

# ROBIN OligoMET Center

## Monthly Research Update: June 2023

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Please submit all monthly updates to Jadyne Stewart at [jadynstewart@som.umaryland.edu](mailto:jadynstewart@som.umaryland.edu) by second Wednesday of each month.

- Beg S, Zanettini C, Queiroz L, **Marchionni L**, Alperstein SA, Siddiqui MT. [Optimal fluid volume for detecting malignancy in serous effusions: a single institution experience](#). J Am Soc Cytopathol. 2023 Jun 13:S2213-2945(23)00060-1. doi: 10.1016/j.jasc.2023.06.003. Epub ahead of print. PMID: 37419704.
- Hongo JA, de Castro GM, Albuquerque Menezes AP, Rios Picorelli AC, Martins da Silva TT, **Imada EL**, **Marchionni L**, Del-Bem LE, Vieira Chaves A, Almeida GMF, Campelo F, Lobo FP. [CALANGO: A phylogeny-aware comparative genomics tool for discovering quantitative genotype-phenotype associations across species](#). Patterns (N Y). 2023 Apr 14;4(6):100728. doi: 10.1016/j.patter.2023.100728. PMID: 37409050; PMCID: PMC10318336.
- Miles D, Sforza D, Wong JW, Gabrielson K, Aziz K, Mahesh M, Coulter JB, Siddiqui I, **Tran PT**, Viswanathan AN, Rezaee M. [FLASH Effects Induced by Orthovoltage X-Rays](#). Int J Radiat Oncol Biol Phys. 2023 Jun 25:S0360-3016(23)00590-4. doi: 10.1016/j.ijrobp.2023.06.006. Epub ahead of print. PMID: 37364800.
- Nelson NG, Lombardo JF, Shimada A, Ruggiero ML, Smith AP, Ko K, Leader AE, Mitchell EP, **Simone NL**. [Physician Perceptions on Cancer Screening for LGBTQ+ Patients](#). Cancers (Basel). 2023 Jun 1;15(11):3017. doi: 10.3390/cancers15113017. PMID: 37296978; PMCID: PMC10252104.
- Prabhu RS, Akinyelu T, Vaslow ZK, Matsui JK, Haghghi N, Dan T, **Mishra MV**, Murphy ES, Boyles S, Perlow HK, Palmer JD, Udovicich C, Patel TR, Wardak Z, Woodworth GF, Ksendzovsky A, Yang K, Chao ST, Asher AL, Burri SH. [Risk Factors for Progression and Toxic Effects After Preoperative Stereotactic Radiosurgery for Patients With Resected Brain Metastases](#). JAMA Oncol. 2023 Jun 8:e231629. doi: 10.1001/jamaoncol.2023.1629. Epub ahead of print. PMID: 37289451; PMCID: PMC10251241.
- Wang M, Wisniewski CA, Xiong C, Chhoy P, Goel HL, Kumar A, Zhu LJ, Li R, St Louis PA, Ferreira LM, Pakula H, Xu Z, **Loda M**, Jiang Z, Brehm MA, Mercurio AM. [Therapeutic blocking of VEGF binding to neuropilin-2 diminishes PD-L1 expression to activate antitumor immunity in prostate cancer](#). Sci Transl Med. 2023 May 3;15(694):eade5855. doi: 10.1126/scitranslmed.ade5855. Epub 2023 May 3. PMID: 37134151.
- Xu Z, **Marchionni L**, Wang S. [MultiNEP: a multi-omics network enhancement framework for prioritizing disease genes and metabolites simultaneously](#). Bioinformatics. 2023 Jun 1;39(6):btad333. doi: 10.1093/bioinformatics/btad333. PMID: 37216914; PMCID: PMC10250081.

### Grants and Contracts

#### Funded:

- Lei Ren, PhD**, contact PI (Jeremy Polf, PhD, MPI at H3D Inc.), from NIH for "3-dimensional prompt gamma imaging for online proton beam dose verification" (R01CA279013) (5/15/23–4/30/27) (\$2,327,159).

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## Grants and Contracts

### Submitted:

- **Sawant, Amit, PhD**, contact PI, and **Phuoc Tran, MD, PhD**, MPI, to the NIH/NCI Research Project Grant program for “Tumor-barcoding coupled high-throughput sequencing for quantitative radiogenomics of FLASH in lung cancer” (PA-20-185) (\$3,910,694).
- **Amit Sawant, PhD**, MPI (Mauro Tambasco, PhD, contact PI, San Diego State University), to the NIH Bioengineering Research Grant program (R01) for “A plasmid DNA chip platform for optimizing and validating radiotherapy FLASH sparing” (PAR-22-242) (\$1,517,075).
- **Lei Ren, PhD**, MPI (Bardia Yousefi, PhD, contact PI, University of Maryland College Park) to the NIH/NCI Clinical and Translational Exploratory/Developmental Studies program (R21) for “Integrated high-dimensional multimodal imaging and omics analysis to decipher early treatment assessment and failure prediction in non-small cell lung cancer” (PAR-22-216) (\$208,448).

