

## APPENDIX X.

### PUBLISHED ABSTRACTS

by members of the Medical Physics Unit : 2021 calendar year (x27)

(names of MPU staff members are underlined, students are indicated by †, presenter indicated by \*)

(list may be revised at a later date)

1. D.S. Ayala Alvarez†, P.G.F. Watson, M. Popovic, V.J. Heng†, M.D.C. Evans, J. Seuntjens, *Brachytherapy TG43 dosimetry characterization of the INTRABEAM source*, World Congress of Brachytherapy, May 06-08, 2021; Radioth. Oncol. **158**, S97-99.OC-0132.
2. A. Ensworth, V. Fortier†, J. Campos Pazmino†, I.R. Levesque, *Robust spatial and temporal unwrapping for accurate quantitative susceptibility mapping*, Proc. 29<sup>th</sup> Scientific Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM), May 15-20, 2021, p. 3550. Poster.
3. F. Moustafavi, L. Cui, B.E. Berryman, I.R. Levesque, E.J. McWalter, *Quantitative magnetization transfer in the knee meniscus: Minimizing data collection protocols*, Proc. 29<sup>th</sup> Scientific Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM), May 15-20, 2021, submission# 989. Poster.
4. K.D. Olsen, L. Cui, B.E. Berryman, I.R. Levesque, E.J. McWalter, *Quantitative magnetization transfer MRI of the knee meniscus: Correlations with biochemistry and histology*, Proc. 29<sup>th</sup> Scientific Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM), May 15-20, 2021, submission# 2449. Poster.
5. F. Keszti+\*, J. Seuntjens, A. Sarfehnia, J. Renaud, *Characterizing the response of absorbed dose calorimeters with non-vacuum thermal insulation materials in isothermal mode of operation*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4665. Scientific Session 31D-1.
6. Y. Poirier, J. Xu, A. Ahmady, S. Mossahebi, H. Zhang, F. Therriault-Proulx, A. Sawant, *Characterization of a novel plastic scintillator for instant real-time dosimetry in electron FLASH-RT*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4666-4667. Scientific Session 1D-4.
7. A. Bui†, H. Bekerat, L. Childress, J. Sankey, J. Seuntjens, S. Enger, *Effect of incoming particle energy, cluster size, LET, and depth in water on the G-value of hydrated electrons*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4672. Scientific Session 2C-3.
8. A. Bui†, H. Bekerat, S.A. Enger, *Film measurements for verification of dose results in hydrated electron dosimetry*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4673. Scientific Session 2C-5.
9. M. Morcost†, M. Antaki, A. Thibodeau-Antonacci†, J. Kalinowski†, H. Glickman, S.A. Enger, *RapidBrachyMCTPS: An open-source dose calculation and optimization tool for brachytherapy research*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4675. Scientific Session 3A-1.
10. D.S. Ayala Alvarez†, P.G.F. Watson, M. Popovic, V.J. Heng†, M.D.C. Evans, J. Seuntjens, *Brachytherapy dosimetry characterization of the INTRABEAM system with spherical applicators*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021, Med Phys **48**(8), 4676. Scientific Session 3A-2.
11. Y. Poirier, R. Nillson, A. Sawant, *Commissioning of Xstrahl SARRP in the  $\mu$ -RayStation treatment planning system and comparison with MuriPlan*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4679-4680. Scientific Session 3B-6.

