

FOR MORE INFORMATION on Penn Medicine's Medical Residency & Fellowship Program please contact:

Cordelia M. Baffic
Associate Director of Medical Education
215.662.3694 | Cordelia.Baffic@uphs.upenn.edu.

For more information on the Department of Radiation Oncology at Penn Medicine please visit www.PennMedicine.org/RadiationOncology



PENN RADIATION ONCOLOGY RESIDENCY PROGRAM

“OUR EDUCATIONAL PHILOSOPHY

IS FUNDAMENTALLY ROOTED IN THE GOAL OF PROVIDING OUR RESIDENTS WITH ALL OF THE NECESSARY TOOLS TO BECOME SUCCESSFUL LEADERS IN RADIATION ONCOLOGY. CLINICAL DIVERSITY AND ACADEMIC FLEXIBILITY ARE KEY ELEMENTS IN OUR RESIDENCY TRAINING PROGRAM.”

Neha Vapiwala, MD
Vice Chair of Education

Sam Swisher-McClure, MD
Residency Program Director



A MESSAGE FROM THE CHAIR OF RADIATION ONCOLOGY James M. Metz, MD

If you are a senior medical student with a strong commitment to hands-on care of patients, an excellent academic record and demonstrated interest in a career in oncology, we invite you to apply to Penn Radiation Oncology’s Residency Program. We offer our residents the highest quality training in clinical medicine, research and patient care in a vibrant university-based community.

Penn Medicine’s Abramson Cancer Center is a recognized national and international leader in developing and implementing today’s most innovative and effective approaches in oncology, from cutting-edge surgical techniques to immunotherapy and beyond. Within this energizing environment lives one of the most comprehensive radiation oncology programs in the world, with a full range of treatment modalities and a diverse patient population and case mix. Our faculty and administration are committed to making your residency experience an excellent one while you are here and assuring that you are fully prepared to engage in whatever career path you choose.

The breadth and depth of Penn Radiation Oncology allows us to provide our residents with the opportunity to develop expertise in every modality. As a Penn resident, you will work with the top people in the field, including faculty mentors, to further develop your specific interests. You will have the resources and support you need to develop your clinical and research interests. You will be part of a team that is committed to collaboration, multidisciplinary care and clinical excellence. You will also be part of the Penn community, a vast network that opens the doors to experiences with other top graduate schools, centers of excellence and academic departments throughout the University and beyond. And you will live in Philadelphia, one of the country’s most exciting cities, with an abundance of metropolitan amenities in an affordable and welcoming setting.

The Penn Residency Program in Radiation Oncology is one of the premier programs in the country.

In the last five years, 80% of Penn Radiation Oncology residents have chosen careers in academic medicine.

OVERVIEW

“Our approach is patient-based, not radiation modality-driven. Here at Penn, whether you’re a trainee or faculty member, you view each case and each clinical quandary as a unique problem, and you approach it with a complete toolbox. Because we have access to all of the cutting-edge tools in the field, you can formulate potential solutions to each problem and work as part of a team to decide ultimately which tool to use. We use multiple teaching methods and styles to train our residents in the various technical aspects but, more importantly, we train our residents in the art of clinical judgment as well as the delivery of quality care to the entire patient, not just his or her tumor.”

Neha Vapiwala, MD



PENN RADIATION ONCOLOGY

- Consistently ranks in the top two programs nationally for grant funding
- Boasts a large and talented faculty with over 85 academic faculty and eight tenured physicians
- Has among the highest patient volumes with over 47,000 new patient visits each year
- Offers a full range of therapeutic radiation modalities at the Penn campus and its affiliate institutions
- Houses the nation’s largest and most comprehensive proton therapy program, including the first to use cone-beam technology and the MLC
- Is an international leader in educating the greater radiation oncology community on new technology and best practices

The Penn Radiation Oncology Residency Program is a five-year commitment. The first year is spent as a preliminary year intern in the Department of Medicine, with the next four years dedicated to radiation oncology training. All clinical rotations are disease-specific, lasting 2-3 months each and providing experience with multiple radiation modalities. The core disease specific blocks include thoracic, breast, gynecologic, gastrointestinal, genitourinary, lymphoid, pediatric, head and neck, and central nervous system cancers.

