



ViewRay MRIdian Bibliography

FDA-cleared since 2012, ViewRay’s MRIdian® is actively being used to treat cancer patients at leading cancer centers world-wide. This bibliography has been prepared by ViewRay to highlight the capabilities of ViewRay’s innovative MRIdian radiation therapy technology.

In this bibliography we list peer-reviewed publications and conference proceedings that have been published by members of the radiation oncology care teams who have pioneered the use of MR image guidance in Radiation Therapy using ViewRay’s MRIdian technology.

MRIDIAN PEER REVIEWED PUBLICATIONS	2
MRIdian Clinical Studies	2
MRIdian Advanced MRI Studies	4
MRIdian Technology Description and Evaluation	4
Quality Assurance	6
CONFERENCE PROCEEDINGS FEATURING MRIDIAN	7
ASTRO 2017 ACCEPTED PAPERS.....	7
AAPM 2017 ACCEPTED PAPERS.....	10
ESTRO 2017 ACCEPTED CONFERENCE PAPERS	13
ASTRO 2016 ACCEPTED CONFERENCE PAPERS	14
AAPM 2016 ACCEPTED CONFERENCE PAPERS.....	17
CONFERENCE PROCEEDINGS (2005 – 2015).....	23

MRIDIAN PEER REVIEWED PUBLICATIONS

MRIdian Clinical Studies

Acharya, S., Fischer-Valuck, B. W., Kashani, R., Parikh, P., Yang, D., Zhao, T., . Olsen, J. (2016). Online Magnetic Resonance Image Guided Adaptive Radiation Therapy: First Clinical Applications. *International Journal of Radiation Oncology*Biology*Physics*, 94(2), 394-403.

Acharya, S., Fischer-Valuck, B. W., Mazur, T. R., Curcuru, A., Sona, K., Kashani, R., ... & Li, H. H. (2016). Magnetic Resonance Image Guided Radiation Therapy for External Beam Accelerated Partial-Breast Irradiation: Evaluation of Delivered Dose and Intrafractional Cavity Motion. *International Journal of Radiation Oncology*Biology*Physics*, 96(4), 785-792.

Bohoudi, O., Bruynzeel, A.M.E., Senan, S., Cuijpers, J.P., Slotman, B.J., Lagerwaard, F.J., Palacios, M.A (2017). Fast and robust online adaptive planning in stereotactic MR-guided adaptive radiation therapy (SMART) for pancreatic cancer. (2017) *Radiother Oncol.* Article in Press. [http://www.thegreenjournal.com/article/S0167-8140\(17\)32498-2/pdf](http://www.thegreenjournal.com/article/S0167-8140(17)32498-2/pdf)

Chen, A. M., Cao, M., Hsu, S., Lamb, J., Mikaeilian, A., Yang, Y., ... & Steinberg, M. L. (2017). Magnetic Resonance Imaging-Guided Re-irradiation of Recurrent and Second Primary Head and Neck Cancer. *Advances in Radiation Oncology*. 2(2):167-175.

Chen, A. M., Hsu, S., Lamb, J., Yang, Y., Agazaryan, N, Steinberg, M.L., Low, D. A., Cao, M. (2017). MRI-guided radiotherapy for head and neck cancer: initial clinical experience. *Clin. Transl. Oncol.* 10.1007/s12094-017-1704-4. E-pub ahead of print.

Fischer-Valuck, B. W., Henke, L, Green, O., Kashani, R., Acharya, S., Bradley, J.D, Robinson, C. G, Thomas, M., Zoberi, I., Thorstad, W., Gay, H., Huang, J., Roach, M., Rodriguez, V., Santanam, L., Li, L., Li, H., Contreras, J., Mazur, T., Hallahan, D., Olsen, J. R., Parikh, P., Mutic, S., Michalski, J. Two-and-a-half-year clinical experience with the world's first magnetic resonance image guided radiation therapy system. *Advances in Radiation Oncology (2017) 2*, 485-493.

Fischer-Valuck, B. W., Green, O., Mazur, T., Li, H., Chundury, A., Rao, Y.J., Bartlett, N.L., Mutic, S., Huang, J. (2017). Magnetic resonance image guided radiation therapy for primary splenic diffuse large B-cell lymphoma: A teaching case. *Pract. Radiat Oncol.* 7(1):e23-26.

Henke, L., Kashani, R., Yang, D., Zhao, T., Green, O., Olsen, L., ... & Bradley, J. (2016). Simulated Online Adaptive Magnetic Resonance-Guided Stereotactic Body Radiation Therapy for the Treatment of Oligometastatic Disease of the Abdomen and Central Thorax: Characterization of Potential Advantages. *International Journal of Radiation Oncology* Biology* Physics*, 96(5), 1078-1086.

Henke, L., Kashani, R, Robinson, C., Curcuru, A., DeWees, T., Green, O., Michalski, J., Mutic, S., Parikh, P., Olsen, J. (2017). Phase 1 trial of stereotactic MR-guided online adaptive radiation therapy (SMART) for the treatment of oligometastatic or unsectable primary malignancies of the abdomen. *Radiother Oncol.* S0167-8140 (17) 32761-5. *In press.*

Kishan, A. U., Cao, M., Mikaeilian, A. G., Low, D. A., Kupelian, P. A., Steinberg, M. L., & Kamrava, M. (2015). Dosimetric feasibility of magnetic resonance imaging-guided tri-cobalt 60 preoperative intensity modulated radiation therapy for soft tissue sarcomas of the extremity. *Practical Radiation Oncology*, 5(5), 350-356.

Kishan, A. U., Cao, M., Wang, P., Mikaeilian, A. G., Tenn, S., Rwigema, J. M., . . . Lee, P. (2015). Feasibility of magnetic resonance imaging-guided liver stereotactic body radiation therapy: A comparison between modulated tri-cobalt-60 teletherapy and linear accelerator-based intensity modulated radiation therapy. *Practical Radiation Oncology*, 5(5), 330-337.

Kishan A. U., Lee P (2016) MRI-guided radiotherapy: Opening our eyes to the future. *Integr Cancer Sci Therap.* 3: DOI: 10.15761/ICST.1000181.

Lamb, J., Cao, M, Kishan, A., Agazaryan, N., Thomas, D., Shaverdian, N., Yang, Yingli, Ray S., Low, D. Raldow, A., Steinberg M.L, Lee P. (2017) Online Adaptive Radiation Therapy: Implementation of a New Process of Care. *Cureus*, v.9(8): e1618.

Li, H., Chen, H. C., Dolly, S., Li, H., Fischer-Valuck, B., Victoria, J., ... & Gach, M. (2016). An integrated model-driven method for in-treatment upper airway motion tracking using cine MRI in head and neck radiation therapy. *Medical Physics*, 43(8), 4700-4710.

Merna, C., Rwigema, J. M., Cao, M., Wang, P., Kishan, A. U., Michailian, A., . . . Lee, P. (2016). A treatment planning comparison between modulated tri-cobalt-60 teletherapy and linear accelerator-based stereotactic body radiotherapy for central early-stage non-small cell lung cancer. *Medical Dosimetry*.

Raghavan, G., Kishan, A. U., Cao, M., & Chen, A. M. (2016). Anatomic and dosimetric changes in patients with head and neck cancer treated with an integrated MRI-tri-60Co teletherapy device. *The British Journal of Radiology*, 89(1067), 20160624.

Wojcieszynski, A. P., Hill, P. M., Rosenberg, S. A., Hullett, C. R., Labby, Z. E., Paliwal, B., ... & Bassetti, M. F. (2017). Dosimetric Comparison of Real-Time MRI-Guided Tri-Cobalt-60 Versus Linear Accelerator-Based Stereotactic Body Radiation Therapy Lung Cancer Plans. *Technology in Cancer Research & Treatment*, 1533034617691407.

Wojcieszynski, A. P., Rosenberg, S. A., Brower, J. V., Hullett, C. R., Geurts, M. W., Labby, Z. E., . . . Bassetti, M. F. (2015). Gadoxetate for direct tumor therapy and tracking with real-time MRI-guided stereotactic body radiation therapy of the liver. *Radiotherapy and Oncology*.

Thomas, D.H., Santhanam, A., Kishan, A.U., Cao, M., Lamb, J., Min, Y., O'Connell, D., Yang, Y., Agazaryan, N., Lee, P., Low, D. Initial Observations of intra- and inter- fractional motions variation in MR guided lung SBRT. (2017) Br. J Radiol. Epub ahead of print. <https://doi.org/10.1259/bjr.20170522>

MRIdian Advanced MRI Studies

Gao, Yu., Han, F., Zhou, Z., Cao, M., Kaprealian, T., Kamrawa, M., Wang, C., Neylon, J., Low, D.A., Yang, Y., Hu, P. (2017). Distortion-free diffusion MRI using an MRI-guided Tri-Cobalt 60 radiotherapy system: Sequence verification and preliminary clinical experience. *Med. Phys.* 44(10):5357-5366.

