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Fødselsår

1965

Uddannelser

2005 Hospitalsfysiker i Strålebehandling, Aarhus Universitetshospital, Danmark

Akademiske grader

1999 Ph.d. i Fysik, Nanjing Universitet, Kina
1994 M.Sc. i Fysik, Aarhus Universitet, Danmark

Forskningsområder

Billedvejledt strålebehandling
Tumorbevægelse ved stråleterapi
Dynamisk MLC tracking
Dosisrekonstruktion
Medicinsk billedbehandling

Nuværende ansættelse

2018 Professor, Klinisk Institut, Aarhus Universitet, Aarhus, Danmark

Tidligere ansættelser

2010-2018 Lektor, Klinisk Institut, Aarhus Universitet, Aarhus, Danmark
2007-2009 Gæste stipendiat, Department of Radiation Oncology, Stanford Universitet, USA
2001-2007 Hospitalsfysiker, Afdeling for Medicinsk Fysik, Aarhus Universitetshospital, Danmark
1999-2000 Postdoc, Københavns Universitet, Danmark
1995-1996 Gymnasielærer, Aurehøj Statsgymnasium, Gentofte, Danmark
1991-1995 Forskningsassistent, Danmarks Tekniske Universitet, Kgs. Lyngby, Danmark

Publikationer og præsentationer

Publications: 124, Peer-reviewed: 122, H-index: 30, Citater: 2520, Patenter: 5 US Patenter relateret til stråleterapi, Præsentationer ved videnskabelige møder (foredrag, inviteret eller peer review): 60

Vejledning

1 postdoc, 8 ph.d.-studerende, 4 specialestuderende og 3 hospitalsfysikere

Agnes Niebuhr Andersson's Cancer Research Foundation Award (2012)
DSMF Young Physicist Award (2008)

Større forskningsbevillinger

Kræftens Bekæmpelse (2020)
Kræftens Bekæmpelse (2016)
Kræftens Bekæmpelse (2012)
Kræftens Bekæmpelse (2009)
Forskningsrådet (1999)

Forskningsrådet (1995)

Involvering i videnskabelige tidsskrifter

Bedømmer for:

Acta Oncologica

International Journal of Radiation Oncology-Biology-Physics

Medical Physics

Physics in Medicine and Biology

Radiation Oncology

Radiotherapy and Oncology

Medlemsskaber

ESTRO

AAPM

DSMF

Publikationer

Oxygen enhancement ratio weighted dose quantitatively describes acute skin toxicity variations in mice after pencil beam scanning proton FLASH irradiation with changing doses and time structures

Poulsen, P. R., Johansen, J. G., Sitarz, M. K., Kanouta, E., Kristensen, L., Grau, C. & Sørensen, B. S., 8 mar. 2024, (E-pub ahead of print) I: International Journal of Radiation Oncology, Biology, Physics.

Evaluation of in vitro irradiation setup: Designed for the horizontal beamline at the Danish Centre for Particle Therapy

Frederiksen, A. T., Jensen, M. B., Poulsen, P. R., Bassler, N., Sørensen, B. S. & Sitarz, M., 13 feb. 2024, I: Acta oncologica (Stockholm, Sweden). 63, s. 23-27 5 s.

Multi-institutional consensus on machine QA for isochronous cyclotron-based systems delivering ultra-high dose rate (FLASH) pencil beam scanning proton therapy in transmission mode

Spruijt, K., Mossahebi, S., Lin, H., Lee, E., Kraus, J., Dhabaan, A., Poulsen, P., Lowe, M., Ayan, A., Spiessens, S., Godart, J. & Hoogeman, M., feb. 2024, I: Medical Physics. 51, 2, s. 786-798 13 s.

Two-dimensional time-resolved scintillating sheet monitoring of proton pencil beam scanning FLASH mouse irradiations

Kanouta, E., Bruza, P., Johansen, J. G., Kristensen, L., Sørensen, B. S. & Poulsen, P. R., 2024, (Accepted/In press) I: Medical Physics.