On most rotations, residents are assigned to work with a specific faculty member one-on-one. This apprenticeship system allows for a more cohesive clinical and educational experience for residents who do not have to juggle the needs and schedules of multiple physicians during a single rotation.

Each resident also has a minimum of 12-months experience of residency training in a research setting. This requirement is usually fulfilled between the 2nd and 4th years. Residents can choose from laboratory or clinical research electives, or design research programs of their own.

Every resident has a minimum 12 months of research experience in the setting of his or her choice.

Penn accepts four new residents each year for a total of 16 participants in the program. In the last 30 years, Penn has trained over 200 radiation oncologists. The majority of our residents choose Penn because they are seeking academic careers but a proportion also go on to work in community practice settings.

Penn Radiation Oncology is fully integrated with Penn Medicine’s Abramson Cancer Center. The Abramson Cancer Center is one of a select group of cancer centers in the country with the prestigious National Cancer Institute (NCI) rating of Exceptional as a Comprehensive Cancer Center, allowing for seamless, multidisciplinary collaboration for every stage and type of cancer.

DIVERSE SETTINGS & POPULATIONS

CHILDREN'S HOSPITAL OF PHILADELPHIA (CHOP) IS ONE OF THE LEADING PEDIATRIC FACILITIES IN THE COUNTRY. ONCOLOGY PATIENTS AT CHOP WHO REQUIRE RADIATION THERAPY RECEIVE TREATMENT THROUGH PENN RADIATION ONCOLOGY, PROVIDING AN EXCEPTIONAL OPPORTUNITY FOR OUR RESIDENTS TO GAIN EXPERIENCE WITH PEDIATRIC PATIENTS.

A great asset of Penn Radiation Oncology is that all of the modalities are available either on the main campus, which houses the Roberts Proton Therapy Center, or at one of the nearby Penn Medicine institutions or affiliates. Penn also provides all radiation oncology services to the Children's Hospital of Philadelphia, allowing residents to fulfill their pediatric requirements on campus, or to pursue that field as a career interest.

The main Radiation Oncology department is located in the Perelman Center for Advanced Medicine. In addition to seeing patients at the main facility, residents rotate to:

- Pennsylvania Hospital
 - » The nation's oldest hospital which is located in nearby Center City, Philadelphia.
- The Philadelphia Veteran's Administration (VA)
 - » Located in University City, adjacent to the Perelman Center for Advanced Medicine campus.

In these settings, residents will see a diverse mix of diseases and work with multiple physicians. Residents also see patients referred by Penn Presbyterian Medical Center, a Penn-owned hospital in West Philadelphia, located within walking distance of the main campus. In addition to common oncologic diagnoses, many patients at Penn are referred from outside the Philadelphia area for treatment of complex cancers with specialized needs only available at a tertiary referral center.

"The experiences at the VA and Pennsylvania Hospital really complemented and enriched my training. I was able to work with different populations and treat a really wide range of cases in a single rotation."

—Current Resident



THE ROBERTS PROTON THERAPY CENTER

The Roberts Proton Therapy Center is the largest and most advanced proton facility in the world. Covering 75,000 square-feet, it is located in the Perelman Center for Advanced Medicine and fully integrated into the department and the Abramson Cancer Center. The proton center has five treatment rooms and has the capacity to treat over 100 patients a day, including pediatric patients from the Children's Hospital of Philadelphia. The proton center also has a newly opened state-of-the-art research facility. Residents receive training in this important and rapidly emerging modality throughout all of their rotations. Few centers are able to offer this level of proton training within the context of the total residency experience.



