

Department of Radiation Oncology

Monthly Research Update: December 2023

UM Radiation Oncology Best Of 2023

DECEMBER AT A GLANCE TOTALS

Clinical trials	
Total enrolled	33
GCC, other	4
NRG, NCI, co-ops	7
PCG Registry	22
Grants and contracts	
New awards	1
Submitted	0
Articles published	9

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

The 19th University of Maryland Annual Radiation Oncology Symposium: Best Of was held on January 11 at the SMC Campus Center in Baltimore. More than 160 in-person and virtual attendees participated in the CME-accredited educational program intended to provide a review of practice-changing studies featured at major national meetings and in peer-reviewed journals over the past year. Led by co-directors **William F. Regine, MD**, and **Sarah McAvoy, MD**, the half-day course brought together leading experts from the University of Maryland and physicians from institutions across the country. Department of Radiation Oncology faculty included **Rashmi K. Benda, MD** (breast cancer), **Matthew J. Ferris, MD** (head and neck cancer/sarcoma), **Jason K. Molitoris, MD, PhD** (gastrointestinal cancer), and **Phuoc T. Tran, MD, PhD** (genitourinary cancer). Guest faculty included **Emma C. Fields, MD** (Virginia Commonwealth University School of Medicine; gynecologic cancer), **Sharad Goyal, MD, MS** (The George Washington University School of Medicine; central nervous system cancer), **Russell Kenneth Hales, MD** (Johns Hopkins University School of Medicine; thoracic cancer), and **Yolanda Tseng, MD, MPhil** (University of Washington School of Medicine; lymphoma).

New this year to the Best Of Symposium were "Meet the Expert" sessions, half-hour breakouts in which attendees could ask questions or present challenging cases to the lecturers. Support for the symposium came from (gold level): AstraZeneca, Aveo Oncology, Daiichi-Sankyo, Exelixis, Seagen, and Varian, a Siemens Healthineers Company; as well as (silver level) Amgen, Astellas Pharma, EMD Serono, Servier, Merck, Takeda, Eisani, Foundation Medicine, and Sumitomo Pharma/Pfizer Oncology. Online access to course materials and lectures will be available to registrants until November 2024.

Clinical Trial Enrollment

- 22 patients at MPTC on the **PCG Registry**
- 1 patient at MPTC on the **DTT 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
- 1 patient at UMMC on **GCC1876**: Tumor bed boost using a breast specific radiosurgery device, the GammaPod: Registry study and evaluation of quality of life with development of sizing nomogram
- 1 patient at MPTC and 1 at UCH on **NRG HN009**: Randomized phase II/III Trial of radiation with cisplatin (at 100 mg/m²) every three weeks versus radiation with weekly cisplatin (at 40 mg/m²) for patients with locoregionally advanced squamous cell carcinoma of the head and neck (SCCHN)
- 2 patients UCH on **GCC1926**: Phase Ib dose escalation of single-fraction preoperative stereotactic partial-breast irradiation for early-stage breast cancer
- 1 patient at UMMC and 1 at MPTC on **NRG BN011**: Testing the addition of the chemotherapy drug lomustine (Gleostine) to the usual treatment (temozolomide and radiation therapy) for newly diagnosed MGMT methylated glioblastoma.
- 1 patient at MPTC 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 genomic risk with radiation (Predict-RT)
- 1 patient at MPTC on **NRG GU010**: Parallel phase III randomized trials of genomic-risk stratified unfavorable intermediate-risk prostate cancer: De-intensification and intensification clinical trial evaluation (GUIDANCE)

Grants and Contracts

Awarded

- **Martha Francis, PhD, RN**, and Ian Kleckner, PhD, MPH, Pls, a grant from the UM School of Nursing for “Phase 1 feasibility testing of serious illness conversation guide in patients and intimate partner dyads living with advanced cancer” (\$15,000).

Submitted

- **Lei Ren, PhD**, Multi-PI (contact PI: Gaykalova, Daria (IGS)), PA-20-185 NIH R01, for “Study of biological and radiographic biomarkers and association with ancestry and survival disparities in oral cavity squamous cell carcinoma using AI approaches” (\$758,739.00).

Articles Published

Entered into PubMed December 7–January 9. Titles link to PubMed abstracts, with full-text links.