An experimental setup for proton irradiation of a murine leg model for radiobiological studies

Overgaard, C. B., Reaz, F., Sitarz, M., Poulsen, P., Overgaard, J., Bassler, N., Grau, C. & Sørensen, B. S., nov. 2023, I: Acta Oncologica. 62, 11, s. 1566-1573 8 s.

Repeated deep-inspiration breath-hold CT scans at planning underestimate the actual motion between breath-holds at treatment for lung cancer and lymphoma patients

Hoffmann, L., Ehmsen, M. L., Hansen, J., Hansen, R., Knap, M., Mortensen, H. R., Poulsen, P. R., Ravkilde, T., Rose, H. K., Schmidt, H. H., Worm, E. S. & Møller, D. S., nov. 2023, I: Radiotherapy and Oncology. 188, 8 s., 109887.

Difference between planned and delivered radiotherapy dose to the internal mammary nodes in high-risk breast cancer patients

Mølby Nielsen, A. W., Spejlborg, H., Lutz, C. M., Rugaard Poulsen, P. & Offersen, B. V., jul. 2023, I: Physics and Imaging in Radiation Oncology. 27, 7 s., 100470.

A simple method to measure the gating latencies in photon and proton based radiotherapy using a scintillating crystal

Worm, E. S., Thomsen, J. B., Johansen, J. G. & Poulsen, P. R., jun. 2023, I: Medical Physics. 50, 6, s. 3289-3298 10 s.

Time-resolved dose rate measurements in pencil beam scanning proton FLASH therapy with a fiber-coupled scintillator detector system

Kanouta, E., Poulsen, P. R., Kertzschner, G., Sitarz, M. K., Sørensen, B. S. & Johansen, J. G., apr. 2023, I: Medical Physics. 50, 4, s. 2450-2462 13 s.

Intrafraction tumor motion monitoring and dose reconstruction for liver pencil beam scanning proton therapy

Nankali, S., Worm, E. S., Thomsen, J. B., Stick, L. B., Bertholet, J., Høyer, M., Weber, B., Mortensen, H. R. & Poulsen, P. R., mar. 2023, I: *Frontiers in Oncology*. 13, 11 s., 1112481.

The dosimetric error due to uncorrected tumor rotation during real-time adaptive prostate stereotactic body radiation therapy

Sengupta, C., Skouboe, S., Ravkilde, T., Poulsen, P. R., Nguyen, D. T., Greer, P. B., Moodie, T., Hardcastle, N., Hayden, A. J., Turner, S., Siva, S., Tai, K. H., Martin, J., Booth, J. T., O'Brien, R. & Keall, P. J., jan. 2023, I: *Medical Physics*. 50, 1, s. 20-29 10 s.

Dose perturbations in proton pencil beam delivery investigated by dynamically deforming silicone-based radiochromic dosimeters

Vindbæk, S. H., Muren, L., Balling, P., Petersen, J. B. B., Valdetaro, L. & Poulsen, P. R., nov. 2022, I: *Physics in Medicine and Biology*. 67, 23, 14 s., 235002.

Accuracy and potential improvements of surface-guided breast cancer radiotherapy in deep inspiration breath-hold with daily image-guidance

Nankali, S., Hansen, R., Worm, E., Yates, E. S., Thomsen, M. S., Offersen, B. & Poulsen, P. R., okt. 2022, I: *Physics in Medicine and Biology*. 67, 19, 195006.

Pencil beam scanning proton FLASH maintains tumor control while normal tissue damage is reduced in a mouse model

Sørensen, B. S., Sitarz, M. K., Ankjærgaard, C., Johansen, J. G., Andersen, C. E., Kanouta, E., Grau, C. & Poulsen, P., okt. 2022, I: *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*. 175, s. 178-184 7 s.

Experimental investigation of dynamic real-time rotation-including dose reconstruction during prostate tracking radiotherapy

Muurholm, C. G., Ravkilde, T., De Roover, R., Skouboe, S., Hansen, R., Crijs, W., Depuydt, T. & Poulsen, P. R., jun. 2022, I: *Medical Physics*. 49, 6, s. 3574-3584 11 s.