12. L. Montgomery<sup>†</sup>, C. Lund<sup>†</sup>, A. Landry, J. Kildea, *Modelling the carcinogenic effects of neutron radiation by simulating clustered DNA damage using TOPAS-nBio*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4685. YIS-06.
13. J. Manalad<sup>†</sup>, L. Montgomery<sup>†</sup>, A. Bui<sup>†</sup>, J. Kildea, *Estimation of neutron RBE related to indirect actions via Monte Carlo simulations*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4692. POSTER 7.
14. Y. Poirier, S. Mossahebi, J. Xu, Stewart Becker, A. Sawant, *Linac conversion to FLASH-RT: Shielding, dosimetry, and experimental design*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4696-4697. POSTER 20.
15. L. Weishaupt, A. Thibodeau-Antonacci<sup>†</sup>, A. Garant, K. Singh, C. Miller, T. Vuong, S.A. Enger, *Deep-learning-based tumor segmentation of endoscopy images for rectal cancer patients*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4698. POSTER 23.
16. K. O'Sullivan-Steben<sup>†</sup>, L. Galarneau, S. Judd, A. Laizner, T. Williams, J. Kildea, *Empowered patients, informed research: A pilot project for radiotherapy data donation using the opal patient portal*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4699. POSTER 26.
17. F. Mathew<sup>†</sup>, H. Wang, L. Montgomery<sup>†</sup>, J. Kildea, *Natural language processing and machine learning to assist radiation oncology incident learning*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4704-4705. Scientific Session 6B-6.
18. H. Naseri<sup>†</sup>, K. Kafi, S. Skamene, M. Tolba, M.D. Faye, P. Ramia, J. Khiguian, J. Kildea, *Development of a generalizable natural language processing pipeline to extract physician-reported pain scores from clinical reports in radiation oncology*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4705. Scientific Session 6B-7.
19. H. Patrick<sup>†</sup>, E. Sepulveda<sup>†</sup>, J. Kildea, *An examination of the relationship between daily rectal wall dose variations during prostate radiotherapy treatment with rectal volume and gas filling information*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4709. Scientific Session 6D-2.
20. S. Côté-Maldonado<sup>†</sup>, F. Khosrow-Khavar, F. Cury, H. Patrocinio, *An investigation of predictors for motion in prostate radiotherapy*, 67<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists, Virtual Meeting, June 22-25, 2021; Med. Phys. **48**(8), 4710. Scientific Session 6D-3.
21. A. Thibodeau-Antonacci<sup>†\*</sup>, T. Vuong, H. Bekerat, L. Liang, S.A. Enger, *Development of a dynamic-shield applicator enabling intensity-modulated brachytherapy for the treatment of rectal cancer*, 63rd Annual Meeting & Exhibition of American Association of Physicists in Medicine, Virtual Meeting, July 25-29, 2021; Med. Phys. **48**(6). SU-IePD-TRACK 5-03. e117-e635.
22. F. Keszti<sup>†\*</sup>, A. Bourgouin, A. Schueller, W. Simon, A. Schoenfeld, J. Seuntjens, J. Renaud, *Absolute dosimetry of ultra-high dose rate pulsed electron beams using a graphite probe calorimeter*, 63rd Annual Meeting & Exhibition of American Association of Physicists in Medicine, Virtual Meeting, July 25-29, 2021; Med. Phys. **48**(6). TU-F-TRACK 5-06. e117-e635.
23. A. Bui<sup>†\*</sup>, L. Childress, J. Sankey, J. Seuntjens, S.A. Enger, *Effect of incoming particle energy and ionization cluster size on the G-value of hydrated electrons*, 63rd Annual Meeting & Exhibition of American Association of Physicists in Medicine, Virtual Meeting, July 25-29, 2021; Med. Phys. **48**(6). TH-D-TRACK 5-06. e117-e635.
24. Y. Zlateva<sup>\*</sup>, B. Muir, I. El Naqa, J. Seuntjens, *Geometry optimization and optical sectioning for in-water Cherenkov dosimetry of large and Small Photon Beams*, 63rd Annual Meeting & Exhibition of American Association of Physicists in Medicine, Virtual Meeting, July 25-29, 2021; Med. Phys. **48**(6). MO-IePD-TRACK 6-05. e117-e635.

25. R. Mueller, S. Aldelaijan, M. Moreau, W. Ngwa, G. Makrigiorgos, R. Berbeco, *Dosimetry and quality assurance for the small animal radiation research platform (SARRP)*, 63rd Annual Meeting & Exhibition, July 25-29, 2021; Med. Phys. **48**(6). PO-GePV-T-438 e117-e635.
26. S. Aldelaijan, M. Khosravi, Y. Khouj, T. Harris, D. O'Farrell, J. Seuntjens, S. Devic, I. Buzurovic, *Towards informed and digitized HDR brachytherapy QA: Quantitative analysis of GYN applicators*, Radioth. Oncol. **158**(1), S190-192 (2021). PO-0229.
27. A. Garant, C. Vasilevsky, M. Boutros, F. Khosrow-Khavar, P. Kavan, H. Diec, S. Desgroseilliers, J. Faria, E. Ferland, V. Pelsser, A. Martin, S. Devic, K. Asiev, T. Vuong, *Interim safety analysis and preliminary results of the Morpheus Phase II study*, Radiother. Oncol. **161**(1), S486-487 (2021). OC-0621.