SMALL ANIMAL RADIATION RESEARCH CORE

The Small Animal Radiation Research Core will open in 2017 and will be located at the distal end of the clinical proton beam line. The state-of-the-art 1000 square-foot facility will incorporate our Small Animal Radiation Research Platform, a system used for precise localization and treatment of model tumors in mice and rats. This will be the only system in the U.S. that has capabilities to do preclinical comparisons of photon and proton therapy utilizing a single system. Contiguous to the research room will be a 600 square-foot procedure room housing two fully outfitted animal surgery tables, a Type III biosafety cabinet, CO2 incubators and wet lab to support animal and cell culture experiments. A dedicated mouse satellite housing facility located on the 8th floor of the adjacent Smilow Center will allow for seamless transfer of animals between the housing facility and the Small Animal Research Core Facility.

TREATMENT MODALITIES AT PENN

TECHNOLOGY AND INNOVATION START HERE

Penn Medicine has one of the most comprehensive radiation oncology departments in the world with the capacity to treat every type of adult and pediatric cancer. We work with our partners to be the first site to launch many new technologies, and to train professionals nationally and internationally to work with these modalities. As a resident, you will gain hands-on experience with these modalities:

- Brachytherapy
- Conformal Radiation Therapy
- Cyberknife
- Gamma Knife
- IGRT
- IMRT
- MammoSite
- Photodynamic Therapy
- Proton Therapy
- Stereotactic Therapy
- Total Body Irradiation
- Total Skin Electron Beam
- TrueBeam

ELECTIVE TIME

“Our residents are themselves engaged in a variety of projects that really reflect their unique strengths and are truly multidisciplinary. A number of our residents get combined degrees. It’s very unique to have residents pursuing such a broad range of interests.”

Neha Vapiwala, MD



During training, every resident has one year of elective time. The choice of how to use that time is highly individualized. Most residents choose academic research within the department, but are also encouraged to pursue advanced research training or gain specialized clinical experience outside of the department. Recent examples of resident elective experiences include:

- Master’s in Science in Clinical Epidemiology from the University of Pennsylvania
- Master’s in Health Policy Research from the University of Pennsylvania
- Master’s in Public Health from Johns Hopkins University
- Brachytherapy Elective from Memorial Sloan Kettering
- Gynecologic Brachytherapy Elective from Mumbai, India
- International Electives in Botswana, Thailand and Brazil

Within the department, there are significant opportunities for research in radiation biology, including photodynamic therapy, preclinical research and translational research. A clinical research focus can include personalized medicine, immunotherapy and radiation, tumor microenvironment, radiation response modifiers and novel technologies.

The Department provides internal “pilot” grants of up to \$5000 for resident-led approved research projects as well as assistance in obtaining external support for training and new investigator grants. This commitment to research distinguishes Penn Radiation Oncology from virtually every other program in the country.

Residents can also choose to take advantage of the depth and breadth of resources available throughout the University of Pennsylvania. These include:

- The Perelman School of Medicine
- The University of Pennsylvania Health System
- The Penn School of Veterinary Medicine
- The Penn School of Nursing
- The Penn Nanotechnology Program
- The Pennovation Center
- The Leonard Davis Institute of Health Economics
- The Wharton School
- The Penn Institute for Translational Medicine and Therapeutics (ITMAT)
- The Wistar Institute

“I have always had a particular interest in palliative care. Here, I was able to work with a mentor who is really defining the field of palliative care in radiation oncology. I am also interested in behavioral economics and I have worked in that area as well.”

— Current Resident

THE BOTSWANA ELECTIVE

Penn Radiation Oncology residents can elect to do a one-month rotation in Gaborone, Botswana. This unique opportunity provides hands-on experience in a developing country that is working to develop a clinical infrastructure. Residents will work with HIV-related malignancies, often presenting in advanced stages, and all see a large number of gynecologic malignancies, lymphomas and head and neck cancers.

“It was really a privilege to spend time in Botswana. It’s clearly a very different world from Penn, and you feel like you are doing something important for people who need treatment and might not otherwise have access to it.”

— Current Resident



ELECTIVE TIME



“There is a vast network of former Penn trainees across the country, holding key leadership positions at many great institutions, who are always willing to help the next generation of Penn-trained radiation oncologists.”

