

## APPENDIX XII.

### CONFERENCE & SEMINAR PRESENTATIONS

by members of the Medical Physics Unit : 2022 calendar year (x 60)

(in multiple author entries, presenter is indicated by an asterisk \*)

(the names of staff members of the MPU are underlined, students are indicated by †)

1. A. Bourgouin, F. Keszti†, W. Simon, A Schoenfeld, J. Seuntjens et al, *FLASH in the clinic track* (oral presentations), "Performance of a probe-type graphite calorimeter (Aerrow) in ultra-high dose per pulse electron beams", *Physica Medica* **94**, S42 (2022).
2. D.S. Ayala Alvarez†\*, M. Popovic, V.J. Heng†, P.G.F. Watson, M.D.C. Evans, J. Seuntjens, *A treatment planning framework for glioblastoma using Monte Carlo calculation of intraoperative radiotherapy dose distributions*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Oral presentation.
3. Y.M. Tai†\*, V.J. Heng†, M. Serban, J. Seuntjens, *Log files-based quality assurance of mixed electron-photon beam radiation therapy*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Oral presentation.
4. V.J. Heng†\*, T. Connell, M-A. Renaud, J. Seuntjens, *Accuracy of an independent Monte Carlo dose verification software*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Oral presentation.
5. C. Dries\*, A. Simon, W. Morgane, S. Dennis, D.S. Ayala Alvarez†, J. Seuntjens, P.G.F. Watson, F. Verhaegen, B. Reniers, *Microdosimetric spectra of electronic brachytherapy skin treatment devices: An MC approach*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Oral presentation.
6. J. Bian†\*, J. Durant†, W-G. Shin, J. Ramos-Méndez, L. Childress, J.C. Sankey, J. Seuntjens, S.A. Enger, *Updating GEANT4-DNA to enable simulation of radiation chemical yield of hydrated electrons at different temperatures and pH values*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Oral presentation.
7. L. Carroll†\*, S.A. Enger, *Design and validation of MaRSS: A Modular Radiation Simulation Software package*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Oral presentation.
8. M. Rahbaran†, J. Kalinowski†, J.M.G. Tsui, J. DeCunha, S.A. Enger\*, *Monte-Carlo based simulations of the uncertainties in clinical water-based intravascular brachytherapy dosimetry*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Oral presentation.
9. Y. Daoud†\*, L. Carroll†, S.A. Enger, *A Radiation detector simulation toolkit for calculating the arterial input function during dynamic positron emission tomography*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Oral presentation.
10. S. Dev†\*, B. Behmand, P. Pater, S.A. Enger, *Establishing correlation between physical microdosimetric quantities and biological endpoints such as DNA double strand break*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Oral presentation.
11. J. Manalad†\*, L. Montgomery†, J. Kildea, *On the Monte Carlo simulation of neutron-induced direct and indirect DNA damage to estimate neutron relative biological effectiveness*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Poster presentation.
12. P. Kim†\*, S.A. Enger, *A theoretical Monte Carlo study for Yttrium-90 radioembolization on hepatocellular carcinoma tumours*, International Conference on Monte Carlo Techniques for Medical Applications (MCMA), Antwerp, Belgium, April 11-13, 2022. Poster presentation.
13. Y. Zou†\*, L.L. Weishaupt, S.A. Enger, *McMedHacks: Deep learning for medical image analysis workshops and Hackathon in radiation oncology*, European Society for Radiotherapy & Oncology Congress (ESTRO), May 06-10, 2022, Copenhagen, Denmark. Poster presentation: OC-0014.

