients. In addition to offering a framework for respectful communication about the sexual sequelae of cancer treatment, the presentations addressed radiation therapy affecting SGM and non-SGM patients, including contouring and dose constraint considerations for organs of sexual function.

Poster Presentations

Frequent Friers: Outcomes in Patients Who Receive Multiple Courses of Lung SBRT

Julie Bloom, MD Radiation Oncology Resident

A study conducted by Dr. Bloom and her Mount Sinai colleagues focused on the safety and efficacy of high-frequency (more than three) stereotactic body radiation

Demographics, Medical Comorbidities, and Functional Factors Associated with Radiation Therapy Regimen Length in Older Patients

Daniel Cherry, MD, Radiation Oncology Resident

Dr. Cherry presented a study on demographic, comorbidity, and functional factors associated with the length of radiation therapy (RT) regimens in older patients. The findings of Dr. Cherry and his Mount Sinai colleagues demonstrated that

Is 80 the New 70? Octogenarians with Oropharyngeal Cell Carcinoma

Daniel Dickstein, MD

Dr. Dickstein provided an overview of therapeutic considerations for older adults with head and neck squamous cell carcinoma, from initial work-up to treatment selection. Their study, prompted by the gap in standard of care therapy to the lung, which showed that overall multiple therapies were well-tolerated and can remain as definitive care in selected patients.

practices for the elderly, recommend patients undergo a geriatric assessment with attention to comorbidities, socioeconomic and psychosocial status, and polypharmacy.

the following were associated with longer RT regimen

length: patients age 85 or older, being a member of

"other" or multi-race, community, facility treatment

setting, and residing in the south.

(continued)

2023 Conference Presentations

ASTRO: American Society for Radiation Oncology (continued)

Multi-criteria Optimization and RapidPlan for Improved Organs at Risk Sparing in Treatment Planning of Malignant Pleural Mesothelioma Vishruta Dumane, PhD

A study by Dr. Dumane and her colleagues at Mount Sinai determined that multi-criteria optimization can further improve the RapidPlan model with respect to organ at risk

(OAR) sparing without compromising target coverage. The combination significantly improved sparing of the OARs, especially the heart, contralateral lung, and esophagus.

radiation therapy with a coronary artery calcium score >1,

thereby warranting a prospective evaluation with a larger

The Role of Coronary Artery Calcium Score to Assess Risk of Cardiovascular Disease in Irradiated Esophageal Cancer Patients

cohort.

Alexandra Hotca-Cho, MD, Radiation Oncology Resident

Dr. Hotca-Cho presented the results of a study that indicated a trend toward increased risk of adverse cardiovascular events in patients with esophageal cancer undergoing

Academic U.S. Radiation Oncology Department Chairs: Who Are They?

Kristin Hsieh, MD, Radiation Oncology Resident

In a study of current academic U.S. radiation oncology chairpersons, Dr. Hsieh and her colleagues found that of 81 chairpersons in permanent positions, 10 (12.3 percent) were females and 71 (87.7 percent) were males. They

The Effect of Age on Health-Related Quality of Life in Patients Treated for Early Stage, Estrogen Receptor Positive Breast Cancer Keva Li, MD Candidate

In an evaluation of the physical and mental health perceptions of more than 2,000 breast cancer patients, Ms. Li and her co-authors show that older patients report worsening fatigue, pain, cognitive functioning, and global

A Dosimetric Assessment of Sexual Organ Sparing Proton Radiotherapy in Female Pelvic Cancer Patients

Deborah Marshall, MD

Dr. Marshall's goal of optimizing treatment to maintain sexual quality of life in female patients was addressed in a study on how to minimize toxicity risks to functional anatomic organs. The study revealed that magnetic

resonance imaging at simulation combined with proton radiotherapy for female sexual organ sparing may provide a technically feasible route to more equitable sexual outcomes for female patients.

