

BIOGRAPHICAL SKETCH

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NAME: Mattes, Malcolm D.

eRA COMMONS USER NAME (credential, e.g., agency login): MDMATTES

POSITION TITLE: Associate Professor of Radiation Oncology

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Massachusetts Institute of Technology, Boston, MA	B.S.	06/2005	Biology
University of California, Los Angeles, CA	M.D.	06/2009	Medicine
Stanford University, Stanford, CA	Internship	06/2010	Internal Medicine
New York Methodist Hospital (NYMH), New York, NY	Residency	06/2014	Radiation Oncology

A. Personal Statement

I am an associate professor in radiation oncology at Rutgers Cancer Institute of New Jersey (CINJ), with my primary clinical interests being lung and genitourinary cancers, and palliative care. I have published 78 peer-reviewed articles, collaborating with students and faculty from several institutions and disciplines in the process. I have basic science laboratory experience under the guidance of Mary-Lou Pardue at Massachusetts Institute of Technology, and Frank Pajonk at University of California-Los Angeles, and investigator initiated clinical research experience through participation in the National Institute of Health (NIH) Introduction to the Principles and Practice of Clinical Research online course in 2014-2015, American Society of Clinical Oncology (ASCO)/American Association of Cancer Research (AACR) Methods in Clinical Research workshop in 2017, NIH Early Career Reviewer Program in 2018, and Palliative Care Research Consortium Intensive in 2022. While at West Virginia University (WVU), I received pilot funding to design and conduct clinical trials related to radioimmunotherapy and tumor metabolism. Since joining the faculty at Rutgers, I was selected to participate on a NIH Cancer Therapy Evaluation program (CTEP) Project Team to develop a Phase I clinical trial combining radiation therapy with a novel AKT inhibitor, which has recently opened to accrual at multiple National Cancer Institute (NCI) Experimental Therapeutics Clinical Trials Network (ETCTN) institutions. Building upon this work, I have a grant from the New Jersey Health Foundation that has facilitated preclinical studies to evaluate AKT inhibitors as radiosensitizers for lung cancer as well. I am an active member of the CINJ Scientific Review Board, and have been an active supporter of NCI cooperative group clinical trials, serving as the local principal investigator for numerous NRG Oncology studies over my career.

Two of my particular clinical and research interests include addressing cancer health disparities and improving quality-of-life for patients with incurable cancer. Several of my publications have been aimed at better understanding barriers to advance care planning and optimal use of palliative radiation therapy in the care of patients with metastatic malignancies (see Contribution to Science section). I am also on the board of directors for the Society for Palliative Radiation Oncology (SPRO), where I have worked alongside other radiation oncologists who are motivated to improve access to evidence based palliative radiotherapy. Most of my clinical practice is spent caring for underserved patients at University Hospital in Newark. I also served on the leadership committee of the American Society for Radiation Oncology (ASTRO) committee on health equity, diversity, and inclusion (CHEDI), where I develop educational sessions for the ASTRO annual meeting related to diversity and inclusion, several of which have been oriented towards improving enrollment in clinical trials for minority patients. I also currently receive funding from the Radiation Oncology Institute on a project that aims to increase exposure to oncology for medical students who are under-represented in medicine, in order to help diversify the oncology workforce. Finally, I recently was accepted into the funded Robert A. Winn Diversity in Clinical Trials Award Program.

B. Positions, Scientific Appointments, and Honors

Positions

- 2020-pres. Associate Professor in Radiation Oncology, Rutgers Robert Wood Johnson Medical School (RWJMS) and Rutgers Cancer Institute of New Jersey, NJ
- 2018-2020 Associate Professor in Radiation Oncology, West Virginia University, WV
- 2014-2018 Assistant Professor in Radiation Oncology, West Virginia University, WV