Samuel Swisher-McClure, MD



ONCOLINK, ONE OF THE FIRST ONLINE CANCER RESOURCES FOR PATIENTS, CAREGIVERS AND PROVIDERS IS RECOGNIZED BOTH NATIONALLY AND INTERNATIONALLY AND OFFERS SURVIVORSHIP CARE PLANS TO PATIENTS AND A COMPREHENSIVE ONLINE PROTON EDUCATION COURSE TO EMERGING CENTERS. JAMES METZ, MD, CHAIR, DEPARTMENT OF RADIATION ONCOLOGY, IS THE EXECUTIVE DIRECTOR OF ONCOLINK. FOR MORE INFORMATION, PLEASE VISIT WWW.ONCOLINK.ORG.

A MULTIDISCIPLINARY APPROACH

Penn Medicine's Abramson Cancer Center is one of a select group of cancer centers in the country with the prestigious National Cancer Institute (NCI) rating of Exceptional as a Comprehensive Cancer Center. We are a national leader in translational and clinical research, as well as clinical medicine. The oncology treatment model at Penn is fully multidisciplinary and patient-centered. Residents in radiation oncology work with top clinicians and research from medical oncology, surgery, pathology, imaging and other disciplines, attending regular conferences, Grand Rounds and lectures.

SUPPORT AND MENTORSHIP

From day one, Penn makes a full commitment to supporting and mentoring its residents. This includes:

- Highly competitive salary and benefits
- Assistance with housing, including access to graduate housing
- Support for research projects
- Flexibility in choosing individual interests in electives
- Assignment of formal and informal mentors
- Travel funds for key meetings
- An experienced, committed program leadership and administrative team
- Assistance with obtaining board certification, licensures
- Support for placement at the end of the residency

TRAINING THE LEADERS OF THE FUTURE

One great testament to the overall success of the Penn Radiation Oncology Residency Program is the extent to which our graduates are leaders in the field. As of 2016:

- One graduate, James Metz, MD, serves as Chair of Penn Radiation Oncology.
- Eleven graduates, including Neha Vapiwala, MD, serve as directors of residency programs.
- Several graduates hold positions as Advisory Deans of major medical schools, including Neha Vapiwala, MD.
- One graduate is a Provost of a major medical school.

Many others are leading innovators in translational and clinical research, as well as leaders of patient care in major universities and cancer centers across the country.

LEADERSHIP & ADMINISTRATION



JAMES METZ, MD
CHAIR

James Metz, MD is a radiation oncologist who specializes in the treatment of gastrointestinal malignancies and the retreatment of previously irradiated tumors. He has led numerous clinical trials in gastrointestinal cancer with a particular interest in maintaining normal organ function. His clinical research emphasizes multimodality therapies for locally advanced gastrointestinal malignancies. Dr. Metz led the development of the Roberts Proton Therapy Center, the largest proton center in the world, which opened in 2010. He has been an international leader in the integration of proton therapy in the cancer treatment paradigm.

Dr. Metz has held a series of administrative positions within the department, beginning in 2005, when he was appointed Director of Clinical Operations. In 2009, he was appointed Vice Chair of the Clinical Division in Radiation Oncology, and in 2010 he became the Director of Quality Assurance and Quality Improvement. In 2014, he was appointed Vice Chair of the department. He has served as Professor of Radiation Oncology at the Perelman School of Medicine and was the Associate Director for Clinical Services and Programs at the Abramson Cancer Center of the University of Pennsylvania.

As the long time Editor-in-Chief (and now Executive Director) of OncoLink, an award winning website and resource for cancer information, Dr. Metz pioneered the use of online cancer survivorship care plans and web-based cancer education and information. OncoLink (www.OncoLink.org) has been named on numerous occasions as one of the Top 10 medical websites in the world by the National Library of Medicine.

Dr. Metz is board certified in radiation oncology and is a member of the American Society of Clinical Oncology (ASCO) and the American Society of Therapeutic Radiation Oncology (ASTRO).