1. **Cherng HR, Sun K, Bentzen S**, Armstrong TS, Gondi V, Brown PD, Mehta M, **Mishra MV**. [Evaluating the heterogeneity of hippocampal avoidant whole brain radiotherapy treatment effect: A secondary analysis of NRG CC001](#). *Neuro Oncol*. 2023 Dec 9:noad226. Online ahead of print.
2. Li H, Mayr NA, Griffin RJ, Zhang H, Pokhrel D, Grams M, Penagaricano J, Chang S, Spraker MB, Kavanaugh J, Lin L, Sheikh K, **Mossahebi S**, Simone CB 2nd, Roberge D, Snider JW, Sabouri P, Molineu A, Xiao Y, Benedict SH. [Overview and recommendations for prospective multi-institutional clinical trials of spatially fractionated radiation therapy \(SFRT\)](#). *Int J Radiat Oncol Biol Phys*. 2023 Dec 16:S0360-3016(23)08246-9. Online ahead of print.
3. Ling X, Alexander GS, **Molitoris J**, Choi J, Schumaker L, Mehra R, Gaykalova DA, **Ren L**. [Identification of CT-based non-invasive radiomic biomarkers for overall survival prediction in oral cavity squamous cell carcinoma](#). *Sci Rep*. 2023 Dec 8;13(1):21774.
4. Milano MT, Marks LB, Olch AJ, Yorke ED, Jackson A, **Bentzen SM**, Constone LS. [Comparison of risks of late effects from radiation therapy in children versus adults: Insights from the QUANTEC, HyTEC, and PENTEC efforts](#). *Int J Radiat Oncol Biol Phys*. 2023 Dec 7:S0360-3016(23)07910-5. Online ahead of print. Review.
5. Saha M, Jung JW, **Lee SW**, Lee C, Lee C, Mille MM. [A deep learning segmentation method to assess dose to organs at risk during breast radiotherapy](#). *Phys Imaging Radiat Oncol*. 2023 Nov 21;28:100520.
6. Sokolov D, Sharda N, Banerjee A, Denisenko K, Basalious EB, **Shukla H**, Waddell J, Hamdy NM, Banerjee A. [Differential signaling pathways in medulloblastoma: Nano-biomedicine targeting non-coding epigenetics to improve current and future therapeutics](#). *Curr Pharm Des*. 2023 Dec 27. Online ahead of print.
7. Spruijt K, **Mossahebi S**, Lin H, Lee E, Kraus J, Dhabaan A, Poulsen P, Lowe M, Ayan A, Spiessens S, Godart J, Hoogeman M. [Multi-institutional consensus on machine QA for isochronous cyclotron-based systems delivering ultra-high dose rate \(FLASH\) pencil beam scanning proton therapy in transmission mode](#). *Med Phys*. 2023 Dec 16. Online ahead of print.
8. Wan S, **Rodrigues DB**, Kwiatkowski J, Khanna O, Judy KD, Goldstein RC, Overbeek Bloem M, Yu Y, Rooks SE, Shi W, Hurwitz MD, Stauffer PR. [Evaluation of a balloon implant for simultaneous magnetic nanoparticle hyperthermia and high-dose-rate brachytherapy of brain tumor resection cavities](#). *Cancers (Basel)*. 2023 Dec 1;15(23):5683.
9. Wefel JS, Deshmukh S, Brown PD, Grosshans DR, Sulman EP, Cerhan JH, Mehta MP, Khuntia D, Shi W, **Mishra MV**, Suh JH, Laack NN, Chen Y, Curtis AA, Laba JM, Elsayed A, Thakrar A, Pugh SL, Bruner DW. [Impact of apolipoprotein E \(APOE\) genotype on neurocognitive function \(NCF\) in patients with brain metastasis \(BM\): An analysis of NRG Oncology's RTOG 0614](#). *Int J Radiat Oncol Biol Phys*. 2023 Dec 13:S0360-3016(23)08238-X. Online ahead of print.

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/U01 New Feb 5	01/23/2024	01/25/2024	01/29/2024
R21 New Feb 16	02/05/2024	02/07/2024	02/09/2024
R01/U01 Resub March 5	02/21/2024	02/23/2024	02/27/2024
R21 Resub March 16	03/05/2024	03/07/2024	03/11/2024