

# Department of Radiation Oncology

## Monthly Research Update: April 2024

### 2nd Annual UM RadOnc Research Symposium

#### APRIL AT A GLANCE TOTALS

##### Clinical trials

Total enrolled	38
GCC, other	6
NRG, NCI, co-ops	6
PCG, other registries	26

##### Grants and contracts

New awards	1
Submitted	3

##### Articles published

5

More than 115 faculty, researchers, and trainees attended the Second Annual Department of Radiation Oncology Research Symposium, held on April 26 at the SMC Student Center. Chaired by **Erika Davies, PhD**, the event featured >30 podium and poster presentations representing a wide range of collaborative basic, translational, and clinical investigations. **Taofeek K. Owonikoko, MD, PhD**, Executive Director of the UM Greenebaum Comprehensive Cancer Center, was the keynote speaker in a program that included lunchtime poster viewing; a symposium overview from **William F. Regine, MD**, the department chair; and sessions on biology, clinical research, and physics. The event concluded with a reception for participants and attendees. Sponsors included Decipher by Veracyte, and Sumitomo Pharma.

Awards were presented to lead authors for top posters, including: 1st, **Mariana Martins, PhD** (Dual oxygenase 2, a reactive oxygen species producing enzyme, increases radiosensitivity and modulates an immune checkpoint inhibitor); 2nd, **Yankun Lang, PhD** (Specific absorption rate prediction in hyperthermia therapy using deep learning method); and 3rd, **Xiao Ling, PhD** (Radiomic biomarkers of locoregional recurrence: Prognostic insights from oral cavity squamous cell carcinoma preoperative CT scans); as well as for top speakers: 1st, **Triet Nguyen** (Investigating the roles of the epithelial-mesenchymal transition program in small-cell lung cancer tumorigenesis and chemoradiation response); 2nd, **Hua-Ren Ryan Cherng, MD** (Evaluating neurocognitive recovery following stereotactic radiosurgery and whole brain radiation therapy: insights from a pooled analysis of 3 phase III trials); and 3rd, **Aman Sangal, PhD** (Development of a digital twin XMAN phantom for imaging and treatment optimization in liver cancer radiation therapy).

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](mailto: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](mailto:nknight@umm.edu)

### Clinical Trial Enrollment

- 25 patients at MPTC on the **Proton Collaborative Group Registry**
- 1 patient at MPTC on the **DTT HUD**
- 3 patients at BWMC and 2 at UMMC on **NRG GU009**: Parallel phase III randomized trials for high-risk prostate cancer evaluating deintensification for lower genomic risk and intensification of concurrent therapy for higher genomic risk with radiation (Predict-RT)
- 1 patient at UMMC on **GCC 2380**: A single arm phase II trial evaluating selective adjuvant therapy for HPV-mediated oropharynx SCCs based on residual circulating tumor DNA levels (SAVAL)
- 1 patient at BWMC 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)
- 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 and prednisone (KNIGHTS)
- 1 patient enrolled at MPTC on **GCC 1886**: Phase I study of concurrent nab-paclitaxel + gemcitabine with hypofractionated, ablative proton therapy for locally advanced pancreatic cancer (LAPC)
- *External enrollments to our studies*: 1 patient enrolled at Georgetown on **GCC 1886**, and 1 at UCSD and 1 at Bon Secours on **GCC 21136**: Phase 2 randomized total eradication of metastatic lesions following definitive radiation to the prostate in de novo oligometastatic prostate cancer (TERPS) trial

## Grants and Contracts

### Funded

- **Naru Lamichhane, PhD**, co-investigator, on FDA 3U01FD005946-08S3, through University of Maryland Center of Excellence in Regulatory Science and Innovation (CERSI) (\$281,052) (09/01/2022-08/31/2025).

### Submitted

- **Qinghao Chen, PhD**, co-investigator, to NIH STTR PA-23-232 (sub with Washington University in St. Louis) for “Proton radiography based on multilayer strip ionization chamber” (\$40,822).
- **Hem Shukla, PhD**, PI, to FDA Centers of Excellence in Regulatory Science and Innovation Collaborative Research for “Surfaceome of sacral chordoma to identify potential targets for immunotherapy” (\$347,654).
- **Byong Yi, PhD**, PI, to Maryland Industrial Partnerships 7410 for “Wearable dose realtime in vivo radiation detection” (\$100,000).

