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Publications

2021

- 1 Recommendations on the practice of calibration, dosimetry, and quality assurance for gamma stereotactic radiosurgery: Report of AAPM Task Group 178. <https://doi.org/10.1002/mp.14831>
- 2 DeWerd, Larry A and Kunugi, Keith. Accurate Dosimetry for Radiobiology. Int J Rad Oncol Biol Phys, 2021.
- 3 Ferris, William, et al. Effects of variable-width jaw motion on beam characteristics for Radixact Synchrony®. J Appl Clin Med Phys, 2021.
- 4 Ferris, William, et al. Technical note: On the impact of the kV imaging configuration on doses from planar images during motion-synchronized treatments on Radixact®. J Appl Clin Med Phys, 2021.
- 5 Khan, Ahtesham, et al. Development and evaluation of a GEANT4-based Monte Carlo Model of a 0.35 T MR-guided radiation therapy (MRgRT) linear accelerator. Med Phys, 2021.
- 6 Khan, Ahtesham, et al. A Monte Carlo Investigation of Dose Point Kernel Scaling for \pm Emitting Radionuclides. Cancer Biother. Radiopharm., 2021.
- 7 Khan, Ahtesham, et al. Evaluation of the GEANT4 transport algorithm and radioactive decay data for alpha particle dosimetry. Applied Radiation and Isotopes, 2021.
- 8 Khan, Ahtesham, et al. Monte Carlo-derived ionization chamber correction factors in therapeutic carbon ion beams. Phys Med Biol, 2021.
- 9 Matrosic, Charlie, et al. 3D dosimetric validation of ultrasound-guided radiotherapy with a dynamically deformable abdominal phantom. Physica Medica, 2021.
- 10 Nelson, Nick, et al. Development and validation of the Dynamic Collimation Monte Carlo simulation package for pencil beam scanning proton therapy. Med Phys, 2021.
- 11 Smith, Blake, et al. Experimental and Monte Carlo characterization of a dynamic collimation system prototype for pencil beam scanning proton therapy. Med Phys, 2021.

2020

- 1 Taneja, Sameer, et al. Measurement of the Energy Spectrum of a 6 MV Linear Accelerator Using Compton Scattering Spectroscopy and Monte Carlo-Generated Corrections. Journal of Medical Physics, Clinical Engineering, and Radiation Oncology, 2021.
- 2 CheFru, Leonard, et al. Interstitial diffuse optical probe with spectral fitting to measure dynamic tumor hypoxia. Biomed Phys Eng Express, 2020.
- 3 Culberson, Wes, et al. Report of AAPM TG292: Dose considerations for the INTRABEAM electronic brachytherapy system. Med Phys, 2020.
- 4 Culberson, Wes, et al. Dose considerations for the INTRABEAM electronic brachytherapy system. Med Phys, 2020.
- 5 Desai, Vimal, et al. On the implementation of the plan-class specific reference field using multidimensional clustering of plan features and alternative strategies for improved dosimetry in modulated clinical linear accelerator treatments. Med Phys, 2020.
- 6 Ferris, William, et al. Evaluation of Radixact Motion Synchrony for 3D Respiratory Motion: Modeling Accuracy and Dosimetric Fidelity. J Appl Clin Med Phys, 2020.
- 7 Ferris, William, et al. Technical Note: Patient Dose from Kilovoltage Images During Motion-Synchronized Treatments on Radixact. Med Phys, 2020.
- 8 Khan, Ahtesham, et al. Characterizing a PTW microDiamond detector in kilovoltage radiation beams. Med Phys, 2020.
- 9 Smith, Blake, et al. An investigation into the robustness of dynamically collimated proton therapy treatments. Med Phys, 2020.



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2020 cont.

- 10 Smith, Blake, et al. Experimental and Monte Carlo characterization of a dynamic collimation system prototype for pencil beam scanning proton therapy. Med Phys, 2020.
- 11 Walter, Autumn, et al. Evaluation of Ionization Chamber Stability Checks using Various Sources. Physica Medica, 2020.