Long-Term Outcomes of Multidisciplinary Radiation Oncology Equity and Inclusion Committee Programming at an Academic Health System Carlos Rodriguez-Russo, MD, Radiation Oncology Resident

This study by Dr. Rodriguez-Russo evaluated learning outcomes and perceived impact of the programming of a multidisciplinary radiation oncology equity and inclusion committee. Nearly three years since implementation,

programming by the committee was shown to be highly valued, with the majority of participants reporting achievement of learning goals and self-improvement in care for marginalized groups as a result of participation.

recommend interventions be considered to promote the recruitment, retention, and promotion of talented female academic radiation oncology physicians through the academic pipeline.

health status during three-year follow-up. They suggest

signatures with functional measures may help guide risk-

further studies involving biomarkers and prognostic

tailored treatment in this population.

2023 Conference Presentations

ASTRO: American Society for Radiation Oncology (continued)



Oscar Padilla, MD



Carlos Rodriguez-Russo, MD



Daniel Dickstein, MD



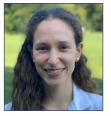
Vishruta Dumane, PhD



Deborah Marshall, MD



Alexandra Hotca-Cho, MD



Julie Bloom, MD



Kristin Hsieh, MD



Daniel Cherry, MD



Keva Li, MD Candidate

ASRT: American Society of Radiologic Technologists

Oral Presentations

Providing Culturally Competent Care in Radiation Oncology to Deaf Patients for High-dose Breath Hold Using Visually Guided Respiratory Gating Treatment Keith Edwards, RT(T), Assistant Chief, Radiation Therapy Alex Ashley, RT(R)(T), Quality Improvement Coordinator

Mr. Edwards and Mr. Ashley highlighted the disparities that exist in cancer care for deaf patients, discussing how to ensure equitable delivery of radiation therapy. Strategies included visually guided prompts using an American Sign Language interpreter via Zoom; improved workflow; being culturally inclusive; and optimizing protocols for patients who are deaf and receiving respiratory gating stereotactic radiation therapy for liver cancer.

Strategies for Improving Employee Retention and Enhancing Satisfaction in Radiation Therapy Natosha Houston, RT(T)

Andrea Cepeda, RT(T)

In this course, Ms. Houston and Ms. Cepeda offered practical tools for radiation oncology departments to use to retain valued radiation therapists, focusing on factors that include adequate staffing, opportunities

for career advancement, staff appreciation, and open communication, as well as appropriate compensation and benefits.

Advanced Practice Radiation Therapy —

Updates on Implementing a Novel Care Pathway in the United States

Clodagh Starrs, MSc, RTT, Advanced Practice Radiation Therapist Danielle McDonagh, MSc, RT(T), Clinical Coordinator, Radiation Therapy Education and Research

Ms. Starrs and Ms. McDonagh presented the significance of the advanced practice radiation therapist (APRT) role as a new level of provider who, with an elevated skillset, can influence quality of care, treatment outcomes, and

patient safety along integral points in the radiation oncology care pathway. They also summarized the responsibilities of an APRT at Mount Sinai and provided guidance on the pathway for establishing the role at other hospitals.

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2023 Conference Presentations

ASRT: American Society of Radiologic Technologists (continued)



Keith Edwards, RT(T)



Alex Ashley, RT(R)(T)



Natosha Houston, RT(T)



Andrea Cepeda, RT(T)



Clodagh Starrs, MSc, RTT



MSc, RTT Danielle McDonagh, MSc, RT(T)

SROA: Society for Radiation Oncology Administrators

Oral Presentations

Wellness Strategies & Personal Experience for the Administrative Leader Kimberly Smith, MPA, FACHE, Vice President, Radiation Oncology Services

With a keen understanding of the importance of employee well-being and preventing burnout, Ms. Smith addresses the need for also focusing on the wellness of administrative leadership. In her session, she reports on the results of a pilot Administrator Wellness Survey, the costs associated with leadership burnout, and novel ideas and approaches to address wellness specifically tailored for the leader.