Time structure of pencil beam scanning proton FLASH beams measured with scintillator detectors and compared with log files

Kanouta, E., Johansen, J. G., Kertzscher, G., Sitarz, M. K., Sørensen, B. S. & Poulsen, P. R., mar. 2022, I: *Medical Physics*. 49, 3, s. 1932-1943 12 s.

In vivo validation and tissue sparing factor for acute damage of pencil beam scanning proton FLASH

Singers Sørensen, B., Krzysztof Sitarz, M., Ankjærgaard, C., Johansen, J., Andersen, C. E., Kanouta, E., Overgaard, C., Grau, C. & Poulsen, P., feb. 2022, I: *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*. 167, s. 109-115 7 s.

The markerless lung target tracking AAPM Grand Challenge (MATCH) results

Mueller, M., Poulsen, P., Hansen, R., Verbakel, W., Berbeco, R., Ferguson, D., Mori, S., Ren, L., Roeske, J. C., Wang, L., Zhang, P. & Keall, P., feb. 2022, I: *Medical Physics*. 49, 2, s. 1161-1180 20 s.

A real-time IGRT method using a Kalman filter framework to extract 3D positions from 2D projections

Nguyen, D. T., Keall, P., Booth, J., Shieh, C. C., Poulsen, P. & O'Brien, R., nov. 2021, I: *Physics in Medicine and Biology*. 66, 21, 214001.

Real-time dose-guidance in radiotherapy: Proof of principle

Muurholm, C. G., Ravkilde, T., Skouboe, S., Worm, E., Hansen, R., Høyer, M., Keall, P. J. & Poulsen, P. R., nov. 2021, I: *Radiotherapy and Oncology*. 164, s. 175-182 8 s.

Strategies for Motion Robust Proton Therapy With Pencil Beam Scanning for Esophageal Cancer

Møller, D. S., Poulsen, P. R., Hagner, A., Dufour, M., Nordmark, M., Nyeng, T. B., Mortensen, H. R., Lutz, C. M. & Hoffmann, L., okt. 2021, I: *International Journal of Radiation Oncology Biology Physics*. 111, 2, s. 539-548 10 s.

Uniform versus non-uniform dose prescription for proton stereotactic body radiotherapy of liver tumors investigated by extensive motion-including treatment simulations

Worm, E. S., Hansen, R., Hoyer, M., Weber, B., Mortensen, H. & Poulsen, P. R., okt. 2021, I: Physics in Medicine and Biology. 66, 20, 205009.

First experimental evaluation of multi-target multileaf collimator tracking during volumetric modulated arc therapy for locally advanced prostate cancer

Hewson, E. A., Dipuglia, A., Kipritidis, J., Ge, Y., O'Brien, R., Roderick, S., Bell, L., Poulsen, P. R., Eade, T., Booth, J. T., Keall, P. J. & Nguyen, D. T., jul. 2021, I: Radiotherapy and Oncology. 160, s. 212-220

AAPM Task Group 264: The safe clinical implementation of MLC tracking in radiotherapy

Keall, P. J., Sawant, A., Berbeco, R. I., Booth, J. T., Cho, B., Cerviño, L. I., Cirino, E., Dieterich, S., Fast, M. F., Greer, P. B., Munck af Rosenschöld, P., Parikh, P. J., Poulsen, P. R., Santanam, L., Sherouse, G. W., Shi, J. & Stathakis, S., maj 2021, I: Medical Physics. 48, 5, s. e44-e64 21 s.

Intrafraction motion monitoring to determine PTV margins in early stage breast cancer patients receiving neoadjuvant partial breast SABR

Mouawad, M., Lailey, O., Poulsen, P., O'Neil, M., Brackstone, M., Lock, M., Yaremko, B., Shmuilovich, O., Kornecki, A., Ben Nachum, I., Muscedere, G., Lynn, K., Karnas, S., Prato, F. S., Thompson, R. T. & Gaede, S., maj 2021, I: Radiotherapy and Oncology. 158, s. 276-284 9 s.

Dosimetric impact of intrafraction prostate rotation and accuracy of gating, multi-leaf collimator tracking and couch tracking to manage rotation: An end-to-end validation using volumetric film measurements

De Roover, R., Hansen, R., Crijns, W., Muurholm, C. G., Poels, K., Skouboe, S., Haustermans, K., Poulsen, P. R. & Depuydt, T., mar. 2021, I: Radiotherapy and Oncology. 156, s. 10-18 9 s.