## Oral Presentations

- **Phuoc T.**, ASCO National Meeting: Case-Based Panel Session - A Multidisciplinary Case-Based Discussion of PSMA PET–Positive Prostate Cancer. (June 3, 2023 – Chicago, IL). “PSMA-PET Imaging: Radiation Oncology Perspective”.
- **Phuoc T.**, U54 ROBIN Consortium Cross-Training Core Seminar Series. (June 6, 2023 – Virtual). “Clinical Radiobiology Basics”.
- **Phuoc T.**, PCF Coffey-Holden Prostate Cancer Academy Meeting (June 23, 2023 – Los Angeles, CA). “The Space-Time Continuum in Metastatic Castration-Sensitive Prostate Cancer: The Final Frontier?”.

## Abstracts

- Andrew J. Armstrong, Vinnie Y.T. Liu, Ramprasaath R. Selvaraju, Emmalyn Chen, Jeffrey P. Simko, Sandy DeVries, A. Oliver Sartor, Howard M. Sandler, Osama Mohamad, Andre Esteva, **Phuoc T. Tran**, Daniel E. Spratt, John Carson, Christopher Peters, Elizabeth Gore, Steve P. Lee, Jedidiah M. Monson, Joseph P. Rodgers, Felix Y. Feng, Paul L. Nguyen. Development and validation of an AI-derived digital pathology-based biomarker to predict benefit of long-term androgen deprivation therapy with radiotherapy in men with localized high-risk prostate cancer across multiple phase III NRG/RTOG trials. Oral presentation at the ASCO National Meeting 2023.
- Ryan M. Phillips, James A. Proudfoot, Elai Davicioni, Yang Liu, Daniel E. Spratt, Felix Y. Feng, Jeff M. Simko, Robert B. Den, Alan Pollack, Seth A. Rosenthal, A. Oliver Sartor, Christopher J. Sweeney, Gerhardt Attard, Samir Patel, Michael W. Straza, Jason A. Efstathiou, Amit B. Shah, Joseph P. Rodgers, Howard M. Sandler, **Phuoc T. Tran**. Basal-Luminal Subtyping of Localized High-Risk Prostate Cancer Identifies Benefit from Adding Docetaxel to Definitive Radiotherapy with Androgen Suppression in the NRG Oncology/RTOG 0521 Phase III Trial. ASCO National Meeting 2023.
- Matthew P. Deek, Amol C. Shetty, Yang Song, Jason A. Efstathiou, Felix Y. Feng, William U. Shipley, Jeffrey P. Simko, Kent W. Mouw, David Miyamoto, Alan Pollack, M. Dror Michaelson, Anthony Zietman, John J. Coen, Douglas M. Dahl, Ashesh B. Jani, Luis Souhami, Brian K. Chang, R. Jeffrey Lee, Huong Thanh Pham, Stephanie L. Pugh, **Phuoc T. Tran**. Prognostic Significance of Pretreatment Immune Cell Infiltration in Muscle Invasive Bladder Cancer Treated with Definitive Chemoradiation. ASCO National Meeting 2023.
- Gregory S Alexander, Rebecca F Krc, James W Assif, Kai Sun, Jason K Molitoris, **Phuoc Tran, Søren M. Bentzen, Zaker Rana, Mark V Mishra**. Conditional Risk and Predictive Factors Associated with Late Toxicity for Prostate Cancer Patients Treated with External Beam Radiotherapy Alone on Randomized Trial RTOG 0126. Oral presentation for the ASTRO National Meeting 2023.

## Clinical Trial Enrollment

- 2 patients were enrolled (8/122 total) on the **TERPS trial**.

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**Awards/Honors**

- **Lei R.** promoted to Associate Chief of Physics Research at the Dept. of Radiation Oncology at University of Maryland Baltimore School of Medicine, effective July.
- **Phuoc T.** appointed as Co-Chair at American Association for Cancer Research (AACR) Annual Meeting 2024 Program Committee.
- **Phuoc T.** appointed as Ad Hoc Reviewer at Cell Reports.

*Please note that these examples are representative of productivity from the ROBIN OligoMET Center members and are not exclusively attributable to the U54 grant.*