14. D.S. Ayala Alvarez<sup>†\*</sup>, P.G.F. Watson, M. Popovic, V.J. Heng<sup>†</sup>, M.D.C. Evans, J. Seuntjens, *TG-43 dosimetry characterization of the INTRABEAM system with spherical applicators*, European Society for Radiotherapy & Oncology Congress (ESTRO), May 06-10, 2022, Copenhagen, Denmark. Poster presentation: MO-0298. **Brachytherapy Best Paper.**
15. M. Serban, M. Gallois, T. Urtubey, R. Nout, A. de Leeuw, L. Fokdal, M. Assenholt, S. Spampinato, K. Bruheim, B. Segedin, S. Chopra, M. Schmid, N. Nesvacil, S. Ecker, K. Kirchheiner, R. Pötter, H. Westerveld, F. Huang, L. Velema, L.T. Tan, M. Valgma, H. Mathiesen, J. Lindegaard, I. Jürgenliemk-Schulz, K. Tanderup, *Effect of dose and fractionation de-escalation in low-risk cervix cancer treated with EBRT and BT*, European Society for Radiotherapy & Oncology Congress (ESTRO), May 06-10, 2022, Copenhagen, Denmark. Poster presentation: OC-0503.
16. S.A. Enger, *The positive impact of good leadership*, European Society for Radiotherapy & Oncology Congress (ESTRO), May 06-10, 2022, Copenhagen, Denmark. Poster presentation: SP-0706.
17. L.L. Weishaupt, T. Vuong, A.Thibodeau-Antonacci<sup>†</sup>, A. Garant, K. Singh, C. Miller, A-G. Martin, F. Schmitt-Ulms, S.A. Enger, *Automated rectal tumor segmentation with inter-observer variability-based uncertainty estimates*, European Society for Radiotherapy & Oncology Congress (ESTRO), May 06-10, 2022. Poster presentation: PO-1325.
18. Y. Daoud, L. Carroll<sup>†</sup>, S.A. Enger, *Mapping of the human wrist to develop a non-invasive radiation detector for dynamic PET application*, European Society for Radiotherapy & Oncology Congress (ESTRO), May 06-10, 2022. Poster presentation: PO-1617.
19. Y. Zou<sup>†\*</sup>, M. Lecavalier-Barsoum, M. Pelmus, F. Maleki, S.A. Enger, *Predictive modeling of post radiation-therapy recurrence for gynecological cancer patients using clinical and histopathology imaging features*, 10<sup>th</sup> annual meeting Curietherapies: Moving Brachytherapy Forward, May 20-22, 2022, Montreal, Quebec. Oral presentation. **Young Investigator Competition Winner.**
20. M. Robitaille\*, C. Menard, J. Lavoie, G. Famulari, G. Nadeau, S.A. Enger, *<sup>169</sup>Yb-based high dose rate intensity modulated brachytherapy for focal treatment of prostate cancer*, 10<sup>th</sup> annual meeting Curietherapies: Moving Brachytherapy Forward, May 20-22, 2022, Montreal, Quebec. Oral presentation.
21. F. Svahn<sup>†\*</sup>, M. Lecavalier-Barsoum, J. Alfieri, M. Morcos, S.A. Enger, *Intensity-modulated vaginal brachytherapy*, 10<sup>th</sup> annual meeting Curietherapies: Moving Brachytherapy Forward, May 20-22, 2022, Montreal, Quebec. Oral presentation.
22. M. Cyr<sup>†\*</sup>, V. Diaz Martinez<sup>†</sup>, S. Devic, N. Tomic, D.F. Lewis, S.A. Enger, *Investigation of the dosimetry characteristics of the GAFCHROMIC EBT3 film response to alpha particle irradiation*, International Conference on 3D and Advanced Dosimetry (IC3DDOSE), June 19-23, 2022, Québec City, Quebec.
23. D.S. Ayala Alvarez<sup>†\*</sup>, P.G.F. Watson, M. Popovic, V.J. Heng<sup>†\*</sup>, M.D.C. Evans, J. Seuntjens, *Effects of dosimetry formalism on dose to organs at risk in intraoperative radiotherapy of glioblastoma*, International Low Energy IORT User Meeting, June 20-21, Bonn, Germany.
24. H. Naseri<sup>†</sup>, S. Skamene, M. Tolba, M. Daro Faye, J. Khrguian, P. Ramia, J. Kildea, *Development and testing of an NLP and radiomics-based predictive model of pain for patients with thoracic spinal bone metastases*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session 3: Young Investigators Symposium - Presentation 1.
25. V.J. Heng<sup>†</sup>, M. Serban, M-A. Renaud, J. Seuntjens, *Robust planning of mixed electron-photon radiation therapy for soft tissue sarcoma at standard SAD*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session 3: Young Investigators Symposium - Presentation 3. **2nd place at the Young Investigators Competition of the 2022 COMP Annual Scientific Meeting in Quebec City.**
26. K. O'Sullivan-Stebent<sup>†</sup>, L. Galarneau, S. Judd, A. Laizner, T. Williams, J. Kildea, *Design and implementation of a prototype radiotherapy menu in a patient portal to reduce patient anxiety and facilitate data sharing*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session 3: Young Investigators Symposium - Presentation 4.
27. L. Carroll<sup>†</sup>, S.A. Enger, *Non-invasive measurement of the arterial input function for dynamic positron emission tomography: Simulation of clinical workflow*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session: Imaging and Imaging in RT – Presentation 7.
28. D.S. Ayala Alvarez<sup>†</sup>, M. Popovic, V.J. Heng<sup>†</sup>, P.G.F. Watson, M.D.C. Evans, J. Seuntjens, *Patient-specific treatment planning for intraoperative radiotherapy of glioblastoma*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session: Treatment Planning – Presentation 7.

