

Get to know physician-scientist Dr. Michelle S. Bradbury, a Neuroradiologist who serves patients in New York, New York.

Michelle S. Bradbury, MD, PhD, a Physician-Scientist specializing in the fields of Nanomedicine and Neuroradiology at Weill Cornell Medicine



New York City, New York Dec 6, 2023 ([Issuewire.com](https://www.issuewire.com)) - Board-certified neuroradiologist, Dr. Bradbury is the Director of the Molecular Imaging Innovations Institute and the Perioperative Imaging and Engineered Technologies Program for Oncology. She is also Head of Cross-Campus Research Collaborations and Innovations with a particular interest in the Cornell Institute for Engineering Innovations in Medicine Program, among others, within the Sandra and Edward Meyer Cancer Center.

Throughout her academic career, she earned her medical degree from the George Washington University School of Medicine and received her Ph.D. from the Massachusetts Institute of Technology. She then went on to complete her residency in diagnostic radiology and her fellowship in neuroradiology at the Bowman Gray School of Medicine / Wake Forest Baptist Medical Center.

In pursuit of clinical excellence, Dr. Bradbury is board-certified in diagnostic radiology by the American Board of Radiology (ABR), with a Certificate of Added Qualification (CAQ) in Neuroradiology. The ABR is a not-for-profit physician-led organization that oversees the certification and ongoing professional development of specialists in diagnostic radiology, Neuroradiology, Interventional Radiology, Radiation Oncology, and Medical Physics.

Dr. Bradbury is an active member of the American Medical Association, the American Society of Clinical Oncology, the Radiological Society of North America, the American Society of Neuroradiology, Sigma Xi, and the American Association for Cancer Research.

As a physician-scientist with long-standing expertise in Molecular Imaging, Therapeutics, and the Radiological Sciences, she previously served as Co-Director of a National Cancer Institute funded Memorial Sloan Kettering-Cornell Center for Translation of Cancer Nanomedicines. The Center advanced groundbreaking work in the design and translation of molecularly targeted, ultrasmall core-shell silica nanoparticles to the clinic for image-guided surgical and therapeutic applications in cancer.

These minute fluorescent particles, when tagged with radiolabels, enable visualization of diseased tissues using multimodal PET and optical imaging approaches that offer a safer and more effective means of detecting and treating tumor cells and metastases within the body without associated toxicity.

Extending her research into the realm of surgical applications, Dr. Bradbury is actively involved in utilizing image-guided surgical applications and particle tracers to assess the spread of cancer cells to lymph nodes and along surgical margins in collaboration with several subsurgical specialties, such as Otolaryngology and Urology. Moreover, her work encompasses the attachment of therapeutic drugs to nanoparticles, bridging the gap between research and clinical trials in collaboration with the Department of Surgery. In addition, the particles used for these studies are intrinsically therapeutic and have been found to enhance anti-cancer proinflammatory responses and augment anti-tumor immunity in immunosuppressive tumor microenvironments.

Within the Brain Tumor Center, she has been at the forefront of investigating the use of small molecule drugs attached to particles for treating brain tumors. This innovative approach holds promise for enhanced penetration through the blood-brain barrier, potentially reaching tumor cells more effectively than conventional drugs and larger-size therapeutic platforms. Simultaneously, she explores novel ways to integrate MRI findings with PET scanning data to deepen our understanding of the molecular biology of brain tumors.

Throughout her research endeavors, Dr. Bradbury's overarching goal is clear: to develop novel approaches that enhance the precision of targeting and treating tumor cells, as well as regulating the tumor microenvironment. By improving the diagnosis, staging, and treatment of cancers, she aspires to

contribute to advancements that ultimately elevate survival rates and prognosis for patients.

Neuroradiology is a subspecialty of radiology focusing on the diagnosis and characterization of abnormalities of the central and peripheral nervous system, spine, and head and neck using neuroimaging techniques. Neuroradiologists are doctors who focus on diagnosing conditions of the spine, neck, head, and central nervous system. They use medical equipment, such as computed tomography or magnetic resonance imaging machines, to identify problems.

Learn More about Dr. Michelle S. Bradbury:

Through her findatopdoc profile,

<https://www.findatopdoc.com/doctor/291088-Michelle-Bradbury-Radiologist>

Through her Weill Cornell Medicine profile,

<https://vivo.weill.cornell.edu/display/cwid-msb2006>

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