Shaverdian, N., Yang, Y., Hu, P., Hart, S., Sheng, K., Lamb, J., ... & Low, D. A. (2017). Feasibility evaluation of diffusion-weighted imaging using an integrated MRI-radiotherapy system for response assessment to neoadjuvant therapy in rectal cancer. *The British Journal of Radiology*, 20160739.

Yang, Y., Cao, M., Sheng, K., Gao, Y., Chen, A., Kamrava, M., ... & Low, D. (2016). Longitudinal diffusion MRI for treatment response assessment: Preliminary experience using an MRI-guided tri-cobalt 60 radiotherapy system. *Medical physics*, 43(3), 1369-1373.

MRIdian Technology Description and Evaluation

Cai, B., Li, H., Yang, D., Rodriguez, V., Curcuru, A., Wang, Y., Wen, J., Kashani, R., Mutic, S., Green, O. (2017) Performance of a multi-leaf collimator system for MR-guided radiation therapy. 44(12):6504-6514. doi: 10.1002/mp.12571.

Feng, Y., Kawrakow, I., Olsen, J., Parikh, P. J., Noel, C., Wooten, O., ... & Hu, Y. (2016). A comparative study of automatic image segmentation algorithms for target tracking in MR-IGRT. *Journal of Applied Clinical Medical Physics*, 17(2).

Ginn, J.S., Agazaryan N., Cao, M., Baharom, U., Low, D. A., Yang, Y., Gao, Y., Hu, P., Lee, P., Lamb, J.M.(2017). Characterization of Spatial Distortion in a 0.35T MRI-guided radiotherapy system. *Phys. Med. Biol.* 62(11):4525-4540.

Hu, Y., Rankine, L., Green, O. L., Kashani, R., Li, H. H., Li, H., . . . Mutic, S. (2015). Characterization of the onboard imaging unit for the first clinical magnetic resonance image guided radiation therapy system. *Medical Physics*, 42(10), 5828-5837.

Lamb, J.M., Ginn, J.S., O'Connell D.P., Agazaryan, N., Cao, M., Thomas, D.H., Yang, Y., Lazea, M., Lee, P., Low, D. (2017). Dosimetric validation of a magnetic resonance image gated radiotherapy system using a motion phantom and radiochromic film. *J. Applied Clin. Physics*, 18(3), 163-169.

- Liu, S., Wu, Y., Wooten, H. O., Green, O., Archer, B., Li, H., & Yang, D. (2016). Methods to model and predict the ViewRay treatment deliveries to aid patient scheduling and treatment planning. *Journal of Applied Clinical Medical Physics*, 17(2).
- Mazur, T. R., Fischer-Valuck, B. W., Wang, Y., Yang, D., Mutic, S., & Li, H. H. (2016). SIFT-based dense pixel tracking on 0.35 T cine-MR images acquired during image-guided radiation therapy with application to gating optimization. *Medical Physics*, 43(1), 279-293.
- Mutic, S., & Dempsey, J. F. (2014). The ViewRay System: Magnetic Resonance–Guided and Controlled Radiotherapy. *Seminars in Radiation Oncology*, 24(3), 196-199.
- Noel, C. E., Parikh, P. J., Spencer, C. R., Green, O. L., Hu, Y., Mutic, S., & Olsen, J. R. (2015). Comparison of onboard low-field magnetic resonance imaging versus onboard computed tomography for anatomy visualization in radiotherapy. *Acta Oncologica*, 54(9), 1474-1482.
- Nguyen, D., Thomas, D., Cao, M., O'Connor, D., Lamb, J., & Sheng, K. (2016). Computerized triplet beam orientation optimization for MRI-guided Co-60 radiotherapy. *Medical Physics*, 43(10), 5667-5675.
- Park, J. M., Park, S. Y., Wu, H. G., & Kim, J. I. (2015). Commissioning Experience of Tri-Cobalt-60 MRI-guided Radiation Therapy System. *Progress in Medical Physics*, 26(4), 193-200.
- Park, J. M., Park, S. Y., Wu, H. G., & Kim, J. I. (2016). Treatment Plan Delivery Accuracy of the ViewRay System in Two-Headed Mode. *Progress in Medical Physics*, 27(3), 169-174.
- Rankine, L.J., Mein, S., Cai, B., Curcuru, A., Juang, T., Miles, D., Mutic, S., Wang, Y., Oldham, M., Li, H.H. (2017). Three-Dimensional Dosimetric Validation of a Magnetic Resonance Guided Intensity Modulated Radiation Therapy System. *Int. J. Radiat. Oncol. Biol. Phys.* 97(5):1095-1104.
- Reynoso, F. J., Curcuru, A., Green, O., Mutic, S., Das, I. J., & Santanam, L. (2016). Technical Note: Magnetic field effects on Gafchromic-film response in MR-IGRT. *Medical Physics*, 43(12), 6552-6556.
- Saenz, D., Paliwal, B., & Bayouth, J. (2014). A dose homogeneity and conformity evaluation between ViewRay and pinnacle-based linear accelerator IMRT treatment plans. *Journal of Medical Physics*, 39(2), 64.
- Saenz, D. L., Yan, Y., Christensen, N., Henzler, M. A., Forrest, L. J., Bayouth, J. E., & Paliwal, B. R. (2015). Characterization of a 0.35T MR system for phantom image quality stability and in vivo assessment of motion quantification. *Journal of Applied Clinical Medical Physics*, 16(6), 30-40.
- Wang, Yuhe, et al. "A GPU-accelerated Monte Carlo dose calculation platform and its application toward validating an MRI-guided radiation therapy beam model." *Medical Physics* 43.7 (2016): 4040-4052.
- Wooten, H. O., Green, O., Yang, M., Dewees, T., Kashani, R., Olsen, J., . . . Mutic, S. (2015). Quality of Intensity Modulated Radiation Therapy Treatment Plans Using a 60Co Magnetic Resonance Image

Guidance Radiation Therapy System. *International Journal of Radiation Oncology*Biography*Physics*, 92(4), 771-778.

Wooten, H.O., Rodriguez, V., Green, O., Kashani, R., Santanam, L., Tanderup, K., Mutic, S., Li, H.H., (2015). Benchmark IMRT evaluation of Co-60 MRI-guided radiation therapy system. *Radiother Oncol.* 114(3):402-405.

Zhang L., Hu, Y., Du. D., Green O.L., Wooten, H.O., Li, H.H., (2015). Three-dimensional polymer gel dosimetry using an onboard 0.35T magnetic resonance imaging scanner: A simulation study. *J. Med. Phys.* 40(3):176-80.

MRIdian Quality Assurance

Altman, M. B., Kavanaugh, J. A., Wooten, H. O., Green, O. L., DeWees, T. A., Gay, H., ... & Mutic, S. (2015). A framework for automated contour quality assurance in radiation therapy including adaptive techniques. *Physics in medicine and biology*, 60(13), 5199.

Li, H. H., Rodriguez, V. L., Green, O. L., Hu, Y., Kashani, R., Wooten, H. O., . . . Mutic, S. (2015). Patient-Specific Quality Assurance for the Delivery of ⁶⁰Co Intensity Modulated Radiation Therapy Subject to a 0.35-T Lateral Magnetic Field. *International Journal of Radiation Oncology*Biography*Physics*, 91(1), 65-72.

Wang, Y., Mazur, T.R., Park, J.C., Yang, D., Mutic, S., Li, H.H. (2017). Development of a fast Monte Carlo dose calculation system for online adaptive radiation therapy quality assurance. *Phys. Med. Biol.* 62 (12), 4970.

Yang, D., Wooten, H.O., Green, O., Li, H.H., Liu, S., Li, X., Rodriguez, V., Mutic, S., Kashani, R. (2016). A software tool to automatically assure and report daily treatment deliveries by a cobalt-60 radiotherapy device. *J. Appl. Clin. Med. Phys.*, 17(3):492-501.