Single-fraction prostate stereotactic body radiotherapy: Dose reconstruction with electromagnetic intrafraction motion tracking

Jaccard, M., Ehrbar, S., Miralbell, R., Hagen, T., Koutsouvelis, N., Poulsen, P., Rouzaud, M., Tanadini-Lang, S., Tsoutsou, P., Guckenberger, M. & Zilli, T., mar. 2021, I: Radiotherapy and Oncology. 156, s. 145-152 8 s.

Six degrees of freedom dynamic motion-including dose reconstruction in a commercial treatment planning system

Skouboe, S., De Roover, R., Gammelmark Muurholm, C., Ravkilde, T., Crijns, W., Hansen, R., Depuydt, T. & Poulsen, P. R., mar. 2021, I: Medical Physics. 48, 3, s. 1427-1435 9 s.

MLC tracking for lung SABR is feasible, efficient and delivers high-precision target dose and lower normal tissue dose

Booth, J., Caillet, V., Briggs, A., Hardcastle, N., Angelis, G., Jayamanne, D., Shepherd, M., Podreka, A., Szymura, K., Nguyen, D. T., Poulsen, P., O'Brien, R., Harris, B., Haddad, C., Eade, T. & Keall, P., feb. 2021, I: Radiotherapy and Oncology. 155, s. 131-137 7 s.

Adapting to the motion of multiple independent targets using multileaf collimator tracking for locally advanced prostate cancer: Proof of principle simulation study

Hewson, E. A., Ge, Y., O'Brien, R., Roderick, S., Bell, L., Poulsen, P. R., Eade, T., Booth, J. T., Keall, P. J. & Nguyen, D. T., jan. 2021, I: Medical Physics. 48, 1, s. 114-124 11 s.

Study protocol of the LARK (TROG 17.03) clinical trial: a phase II trial investigating the dosimetric impact of Liver Ablative Radiotherapy using Kilovoltage intrafraction monitoring

Lee, Y. Y. D., Nguyen, D. T., Moodie, T., O'Brien, R., McMaster, A., Hickey, A., Pritchard, N., Poulsen, P., Tabaksblat, E. M., Weber, B., Worm, E., Pryor, D., Chu, J., Hardcastle, N., Booth, J., GebSKI, V., Wang, T. & Keall, P., 2021, I: BMC Cancer. 21, 1, 9 s., 494.

Beam characterization and feasibility study for a small animal irradiation platform at clinical proton therapy facilities

Gerlach, S., Pinto, M., Kurichiyanil, N., Grau, C., Hérault, J., Hillbrand, M., Poulsen, P. R., Safai, S., Schippers, J. M., Schwarz, M., Sndergaard, C. S., Tommasino, F., Verroi, E., Vidal, M., Yohannes, I., Schreiber, J. & Parodi, K., dec. 2020, I: Physics in Medicine and Biology. 65, 24, 18 s., 245045.

Patterns of practice for adaptive and real-time radiation therapy (POP-ART RT) part I: Intra-fraction breathing motion management

Anastasi, G., Bertholet, J., Poulsen, P., Roggen, T., Garibaldi, C., Tilly, N., Booth, J. T., Oelfke, U., Heijmen, B. & Aznar, M. C., dec. 2020, I: Radiotherapy and Oncology. 153, s. 79-87 9 s.

Fully automated detection of heart irradiation in cine MV images acquired during breast cancer radiotherapy

Poulsen, P. R., Thomsen, M. S., Hansen, R., Worm, E., Spejlberg, H. & Offersen, B., nov. 2020, I: Radiotherapy & Oncology. 152, s. 189-195 7 s.

Is multileaf collimator tracking or gating a better intrafraction motion adaptation strategy? An analysis of the TROG 15.01 stereotactic prostate ablative radiotherapy with KIM (SPARK) trial

Hewson, E. A., Nguyen, D. T., O'Brien, R., Poulsen, P. R., Booth, J. T., Greer, P., Eade, T., Kneebone, A., Hruby, G., Moodie, T., Hayden, A. J., Turner, S. L., Hardcastle, N., Siva, S., Tai, K. H., Martin, J. & Keall, P. J., okt. 2020, I: Radiotherapy and Oncology. 151, s. 234-241 8 s.

