

Department of Radiation Oncology

Monthly Research Update: March 2023

1st Annual RadOnc Research Symposium

The First Annual Department of Radiation Oncology Research Symposium was held on the afternoon of March 31 in UMSOM Leadership Hall. Organized by Phuoc T. Tran, MD, PhD, the department's Vice Chair for Research, the event featured >30 podium and poster presentations representing a wide range of collaborative basic, translational, and clinical investigations. UMSOM Dean Mark T. Gladwin, MD, was the keynote speaker in a program that included lunchtime poster viewing; a research overview from William F. Regine, MD, the department chair; and sessions on biology, physics, and clinical research. The event concluded with a reception for participants and attendees. Sponsors included Decipher Prostate Genomic Classifier/Veracyte, Myovant Sciences, and Tempus. Awards were presented to lead authors for top posters, including: 1st, Dario Rodrigues, PhD (Novel microwave applicator for hyperthermia treatment of brain lesions); 2nd, Audrey Lafargue, PhD (Transactivation domain of TWIST1 controls TWIST1-induced suppression of oncogene-induced senescence and is required for TWIST1-induced aggressiveness in non-small cell lung cancer); and 3rd, Martha Francis, PhD, RN (Multi-method study exploring communication of emotionally vulnerable content and suffering in patient and intimate partner dyads living with advanced cancer); as well as for top speakers: 1st, Esther Vicente, PhD (Combining serial and parallel functionality of the lung to minimize post-radiotherapy loss of respiratory function in lung cancer patients); 2nd, Sara Kim, BS, BM (Longitudinal monitoring of ocular blood flow dynamics in experimental rabbit models pre- and post-irradiation); and 3rd, Bardia Yousefi, PhD (Embedding for multi-modal radiogenomic prognosis of non-small cell lung cancer).

MARCH AT A GLANCE TOTALS

Clinical trials	
Total enrolled	39
GCC, other	12
NRG, NCI, co-ops	3
PCG Registry	24
Grants and contracts	
New awards	2
Submitted	4
Articles published	2

Information for this monthly update should be provided no later than the second Wednesday of each month to Miek Segers at msegers@som.umaryland.edu. The update will be published on the second Friday of each month.

Have questions about identifying a funding source? Finding research partners across the UMB/UM campuses or at another university? Defining future research strategies? Or organizing your thoughts on (virtual) paper? Contact Nancy Knight, PhD, Director of Academic and Professional Development for the department, at nknight@umm.edu

Clinical Trial Enrollment

- 24 patients at MPTC on the **PCG Registry**
- 3 patients at MPTC on the **Deep Thermal Therapy HUD**
- 1 patient at BWMC on **Alliance A221803**: Mepitel film for the reduction of radiation dermatitis in breast cancer patients undergoing post-mastectomy radiation therapy: A randomized phase III clinical trial
- 2 patients at MPTC on **RTOG 1308**: Phase III randomized trial comparing overall survival after photon versus proton chemoradiotherapy for inoperable stage II-IIIB NSCLC
- 1 patient at MPTC on **GCC 19146**: Comparison and verification of radiation planning for pencil beam scanning proton therapy using single-energy and dual-energy computed tomography simulation methods
- 1 patient at BWMC, 2 at UMMC, and 1 at UCH on **GCC 15100**: Pragmatic phase III randomized trial of proton vs. photon therapy for patients with non-metastatic breast cancer: A Radiotherapy Comparative Effectiveness (Radcomp) Consortium Trial
- 1 patient at UMMC on **NRG GU010**: Parallel phase III randomized trials of genomic-risk stratified unfavorable intermediate risk prostate cancer: De-intensification and intensification clinical trial evaluation
- 1 patient at MPTC on **GCC 2242**: Hybrid virtual-MRI/CBCT for image guidance in liver radiation therapy
- 1 patient at MPTC on **GCC 20110**: A single-arm, single-stage phase II trial of selective avoidance of nodal volumes at minimal risk (SAVER) in the contralateral neck of patients with p16-positive oropharynx cancer.
- 1 patient at MPTC on **GCC 21136**: Phase II randomized total eradication of metastatic lesions following definitive radiation to the prostate in de novo oligometastatic prostate cancer (TERPS) trial.