CONFERENCE PROCEEDINGS FEATURING MRIDIAN

ASTRO 2017 ACCEPTED PAPERS

Oral Presentations

Outcomes Utilizing MRI-guided and Real-Time Adaptive Pancreas Stereotactic Body Radiotherapy (SBRT)

[http://www.redjournal.org/article/S0360-3016\(17\)31390-1/abstract](http://www.redjournal.org/article/S0360-3016(17)31390-1/abstract)

Session: GI 3 - Clinical Results of Esophagogastric and Hepatobiliary Cancers

Track: Gastrointestinal Cancer

Presenter: Naomi Jiang, MD

Distortion-Free Diffusion MRI using an MRI-Guided Radiotherapy System: Sequence Validation and Preliminary Clinical Experience

[http://www.redjournal.org/article/S0360-3016\(17\)31343-3/abstract](http://www.redjournal.org/article/S0360-3016(17)31343-3/abstract)

Session: MRI-Guided Radiation Therapy

Track: Radiation and Cancer Physics

Presenter: Yu Gao, MS

MRI-Directed EP-Guided Noninvasive Cardiac Radioablation (ENCORE) for Treatment of Ventricular Tachycardia (VT)

[http://www.redjournal.org/article/S0360-3016\(17\)31342-1/abstract](http://www.redjournal.org/article/S0360-3016(17)31342-1/abstract) Session: MRI-Guided Radiation Therapy

Track: Radiation and Cancer Physics

Presenter: Olga Green

Rapid Access Palliative Radiation Workflow Using MRI-Guided Single-Session Simulation, Online Adaptation, and Treatment

[http://www.redjournal.org/article/S0360-3016\(17\)31347-0/abstract](http://www.redjournal.org/article/S0360-3016(17)31347-0/abstract) Session: MRI-Guided Radiation Therapy

Track: Radiation and Cancer Physics

Presenter: Anna-Maria Alicia De Costa, MD, PhD

Towards Tumor Margins Reduction: Tracking Accuracy Evaluation of an MRI-RT System

[http://www.redjournal.org/article/S0360-3016\(17\)31344-5/pdf](http://www.redjournal.org/article/S0360-3016(17)31344-5/pdf)

Session: MRI-Guided Radiation Therapy

Track: Radiation and Cancer Physics

Presenter: David Cusumano

Stereotactic MR-Guided Adaptive Radiation Therapy (SMART) for Locally Advanced Pancreatic Tumors

[http://www.redjournal.org/article/S0360-3016\(17\)31345-7/fulltext](http://www.redjournal.org/article/S0360-3016(17)31345-7/fulltext)

Session: MRI-Guided Radiation Therapy

Presentation#: 269

Presenter: Anna Bruynzeel, MD, PhD

Role of Daily Plan Adaption during Breath-Hold MR-Guided Stereotactic Ablative Radiotherapy for Adrenal Metastases

[http://www.redjournal.org/article/S0360-3016\(17\)31346-9/abstract](http://www.redjournal.org/article/S0360-3016(17)31346-9/abstract) Session: MRI-Guided Radiation Therapy

Track: Radiation and Cancer Physics

Presentation#: 270

Presenter: Miguel Palacios, PhD

ePoster

Stereotactic MR-Guided Adaptive Radiotherapy (SMART) for Ultra-Central Thorax Lesions: Results of a Phase 1 Trial

[http://www.redjournal.org/article/S0360-3016\(17\)31634-6/abstract](http://www.redjournal.org/article/S0360-3016(17)31634-6/abstract) Session: Lung e-

Track: Lung Cancer

Presentation#: 1152

Presenter: Lauren E Henke, MD

Differential Response Rates of Gastrointestinal Tumors During Real-time MRI-Guided Radiation Therapy: Opportunities for Treatment Individualization

[http://www.redjournal.org/article/S0360-3016\(17\)31535-3/abstract](http://www.redjournal.org/article/S0360-3016(17)31535-3/abstract) Session: Imaging for Response Assessment

Track: Radiation and Cancer Physics

Presentation#: 1055

Presenter: Hima Bindu Musunuru, MBBS, MRCP, FRCR

Accuracy and Temporal Efficiency of Self-Directed Breath Hold During MRI-Guided Radiation Therapy

[http://www.redjournal.org/article/S0360-3016\(17\)31603-6/abstract](http://www.redjournal.org/article/S0360-3016(17)31603-6/abstract) Session: Image Guided and Adaptive Therapy

Track: Radiation and Cancer Physics

Presentation#: 1122

Presenter: John Bayouth

Poster

High Dose Adaptive MRI Guided Radiation Therap Improves Overall Survival of Inoperable Pancreatic Cancer

[http://www.redjournal.org/article/S0360-3016\(17\)32096-5/abstract](http://www.redjournal.org/article/S0360-3016(17)32096-5/abstract)

Presentation#: 2443

Presenter: Souman Rudra, MD

Phase I Study of Stereotactic Body Radiotherapy for Liver Tumors Utilizing MRI-guided Tri-Co Teletherapy System

[http://www.redjournal.org/article/S0360-3016\(17\)32047-3/abstract](http://www.redjournal.org/article/S0360-3016(17)32047-3/abstract) Presentation#: 2395

Presenter: Percy Lee

Dose-Dependent Increase in Solid Tumor Heterogeneity Measured by the Standard Deviation of T2 Relaxation Time Constant

[http://www.redjournal.org/article/S0360-3016\(17\)33420-X/pdf](http://www.redjournal.org/article/S0360-3016(17)33420-X/pdf) Presentation#: 3744

Presenter: Chenyang Wang, MD, PhD

Longitudinal diffusion MRI for early assessment of treatment response in sarcoma patients after pre-operative radiation therapy

[http://www.redjournal.org/article/S0360-3016\(17\)33443-0/abstract](http://www.redjournal.org/article/S0360-3016(17)33443-0/abstract) Presentation#: 3766

Presenter: Yingli Yang, PhD

Evaluation of Single Fraction High-Gradient Partial Breast Irradiation as the Sole Method of Radiation Therapy for Low-Risk Stage 0 and 1 Breast Cancer – Early Results of a Single Institution Prospective Clinical Trial

[http://www.redjournal.org/article/S0360-3016\(17\)31788-1/abstract](http://www.redjournal.org/article/S0360-3016(17)31788-1/abstract) Presentation#: 2143

Presenter: Imran Zoberi, MD

Feasibility of Stereotactic Body Radiation Therapy for Non-Small Cell Lung Cancer Using a Linear Accelerator-Based Magnetic Resonance Image Guided Radiation Therapy System

[http://www.redjournal.org/article/S0360-3016\(17\)33208-X/fulltext](http://www.redjournal.org/article/S0360-3016(17)33208-X/fulltext) Presentation#: 3536

Presenter: Bin Cai, PhD

Novel Use of 0.35T MRI Guidance for High Dose Rate Brachytherapy in the Treatment of Cervical Cancer

[http://www.redjournal.org/article/S0360-3016\(17\)32370-2/pdf](http://www.redjournal.org/article/S0360-3016(17)32370-2/pdf) Presentation#: 2711

Presenter: Huaising Cindy Ko, MD

Stereotactic MR-Guided Adaptive Radiation Therapy (SMART) for Prostate Cancer

[http://www.redjournal.org/article/S0360-3016\(17\)33300-X/abstract](http://www.redjournal.org/article/S0360-3016(17)33300-X/abstract) Presentation#: 3626

Track: Physics

Presenter: Frank Lagerwaard, MD, PhD

Impact of Daily Adaptive Plans for Stereotactic MR-Guided Radiation Therapy (SMART) in Early Stage Lung Cancer

[http://www.redjournal.org/article/S0360-3016\(17\)33389-8/abstract](http://www.redjournal.org/article/S0360-3016(17)33389-8/abstract) Presentation#: 3713

Track: Physics

Presenter: Suresh Senan, PhD, MBBS

Treatment Plan Quality of Tri-Co-60 Intensity Modulated Radiation Therapy Compared to Volumetric Modulated Arc Therapy for Cervical Cancer

[http://www.redjournal.org/article/S0360-3016\(17\)33362-X/fulltext](http://www.redjournal.org/article/S0360-3016(17)33362-X/fulltext) Presentation#: 3687

Track: Physics

Presenter: Jong Min Park, PhD

Dosimetric Characteristics of Double-Focused MLCs in MRI-Guided Radiation Therapy

[http://www.redjournal.org/article/S0360-3016\(17\)33355-2/pdf](http://www.redjournal.org/article/S0360-3016(17)33355-2/pdf) Presentation#: 3680

Track: Physics

Presenter: Hiroyuki Okamoto, PhD

AAPM 2017 ACCEPTED PAPERS

Oral Presentation

MR-Guided Radiotherapy; Radiation Therapy Optimized for MRI

C Glide-Hurst, Presenting Author

TU-FG-FS4-0 (Tuesday, August 1, 2017) 1:45 PM - 3:45 PM Room: Four Seasons 4

Validation Phantom of Dosimetric and Deformable Accuracy for Purposes of Commissioning An MR-Guided Online Adaptive Radiotherapy (ART) Program