Other Experience and Professional Memberships

- 2023-pres. Board of Directors, Society for Palliative Radiation Oncology (SPRO)
- 2023-pres. Member, Council for Inclusive Excellence, New Jersey Medical School (NJMS)
- 2023-pres. Member, Self Evaluation Program Item Writing Task Force, ASCO
- 2023-pres. Member, Digital Education Content Planning Group, ASCO
- 2022-pres. Vice Chair, Communications Committee, ASTRO
- 2022-pres. Site Leader, ASCO Oncology Summer Internship, NJMS
- 2021-pres. Cancer Liaison Physician, ACOS Commission on Cancer, Rutgers University Hospital
- 2021-pres. Member, Scientific Review Board, Rutgers Cancer Institute of New Jersey
- 2021-pres. Member, Distinction in Inclusion and Diversity Faculty Committee, RWJMS
- 2021-pres. Leader, Thoracic Malignancies Disease Team, Rutgers University Hospital
- 2021-pres. Member, Membership Committee, ASTRO
- 2020 Member, Project Team for Ipatasertib, NCI Cancer Therapy Evaluation Program
- 2020-pres. Member, Annual Meeting Education Committee, ASTRO
- 2020-pres. Member, State Captain Initiative, ASTRO
- 2020-2022 Member, Patient- and Family-Centered Care Commission, American College of Radiology
- 2020-2022 Co-Chair of Education Subcommittee, Committee on Health Equity/Diversity/Inclusion, ASTRO
- 2019-pres. Member, Education Committee, ASTRO
- 2018-2019 Member, Institutional Review Board, WVU
- 2018-pres. Member, Workforce Subcommittee, ASTRO
- 2018-2019 Chair, Department of Radiation Oncology Promotion and Tenure Committee, WVU
- 2018-2019 Participant, Early Career Reviewer Program, NIH
- 2018-pres. Member, American Society of Clinical Oncology
- 2017-pres. Member, Thoracic Cancer/Sarcoma Clinical Category Committee, American Board of Radiology
- 2017-2018 Member, Maintenance of Certification Advisory Committee, American Board of Radiology
- 2017-pres. Member, Genitourinary Cancer Committee, NRG Oncology
- 2017-2019 Member, Distinguished Teacher Committee, WVU School of Medicine
- 2017-pres. Member, Committee on Health Equity, Diversity, and Inclusion, ASTRO
- 2017-2019 Member, Cancer Committee, WVU Cancer Institute
- 2017-pres. Member, American Association for Cancer Research (AACR)
- 2017-2019 Faculty Advisor, Oncology Interest Group, WVU School of Medicine
- 2017-2019 Ad hoc Member, Protocol Review and Monitoring Committee, WVU Cancer Institute
- 2016-pres. Member, Gastrointestinal Cancer Committee (Colorectal and Non-Colorectal), NRG Oncology
- 2016-2018 Member, Education Committee, ACR
- 2016-2017 Member, Measures Committee, ASTRO
- 2016-2017 Member, Faculty Senate, WVU
- 2015-pres. Member, Communications Committee, ASTRO
- 2015-2019 Member, Academic and Professional Standards Committee, WVU School of Medicine
- 2015-pres. Diplomate, American Board of Radiology
- 2014-2016 Member, Data Safety and Toxicity Committee, WVU Cancer Institute
- 2014-2019 Member, CMCE/MOC Committee, ASTRO
- 2013-2014 Member, Website and Education Subcommittee, ASTRO
- 2013-2014 Member, Education Subcommittee, Association of Residents in Radiation Oncology (ARRO)
- 2012-2013 Chair, Executive Committee, New York Roentgen Society
- 2011-pres. Member, American Society for Radiation Oncology (ASTRO)
- 2011-pres. Member, American College of Radiology (ACR)
- 2011-2014 Member, Resident Committee, American College of Radiation Oncology (ACRO)
- 2011-2014 Member, Executive Committee, New York Roentgen Society

Honors

2022	Educator of the Year Award, Association of Residents in Radiation Oncology, Rutgers CINJ
2021	Nominee, Chancellor's Award for Excellence in Diversity, Equity, and Inclusion
2017	Inducted, Academy of Excellence in Teaching and Learning, WVU School of Medicine
2016	Research Scholar Award, West Virginia Clinical and Translational Science Institute (WVCTSI)
2016	Award for Innovation, WVU Cancer Institute
2015	High Dose Rate Brachytherapy Scholarship/Participant, American Brachytherapy Society (ABS)
2014	Radiosurgery Course Scholarship/Participant, AANS/ASTRO
2014	Best Poster Presentation, Resident Research Day, NYMH
2013	Original Scientific Paper of the Year, Resident Research Day, NYMH
2013	Wong Award for Original Scientific Research, ACRO Annual Meeting
2013	Roentgen Resident/Fellow Research Award, NYMH Radiation Oncology Department
2012	Roentgen Resident/Fellow Research Award, NYMH Radiation Oncology Department
2012	Original Scientific Paper of the Year, Resident Research Day, NYMH

