

Department of Radiation Oncology

Monthly Research Update: March 2025

3rd Annual UM RadOnc Research Symposium

MARCH AT A GLANCE TOTALS

Clinical trials

Total enrolled	20
GCC, other	8
NRG, co-ops	0
PCG, other registries	12

Grants and contracts

New awards	0
Submitted	3

Articles published	8
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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

Faculty, researchers, and trainees attended the Third Annual Department of Radiation Oncology Research Symposium, held on March 28 at the SMC Student Center. Chaired by **France Carrier, PhD**, the event featured >40 podium and poster presentations representing a wide range of collaborative basic, translational, and clinical investigations. **Elana J. Fertig, PhD**, Director of the UMB Institute for Genome Sciences was the keynote speaker, and **Giuliano Scarcelli, PhD**, associate professor in the Department of Bioengineering and Biophysics at UM College Park, was the guest speaker. The program included a lunchtime poster viewing; a welcome from **William F. Regine, MD**; and sessions on biology, clinical research, and physics. The event concluded with a reception for participants and attendees. Sponsors were Sumitomo Pharma, Tempus, and Decipher by Veracyte.

Awards were presented to lead authors for top posters, including: 1st, **Muhammad (Ajmal) Khan, PhD** (TWIST1 overexpression models an aggressive subtype of pancreatic ductal adenocarcinoma in vivo); 2nd, **Vijay Sharma, PhD** (Assessment of a novel snout-mounted imaging system for dose depth monitoring); and 3rd, **Alex Allen, MD** (Clinical toxicity profiles of neoadjuvant volumetric modulated arc radiotherapy and proton beam radiotherapy for soft tissue sarcoma: A single-institution retrospective analysis); as well as for top speakers: 1st, **Dario Rodrigues, PhD** (Numerical feasibility of delivering deep hyperthermia to lateral tumors opposite to metallic hip implants); 2nd, **Austin Thompson, MD** (The effect of residing in a food-insecure area on locally advanced breast cancer survival); and 3rd, **Triet Nguyen, BA** (TWIST1 associates with resistance to treatment and Twist1 drives tumor progression in vivo for small cell lung cancer).

The Annual UM Radiation Oncology Research Symposium was initiated in 2023 by **Phuoc Tran, MD, PhD**, to encourage increased intra- and interdepartmental collaboration, support development of successful research award tracks for young trainees and enhance faculty career development, and foster academic-industrial partnerships.

Grants and Contracts

NOTE in reference to: Guidance on Communications/Notices/Requests from Sponsors:

The [Research section of UMB's Navigating Federal Orders and Guidance webpage](#) has been updated to include specific [guidance for award terminations](#):

"If you receive any communication about an award, including survey requests, stop work orders, termination notices, etc., from a federal agency or pass through entity, please have them forward the request or notification as soon as possible to Jill Frankenfield at jill.frankenfield@umaryland.edu and Laure Scarantino at lscarantino@umaryland.edu copying the department chair and dean. **It is imperative that these communications are shared since SPA [UMB's Office of Research and Development] is not guaranteed to receive them otherwise.** They will assist with handling the requests."

In addition, to minimize risk, refrain from submitting a survey or any other responses to sponsor requests for information on your own. **UMB's SPA and the Office of University Counsel are collaborating closely to respond to each of these requests.**

Grants and Contracts

Submitted

- **Dario Rodrigues, PhD**, PI/PD, to the Ivy Foundation 2025 Translational Adult Glioma Award, for “Preclinical validation of MR-guided hyperthermia applicator for noninvasive treatment of glioblastoma” (\$600,000).
- **Erika Davies, PhD**, PI/PD, on a subaward with Red Hill Biopharma to NIH/NIAID BAA-75N93024R00020 for “Development of radiation/nuclear medical countermeasures and biodosimetry devices” (up to \$2,773,437).
- **Erika Davies, PhD**, PI/PD, to NIAID BAA-75N93024R00020 for “Development of radiation/nuclear medical countermeasures and biodosimetry devices” (\$6,198,998)