K Mittauer*, P Hill , J Bayouth ,

TU-D-FS4-1 (Tuesday, August 1, 2017) 11:00 AM - 12:15 PM Room: Four Seasons 4

Clinical Indications and Applications of MRI Guided Radiotherapy

Bassetti, Michael, Presenting Authors

Session: MR-guided Radiotherapy

TU-FG-FS4-0 (Tuesday - 8/1/2017) 1:45 PM - 3:45 PM Room: Four Seasons 4

Advances in MRI-based motion management for radiation therapy

J Cai, Presenting Author

TH-EF-FS4-0 (Thursday, August 3, 2017) 1:00 PM - 3:00 PM Room: Four Seasons 4

Optimization of Treatment Planning Workflow and Tumor Coverage During Daily Adaptive MR-G-RT of Pancreatic Cancer

S Olberg1*, O Green2 , B Cai, D Yang, V Rodriguez, H Zhang, P Parikh, S Mutic, J Park

SU-K-601-12 (Sunday, July 30, 2017) 4:00 PM - 6:00 PM Room: 601

Performance of a Multi Leaf Collimator System for MR-Guided Radiation Therapy

B Cai*, H Li , D Yang , V Rodriguez , A Curcuru , Y Wang , J Wen , R Kashani , S Mutic , O Green

MO-F-FS1-7 (Monday, July 31, 2017) 4:30 PM - 6:00 PM Room: Four Seasons 1

A Method to Accelerate Monte Carlo Calculation Based QA for MRI Guided Online Adaptive Radiation Therapy

Y Wang*, T Mazur , J Park , D Yang , S Mutic , H Li ,

TU-D-205-1 (Tuesday, August 1, 2017) 11:00 AM - 12:15 PM Room: 205.

Development of a Fast Monte Carlo Dose Calculation System for Online Adaptive Radiation Therapy Quality Assurance

Y Wang*, T Mazur , J Park , D Yang , S Mutic , H Li

TU-D-205-3 (Tuesday, August 1, 2017) 11:00 AM - 12:15 PM Room: 205

Fluence-Weighted Gating Considerations in MR-Guided Radiotherapy

T Mazur*, Y Wang , H Li , S Mutic , O Green

TU-FG-FS2-12 (Tuesday, August 1, 2017) 1:45 PM - 3:45 PM Room: Four Seasons 2.

Optimizing and troubleshooting MRI for radiation therapy - H Gach, Presenting Author MO-DE-702-0 (Monday, July 31, 2017) 1:45 PM - 3:45 PM Room: 702

Shape Context Based Deformable Surface Registration for the Gastrointestinal Tract; Y Lu^{1*}, R Kashani², L Henke¹, I Chen¹, A Curcuru¹, P Parikh¹, (1) Washington University in St. Louis, St. Louis, MO, (2) University of Michigan, Ann Arbor, MI.

MO-F-205-8 (Monday, July 31, 2017) 4:30 PM - 6:00 PM Room: 205

MR Image Processing, Registration & Planning On ViewRay

Yingli Yang, Presenting Author

Session - MR in RT: MR Image Processing, Registration and Planning in Radiation Therapy

MO-F-FS2-3 (Monday - 7/31/2017) 4:30 PM - 6:00 PM Room: Four Seasons 2

Respiratory Motion-Resolved, Self-Gated 4D-MRI Using Rotating Cartesian K-Space (ROCK): Initial Clinical Experience On An MRI-Guided Radiotherapy System

F Han, Z Zhou, D Du, Y Gao, M Cao, N Shaverdian, J Hegde, M Steinberg, P Lee, A Raldow, D Low, K Sheng, Y Yang, P Hu

TU-D-601-5 (Tuesday, August 1, 2017) 11:00 AM - 12:15 PM Room: 601.

A Preliminary Evaluation of Respiratory Motion Modeling at 0.35T for MRI-Guided Radiotherapy

J Ginn, D O'Connell, D Thomas, N Agazaryan, M Cao, Y Yang, D Low, J Lamb

TU-FG-FS2-2 (Tuesday, August 1, 2017) 1:45 PM - 3:45 PM Room: Four Seasons 2.

Accelerated 3D BSSFP Imaging for Treatment Planning On a Low-Field MRI-Guided Radiotherapy System

Y Gao*, Z Zhou, F Han, M Cao, N Shaverdian, J Hegde, B Bista, M Steinberg, P Lee, A Raldow, D Low, P Hu, Y Yang

TU-FG-FS2-3 (Tuesday, August 1, 2017) 1:45 PM - 3:45 PM Room: Four Seasons 2.

Cardiac BSSFP Cine MRI for MR Guided Radiation Therapy of Centrally Located Thoracic Tumors

Y Yang*, M Cao, S Rashid, F Han, Y Gao, J Lamb, P Beron, P Lee, D Low, P Hu

TU-FG-FS2-4 (Tuesday, August 1, 2017) 1:45 PM - 3:45 PM Room: Four Seasons 2.

Dosimetric Impact of Air Cavities in Gastrointestinal Tract for MR-Guided Stereotactic Body Radiotherapy of Pancreas Cancers

J Neylon*, C Wang, P Lee, D Du, Y Yang, J Lamb, K Sheng, N Agazaryan, D Low, M Cao

TU-H-605-9 (Tuesday, August 1, 2017) 4:30 PM - 6:00 PM Room: 605

Dynamic MRI for radiation therapy - K Sheng, Presenting Author

MO-DE-702-0 (Monday, July 31, 2017) 1:45 PM - 3:45 PM Room: 702

MRI-Guided Soft Tissue Alignment Improved Dose Delivery Accuracy for Head And Neck Radiation Therapy, D Wang*, J Neylon, A Santhanam, Y Yang, R Chin, X Qi, UCLA, Los Angeles, CA WE-RAM2-

GePD-J(A)-5 (Wednesday, August 2, 2017) 10:00 AM - 10:30 AM Room: Joint Imaging-Therapy ePoster Lounge - A
Feasibility of Adaptive MR-Guided SBRT of Lung Cancers
N Dogan*, K Padgett , G Simpson , A Ishkanian
TU-D-FS4-7 (Tuesday, August 1, 2017) 11:00 AM - 12:15 PM Room: Four Seasons 4

ePoster

Validation of Plan Verification QA and Workflow Process Through Benchmark Plans for Commissioning of An MR-Guided Online Adapted Radiotherapy (ART) Program
K Mittauer*, P Hill , J Bayouth , University of Wisconsin, Madison, WI
MO-L-GePD-J(A)-1 (Monday, July 31, 2017) 1:15 PM - 1:45 PM Room: Joint Imaging-Therapy ePoster Lounge - A

Low-Field 4D MRI for MRI-Guided Treatment Planning and Dose Delivery
H Gach1*, T Mazur1 , H Wang1 , H Song2 , M Fernandez-Seara3 , V Stenger4 , B Vajko5 , J Dempsey6 , Y Motai7 , S Mutic1 , O Green1
MO-RAM-GePD-JT-3 (Monday, July 31, 2017) 9:30 AM - 10:00 AM Room: Joint Imaging-Therapy ePoster Theater

Gating Performance Considerations in MR-Guided Radiation Therapy
E Omari, T Mazur , H Gach, O Green
MO-L-GePD-J(A)-2 (Monday, July 31, 2017) 1:15 PM - 1:45 PM Room: Joint Imaging-Therapy ePoster Lounge – A

Stability Test for MRI Quality Assurance in Radiation Therapy
B McClain*, A Curcuru , O Green , S Mutic , H Gach
MO-RPM-GePD-IT-1 (Monday, July 31, 2017) 3:45 PM - 4:15 PM Room: Imaging ePoster Theater

A Quick and Inexpensive QA Test Phantom and Procedure for Large Volume Phased Array Receiver Coils
A Curcuru*, B McClain , S Mutic , O Green , H Gach
MO-RPM-GePD-IT-5 (Monday, July 31, 2017) 3:45 PM - 4:15 PM Room: Imaging ePoster Theater

Motion-Compensated Free-Breathing 3D MRI for MR Simulation Using Rotating Stack-Of-Stars Acquisition
Z Zhou*, F Han , Y Gao , M Cao , M Steinberg , P Lee , A Raldow , D Low , Y Yang , P Hu
MO-L-GePD-I-5 (Monday, July 31, 2017) 1:15 PM - 1:45 PM Room: Imaging ePoster Lounge