C. Contributions to Science

1. Advance care planning is under-utilized in the United States, leading to outcomes that are in contrast to most patients' stated wishes at the end-of-life. We surveyed a variety of healthcare professionals who care for cancer patients to learn more about their views on advance care planning and end-of-life care relating to themselves and the healthcare system as a whole. A separate comparative analysis was done to assess biases that different types of physicians may have in managing the care of these terminal cancer patients. I served as the primary investigator for this work. I also collaborated with ASTRO to study radiation oncologists' attitudes toward palliative and supportive care and determined barriers to its appropriate utilization in advanced cancer patients. Finally, given that palliative radiation therapy is underutilized, I performed a targeted needs assessment to assess barriers to referral.
 - a. **Mattes MD**, Tung K, Baum R, Parikh K, Ashamalla H. Understanding the views of those who care for patients with cancer on advance care planning and end-of-life care. *Am J Hosp Palliat Care*. 2015;32(8):802-9. PubMed PMID: 24939206.
 - b. Wei RL, **Mattes MD**, Yu J, Thrasher A, Shu HK, Paganetti H, De Los Santos J, Koontz B, Abraham C, Balboni T. Attitudes of radiation oncologists toward palliative and supportive care in the United States: Report on national membership survey by the American Society for Radiation Oncology (ASTRO). *Pract Radiat Oncol*. 2017;7(2):113-119. PubMed PMID: 28274395.
 - c. Pifer PM, Farrugia MK, **Mattes MD**. Comparative Analysis of the Views of Oncologic Subspecialists and Palliative/Supportive Care Physicians Regarding Advanced Care Planning and End-of-Life Care. *Am J Hosp Palliat Care*. 2018;35(10):1287-1291. PubMed PMID: 29514487
 - d. Parker SM, Wei RL, Jones JA, **Mattes MD**. A targeted needs assessment to improve referral patterns for palliative radiation therapy. *Ann Palliat Med*. 2019;8(4):516-522. PubMed PMID: 31594377.
2. Diversifying the radiation oncology workforce is an urgent and unmet need. The below works describe pathways to promoting diversity in the radiation oncology workforce and identify factors predictive of a medical school graduating a high volume of future radiation oncology residents, in order to better understand potential pathways to more effectively diversify the radiation oncology physician workforce. I served as the primary investigator for this work.
 - a. **Mattes MD**, Bugarski LA, Wen S, Deville C Jr. Assessment of the Medical Schools Radiation Oncology Residents Graduate From, and Implications for Diversifying the Workforce. *Int J Radiat Oncol Biol Phys*. 2020 Nov 15;108(4):879-885. PubMed PMID: 32561501.
 - b. Paradis KC, Franco I, Beltran-Ponce S, Chaurasia A, Laucis AM, Venkat P, Siker M, Suneja G, Deville C, Munbodh R, **Mattes MD**. The Current State of Departmental Diversity, Equity, and Inclusion Efforts within US Academic Radiation Oncology Departments. *Int J Radiat Oncol Biol Phys*. 2022 Jun 23:S0360-3016(22)00611-3. PubMed PMID: 36306980.
 - c. **Mattes MD**, Munoz SM, Thomas CR Jr, Deville C Jr. Pilot Study Exploring the Feasibility of Incorporating Radiation Oncology Into Pre-existing Early Pathway Programs for Diverse Premedical Students. *Int J Radiat Oncol Biol Phys*. 2023 Jan 23:S0360-3016(23)00063-9. PubMed PMID: 36702316.