NEHA VAPIWALA, MD
VICE CHAIR OF EDUCATION

Neha Vapiwala, MD is an Associate Professor and Vice Chair of Education in the Penn Department of Radiation Oncology, as well as Advisory Dean in the Perelman School of Medicine. She also served as the department's Chief of the Genitourinary Service, working with multiple interdisciplinary teams to oversee the department's various local, national and international educational activities. Dr. Vapiwala's clinical practice focuses on the multidisciplinary management of genitourinary (GU) cancers, and her research has investigated clinical outcomes and toxicities of multimodal therapy, technological improvements in the delivery of photon- and proton-based radiation, and the varying roles of integrative medicine, shared decision-making and safety culture in oncology. She is the GU Scientific Committee track leader for the American Society of Clinical Oncology and also serves on cancer education and examination committees in the American Society for Radiation Oncology, American College of Radiology and American Board of Radiology. In terms of her education-related roles, Dr. Vapiwala is an Advisory Dean in the Perelman School of Medicine, President of the National Association of Directors of Radiation Oncology Programs, and Vice Chair of the Residency Review Committee of the Accreditation Council for Graduate Medical Education.



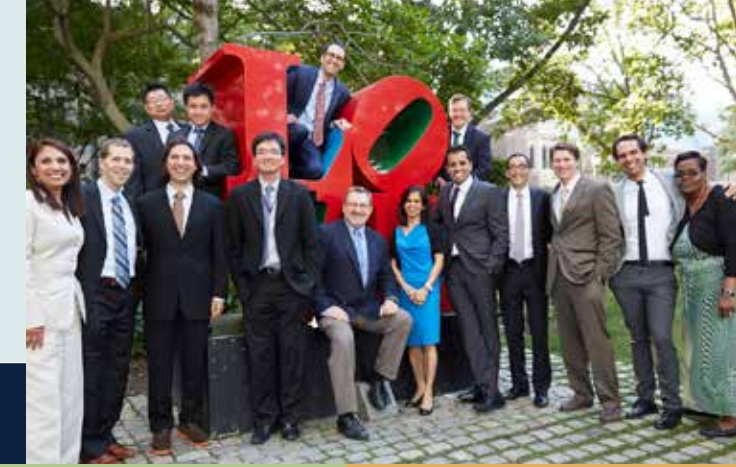
SAMUEL SWISHER-McCLURE, MD
RESIDENCY PROGRAM DIRECTOR

Samuel Swisher-McClure, MD is an Assistant Professor of Radiation Oncology at the University of Pennsylvania. He serves as the residency program director for the Penn Radiation Oncology Residency Program. He conducts oncology-related health services research, and previously completed a Masters degree in Health Policy Research at the University of Pennsylvania. Dr. Swisher-McClure's clinical practice is focused on the multidisciplinary management of patients with thoracic and head and neck malignancies.



CORDELIA BAFFIC
ASSOCIATE DIRECTOR OF MEDICAL
EDUCATION

Ms. Baffic has been at Penn for over 30 years and has coordinated the residency program for more than 25. She currently manages both the medical and physics residency programs for Penn Medicine. She is the founder of the Association of Radiation Oncology Program Coordinators, a unique resource for both program managers and residents. Most recently, she was appointed to the Coordinator Advisory Group, which serves as a consultative body to the ACGME administration concerning coordinator, graduate medical education, learning environment, and accreditation matters to all specialties. Ms. Baffic brings an extraordinary high level of commitment, caring and experience to her role.



PHILADELPHIA

The University of Pennsylvania is located in the heart of Philadelphia, a city that is exciting but also very livable, and surprisingly affordable. At Penn, you will have access to everything that the University has to offer. In the nearby area, you can get in touch with history, visit great museums and parks, tune in to music and theater, and of course, enjoy college and professional sports. The Penn community and the Philadelphia area are diverse in their people and places. You can choose to live in a fantastic urban environment or in one of the area's beautiful suburbs. There's plenty to do in Philadelphia but you are also only about an hour from the ocean or mountains, as well as only a couple of hours up to New York City or down to Washington, DC. Philadelphia is a great place to live and to practice medicine, for you and your family.