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Grants and Contracts

Funded

- **Erika Davies, PhD**, PI, from PureTech LYT 100, Inc., for “PK studies of company test article in C57L/J mouse model of PBI/BM2.5” (\$117,516; Jan 2023–Jun 2023).
- **Erika Davies, PhD**, PI, from Xequel Bio for “Task order 2. Establish (SOW 1.0) and validate (SOW 2.0) a cutaneous radiation injury (CRI) model in Yorkshire swine” (\$1,766,097; Jan 2023–Dec 2023).

Submitted

- **Erika Davis, PhD**, PI, to Columbia University/NIAID for a CMCRC Pilot Project 2023 (\$154,500).
- **Amit Sawant, PhD**, multi-PI, with CFD Research for a phase 1 SBIR proposal on “Macro physiological platform for pre-clinical investigations in FLASH radiotherapy” (\$115,000).
- **Hem Shukla, PhD**, PI, to Columbia University/NIAID for a CMCRC Pilot Project 2023 (\$152,470).
- **Phuoc Tran, MD, PhD**, multi-PI, with the University of Wisconsin for an NIH R01 resubmission proposal on “Tumor-barcoding and high-throughput sequencing to assess genomic predictors of TRT response and immunomodulation in NSCLC” (\$1,259,175).

Articles Published

Entered into PubMed March 9–April 12. Titles link to PubMed abstracts, with full-text links.

1. Amin NB, Bridgham KM, Brown JP, Moyer KF, Taylor RJ, Wolf JS, Witek ME, **Molitoris JK**, Mehra R, Cullen KJ, Papadimitriou JC, Raghavan P, Hatten KM. [Regionalization of head and neck oncology tumor boards: Perspectives of collaborating physicians](#). *OTO Open*. 2023 Feb 28;7(1):e18.
2. Zhong H, **Ren L**, Lu Y, Liu Y. [On the correction of respiratory motion-induced image reconstruction errors in positron-emission tomography-guided radiation therapy](#). *Phys Imaging Radiat Oncol*. 2023 Mar 16;26:100430.

Important Dates for Upcoming Funding Submissions

Below is an updated calendar with firm due dates for upcoming major NIH deadlines (individual RFA/PA dates may differ). Contact the Department Office of Research Administration (DORA) (msegers@som.umaryland.edu) ASAP if you plan to submit any funding proposal, regardless of funder. Failure to meet these deadlines may result in delaying your submission until the next cycle (if available).

NIH deadline	DORA budget, prelim materials	Dean/SOM prelim materials	FINAL Dean/SOM/SPA
R01 new sub. 06/05/23	05/23/23	05/26/23	05/30//23
R21 new sub. 06/16/23	06/02/23	06/07/23	06/09/23
R01 Resub. 07/05/23	06/20/23	06/23/23	06/27//23
R21 Resub. 07/16/23	06/30/23	07/07//23	07/11//23

Reminder: Seed Grant Proposals Due April 17

Submissions for the Department of Radiation Oncology Seed Grant Program are due on Monday, April 17. Changes this year include opening the program to residents as well as any full-time faculty members in the department (resident applicants should have a designated faculty mentor). Two types of awards are offered and will be awarded depending on the quality and scope of applications: (1) **a major research award up to (but preferably less than) \$50,000** for innovative investigations likely to result in NIH funding and to provide data/directions that can accelerate career focus and advancement for the applicant; and/or (2) **smaller seed grants in the range of \$10,000 to \$15,000**.

Criteria for selection include feasibility, novelty, and overall scientific merit of the research proposed; translational nature of the research and/or likelihood of near-term translation to patient benefit; extent to which the proposed research involves promising collaborations; and likelihood that the proposed studies will lead to extramural funding, in particular multi-investigator grants, and to supporting a well-defined long-term research strategy within the department. The award term is 1–2 years. The full application and additional information are available from nknight@umm.edu.