29. A. Thibodeau-Antonacci†, S.A. Enger, H. Bekerat, T. Vuong, *Gafchromic film and scintillator detector measurements in phantom with a novel intensity-modulated brachytherapy endorectal shield*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session: Poster session 4.
30. J. Manalad†, L. Montgomery†, J. Kildea, *Estimating the relative biological effectiveness of neutron radiation for inducing clustered DNA damage via Monte Carlo simulation of direct and indirect action*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session: Poster session 29.
31. F. Matthew†, J. Manalad†, J. Kildea, *Monte Carlo modeling to investigate the suitability of using single-cell DNA sequencing of irradiated cells in the mutation signature analysis of low- and high-LET radiation*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session: Poster session 58.
32. H. Patrick†, J. Kildea, *Scratching the (dose) surface: Demonstrating the power and potential of dose-surface maps to investigate spatial effects of treatment planning parameters on delivered dose to the rectum*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session: Poster session 60.
33. Y.M. Tai†, V.J. Heng†, M-A. Renaud, M. Serban, J. Seuntjens, *Feasibility of MapCHECK-based and log file-based quality assurance for mixed electron-photon radiation therapy at standard SAD*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session: Poster session 62.
34. V. Diaz Martinez†, M. Cyr†, S. Devic, N. Tomic, D.F. Lewis, S.A. Enger, *Use of Monte Carlo method to relate Gafchromic EBT3 film response to absorbed dose for alpha particle dosimetry*, Canadian Organization of Medical Physicists (COMP), June 22-25, 2022, Québec City, Quebec. Scientific session: Poster session 67.
35. Y.M. Tai†\*, V.J. Heng†, M-A. Renaud, M. Serban, J. Seuntjens, *Quality assurance for mixed electron-photon beam radiation therapy using treatment log files and MapCHECK*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Therapy - General ePoster viewing. Presentation PO-GePV-T-71.
36. M. Maher†\*, C.M. Lund, J. Bancheri, J. Seuntjens, *Developing a compact proton dielectric Wass accelerator: Characterizing pulse delivery and electromagnetic dispersion in annular parallel-plate waveguides*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Therapy - General ePoster viewing. Presentation PO-GePV-T-189.
37. J. Bian†, J. Duran, W. Shin, J. Ramos-Mendez, L. Childress, J. Sankey, J. Seuntjens, S.A. Enger\*, *Update of the GEANT4-DNA software for simulation of radiation chemical yield for reactive water radiolysis species at different temperature and PH*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Therapy - General ePoster viewing. Presentation PO-GePV-T-271.
38. V.J. Heng†\*, M. Serban, C.R. Freeman, M-A. Renaud, J. Seuntjens, *Robust, applicator-free and bolus-free mixed electron-photon beam radiation therapy for soft tissue sarcoma*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Treatment Planning and Verification Techniques. Presentation TU-D930-lePD-F4-1.
39. C.M. Lund†\*, P.M. Jung, M. Maher†, J. Bancheri†, T. Planche, R. Baartman, J. Seuntjens, *Towards accessible proton radiotherapy: Beam optics design for a compact medical proton accelerator*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Proton Therapy III, Therapy interactive ePoster discussion. Presentation WE-c930-lePD-F7-6.
40. N. MacKay†\*, F. Keszti†, J. Seuntjens, A. Sarfehnia, J. Renaud, *Examination of stability and heat transfer effects of a graphite probe calorimeter*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Clinical Dosimetry, Calibration, Shielding. Presentation TH-B-BRA-4.
41. H. Patrick†\*, J. Kildea, *Rtdsm: An open-source software for dose-surface map generation and analysis*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Novel Imaging Applications, Multi-disciplinary interactive ePoster discussion. Presentation MO-H345-lePD-F6-2.