- d. **Mattes MD**, Gayed G, Thomas CR Jr, Deville C Jr. Impact of a Virtual Introduction to Radiation Oncology Presentation on Stimulating Interest in the Specialty Among Diverse Medical Students at Multiple Institutions. *J Am Coll Radiol*. 2023 Feb;20(2):243-250. PubMed PMID: 36513260.
3. Several preclinical studies have demonstrated that radiation therapy can prime a more robust systemic effect on cancer lesions outside of the irradiated area through increased antigen release and presentation, and mobilization of immune effector cells. In a prospective clinical trial, we evaluated the impact of the addition of radiation therapy to checkpoint inhibitor immunotherapy in patients with metastatic lung cancer. A further retrospective analysis assessed the impact of immunotherapy in combination with stereotactic radiosurgery in the treatment of brain metastasis. I served as the primary investigator for this work.
 - a. **Mattes MD**, Eubank TD, Almubarak M, Wen S, Marano GD, Jacobson GM, Ma PC. A Prospective Trial Evaluating the Safety and Systemic Response From the Concurrent Use of Radiation Therapy with Checkpoint Inhibitor Immunotherapy in Metastatic Non-Small Cell Lung Cancer. *Clin Lung Cancer*. 2021 Jan 25:S1525-7304(21)00015-2.
 - b. Singh SA, McDermott DM, **Mattes MD**. Impact of Systemic Therapy Type and Timing on Intracranial Tumor Control in Patients with Brain Metastasis from Non-Small-Cell Lung Cancer Treated With Stereotactic Radiosurgery. *World Neurosurg*. 2020 Dec;144:e813-e823.
4. Multidisciplinary cancer care can be a challenging concept to teach medical students, most of whom will not spend any time in outpatient oncology clinics or may only experience oncology through the eyes of a single type of oncologist. Furthermore, graduate medical education does not require rotations or didactics to oncologic fields outside of one's own. The following publications describe novel approaches to improving multidisciplinary care, particularly in relation to radiation oncology. I served as the primary investigator for this work.
 - a. **Mattes MD**. Multidisciplinary oncology education: going beyond tumor board. *J Am Coll Radiol*. 2016;13(10):1239-1241. PubMed PMID: 27474420
 - b. **Mattes MD**, Small Jr W, Vapiwala N. Out of the Basement and Into the Classroom: Pathways for Expanding the Role of Radiation Oncologists in Medical Student Education. *J Am Coll Radiol* 2018 Nov;15(11):1620-1623. PubMed PMID: 29305073.
 - c. Tsui JMG, Grewal NKS, Sivapragasam M, Flanagan M, Golden DW, Alfieri J, **Mattes MD**. Tumor Board Shadowing: A Unique Approach for Integrating Radiation Oncologists Into General Medical Student Education. *Int J Radiat Oncol Biol Phys*. 2019;104:773-777. PubMed PMID: 30951806.
5. PET/CT has improved lymph node staging in non-small cell lung cancer but remains relatively inaccurate in the assessment of lymph nodes with low – intermediate SUV. Using a large database of patients who underwent both PET/CT and pathologic lymph node evaluation for newly diagnosed non-small cell lung cancer, we assessed a novel PET parameter in evaluating these lymph nodes and also developed a nomogram to aid in imaging based nodal assessment. The findings of this work impact both staging and radiotherapy treatment planning. I served as the primary investigator for this work.
 - a. **Mattes MD**, Weber WA, Foster A, Moshchinsky AB, Ahsanuddin S, Zhang Z, Shi W, Rizk NP, Wu AJ, Ashamalla H, Rimner A. A predictive model for lymph node involvement with malignancy on PET/CT in non-small-cell lung cancer. *J Thorac Oncol*. 2015;10(8):1207-12. PubMed PMID: 26200276.
 - b. **Mattes MD**, Moshchinsky AB, Ahsanuddin S, Rizk NP, Foster A, Wu AJ, Ashamalla H, Weber WA, Rimner A. Ratio of lymph node to primary tumor SUV on PET/CT accurately predicts nodal malignancy in non-small-cell lung cancer. *Clin Lung Cancer*. 2015;16(6):e253-8. PubMed PMID: 26163919.

Complete List of Published Work in MyBibliography

<https://www.ncbi.nlm.nih.gov/myncbi/malcolm.mattes.1/bibliography/public/>