Dosimetric effect of intrafraction motion and different localization strategies in prostate SBRT

Vanhanen, A., Poulsen, P. & Kapanen, M., jul. 2020, I: Physica Medica. 75, s. 58-68 11 s.

Isotoxic dose prescription level strategies for stereotactic liver radiotherapy: the price of dose uniformity

Hansen, A. T., Poulsen, P. R., Hoyer, M. & Worm, E. S., maj 2020, I: Acta Oncologica. 59, 5, s. 558-564 7 s.

Simulated multileaf collimator tracking for stereotactic liver radiotherapy guided by kilovoltage intrafraction monitoring: Dosimetric gain and target overdose trends

Poulsen, P. R., Murtaza, G., Worm, E. S., Ravkilde, T., O'Brien, R., Grau, C., Høyer, M. & Keall, P., mar. 2020, I: Radiotherapy and Oncology. 144, s. 93-100 8 s.

Real-Time Image Guided Ablative Prostate Cancer Radiation Therapy: Results From the TROG 15.01 SPARK Trial

Keall, P., Nguyen, D. T., O'Brien, R., Hewson, E., Ball, H., Poulsen, P., Booth, J., Greer, P., Hunter, P., Wilton, L., Bromley, R., Kipritidis, J., Eade, T., Kneebone, A., Hruby, G., Moodie, T., Hayden, A., Turner, S., Arumugam, S., Sidhom, M., & 5 flereHardcastle, N., Siva, S., Tai, K. H., Gebiski, V. & Martin, J., 2020, I: International Journal of Radiation Oncology Biology Physics. 107, 3, s. 530-538 9 s.

First clinical real-time motion-including tumor dose reconstruction during radiotherapy delivery

Skouboe, S., Ravkilde, T., Bertholet, J., Hansen, R., Worm, E. S., Muurholm, C. G., Weber, B., Høyer, M. & Poulsen, P. R., okt. 2019, I: Radiotherapy and Oncology. 139, s. 66-71 6 s.

A deep learning framework for automatic detection of arbitrarily shaped fiducial markers in intrafraction fluoroscopic images

Mylonas, A., Keall, P. J., Booth, J. T., Shieh, C. C., Eade, T., Poulsen, P. R. & Nguyen, D. T., 2019, I: Medical Physics. 46, 5, s. 2286-2297 12 s.

See, Think, and Act: Real-Time Adaptive Radiotherapy

Keall, P., Poulsen, P. & Booth, J. T., 2019, I: Seminars in Radiation Oncology. 29, 3, s. 228-235 8 s.

Setup strategies and uncertainties in esophageal radiotherapy based on detailed intra- and interfractional tumor motion mapping

Hoffmann, L., Poulsen, P. R., Ravkilde, T., Bertholet, J., Kruhlikava, I., Helbo, B. L., Schmidt, M. L. & Nordmark, M., 2019, I: Radiotherapy and Oncology. 136, July, s. 161-168 8 s.

Simulated real-time dose reconstruction for moving tumors in stereotactic liver radiotherapy

Skouboe, S., Poulsen, P. R., Muurholm, C. G., Worm, E., Hansen, R., Høyer, M. & Ravkilde, T., 2019, I: Medical Physics. 46, 11, s. 4738-4748 11 s.

Technical Note: In silico and experimental evaluation of two leaf-fitting algorithms for MLC tracking based on exposure error and plan complexity

Caillet, V., O'Brien, R., Moore, D., Poulsen, P., Pommer, T., Colvill, E., Sawant, A., Booth, J. & Keall, P., 2019, I: Medical Physics. 46, 4, s. 1814-1820 7 s.