Leading Innovation Through the Role of the APRT at the Mount Sinai Health System

Kimberly Smith, MPA, FACHE, Vice President, Radiation Oncology Services Samantha Skubish, MS, RT(R)(T), Chief Technical Director, Radiation Oncology

Ms. Smith and Ms. Skubish presented the efforts of the Department of Radiation Oncology in establishing the advanced practice radiation therapist (APRT) role at Mount Sinai, resulting in opportunities to decrease cost, increase efficiency, retain skilled staff, and improve quality, safety, and wellness. They also discussed how Mount Sinai navigated the administrative process to be the first institution to implement the new model of care in the United States.



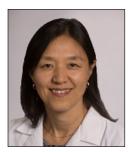
Kimberly Smith, MPA, FACHE



Samantha Skubish, MS, RT(R)(T)

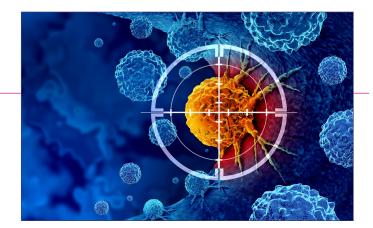
Research Review

Recent Grant Awards



Tian Liu, PhD, Chief of Physics for the Mount Sinai Health System, has received an NIH R01 subaward in collaboration with Dr. Xiofeng Yang at Emory University. In their project, "Real-Time Volumetric Imaging for Motion Management and Dose Delivery Verification," Dr. Liu and Dr. Yang seek to fill a

clinical gap by developing a real-time volumetric imagingbased tumor tracking and dose verification (RITD) system using novel techniques in deep learning, imaging, Monte Carlo simulation and high-performance computation with lung SBRT treatment as a testbed. In-treatment real-time volumetric imaging is needed to enable dose-guided adaptive SBRT. Despite these strong needs, real-time



volumetric imaging is not currently available due to the big challenge of reconstructing an instantaneous 3D image from very few 2D projections to meet the real-time requirement. Dr. Liu is also collaborating with Dr. Zhen Tian at the University of Chicago on an NIH R37 subaward using artificial intelligence to drive automatic treatment planning of stereotactic radiosurgery for the management of multiple brain metastases.

Investigator Profile

Daniel R. Dickstein, MD, a radiation oncology resident, class of 2025, continues to receive accolades for his groundbreaking research. Following in the footsteps of his primary research mentors, Deborah Marshall, MD, and Karyn Goodman, MD, Dr. Dickstein is exploring the unique toxicity of radiation in sexual minority populations, which have been historically understudied. For his efforts, Dr. Dickstein received a prestigious American Society of Clinical Oncology (ASCO) Young Investigators Award in 2023 to pursue research to improve sexual health outcomes in sexual and gender minorities with prostate cancer.

"I am so grateful to have received an ASCO Young Investigator Award and thank Dr. Marshall, Dr. Goodman, and my entire mentorship team for their guidance and support," says Dr. Dickstein, who was also selected to join a group of fellows and residents to participate in the prestigious Thought Leaders of the Future academy sponsored by the Prostate Cancer Foundation. A prolific researcher, Dr. Dickstein has recently authored several high impact reviews in *Nature Reviews Urology* and *JNCI Cancer Spectrum*, and has been a contributing author to numerous articles published in journals such as *Gynecologic Oncology, The Lancet, Oncology, Journal of Neuro-oncology,* and *Cancers (Basel),* to name a few.

Dr. Dickstein also lends his time and talent to better the lives of community residents, recently joining the Emerging Leaders Council of the Ali Forney Center, an organization that provides shelter and comprehensive services for homeless LGBTQ+ youth.



After earning his undergraduate degree in mathematics and biochemistry at Bowdoin College, Dr. Dickstein completed his MD at the Icahn School of Medicine at Mount Sinai. He entered the Radiation Oncology residency program at The Mount Sinai Hospital in 2021.