An Evaluation of Patient Independent Image Distortion in a 0.35T MRI-Guided Radiotherapy System
J Ginn1*, N Agazaryan1 , M Cao1 , U Baharom2 , D Low1 , Y Yang1 , Y Gao1 , P Hu1 , P Lee1 , J Lamb1
U-C1-GePD-JT-1 (Tuesday, August 1, 2017) 9:30 AM - 10:00 AM Room: Joint Imaging-Therapy ePoster Theater

Clinical Assessment of Spatial Uncertainty for a Combined 0.35T MR and EBRT Treatment Machine
J Neylon*, K Sandler , D Du , Y Yang , J Lamb , K Sheng , D Low , M Cao

TU-RPM-GePD-J(B)-6 (Tuesday, August 1, 2017) 3:45 PM - 4:15 PM Room: Joint Imaging-Therapy ePoster Lounge – B

Quantification of the Low Field MRI Image Quality for Deformable Registration

E Boehnke1*, F Han1 , P Hu1 , Y Yang1 , K Sheng2

TU-L-GePD-J(A)-6 (Tuesday, August 1, 2017) 1:15 PM - 1:45 PM Room: Joint Imaging-Therapy ePoster Lounge – A

Radiomics Feature Variability On 0.35T MR-Guided-RT System

K Padgett, I Mihaylov

TU-L-GePD-JT-1 (Tuesday, August 1, 2017) 1:15 PM - 1:45 PM Room: Joint Imaging-Therapy ePoster Theater

ESTRO 2017 ACCEPTED CONFERENCE PAPERS

Oral Presentation

OC-0161: Patient tolerance of stereotactic MR-guided adaptive radiation therapy: an assessment using PRO's

R. Bakker, M. Jeulink, S. Tetar, S. Senan, B. Slotman, F. Lagerwaard, A. Bruynzeel, VU University Medical Center, Radiotherapy, Amsterdam, The Netherlands

Session: Novelties in image guidance

SP-0212: Automatic image segmentation and structure evaluation for on-line adaptive RT

S. Mucic, Washington University School of Medicine, Department of Radiation Oncology, St. Louis, USA

Session: Ultra fast online therapy adaptation (replanning, dose accumulation QA)

OC-0262: Implementation of patient specific QA for daily adaptive MR-guided radiation therapy

M. Palacios, T. Apicella, D. Hoffmans, T. Rosario, M. Admiraal, I. Kawrakow*, J. Cuijpers, VU Medical Center, Radiation Oncology Department, Amsterdam, The Netherlands.

*ViewRay- Inc., Research & Development, Mountain View, USA.

Session: Best of online MRI-guided radiotherapy

SP-0396: Can we perform RCTs evaluating MR guided radiotherapy?

V. Valentini, Università Cattolica del Sacro Cuore - Policlinico A. Gemelli, Gemelli ART, Rome, Italy.

Session: MR guided radiotherapy: the new standard of care in 10 years time

OC-0425 Clinical experience with stereotactic MR-guided adaptive radiation therapy for pancreatic tumors

A. Bruynzeel, F. Lagerwaard, O. Bohoudi, S. Tetar, N. Haasbeek, S. Oei, B. Slotman, M. Meijerink, S. Senan, M. Palacios, VU University Medical Center, Radiotherapy, Amsterdam, The Netherlands

Session: Upper and Lower GI

SP-0494: Using a MRI-guided radiation therapy system for prostate cancer patients

O. Bohoudi, A. Bruynzeel, S. Senan, B. Slotman, M. Palacios, F. Lagerwaard, VUMC, Radiotherapy, Amsterdam, The Netherlands.

Session: Focus on prostate cancer: what is the best of radiotherapy we need to treat our patients with?

OC-0490: A robust and fast planning approach for adaptive MR-guided treatment of pancreatic cancer

O. Bohoudi, A. Bruynzeel, B. Slotman, S. Senan, F. Lagerwaard, M. Palacios, VUMC, Radiotherapy, Amsterdam, The Netherlands.

Session: Inter-fraction motion management

SP-0593: Clinical commissioning of MR guided treatment systems

O. Green, Washington University School of Medicine, Department of Radiation Oncology, St. Louis, USA.

Session: Applications and challenges in dosimeters for MR-Linacs

OC-0231: The suitability of radiochromic film in 0.35T magnetic field CO-60 compared with conventional 6MV

D. Barten, L. van Battum, D. Hoffmans, S. Heukelom
VUMC, Radiotherapie, Amsterdam, The Netherlands

Poster

PV-0322: Rapid Early Response of Gastroesophageal Junction Tumors During Real-time MRI-Guided Radiotherapy

H. Musunuru, S. Rosenberg, J. Bayouth, K. Mitteur, M. Ritter, B. Paliwal, M. Witek, A. Baschnagel, N. Uboha, S. Lubner, N. Loconte, P. Harari, M. Bassetti, University of Wisconsin Hospital and Clinics, Medical Oncology, Madison, USA

Session 7: Upper and lower GI

ASTRO 2016 ACCEPTED CONFERENCE PAPERS

Oral Presentation

Speaker: Clifford Robinson, MD

Session EDU 44 - Practical clinical implementation and use of adaptive radiotherapy

Topic: Practical clinical implementation and use of adaptive radiotherapy

Date: 9/28 (11 AM - 12:30 PM)

Venue: 156 A/B/C

Speaker: Sasa Mutic, PhD

Panel 23 - MRI Guided Radiotherapy: clinical experience, promise, value and pitfall

Date: 9/28 (1:30 PM – 3 PM)

Venue: 205 A/B/C

Speaker: Jeff Michalski, MD

Session - International Session 2 - ASTRO/ESTRO:In Room Adaptive Imaging with a Focus on MRI

Topic: ViewRay Device Experience

Date: 9/25 (1:15 PM – 2:45 PM), Dr. Michalski to speak at 1:35PM

Venue: 206 A/B

Speaker: Minsong Cao, PhD

Session: MRI Guided Radiotherapy: Clinical Experience, Promise, Value and Pitfall

Title: Longitudinal studies based on daily MRI images for IGRT

Date: 9/28 (1:30 PM – 3 PM), Minsong Cao to speak at 2:10 PM

Venue: 205 A/B/C

Speaker: Dan Nguyen

Session: Physics: MR-Guided and Motion Adaptive Therapy

Title: Automated triplet beam orientation optimization for MRI guided Co-60 radiotherapy

Date: 9/26 (4:15 PM- 5:45 PM), Dan Nguyen to speak at 4:15 PM

Venue: 160 A/B/C

Speaker: Xiangrong Qi, PhD

Session: Physics: MR-Guided and Motion Adaptive Therapy

Title: MRI-guided soft tissue alignment for head and neck radiotherapy: Margin reduction and its clinical feasibility

Date: 9/26 (4:15 PM- 5:45 PM), Xiangrong Qi to speak at 4:25 PM

Venue: 160 A/B/C

Speaker: Stephen Rosenberg, MD

Session: Physics - MR-Guided and Motion Adaptive Therapy

Title: Real-time MRI-Guided Radiotherapy for Gastroesophageal Junction/Gastric Cancers

Date: 9/26 (4:15 PM- 5:45 PM)

Venue: 160 A/B/C

Speaker: Andrzej Wojcieszynski, MD

Session: Physics - MR-Guided and Motion Adaptive Therapy

Title: Prospective Results of Real-Time MRI-Guided Lumpectomy Cavity Boost Treatment

Date: 9/26 (4:15 PM – 5:45 PM)

Venue: 160 A/B/C

ePoster

Presenter: Benjamin Fischer-Valuck, MD

Discussion - Hematologic - Fruit for Thought

Topic: Treatment of gastric MALT lymphoma utilizing a magnetic resonance image-guided radiation therapy (MR-IGRT) system: evaluation of interfractional target motion.

Date: 9/25 (1:15 PM – 2:45 PM)

Venue: 052 A

Presenter: Lauren Henke, MD

Discussion - Scientific Session - Physics - Outcome Analysis and Modeling

Topic: Online adaptive magnetic resonance guided (OAMR) - stereotactic body radiation therapy for abdominal malignancies: Prospective dosimetric results from a Phase I trial - NOTE: Lauren won the Physis Award Winner in the Resident ePoster Recognition Award - will receive trophy at Final Program.

Date: 9/28 (11 AM – 12:30 PM)

Venue: 052 B

Presenter: Michael Reilly, PhD

Session: Physics Planning Strategies

Topic: Quantitative and dosimetric evaluation of offline adaptive radiotherapy toward establishing a decision support framework for evaluating the necessity for real-time adaptation

Date: 9/28 (1:30 PM – 3 PM)

Venue: 052 A

Presenter: Benjamin Fischer-Valuck, MD

Title: Magnetic resonance image-guided radiation therapy (MR-IGRT) for the treatment of prostate cancer: Initial clinical experience and patient selection.