42. H. Naseri<sup>†\*</sup>, S. Skamene, M. Tolba, M. Faye, P. Ramia, J. Khruiguan, H. Patrick<sup>†</sup>, A. Andrade, M. David, J. Kildea, *A novel lesion-center-based machine learning pipeline for distinguishing between metastatic and healthy bone regions in cancer patients*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Advancing Science to Expand Access to State-of-the-Art Applications in Medical Physics: III, Multi-disciplinary interactive ePoster discussion. Presentation TU-I345-lePD-F5-1.
43. V. Diaz Martinez<sup>†</sup>, L. Carroll<sup>†</sup>, S.A. Enger<sup>\*</sup>, *Monte Carlo simulation of the 224Ra decay chain and the diffusion of 220Rn for diffusing alpha-emitters radiotherapy*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Therapy - General ePoster viewing. Presentation PO-GePV-T-60.
44. J. Babik<sup>\*</sup>, N. Chabaytah<sup>\*</sup>, B. Behmand, T. Connell, M.D.C. Evans, R. Ruo, Y. Poirier, S.A. Enger, *Characterization of the relative biological effectiveness of a range of photon energies for irradiation of HeLa and PC-3 cell lines*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Therapy - General ePoster viewing. Presentation PO-GePV-T-449.
45. F. Berumen-Murilo<sup>†\*</sup>, S.A. Enger, L. Beaulieu, *Sub-second (D(M,M) calculation for LDR prostate brachytherapy using deep learning methods*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: AI in Treatment Planning - Therapy interactive ePoster discussion. Presentation SU-H300-lePD-F4-1.
46. H. Jafarzadeh<sup>†\*</sup>, M. Antaki<sup>\*</sup>, X. Mao, S.A. Enger, *Bayesian optimization in treatment planning of high dose rate brachytherapy*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Brachytherapy – III, Therapy interactive ePoster discussion. Presentation SU-H400-lePD-F7-4.
47. A. Thibodeau-Antonacci<sup>†\*</sup>, T. Vuong, B. Liontis, F. Rayes, S. Pande, S.A. Enger, *Development of a novel MRI-compatible applicator for intensity modulated rectal brachytherapy*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Brachytherapy. Presentation SU-K-207-3.
48. Y. Zou<sup>†\*</sup>, M. Lecavalier-Barsoum, M. Pelmus, S.A. Enger, *Patient-specific nuclei size and cell spacing distribution extraction from histopathology whole slide images for treatment outcome prediction modelling*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Machine Learning for Toxicity Prediction, Multi-disciplinary interactive ePoster discussion. Presentation MO-C930-lePD-F5-1.
49. S.P. Kim<sup>\*</sup>, L. Rodriguez, G. Herrera, S.A. Enger, D. Alvarez, *Evaluating the accuracy of a practical and quantitative imaging and dosimetry protocol for post-treatment Yttrium-90 SPECT/CT*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Radiopharmaceutical Imaging & Dosimetry: Specialty Program, The New Era of Radiopharmaceutical - Therapy interactive ePoster discussion. Presentation MO-E115-lePD-F5-5.
50. S. Dev<sup>†\*</sup>, B. Behmand, P. Pater, S.A. Enger, *To establish correlation between physical microdosimetric quantities such as dose mean lineal energy, target size and biological endpoints such as DNA double strand breaks in HeLa Cells irradiated with iridium-192 high dose rate brachytherapy source and 225kV x-rays*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Therapy BLUE RIBBON ePoster. Presentation MO-I430-BReP-F3-5.
51. S.A. Enger<sup>\*</sup>, *A new alpha particle treatment device: Introduction and clinical implementation*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Emerging and Re-Emerging Brachytherapy treatments. Presentation TU-AB-BRA-2.