Department of Radiation Oncology: Journal Publications at a Glance

Between January 2023 and January 2024, the Department of Radiation Oncology's radiation oncologists, residents, and radiation therapists were investigators and co-authors for an impressive roster of 79 publications across 48 peer reviewed journals.

Spotlight on Staff

Outstanding Achievements

Please join us in congratulating **Alex Ashley, RT(R)(T),** on his appointment as our first Quality Assurance Coordinator in the Department of Radiation Oncology, and **Kevin Minassian, BS, RT(T),** on his promotion to Assistant Chief, Radiation Therapy, The Mount Sinai Hospital.

Alex Ashley, RT(R)(T)



On May 22, 2023, **Alex Ashley, RT(R)(T)**, began his role as the department's first Quality Assurance Coordinator, filling a critical and much needed position. Through quality assurance activities, service excellence, and patient advocacy, this new position will help optimize safety and compliance, and advance QA activities in the department.

Alex joined the Mount Sinai team in 2018 and was promoted to Senior Radiation Therapist in 2021. Devoted to his community and to the quality of care provided to the cancer patient, he has a passion for quality assurance and is currently enrolled in the Continuous Improvement Academy at Mount Sinai as well as LEAN process improvement training. Alex is working with all members of the department on quality assurance, including but not limited to quality metrics, clinical efficiency, and improving the patient

Kevin Minassian, BS, RT(T)



Kevin Minassian, BS, RT(T), began in his management role as Assistant Chief of Radiation Therapy on January 1, 2024. Kevin joined the Mount Sinai team in 2015 and over the nearly 10 years with the department, he has worked in progressive leadership roles, with promotion to Senior Therapist in 2017 and Lead

Therapist in 2022. He has contributed extensively to the training and implementation of Sensitive Practice

experience. He also participates in the existing departmental QA Committee and quality initiatives through which his role will further serve to benefit patients, clinical staff, leadership, and physicians by optimizing day-to-day operations, sustaining long-term quality improvement initiatives, and enhancing workflow processes.

Most recently, Alex assisted in the research and development of new Standards of Practice within the department, including the improvement of respiratory gating and intrafraction imaging and partial brain stereotactic radiosurgery and has also established patient education materials on surface-guidance radiation technique.

Alex completed his Bachelor of Professional Studies in Radiation Therapy at SUNY Upstate Medical Center in 2014 and is currently pursuing his Master of Business Administration. He has received numerous professional honors for his achievements.

among a multidisciplinary team and provides guidance to our therapy team in the Sim and on the treatment floor. Kevin also serves as a clinical preceptor and mentor to our radiation therapy students and has presented at the ASRT Radiation Therapy Conference on strategies for respiratory gating.

Kevin obtained his Certificate in Radiation Therapy from Memorial Sloan Kettering Cancer Center and holds a Bachelor of Science in Biological Sciences from the University of Delaware.

A Shout-Out to Astrid Lenis

"As we close another successful year for Mount Sinai Downtown Radiation Oncology, I would like to recognize our Senior Director, **Astrid Lenis**. Astrid's steady hand on the pulse of our day-to-day operations makes Downtown Radiation Oncology a special place for all the staff. She is a great advocate for our patients and always goes the extra mile to provide the clinical team the support that helps us deliver quality patient care. It is wonderful to have her as one of the lead members of our team, and I feel so proud to call her my colleague!" — Dr. Manjeet Chadha, Director, Radiation Oncology, Mount Sinai Downtown



Celebrating National Radiologic Technology Week

Mount Sinai's medical imaging and radiation therapy colleagues were recognized during National Radiologic Technology Week for their hard work, passion, and dedication to providing expert care to our patients in a warm and friendly environment.