Date: 9/25 (10 AM-5 PM), 9/26 (10 AM-5 PM), 9/27 (10 AM-5 PM)

Presenter: Olga Green, PhD

Title: Vector analysis of bladder cancer patient setup utilizing a magnetic resonance image-guided radiation therapy (MR-IGRT) system

Date: 9/25 (10 AM-5 PM), 9/26 (10 PM-5 PM), 9/27(9 AM-5 PM)

Venue: Poster Hall

Presenter: Lauren Henke, MD

Title: Adaptive MR-guided stereotactic body radiotherapy (AMR-SBRT) for oligometastatic or unresectable primary abdominal malignancies: Results of a prospective phase I trial

Date: 9/25 (10 AM-5 PM), 9/26 (10 PM-5 PM), 9/27(9 AM-5 PM)

Venue: Poster Hall

Presenter: Sasa Mucic, PhD

Title: The design and implementation of a novel compact linac based MRI guided radiation therapy (MR-IGRT) system

Date: 9/25 (10 AM-5 PM), 9/26 (10 PM-5 PM), 9/27(9 AM-5 PM)

Venue: Poster Hall

Presenter: Kathryn Mittauer, PhD

Session: Physics – Motion Management

Title: Multi-Institutional Investigation of Relative Pancreatic Tumor to Duodenal Motion in MRI-Guided Radiotherapy for Potential Online Adaptive Radiotherapy (Poster # 1114)

Date: 9/27 (4:45 PM – 6:15 PM)

Poster

Presenter: Mitchell Kamrava, MD

Title: Assessment of Intrafraction Motion of the Vaginal Apex During Postoperative MRI-Guided Radiation Therapy (Poster # 2738)

Date: 9/25 (10 AM – 5PM), 9/26 (10 AM – 5PM), 9/27 (10 AM-5 PM)

Presenter: Daniel Low, PhD

Title: The Physics of a Novel Compact Linear Accelerator–Based Magnetic Resonance Imaging–Guided Radiation Therapy System (Poster # 3555)

Date: 9/25 (10 AM – 5PM), 9/26 (10 AM – 5PM), 9/27 (10 AM-5 PM)

Presenter: Benjamin Fischer-Valuck, MD

Title: Magnetic resonance image-guided radiation therapy (MR-IGRT) for the treatment of prostate cancer: Initial clinical experience and patient selection.

Date: 9/25 (10 AM-5 PM), 9/26 (10 AM-5 PM), 9/27 (10 AM-5 PM)

Venue: Poster Hall

Presenter: Olga Green, PhD

Title: Vector analysis of bladder cancer patient setup utilizing a magnetic resonance image-guided radiation therapy (MR-IGRT) system

Date: 9/25 (10 AM-5 PM), 9/26 (10 PM-5 PM), 9,27(9 AM-5 PM)

Venue: Poster Hall

Presenter: Lauren Henke, MD

Title: Adaptive MR-guided stereotactic body radiotherapy (AMR-SBRT) for oligometastatic or unresectable primary abdominal malignancies: Results of a prospective phase I trial

Date: 9/25 (10 AM-5 PM), 9/26 (10 PM-5 PM), 9,27(9 AM-5 PM)

Venue: Poster Hall

Presenter: Sasa Mutic, PhD

Title: The design and implementation of a novel compact linac based MRI guided radiation therapy (MR-IGRT) system

Date: 9/25 (10 AM-5 PM), 9/26 (10 PM-5 PM), 9/27(9 AM-5 PM)

Venue: Poster Hall

AAPM 2016 ACCEPTED CONFERENCE PAPERS

Oral Presentation

Session: Online Adaptive Radiotherapy - Considerations for Practical Clinical Implementation

3:25 pm: Fast Online Replanning Techniques - X Li

MO-E-BRC-3 (Monday, August 1, 2016) 2:45 PM - 3:45 PM Room: Ballroom C

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=31880>

Implications for Online Adaptive and Non-Adaptive Radiotherapy of Gastic and Gastroesophageal Junction Cancers Using MRI-Guided Radiotherapy

K Mittauer*, M Geurts , R Toya , M Bassetti , P Harari , B Paliwal , J Bayouth
TH-CD-202-11 (Thursday, August 4, 2016) 10:00 AM - 12:00 PM Room: 202
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32020>

Indications for Online Adaptive Radiotherapy Based On Dosimetric Consequences of Interfractional Pancreas-To-Duodenum Motion in MRI-Guided Pancreatic Radiotherapy

K Mittauer1*, S Rosenberg1 , M Geurts1 , M Bassetti1 , I Chen2 , L Henke2 , J Olsen3 , R Kashani2 , A Wojcieszynski1 , P Harari1 , Z Labby1 , P Hill1 , B Paliwal1 , P Parikh2 , J Bayouth1
TU-AB-BRA-11 (Tuesday, August 2, 2016) 7:30 AM - 9:30 AM Room: Ballroom A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32019>

Session: Motion Management in Current Stereotactic Body Radiation Therapy (SBRT) Practice

9:10 AM : MRI-guided tracking and gating - O Green, Presenting Author
MO-B-201-0 (Monday, August 1, 2016) 8:30 AM - 9:30 AM Room: 201
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=31900>

Online Adaptive Radiotherapy - Considerations for Practical Clinical Implementation

2:45 PM : Online Adaptive MR-Guided RT: Workflow and Clinical Implementation - R Kashani,
MO-E-BRC-0 (Monday, August 1, 2016) 2:45 PM - 3:45 PM Room: Ballroom C
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=31880>

Interactive Auto-Segmentation for Bowel in Online Adaptive MRI-Guided Radiation Therapy by Using a Multi-Region Labeling Algorithm

Y Lu*, I Chen , R Kashani , H Wan , N Maughan , D Muccigrosso , P Parikh
SU-C-BRA-1 (Sunday, July 31, 2016) 1:00 PM - 1:55 PM Room: Ballroom
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33579>

Use of Gradient Echo Plural Contrast Imaging (GEPCI) in MR-Guided Radiation Therapy:A Feasibility Study Targeting Brain Treatment

B Cai1*, J Wen2 , Y Rao1 , C Tsien1 , J Huang1 , O Green1 , S Mutic1 , D Yablonskiy2 , H Gach
SU-D-207A-4 (Sunday, July 31, 2016) 2:05 PM - 3:00 PM Room: 207A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33824>

A Novel Doubly-Focused Multileaf Collimator Design for MR-Guided Radiation Therapy

H Li1*, S Mutic1 , D Low2 , O Green1 , G Fought3 , I Kawrakow3 , A Sharma3 , S Shvartsman3 , J Dempsey
TH-AB-BRA-1 (Thursday, August 4, 2016) 7:30 AM - 9:30 AM Room: Ballroom A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32757>

MOSFET-Based Dosimetry in An MR Image-Guided Radiation Therapy System: Comparison with and Without a Static 0.3T Magnetic Field

J Cammin* , A Curcuru , H Li , S Mutic , O Green
TH-AB-BRA-6 (Thursday, August 4, 2016) 7:30 AM - 9:30 AM Room: Ballroom A

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32340>

PENELOPE-Based GPU-Accelerated Dose Calculation System Applied to MRI-Guided Radiation Therapy
Y Wang*, T Mazur , O Green , Y Hu , H Li , V Rodriguez , H Wooten , D Yang , T Zhao , S Mutic , H Li , TH-AB-BRA-7 (Thursday, August 4, 2016) 7:30 AM - 9:30 AM Room: Ballroom A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32440>

3D Remote Dosimetry for MRI-Guided Radiation Therapy: A Hybrid Approach
L Rankine1,2*, S Mein3 , J Adamovics4 , B Cai1 , A Curcuru1 , T Juang3 , D Miles3 , S Mutic1 , Y Wang1 , M Oldham5, H Li1
TH-CD-BRA-2 (Thursday, August 4, 2016) 10:00 AM - 12:00 PM Room: Ballroom A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32901>

Magnetic Field Effects On Gafchromic-Film Response in MR-IGRT
F Reynoso1*, A Curcuru1 , O Green1 , S Mutic1 , I Das2 , L Santanam1 ,
TH-CD-BRA-6 (Thursday, August 4, 2016) 10:00 AM - 12:00 PM Room: Ballroom A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33543>

Implementation and Evaluation of a New 3D Dosimetry Protocol for Validating MRI Guided Radiation Therapy Treatments
S Mein1*, L Rankine2,3 , J Adamovics4 , H Li3 , M Oldham5
TH-CD-BRA-11 (Thursday, August 4, 2016) 10:00 AM - 12:00 PM Room: Ballroom A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32686>