## Articles Published

Entered into PubMed April 12–May 8. Titles link to PubMed abstracts, many of which contain full-text links.

1. Li R, Zhuang T, Montalvo S, **Wang K**, Parsons D, Zhang Y, Iyengar P, Wang J, Godley A, Cai B, Lin MH, Westover K. [Adapt-on-demand: A novel strategy for personalized adaptive radiotherapy for locally advanced lung cancer.](#) *Pract Radiat Oncol.* 2024 Apr 3:S1879-8500(24)00078-X. Online ahead of print.
2. Ling X, Alexander GS, **Molitoris J**, Choi J, Schumaker L, **Tran P**, Mehra R, Gaykalova D, **Ren L**. [Radiomic biomarkers of locoregional recurrence: prognostic insights from oral cavity squamous cell carcinoma preoperative CT scans.](#) *Front Oncol.* 2024 Apr 23;14:1380599.
3. **Nguyen T**, **Carrieri FA**, Connis N, **Lafargue A**, Chang J, Chan A, Shetty AC, Song Y, Hoang T, Jagtap S, Chowdhury DD, Khan MA, Gabrielson KL, Rezaee M, Torres-Ayuso P, Brognard J, Hann CL, **Tran PT**. [TNIK inhibition sensitizes TNIK-overexpressing lung squamous cell carcinoma to radiotherapy.](#) *Mol Cancer Ther.* 2024 Apr 27. Online ahead of print.
4. Okunieff P, Swarts SG, Fenton B, Zhang SB, Zhang Z, Rice L, Zhou D, **Carrier F**, Zhang L. [Radiation biological toximetry using circulating cell-free DNA \(cfDNA\) for rapid radiation/nuclear triage.](#) *Radiat Res.* 2024 Apr 25. Online ahead of print.
5. **Rana Z**, Kamran SC, Shetty AC, Sutera P, Song Y, **Bazyar S**, Solanki AA, Simko JP, Pollack A, McConkey D, Kates M, Siddiqui MM, Hiken J, Earls J, Messina D, Mouw KW, Miyamoto D, Shipley WU, Michaelson MD, Zietman A, Coen JJ, Dahl DM, Jani AB, Souhami L, Chang BK, Lee RJ, Pham H, Marshall DT, Shen X, Pugh SL, Feng FY, Efstathiou JA, **Tran PT**, Deek MP. [Prognostic significance of immune cell infiltration in muscle-invasive bladder cancer treated with definitive chemoradiation: A secondary analysis of RTOG 0524 and RTOG 0712.](#) *Eur Urol Oncol.* 2024 Apr 18:S2588-9311(24)00095-6. 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](mailto: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 June 5	05/23/24	05/28/24 (11 AM at ORD)	05/29/24
R21 New June 16	06/03/24	06/06/24	06/10/24
R01/U01 Resub July 5	06/20/24	06/25/24	06/27/24
R21 Resub July 16	07/01/24	07/05/24	07/09/24

### New UMB Proposal Submission Requirements

As of May 10, all funding/research proposals submitted to UMB for routing, regardless of the sponsor, must adhere to updated guidance resulting from the [CHIPS and Science Act of August 9, 2022](#). Among other requirements, all UMB PIs and UMB Senior/Key Personnel must be listed on the Proposal Development record and must complete an Investigator Certification Questionnaire before a proposal can be routed. PIs and Senior/Key personnel must certify that they are not participating in a Malign Foreign Talent Recruitment Program, as defined by the CHIPS and Science Act. Additional information is available at:

- [UMB’s Research Security Website](#)
- [OSTP Memo to Federal Research Agencies](#)
- [NSF Proposal & Award Policies & Procedures Guide \(PAPPG\) NSF 24-1](#)
- [DOD Memo, Policy for Risk-Based Security Reviews of Fundamental Research](#)
- [National Security Presidential Memorandum 33 \(NSPM-33\)](#)
- [Key Persons and KR Proposal Roles](#)