The accuracy and precision of the KIM motion monitoring system used in the multi-institutional TROG 15.01 Stereotactic Prostate Ablative Radiotherapy with KIM (SPARK) trial

Hewson, E. A., Nguyen, D. T., O'Brien, R., Kim, J. H., Montanaro, T., Moodie, T., Greer, P. B., Hardcastle, N., Eade, T., Kneebone, A., Hruby, G., Hayden, A. J., Turner, S., Siva, S., Tai, K. H., Hunter, P., Sams, J., Poulsen, P. R., Booth, J. T., Martin, J., & Keall, P. J., 2019, I: Medical Physics. 46, 11, s. 4725-4737 13 s.

Validation of fast motion-including dose reconstruction for proton scanning therapy in the liver

Colvill, E., Petersen, J. B. B., Hansen, R., Worm, E., Skouboe, S., Høyer, M. & Poulsen, P. R., 20 nov. 2018, I: Physics in Medicine and Biology. 63, 22, 9 s., 225021.

Review of Real-Time 3-Dimensional Image Guided Radiation Therapy on Standard-Equipped Cancer Radiation Therapy Systems - Are We at the Tipping Point for the Era of Real-Time Radiation Therapy?

Keall, P. J., Nguyen, D. T., O'Brien, R., Zhang, P., Happersett, L., Bertholet, J. & Poulsen, P. R., 15 nov. 2018, I: International Journal of Radiation Oncology, Biology, Physics. 102, 4, s. 922-931 10 s.

Investigating multi-leaf collimator tracking in stereotactic arrhythmic radioablation (STAR) treatments for atrial fibrillation

Lydiard, S., Caillet, V., Ipsen, S., O'Brien, R., Blanck, O., Poulsen, P. R., Booth, J. & Keall, P., 28 sep. 2018, I: Physics in Medicine and Biology. 63, 19, 13 s., 195008.

First online real-time evaluation of motion-induced 4D dose errors during radiotherapy delivery

Ravkilde, T., Skouboe, S., Hansen, R., Worm, E. & Poulsen, P. R., aug. 2018, I: Medical Physics. 45, 8, s. 3893-3903 11 s.

Geometric and dosimetric comparison of four intrafraction motion adaptation strategies for stereotactic liver radiotherapy

Nankali, S., Worm, E. S., Hansen, R., Weber, B., Høyer, M., Zirak, A. & Poulsen, P. R., 16 jul. 2018, I: Physics in Medicine and Biology. 63, 14, 12 s., 145010.

A Prospective Cohort Study of Gated Stereotactic Liver Radiation Therapy Using Continuous Internal Electromagnetic Motion Monitoring

Worm, E. S., Høyer, M., Hansen, R., Larsen, L. P., Weber, B., Grau, C. & Poulsen, P. R., 1 jun. 2018, I: International Journal of Radiation Oncology, Biology, Physics. 101, 2, s. 366-375 10 s.

Electromagnetic-Guided MLC Tracking Radiation Therapy for Prostate Cancer Patients: Prospective Clinical Trial Results

Keall, P. J., Colvill, E., O'Brien, R., Caillet, V., Eade, T., Kneebone, A., Hruby, G., Poulsen, P. R., Zwan, B., Greer, P. B. & Booth, J., 1 jun. 2018, I: International Journal of Radiation Oncology, Biology, Physics. 101, 2, s. 387-395 9 s.

Potential improvements of lung and prostate MLC tracking investigated by treatment simulations

Toftgaard, J., Keall, P. J., O'Brien, R., Ruan, D., Ernst, F., Homma, N., Ichiji, K. & Poulsen, P. R., 1 maj 2018, I: Medical Physics. 45, 5, s. 2218-2229 12 s.

The first clinical implementation of real-time image-guided adaptive radiotherapy using a standard linear accelerator

Keall, P. J., Nguyen, D. T., O'Brien, R., Caillet, V., Hewson, E., Poulsen, P. R., Bromley, R., Bell, L., Eade, T., Kneebone, A., Martin, J. & Booth, J. T., 1 apr. 2018, I: Radiotherapy and Oncology. 127, 1, s. 6-11 6 s.

Automatic online and real-time tumour motion monitoring during stereotactic liver treatments on a conventional linac by combined optical and sparse monoscopic imaging with kilovoltage x-rays (COSMIK)

Bertholet, J., Toftgaard, J., Hansen, R., Worm, E. S., Wan, H., Parikh, P. J., Weber, B., Hoyer, M. & Poulsen, P. R., 7 mar. 2018, I: Physics in Medicine and Biology. 63, 5, 055012.