52. S.A. Enger, P. Alvarez, W. Culberson, R. Kapsch, S. Kry, M. McEwen, M. Mitch, B. Muir, M. Pankuch, J. Renaud, R. Tosh\*, K. Working, *Introducing an AAPM working group on international dosimetry integration: A resource for the AAPM membership to identify where primary standards and protocols are needed for clinical applications*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Professional interactive ePoster discussion. Presentation TU-F115-lePD-F6-5.
53. S.A. Enger\*, *Modelling of brachytherapy treatments*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Multi-Scale Modeling in Imaging and Therapy. Presentation TH-C-BRC-03.
54. S.A. Enger\*, *Current state of dosimetry with 90Y microspheres*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. Session: Novel interventional procedures involving microspheres. Presentation TH-E-BRB-4.
55. S. Aldelaijan\*, H. Ashaleh, C. Constantinescu, S. Devic, I. Buzurovic, B. Moftah, *A novel quality assurance system to evaluate MR-only workflow for interstitial and intracavitary gynecological HDR brachytherapy*, American Association of Physicists in Medicine (AAPM) 64<sup>th</sup> Annual Meeting & Exhibition, "Celebrating Medical Physics: Transforming Human Health", July 10-14, 2022, Washington, DC. General ePoster viewing (GePV) TPO-GePV-T-23.
56. A. Thibodeau-Antonacci<sup>+</sup>\*, L. Weishaupt\*, A. Garant, C. Miller, T. Vuong, P. Nicolai, S.A. Enger, *Deep learning-based automatic segmentation of rectal tumors in endoscopy images*, New Avenues in the Non-operative Management of Patients with Rectal Cancer, International Conference, October 13-15, 2022, Montreal, Quebec. Oral presentation.
57. M. Cyr<sup>+</sup>\*, J. Babik, B. Behmand, N. Chabaytah, S.A. Enger, *Investigation of diffusion of the alpha-particle emitting daughters of the DaRT seed through animal models*, New Avenues in the Non-operative Management of Patients with Rectal Cancer, International Conference, October 13-15, 2022, Montreal, Quebec. Oral presentation.
58. J. Li\*, H. Bekerat, M.D.C. Evans, T. Vuong, N. Chabaytah, J. Babik, B. Behmand, S.A. Enger, *Characterising the relative biological effectiveness of different radiation modalities on HCT116, a human colorectal cancer cell line*, New Avenues in the Non-operative Management of Patients with Rectal Cancer, International Conference, October 13-15, 2022, Montreal, Quebec. Oral presentation.
59. J. Kalinowski<sup>+</sup>\*, S.A. Enger, *RapidBrachyMCTPS: A Monte Carlo-based brachytherapy treatment planning system*, New Avenues in the Non-operative Management of Patients with Rectal Cancer, International Conference, October 13-15, 2022, Montreal, Quebec. Oral presentation.
60. S. Quetin<sup>+</sup>\*, S.A. Enger, *Artificial intelligence-based brachytherapy*, New Avenues in the Non-operative Management of Patients with Rectal Cancer, International Conference, October 13-15, 2022, Montreal, Quebec. Oral presentation.