Quantitative Evaluation of Deformable Image Registration in MRI-Guided Adaptive Radiation Therapy
K Mooney1*, T Zhao1 , Y Duan2 , M Zhang3 , O Green1 , S Mutic1 , D Yang1
TU-AB-202-6 (Tuesday, August 2, 2016) 7:30 AM - 9:30 AM Room: 202
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=31631>

Slice by Slice Approach to Quantifying Inter-Fractional Organ Motion
M Cardenas*, T Mazur , H Li , S Mutic , J Bradley , C Tsien , O Green
TU-AB-BRA-8 (Tuesday, August 2, 2016) 7:30 AM - 9:30 AM Room: Ballroom A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33538>

Treatment of Gastric MALT Lymphoma Utilizing a Magnetic Resonance Image-Guided Radiation Therapy (MR-IGRT) System: Evaluation of Gating Feasibility
T Mazur*, H Gach , A Chundury , B Fischer-Valuck , J Huang , M Thomas , O Green
TU-AB-BRA-10 (Tuesday, August 2, 2016) 7:30 AM - 9:30 AM Room: Ballroom A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=34431>

Quality Assurance of An Integrated Magnetic Resonance Image Guided Adaptive Radiotherapy Machine Using Cherenkov Imaging
J Andreozzi1*, K Mooney2 , P Bruza1 , A Curcuru2 , S Saunders1 , D Gladstone3 , B Pogue1 , O Green2
TU-AB-BRA-12 (Tuesday, August 2, 2016) 7:30 AM - 9:30 AM Room: Ballroom A

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33615>

An Effective Homomorphic Unsharp Mask Filtering Method to Correct Intensity Inhomogeneity in Daily Treatment MR Images

D Yang*, H Gach , H Li , S Mutic

TU-H-206-4 (Tuesday, August 2, 2016) 4:30 PM - 6:00 PM Room: 206

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32442>

The Physics of High Power Radiofrequency Isolation in a Novel Compact Linear Accelerator Based MRI Guided Radiation Therapy System

J Lamb1*, D Low1 , S Mutic2 , S Shvartsman3 , T Chmielewski3 , G Fought3 , A Sharma3 , J Dempsey

TU-H-BRA-1 (Tuesday, August 2, 2016) 4:30 PM - 6:00 PM Room: Ballroom A

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33146>

The Physics of Magnetic Field Isolation in a Novel Compact Linear Accelerator Based MRI-Guided Radiation Therapy System

D Low1*, S Mutic2 , S Shvartsman3 , T Chmielewski3 , G Fought3 , A Sharma3 , J Dempsey3

TU-H-BRA-2 (Tuesday, August 2, 2016) 4:30 PM - 6:00 PM Room: Ballroom A

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32688>

Characterization of a Linear Accelerator Operating in a Compact MRI-Guided Radiation Therapy System

O Green1*, S Mutic1 , D Low2 , H Li1 , T Chmielewski3 , G Fought3 , M Hernandez3 , I Kawrakow3 , A Sharma3 , S Shvartsman3 , J Dempsey3 ,

TU-H-BRA-6 (Tuesday, August 2, 2016) 4:30 PM - 6:00 PM Room: Ballroom A

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33594>

The Design and Characteristics of a Novel Compact Linac-Based MRI Guided Radiation Therapy (MR-IGRT) System

S Mutic1*, D Low2 , T Chmielewski3 , G Fought3 , M Hernandez3 , I Kawrakow3 , A Sharma3 , S Shvartsman3 , J Dempsey3

TU-H-BRA-8 (Tuesday, August 2, 2016) 4:30 PM - 6:00 PM Room: Ballroom A

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32900>

Session: MRgRT

5:36 PM : Strategies for adaptive RT - O Green, Presenting Author

WE-H-207B-0 (Wednesday, August 3, 2016) 4:30 PM - 6:00 PM Room: 207B

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=31834>

Distortion-Free 3D Diffusion MRI On An MRI-Guided Radiotherapy System for Longitudinal Tumor Response Assessment

Y Gao*, Y Yang , N Rangwala , M Cao , D Low , P Hu

TU-AB-BRA-7 (Tuesday, August 2, 2016) 7:30 AM - 9:30 AM Room: Ballroom A

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32391>

Rest In Peace – ITV

11:50 AM : Gating Is the Best ITV Killer - D Low, Presenting Author
TU-D-202-0 (Tuesday, August 2, 2016) 11:00 AM - 12:15 PM Room: 202
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=31647>

Assessment of Treatment Response Via Longitudinal Diffusion MRI On A MRI-Guided System: Initial Experience of Quantitative Analysis X Qi*, Y Yang , L Yang , D Low , K Sheng
WE-FG-202-8 (Wednesday, August 3, 2016) 1:45 PM - 3:45 PM Room: 202
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33220>

Longitudinal Diffusion MRI for Treatment Assessment of Sarcoma Patients with Pre-Operative Radiation Therapy
Y Yang*, M Cao , M Kamrava , D Low , K Sheng , J Lamb , N Agazaryan , D Thomas , P Hu
WE-FG-202-11 (Wednesday, August 3, 2016) 1:45 PM - 3:45 PM Room: 202
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32449>

4:52 PM: MR-driven RT Planning - M Cao, Presenting Author
WE-H-207B-0 (Wednesday, August 3, 2016) 4:30 PM - 6:00 PM Room: 207B
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=31834>

Automated Triplet Beam Orientation Optimization for MRI-Guided Co-60 Radiotherapy
D Nguyen*, D Thomas , M Cao , D O'Connor , J Lamb , K Sheng
TH-AB-BRA-2 (Thursday, August 4, 2016) 7:30 AM - 9:30 AM Room: Ballroom A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33176>

Simulation of Errors in Maximal Intensity Projection (MIP)-Based Lung Tumor Internal Target Volumes (ITV) Using Real-Time 2D MRI and Deformable Image Registration Based Lung Tumor Tracking
D Thomas*, A Kishan, A Santhanam, Y Min, D O'Connell, J Lamb, M Cao, N Agazaryan, Y Yang, P Lee, D Low
SU-G-BRA-4 (Sunday, July 31, 2016) 4:00 PM - 6:00 PM Room: Ballroom A
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=34032>

Poster

Spatial Accuracy Evaluation for Real-Time MR Guided Radiation Therapy Using a Novel Large-Field MRI Distortion Phantom
A Antolak*, J Bayouth , R Bosca , E Jackson
SU-G-JeP2-13 (Sunday, July 31, 2016) 4:30 PM - 5:00 PM Room: ePoster Theater
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33119>

MRI-Guided Single-Session Simulation, Online Adaptation, and Treatment
P Hill*, M Geurts, K Mittauer, J Bayouth
SU-F-J-110 (Sunday, July 31, 2016) 3:00 PM - 6:00 PM Room: Exhibit Hall
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33855>

Lower Esophagus Margin Implications Based On Rapid Computational Algorithm for SBRT
M Cardenas*, T Mazur , H Li , S Mutic , J Bradley , C Tsien , O Green

SU-F-J-102 (Sunday, July 31, 2016) 3:00 PM - 6:00 PM Room: Exhibit Hall
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33454>

Experimental Measurement of Optically Stimulated Luminescence Detectors in a MR-IGRT Environment
Toward Assessing Magnetic Field Effects On These Devices and Their Use as An In-Vivo Dosimeter

M Reilly*, A Curcuru , S Yaddanapudi , O Green

SU-F-T-324 (Sunday, July 31, 2016) 3:00 PM - 6:00 PM Room: Exhibit Hall
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=34040>

Validation of Absolute Dose Measurements for MR-IGRT With and Without Magnetic Field

O Green1*, H Li1 , S Goddu1 , S Mutic1 , I Kawrakow

SU-F-T-472 (Sunday, July 31, 2016) 3:00 PM - 6:00 PM Room: Exhibit Hall
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33951>

Patient Localization Using MRI-Guided Soft Tissue for Head-And-Neck Radiotherapy: Indication for Margin
Reduction and Its Feasibility

X Qi*, Y Yang , N Jack , A Santhanam , L Yang , A Chen , D Low

SU-F-J-17 (Sunday, July 31, 2016) 3:00 PM - 6:00 PM Room: Exhibit Hall
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=31635>

Effects of Couch Position Variability On Dosimetric Accuracy with An MRI-Guided Co-60 Radiation Therapy
Machine

P Chow*, D Thomas , N Agazaryan , M Cao , D Low , Y Yang , J Lamb

SU-F-J-125 (Sunday, July 31, 2016) 3:00 PM - 6:00 PM Room: Exhibit Hall
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33290>

