

Department of Radiation Oncology

Monthly Research Update: February 2025

UMB Monitoring Federal Funding Changes

In a March 11 message, UMB President Bruce E. Jarrell, MD, discussed responses to ongoing changes in federal funding. He noted that "...we have seen disruptions in the form of grant freezes, delays in reviews, and, in some cases, cancellations of research projects that are vital to our work. Given the scale of UMB's reliance on federal research funding, where nearly half of our budget derives from research and training grants, we understand that cuts or changes in federal support will have a profound impact across our institution. While the exact scope of these changes remains unclear, we anticipate that they might disrupt research and impact programs and faculty and staff positions in the coming months." He reported that "UMB is actively involved in advocating for the continuation of federal support for research universities and is exploring all avenues to minimize disruptions. We also are making careful, strategic decisions to reduce expenses while preserving the excellence of our core operations." The university will continue to monitor the evolving legal and regulatory landscape and to keep faculty, staff, and trainees informed.

FEBRUARY AT A GLANCE TOTALS

Clinical trials

Total enrolled	43
GCC, other	18
NRG, co-ops	4
PCG, other registries	21

Grants and contracts

New awards	0
Submitted	5

Articles published	5
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Grants and Contracts

Submitted

- **Erika Davies, PhD**, PI/PD, to NIH Development of Alternative Human Models of Radiation-Induced Injuries (U01) for "Development of air liquid interface (ALI) organ-on-a-chip models of radiation-induced lung alveolar and microvasculature injury for evaluation of medical countermeasures" (\$2,681,917).
- **Hem Shukla, PhD**, PI/PD, to NIH/NCI Clinical and Translational Exploratory/Developmental Studies (R21) for "Clinical validation of the role of caveolin-1 in radiation and chemotherapy resistance in lung cancer" (\$427,625).
- **Hem Shukla, PhD**, PI/PD, to NIH/NCI Clinical and Translational Exploratory/Developmental Studies (R21) for "Understanding the role of OCT4 and SOX2 in pancreatic cancer stemness, resistance to therapies and immune suppression in patient derived tumor organoid model" (\$427,625).
- **Phuoc Tran, MD, PhD**, lead PI/PD, to NIH Exploratory/Developmental Bioengineering Research Grants (R21) for "Deciphering clinical data on oligometastatic prostate cancer using a precision medicine quantitative systems pharmacology modeling platform" (\$441,282).
- **France Carrier, PhD**, lead PI/PD, and **Amit Sawant, PhD**, PI/PD, to NIH/NCI Research Projects to Enhance Applicability of Mammalian Models for Translational Research (R01) for "Development of a porcine orthotopic pancreatic cancer model for facilitating clinical translation of ultra-high dose rate (FLASH) radiotherapy" (\$3,877,703).

Important Dates for Upcoming Funding Submissions

Below is an updated calendar with firm due dates for major standard NIH deadlines (RFA/PA dates may differ). Contact the Department Office of Research Administration (msegers@som.umaryland.edu) ASAP if you plan to submit any funding proposal, regardless of funder.

NIH deadline	DORA budget, prelim materials	Dean/SOM prelim materials	FINAL Dean/SOM/SPA
R01/U01 June 5	05/23/2025	05/27/2025	05/29/2025
R21 June 16	06/03/2025	06/05/2025	06/09/2025

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

- 20 patients at MPTC on the **Proton Collaborative Group Registry**
- 2 patients at MPTC on the **Deep Thermal Therapy Hud**
- 5 patients at UMMC on **GCC 2384**: Evaluation of improved onboard patient imaging with the HyperSight platform on TrueBeam 4.1
- 1 patient at Shore on **CCTG MA.39**: TAILOR RT: A randomized trial of regional radiotherapy in biomarker low-risk node positive and T3N0 breast cancer
- 1 patient at Capital Region on **NRG GU009**: Parallel phase III randomized trials for high-risk prostate cancer evaluating de-intensification for lower genomic risk and intensification of concurrent therapy for higher risk genomic risk with radiation (PREDICT-RT)
- 1 patient at Capital Region on **NRG GU013**: The phase III 'High Five Trial' five fraction radiation for high-risk prostate cancer
- 2 patients at MPTC on **GCC 19140**: Pilot study of laser interstitial thermal therapy followed by hypofractionated radiation therapy for recurrent high-grade gliomas
- 1 patient at MPTC on **GCC 2422**: Phase I feasibility and pilot RCT of serious illness conversation guide in patient and intimate partner dyads living with advanced lung cancer
- 1 patient at MPTC on **GCC 1886**: Phase I study of concurrent nab-paclitaxel + gemcitabine with hypofractionated, ablative proton therapy for locally advanced pancreatic cancer
- 1 patient at MPTC on **GCC 1669**: PPCR Registry Trial: Multicenter registry of pediatric patients treated with proton radiation therapy
- 1 patient at MPTC on **GCC 2415**: REMASter: Recurrent brain metastases after SRS trial
- 4 patients at UMMC on **GCC 2380**: A single arm phase I-II trial evaluating selective adjuvant therapy for HPV-mediated oropharynx SCCs based on residual circulating tumor DNA (ctDNA) levels (SAVAL)
- 1 patient at UMMC on **NRG BN012**: A randomized phase III trial of pre-operative compared to post-operative stereotactic radiosurgery in patients with resectable brain metastases
- 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 UMMC 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. Dal Pra A, Ghadjar P, Ryu HM, Proudfoot JA, Hayoz S, Michalski JM, Spratt DE, Liu Y, Schär C, Berlin AM, Zwahlen DR, Simko JP, Hölscher T, Efstathiou JA, Polat B, Sandler HM, Hildebrandt G, Parliament MB, Mueller AC, Dayes IS, Plasswilm L, Correa RJM, Robertson JM, Karrison TG, Davicioni E, Hall WA, Feng FY, Pollack A, Thalmann GN, Nguyen PL, Aebbers DM, **Tran PT**, Zhao SG. [Predicting dose response to prostate cancer radiotherapy: Validation of a radiation signature in the randomized phase III NRG/RTOG 0126 and SAKK 09/10 trials](#). *Ann Oncol*. 2025 Feb 13:S0923-7534(25)00025-0. Online ahead of print.
2. **Gonzalez R, Olis S, Mossahebi S, Yao W**. [Measurement of stopping power ratio of chemo-ports using energy spectrum extracted from integral depth dose](#). *J Appl Clin Med Phys*. 2025 Feb 25:e70052. Online ahead of print.
3. **LePore L**, Kronfli D, Baker K, **Eggleston C**, Schotz K, Kleckner AS, **Bentzen SM, Mohindra P, Vyfhuys MAL**. [Identifying nutritional inequities of patients with cancer residing in food deserts](#). *Adv Radiat Oncol*. 2024 Nov 23;10(1):101641. Published in eCollection 2025 Jan.
4. Ling X, **Bazyar S, Ferris M, Molitoris J**, Allor E, Thomas H, Arons D, Schumaker L, **Krc R**, Mendes WS, **Tran PT, Sawant A**, Mehra R, Gaykalova DA, **Ren L**. [Author correction: Identification of CT based radiomic biomarkers for progression free survival in head and neck squamous cell carcinoma](#). *Sci Rep*. 2025 Feb 21;15(1):6358.
5. **Zhou J, Gopal A, Zhang B, Xu H, Chen S, Yi B, Lasio G**. [A novel optimization of cone beam CT frequency for lung radiation therapy based on an image-guided radiation therapy protocol and patient classification method](#). *Transl Lung Cancer Res*. 2025 Jan 24;14(1):81–95.