Clinical Trial Enrollment

- 10 patients at MPTC on the **Proton Collaborative Group Registry**
- 2 patients at MPTC on the **Deep Thermal Therapy HUD**
- 6 patients at UMMC on **GCC 2384**: Evaluation of improved onboard patient imaging with the HyperSight platform on TrueBeam 4.1
- 1 patient at UMMC on **GCC 23100**: A randomized trial of high-risk metachronous oligometastatic prostate cancer with high-risk mutations treated with metastasis directed therapy and niraparib/abiraterone acetate and prednisone (KNIGHTS)
- 1 patient at UCH on **GCC 1944**: A randomized phase III trial of two standard dose fractionation regimens for adjuvant vaginal brachytherapy in early-stage endometrial cancer

Articles Published

Entered into PubMed February 12–March 11. Titles link to PubMed abstracts.

1. Andrews JR, Kim Y, Horjeti E, Arafa A, Gunn H, De Bruycker A, Phillips R, Song D, Childs DS, Sartor OA, Orme JJ, Chaudhuri AA, **Tran P**, Kiess A, Sutera P, Mercier C, Ost P, Park SS, Lucien F. [PSMA+ extracellular vesicles are a biomarker for SABR in oligorecurrent prostate cancer: Analysis from the STOMP-like and ORIOLE trial cohorts](#). *Clin Cancer Res*. 2025 Mar 17;31(6):1142–1149.
2. **Bentzen SM**. [Artificial intelligence in health care: A rallying cry for critical clinical research and ethical thinking](#). *Clin Oncol (R Coll Radiol)*. 2025 Mar 8;41:103798. Online ahead of print.
3. Hill MA, Silvestre Patallo I, Aitkenhead AH, Bazalova-Carter M, Carter R, Nill S, Nisbet A, Ghita-Pettigrew M, **Poirier Y**, Prise KM, Subiel A, Schettino G. [The importance of standardisation and challenges of dosimetry in conventional preclinical radiation biology research](#). *Br J Radiol*. 2025 Mar 24:taf066. Online ahead of print.
4. **Kalavagunta C, Savla B, White J, Bulkley D, Dunlap A, Kwok R, Shaw K, MacFarlane M, Dudley S, Alicia D, Marter K, Leichter R, Chason C, Bentzen SM, Regine W, Vyfhuis M**. [Forward momentum: progressive change through diversity equity and inclusion initiatives in academic health care](#). *JNCI Cancer Spectr*. 2025 Mar 3;9(2):pkaf029.
5. Klaver YL, Hoogeman MS, Lu QR, Bradley JD, Choi JI, **Ferris MJ**, Grau C, Guha C, Lin H, Lin L, Mascia AE, Moerman AM, Poulsen PR, Shi LZ, Sørensen BS, Tian S, Vozenin MC, Willey CD, Zhou S, Amos RA, Hawkins M, Simone CB 2nd. [Requirements and study design for the next proton FLASH clinical trials: An international multidisciplinary Delphi consensus](#). *Int J Radiat Oncol Biol Phys*. 2025 Mar 31:S0360-3016(25)00306-2.
6. Mayo CS, Appelt AL, Paradis KC, Dawson LA, Andratschke N, Vasquez Osorio EM, **Bentzen SM**, Yorke ED, Jackson A, Marks LB, Yom SS. [Joining forces to advance reirradiation: Establishing the Reirradiation Collaborative Group](#). *Int J Radiat Oncol Biol Phys*. 2025 Mar 12:S0360-3016(25)00139-7. Online ahead of print.
7. **Poirier Y, Byrne KE, Hamad G**, Therriault-Proulx F, Jiang K, **Deng W, Sawant A, Mossahebi S**. [What's in a Proton FLASH beam? Characterizing ultra-high dose rate protons using a commercial plastic scintillator](#). *Radiat Res*. 2025 Apr 1;203(4):201–213.
8. Shah KD, Yeap BY, Lee H, Soetan ZO, Moteabbed M, Muise S, Cowan J, Remillard K, Silvia B, Mendenhall NP, Soffen E, **Mishra MV**, Kamran SC, Miyamoto DT, Paganetti H, Efstathiou JA, Chamseddine I. [Predictive model of acute rectal toxicity in prostate cancer treated with radiotherapy](#). *JCO Clin Cancer Inform*. 2025 Mar;9:e2400252. Epub 2025 Mar 19.