2019

- 1 Ferris, William, et al. Calculating dose from a 2.5 MV imaging beam using a commercial treatment planning system. J Appl Clin Med Phys, 2019.
- 2 Hansen, John, et al. A convex windowless extrapolation chamber to measure surface dose rate from ¹⁰⁶Ru/¹⁰⁶Rh episcleral plaques. Med Phys, 2019.
- 3 Hansen, John, et al. Surface dose rate from a flat ¹⁰⁶Ru/¹⁰⁶Rh episcleral plaque measured with a planar windowless extrapolation chamber and un-laminated EBT3 film. Radiat Meas, 2019.
- 4 Matrosic, Charlie, et al. Deformable abdominal phantom for the validation of real-time image guidance and deformable dose accumulation. J Appl Clin Med Phys, 2019.
- 5 Radtke, Jeff, et al. Ionization Chambers to Determine Neutron and Gamma-Ray Kerma in a Research Reactor. IEEE Transactions on Nuclear Science, 2019.
- 6 Smith, Blake, et al. LET response variability of Gafchromic EBT3 film from a Co-60 calibration in clinical proton beam qualities. Med Phys, 2019.
- 7 Smith, Blake, et al. Technical Note: Optimization of spot and trimmer position during dynamically collimated proton therapy. Med Phys, 2019.
- 8 Smith, Blake, et al. Trimmer sequencing time minimization during dynamically collimated proton therapy using a colony of cooperating agents. Phys Med Biol, 2019.

2018

- 1 Aima, Manik, et al. Dosimetric characterization of a new directional low-dose rate brachytherapy source. Med Phys, 2018.
- 2 Desai, Vimal, et al. VMAT and IMRT plan-specific correction factors for linac-based ionization chamber dosimetry. Med Phys, 2018.
- 3 DiMaso, Lianna, et al. Investigating a novel split-filter dual-energy CT technique for improving pancreas tumor visibility for radiation therapy. J Appl Clin Med Phys, 2018.
- 4 Fagerstrom, Jessica, et al. Prototype modulated orthovoltage stereotactic radiosurgery cones. Radiat Meas, 2018.
- 5 Lawless, Michael, et al. Monte Carlo and ⁶⁰Co-based kilovoltage x-ray dosimetry methods. Med Phys, 2018.
- 6 Simiele, Eric, et al. Spectral characterization of plastic scintillation detector response as a function of magnetic field strength. Phys Med Biol, 2018.
- 7 Simiele, Eric, et al. Characterization of spectral and intensity changes with measurement geometry in various light guides used in scintillation dosimetry. Med Phys, 2018.
- 8 Simiele, Eric, et al. On the accuracy and efficiency of condensed history transport in magnetic fields in GEANT4. Phys Med Biol, 2018.
- 9 Smith, Blake, et al. Secondary neutron dose from a Dynamic Collimation System during intracranial pencil beam scanning proton therapy: A Monte Carlo investigation. Int J Radiat Oncol Biol Phys, 2018.
- 10 Taneja, Sameer, et al. Characterization of the energy spectrum of a ¹³⁷Cs irradiator through measurements using a pulse-mode detector. Radiat Meas, 2018.



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- 1 Simiele, Eric, et al. Experimental determination of the effective point of measurement in electron beams using a commercial scintillation detector. Radiat Meas, 2017.
- 2 Smith, Blake, et al. Air-kerma strength determination of an HDR 192Ir source including a geometric sensitivity study of the seven-distance method. Med Phys, 2017.
- 3 Hansen, John, et al. Windowless extrapolation chamber measurement of surface dose rate from a 90Sr/90Y ophthalmic applicator. Radiat Meas, 2017.

2016

- 1 Martha Malin, et al, Absolute measurement of LDR brachytherapy source emitted power: Instrument design and initial measurements, Med Phys 2016
- 2 Pedersen, Kurt, et al. Radiation Biology Irradiator Dose Verification Survey, Rad Res, 2016.

2015

- 1 Aima, Manik et al. Air-kerma strength determination of a new directional ^{103}Pd source, Med Phys, 2015
- 2 Seed, TM et al. An interlaboratory comparison of dosimetry for a multi-institutional radiobiological research project: Observations, problems, solutions and lessons learned, Intl J of Radiation Biology, 2015
- 3 Drzymala, RE et al. A round-robin gamma stereotactic radiosurgery dosimetry interinstitution comparison of calibration protocols. Med Phys 2015.
- 4 Rosen, BS et al. A prototype, glassless densitometer traceable to primary optical standards for quantitative radiochromic film dosimetry. Med Phys 2015.
- 5 Malin, M et al. Impact of the differential fluence distribution of brachytherapy sources on the spectroscopic dose-rate constant. Med Phys 2015.
- 6 Moura, E et al., Development of a phantom to validate high-dose-rate brachytherapy treatment planning systems with heterogeneous algorithms," Med Phys 2015.
- 7 DeWerd, L et al. A modified dose calculation formalism for electronic brachytherapy sources. Brachytherapy 2015.