Excellence in Action

Blending Compassion with Care

Irene Braccia, BSN, Nurse Manager, and Mariam Rahyab, LMSW, social worker – with help from the Radiation Oncology team – made certain that a very ill pediatric patient had a special birthday celebration on the day of their treatment. When Mariam learned that the patient liked Super Mario and Mickey Mouse, she reached out to the team suggesting that the room be decorated accordingly. She also designed a jumbo card with all of the patient's favorite Super Mario characters for the treatment team to sign. Irene took care of getting the decorations and cake and turned an exam room into a party hub. When the patient asked for their favorite food, Mariam returned with doughnuts and chicken nuggets. The patient's face lit up with excitement.

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Excellence in Action

Blending Compassion with Care (continued)

"I was so honored to watch the joy on the faces of this patient and their mom," Mariam says. "Working in oncology, we experience our patients' pain and trauma, but we also get to see their hope and resilience. I try to go above and beyond in a patient's care. As a social worker, I see the patient as a whole person in their environment. Families and patients are valued and supported at Mount Sinai."

"Oncology nursing is challenging, but I have met the most extraordinary people over the course of my career," notes Irene. "This particular pediatric patient had a grim prognosis, and the entire Radiation Oncology staff wanted to ensure that both the child and their family would be cared for in a meaningful way. The patient's smile was the best thank you ever! I cannot be prouder of the Radiation Oncology team for their professionalism and for their caring spirit."

Making a Positive Impact

In November, **Melissa Brito, Nurse Practitioner**, Mount Sinai-Union Square, had the pleasure of volunteering at a Health and Wellness Fair hosted by the High School for Law and Public Service in Washington Heights for the local community, students, and their families. The school prepares students for careers in law through their CTLE Certified Law Course Sequence Program, as well as other areas of public service fields such as medical and public safety. The high school's enrollment consists of approximately 97 percent minority students

and 94 percent are from economically disadvantaged households. Over 50 percent of the students are English language learners.





Mariam Rahyab, LMSW (far left), and Irene Braccia, BSN (far right), with members of the Radiation Oncology team who helped organize a special birthday celebration.

"The Health and Wellness Fair brings the community together to educate, motivate and expose the students and their families to available resources," says Melissa. "Activities included introduction to physical activity classes such as Zumba, strength-training activities, and cycling with professional exercise trainers. Other exhibitors present at the fair included the medical practice team of the school's primary in-house clinic."

"My dedicated station provided breast cancer awareness printed educational resources in Spanish and English as well as breast cancer related souvenirs, which serve as a reminder token of the information provided," adds Melissa. "The community is highly impacted by multiple factors, which ultimately can negatively affect their health and overall well-being. As a Hispanic medical provider, first generation in my family who grew up in the neighborhood, and also Spanish speaking, I am highly trusted by the community members, and this served as a perfect opportunity to use my skills and knowledge for a positive impact. I was able to engage the parents of the students, staff, and even young women on breast health awareness. Additionally, the students saw a working professional with whom they have a lot in common and can aspire to continue their studies and work in a similar field of service or other professional role in the future."

Excellence in Action

Giving Back

Charmin Williams, RN, who hails from Berbice, Guyana, attended Eversham Primary School and Kiltern Nursery School. With the help of donations from Mount Sinai Radiation Oncology nurses, her personal funds, and contributions from family and friends, Charmin purchased and shipped much-needed supplies to the schools.

"Eversham Village is the small community where I grew up," says Charmin. "This year, it was such a pleasure to be present and give back to two of the schools that I attended. In conjunction with a local non-governmental organization – Family Awareness Consciousness Togetherness – we were able to provide these school supplies directly to 170 children. Every single contribution was so generous and greatly appreciated. I look forward to making a continued impact on the children of other neighboring communities in 2024!"



What Our Patients Are Saying

Joshua Sanchez: When a Patient is Hearing Impaired

Mount Sinai Department of Radiation Oncology finds a way to deliver care to patients no matter the obstacles.



When Joshua Sanchez was recommended for stereotactic body radiotherapy for a tumor on his liver, the radiation oncology team was faced with a particular challenge. Mr. Sanchez is hearing impaired and the therapy would involve voice instructions.