Systematic intrafraction shifts of mediastinal lymph node targets between setup imaging and radiation treatment delivery in lung cancer patients

Schmidt, M. L., Hoffmann, L., Møller, D. S., Knap, M. M., Rasmussen, T. R., Folkersen, B. H. & Poulsen, P. R., 1 feb. 2018, I: *Radiotherapy & Oncology*. 126, 2, s. 318-324 7 s.

The accuracy and precision of Kilovoltage Intrafraction Monitoring (KIM) six degree-of-freedom prostate motion measurements during patient treatments

Kim, J. H., Nguyen, D. T., Booth, J. T., Huang, C. Y., Fuangrod, T., Poulsen, P., O'Brien, R., Caillet, V., Eade, T., Kneebone, A. & Keall, P., 1 feb. 2018, I: *Radiotherapy and Oncology*. 126, 2, s. 236-243 8 s.

Efficient Interplay Effect Mitigation for Proton Pencil Beam Scanning by Spot-Adapted Layered Repainting Evenly Spread out Over the Full Breathing Cycle

Poulsen, P. R., Eley, J., Langner, U., Simone, C. B. & Langen, K., 1 jan. 2018, I: *International Journal of Radiation Oncology, Biology, Physics*. 100, 1, s. 226-234 9 s.

An interdimensional correlation framework for real-time estimation of six degree of freedom target motion using a single x-ray imager during radiotherapy

Nguyen, D. T., Bertholet, J., Kim, J., O'Brien, R. T., Booth, J. T., Poulsen, P. R. & Keall, P. J., 2018, I: *Physics in Medicine and Biology*. 63, 1, 015010.

Rethink radiotherapy - BIGART 2017

Grau, C., Høyer, M., Poulsen, P. R., Muren, L. P., Korreman, S. S., Tanderup, K., Lindegaard, J. C., Alsner, J. & Overgaard, J., nov. 2017, I: *Acta Oncologica*. 56, 11, s. 1341-1352 12 s.

Simultaneous acquisition of 4D ultrasound and wireless electromagnetic tracking for in-vivo accuracy validation

Ipsen, S., Bruder, R., Worm, E. S., Hansen, R., Poulsen, P. R., Høyer, M. & Schweikard, A., 1 sep. 2017, I: *Current Directions in Biomedical Engineering*. 3, 2, s. 75-78 4 s.

Determining the mechanical properties of a radiochromic silicone-based 3D dosimeter

Kaplan, L. P., Høye, E. M., Balling, P., Muren, L. P., Petersen, J. B. B., Poulsen, P. R., Yates, E. S. & Skyt, P. S., 21 jul. 2017, I: *Physics in Medicine and Biology*. 62, 14, s. 5612-5622 11 s.

Quantifying the accuracy and precision of a novel real-time 6 degree-of-freedom kilovoltage intrafraction monitoring (KIM) target tracking system

Kim, J. H., Nguyen, D. T., Huang, C. Y., Fuangrod, T., Caillet, V., O'Brien, R., Poulsen, P., Booth, J. & Keall, P., 23 jun. 2017, I: *Physics in Medicine and Biology*. 62, 14, s. 5744-5759 16 s.

Cone beam CT-based set-up strategies with and without rotational correction for stereotactic body radiation therapy in the liver

Bertholet, J., Worm, E., Høyer, M. & Poulsen, P., jun. 2017, I: *Acta Oncologica*. 56, 6, s. 860-866 7 s.

Quantification of intrafraction prostate motion and its dosimetric effect on VMAT

Juneja, P., Colvill, E., Kneebone, A., Eade, T., Ng, J. A., Thwaites, D. I., Keall, P., Kaur, R., Poulsen, P. & Booth, J. T., jun. 2017, I: *Australasian Physical & Engineering Sciences in Medicine*. 40, 2, s. 317-324 8 s.

The first clinical implementation of a real-time six degree of freedom target tracking system during radiation therapy based on Kilovoltage Intrafraction Monitoring (KIM)

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