"We decided to deliver the radiation using respiratory gating," says Karyn Goodman, MD, MS, Vice Chair, Research and Quality, Department of Radiation Oncology. "When we do respiratory gating, we have to have our patients listen to voice instructions during the treatment, and so this relies on their having the ability to hear." The team needed to devise an alternate method to deliver the instructions so that Mr. Sanchez could undergo treatment. In the standard approach, patients hear a voice prompt telling them to "breathe in, breathe out." Working with an American Sign Language (ASL) interpreter, they developed a plan to use goggles that would allow him to see both the ASL interpreter as well as visual cues for breathing instructions with a little sign curve giving him the guidance he needed to breathe regularly.

"It was really important not just for me," says Mr. Sanchez. "I know it's really important for other deaf patients or other disabled people who might have a hard time communicating...that's very important for access for me and other patients. I've gone through so much, it's not easy, but I really appreciate them not waiting or holding back. They really care about you here."

Mr. Sanchez' cancer journey was featured on TODAY.com at https://www.today.com/health/disease/man-38-thought-colon-cancer-symptoms-hemorrhoids-rcna77916

You can also view a video on how the Mount Sinai team came together to make sure Mr. Sanchez could undergo the treatment that could save his life at https://www.youtube.com/watch?v=BfTqtCr3bu8

What Our Patients Are Saying

A Message of Thanks

"I recently underwent radiation therapy for lung cancer in the radiation treatment area. I want to compliment the technology and administrative staff on their efficiency and hospitality. Everyone was so kind and made me feel welcome and important as an individual. I just wanted to say thank you to you all and tell you how much I appreciate the warm welcome I received." — A grateful patient



Cancer Patients' Poetry and Prose During the Pandemic Years

In 2011, Emily Rubin started the Write Treatment Workshops after she completed treatments for breast cancer at Mount Sinai Beth Israel. "In running the Write Treatment Workshops for Mount Sinai Hospitals," says Ms. Rubin, "I have been able to connect through the creative act of writing with so many who, like me, have been participants in these workshops who come and stay with a yearning to tell stories and hear those of others."

During the pandemic, the workshops moved from the hospital setting to Zoom. Ms. Rubin emailed prompts to spur the imagination and participants would create a short finished product. In June 2023, her second anthology



Dr. Alison Snow, Emily Rubin, and Dr. Manjeet Chadha

of the pieces generated in the workshops – *The Write Treatment Anthology Volume 2: The Pandemic Years* – was launched before a packed audience of cancer patients and survivors, family members, friends, and Mount Sinai Health System staff. Manjeet Chadha, MD, Director of the Department of Radiation Oncology, Mount Sinai Downtown, introduced Ms. Rubin at the event. "As a former patient and cancer survivor, she has been the guiding light and a huge resource in helping many of our patients find an outlet through their writing."

"This is such an extraordinary accomplishment to have a second publication from the workshops," says Alison Snow, PhD, LCSW-R, Director of Cancer Supportive Services at Mount Sinai Downtown Cancer Centers and a co-editor of the anthology.

Both anthologies are a moving and inspirational collection of personal essays and poems exploring what life is like after the diagnosis of cancer written by those who have been affected by cancer firsthand, whether directly or through someone they love.

Sales of the anthology help fund the workshops and can be purchased at https://www.amazon.com/Write-Treatment-Anthology-Pandemic-Years/dp/B0C9GHJ9CX

A Support Program for Patients

The Radiation Oncology Peer Support Group is an important resource for our patients. Led by our social worker, **Mariam Rahyab, LMSW,** the group focuses on building community support and emotional healing throughout and after the patients' treatment journey.

To refer a patient, call or text Mariam at 929.837.1119.



New and Noteworthy

New Computers for the Center for Radiation Sciences Education

Maria Dimopoulos, PhD, MBA, RT(T), has been awarded a grant by the American Association of Medical Dosimetrists

Louis Armstrong Music Benefit Honors Dr. Manjeet Chadha

The 18th annual "Wonderful World" gala benefiting the Louis Armstrong Center for Music and Medicine has honored **Manjeet Chadha, MD**, Director of the Department of Radiation Oncology Mount Sinai Downtown. Dr. Chadha is one of three individuals recognized this year from a variety of fields, including music and medicine, in addition to patients who have benefitted from receiving music therapy at Mount Sinai hospitals.



to fund the acquisition of computers for the Center for Radiation Sciences Education.

The gala, held on October 23, 2023, honors the legacy of the Louis Armstrong Department of Music Therapy and its commitment to music therapy at Mount Sinai. "This event highlights our commitment to music therapy, as the doctors, musicians, and patients who attend enjoy hearing about Louis' love of music and people from all walks of life. This gala supports our care of patients and research from neonatal care to oncology, Alzheimer's disease, and psychiatry," says Joanne V. Loewy, DA, LCAT, MT-BC, Founder and Director of the Louis Armstrong Center for Music and Medicine, which offers music therapy services throughout the Mount Sinai Health System.

Benefit honorees Dr. Manjeet Chadha (center); Zoë Breche, a patient of the Louis Armstrong Center who is the drummer of Bruce Springsteen's 'Nightshift' band; and Samara Joy, Grammy Award-winning vocalist, who performed "What a Wonderful World" at the gala

From Summer Research Fellow to Medical Student Researcher



Courtney Campbell, our first Summer Research Fellow and now a second-year medical student at Meharry Medical College, was selected among her peers to give an oral presentation at Meharry's Student Research Day. Ms. Campbell's project, Stereotactic Body Radiation

Therapy in Hepatocellular Carcinoma Patients with Severe Liver Disease, explored the safety of liver SBRT for patients with Child-Turcotte-Pugh Class C liver disease, previously thought to be unsafe for SBRT.

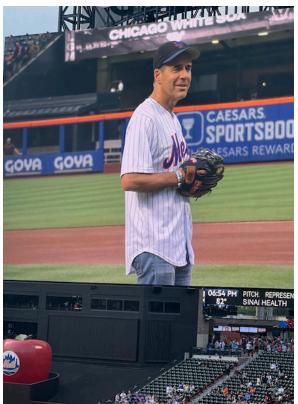
The Summer Research Fellowship at Mount Sinai was developed to increase interest and excitement about Radiation Oncology among historically underrepresented minority medical students. The fellowship provides a stipend to allow students to pursue a research project and gain clinical exposure at Mount Sinai. We look forward to welcoming new fellows this summer.

Our Congressman Visits the New York Proton Center

U.S. Representative Adriano Espaillat, who represents New York's 13th District, was welcomed to the New York Proton Center on June 27 to discuss ways to ensure that this cutting-edge treatment remains accessible to cancer patients in our communities, especially children. Congressman Espaillat, whose congressional district includes Harlem, East Harlem, West Harlem, Hamilton Heights, Washington Heights, Inwood, Marble Hill, and the northwest Bronx, met with Dr. Kenneth Rosenzweig and other members of the leadership team.



Play Ball: 2023 New York Mets Outing









Celebrating the Holidays









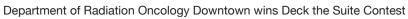












Mount Sinai Radiation Oncology Social Media

Interested in joining the social media committee? Have a photo you would like to post? Please reach out on our social platforms below.



Follow Us on Instagram @MountSinaiRadOnc @MountSinaiRTTedu



Watch Educational Programs on YouTube

To learn more about the radiation oncology simulation and treatment process, view our educational video playlist on **YouTube.com** by searching Mount Sinai Radiation Oncology.



Reach Residents on Twitter Follow our Mount Sinai Radiation Oncology residents on Twitter searching the handle @MSROResidents



Share Your News Email us at radoncnews@mountsinai.org