Evaluation of a Magnetic Resonance Image Gated Radiotherapy System Using a Motion Phantom and
Radiochromic Film

J Lamb*, J Ginn , D O'Connell , D Thomas , N Agazaryan , M Cao , Y Yang , D Low

SU-F-J-151 (Sunday, July 31, 2016) 3:00 PM - 6:00 PM Room: Exhibit Hall
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33782>

Respiratory Motion Resolved, Self-Gated 4D-MRI Using Rotating Cartesian K-Space Sampling

F Han*, Z Zhou , Y Yang , K Sheng , P Hu

SU-F-J-158 (Sunday, July 31, 2016) 3:00 PM - 6:00 PM Room: Exhibit Hall
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32727>

MRI-Based HDR Prostate Brachytherapy: A Phantom Study for Interstitial Catheter Reconstruction with
0.35T MRI Images

S Park1*, M Kamrava1 , Y Yang

SU-G-JeP2-14 (Sunday, July 31, 2016) 4:30 PM - 5:00 PM Room: ePoster Theater
<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=32689>

Automatic Quantification of MLC Positional Accuracy in An MRI Guided Radiotherapy System

X Li*, M Studenski, F Yang, N Dogan, N Lamichhane, K Padgett

SU-G-JeP2-3 (Sunday, July 31, 2016) 4:30 PM - 5:00 PM Room: ePoster Theater

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=33763>

Skin exposure outside the treatment field during treatment of breast cancer with tri-Co-60 MR-IGRT system

Jong Min Park, Jung-in Kim, So-Yeon Park, Sang-Tae Kim, Kyung Hwan Shin

Poster: SU-F-T-317 (Sunday, July 31, 2016) 3:00 PM - 6:00 PM Room: Exhibit Hall

<http://www.aapm.org/meetings/2016AM/PRAbs.asp?mid=115&aid=31763>

CONFERENCE PROCEEDINGS (2005 – 2015)

2015

Acharya, S., Fischer-Valuck, B., Roach, M., Kashani, R., Ochoa, L., Yang, M., . . . Thomas, M. (2015). Magnetic Resonance (MR) Guided Accelerated Partial-Breast Irradiation (APBI): MRI Soft Tissue Contrast Allows for Decreased Margins and May Improve Cosmesis. *International Journal of Radiation Oncology Biology Physics*, 93(3).

Chen, H., Dolly, S., Victoria, J., Anastasio, M., Ruan, S., Low, D., . . . Li, H. (2015). WE-G-BRD-04: BEST IN PHYSICS (JOINT IMAGING-THERAPY): An Integrated Model-Based Intrafractional Organ Motion Tracking Approach with Dynamic MRI in Head and Neck Radiotherapy. *Medical Physics*, 42(6), 3689-3689.

Chen, H., Dolly, S., Victoria, J., Ruan, S., Low, D., Anastasio, M., . . . Li, H. (2015). SU-C-210-07: Assessment of Intra-/Inter-Fractional Internal Tumor and Organ Movement in Radiotherapy of Head and Neck Cancer Using On-Board Cine MRI. *Medical Physics*, 42(6), 3205-3206.

Chen, H., Dolly, S., Victoria, J., Fischer-Valuck, B., Wooten, H., Kashani, R., . . . Li, H. (2015). An Anatomy Driven Contour Tracking Method to Quantify Pharyngeal Airway Motion Using On-board Cine MRI in Head and Neck Radiation Therapy. *International Journal of Radiation Oncology*Biography*Physics*, 93(3).

Ellefson, S., Culberson, W., Bednarz, B., Dewerd, L., & Bayouth, J. (2015). WE-D-BRA-07: Analysis of ArcCHECK Diode Array Performance for ViewRay Quality Assurance. *Medical Physics*, 42(6), 3668 -3668.

Fischer-Valuck, B., Mazur, T., Acharya, S., Wan, H., Kashani, R., Li, H., . . . Thomas, M. (2015). Accelerated Partial-Breast Irradiation Utilizing an On-board Magnetic Resonance Image Guided Radiation Therapy System: Evaluation of Intrafraction Motion of the Lumpectomy Cavity. *International Journal of Radiation Oncology*Biography*Physics*, 93(3).

Green, O., Goddu, S., Li, H., Mutic, S., & Kawrakow, I. (2015). TH-CD-304-07: Chamber Volume Effect On Absolute Dosimetry in A Magnetic Field. *Medical Physics*, 42(6), 3724-3724.

Green, O., Rankine, L., Cai, B., Santanam, L., Kashani, R., Sharma, A., . . . Mutic, S. (2015). TH-AB-303-12: Commissioning of Magnetic Resonance Imaging-Based Tumor Tracking and Beam Control. *Medical Physics*, 42(6), 3713-3713.

Green, O., Green, N., Michalski, J., & Mutic, S. (2015). MRI-Guided Radiation Therapy for Bladder: Initial Experience. *International Journal of Radiation Oncology*Biology*Physics*, 93(3).

Hu, Y., Rankine, L., Green, O. L., Kashani, R., Li, H. H., Li, H., ... Mutic, S. (2015). Characterization of the Onboard Imaging Unit for the First Clinical Magnetic Resonance Image-Guided Radiation Therapy System. *Medical Physics*, 42(10), 5828-5837.

Lamb, J., Agazaryan, N., Cao, M., Low, D., Thomas, D., & Yang, Y. (2015). SU-E-J-198: Out-Of-Field Dose and Surface Dose Measurements of MRI-Guided Cobalt-60 Radiotherapy. *Medical Physics*, 42(6), 3310-3311.

Lamb, J., Kamrava, M., Agazaryan, N., Cao, M., Low, D., Thomas, D., & Yang, Y. (2015). SU-E-J-206: Adaptive Radiotherapy for Gynecological Malignancies with MRIGuided Cobalt-60 Radiotherapy *Medical Physics*, 42(6), 3312-3313.

Li, H., Chen, H., Dolly, S., Victoria, J., Fischer-Valuck, B., Anastasio, M., . . . Thorstad, W. (2015). In-Treatment Pharyngeal Airway Motion Quantitative Analysis With Dynamic MRI for Head and Neck Radiation Therapy. *International Journal of Radiation Oncology*Biology*Physics*, 93(3).

Liu, S., Wooten, H., Wu, Y., & Yang, D. (2015). SU-E-T-629: Prediction of the ViewRay Radiotherapy Treatment Time for Clinical Logistics. *Medical Physics*, 42(6), 3481-3481.

Mazur, T., Wang, Y., Fischer-Valuck, B., Acharya, S., Kashani, R., Li, H., . . . Li, H. (2015). SU-F-303-11: Implementation and Applications of Rapid, SIFT-Based Cine MR Image Binning and Region Tracking. *Medical Physics*, 42(6), 3540-3540.

Mcclain, B., Olsen, J., Green, O., Yang, D., Santanam, L., Olsen, L., . . . Kashani, R. (2015). WE-AB-BRA-09: Sensitivity of Plan Re-Optimization to Errors in Deformable Image Registration in Online Adaptive Image-Guided Radiation Therapy. *Medical Physics*, 42(6), 3654-3655.

O'Connell, D. P., Thomas, D. H., Dou, T. H., Lamb, J. M., Yang, L., & Low, D. A. (2015). SU-E-J-234: Application of a Breathing Motion Model to ViewRay Cine MR Images. *Medical Physics*, 42(6), 3319-3319.

Paliwal, B., Asprey, W., Yan, Y., Saenz, D., & Bayouth, J. (2015). SU-E-J-230: Evaluation of ViewRay 0.35 T MRI Normal Structure Segmentation. *Medical Physics*, 42(6), 3318-3319.

Rosenberg, S., Labby, Z., Wojcieszynski, A., Hullett, C., Geurts, M., Bayliss, R., . . . Bassetti, M. (2015). First Reported Real-Time MRI Guided Liver Stereotactic Body Radiation Therapy Treatments: Experience and Clinical Implications. *International Journal of Radiation Oncology*Biology*Physics*, 93(3).

Saenz, D., Yan, Y., Ellefson, S., Asprey, W., Bayouth, J., & Paliwal, B. (2015). Comparison of ViewRay 0.35 T MRI and Conventional CT Scans for Normal Structure Segmentation. *International Journal of Radiation Oncology*Biology*Physics*, 93(3).

Thomas, D., O'Connell, D., Lamb, J., Cao, M., Yang, Y., Agazaryan, N., . . . Low, D. (2015). SU-F-303-17: Real Time Dose Calculation of MRI Guided Co-60 Radiotherapy Treatments On Free Breathing Patients, Using a Motion Model and Fast Monte Carlo Dose Calculation. *Medical Physics*, 42(6), 3541-3541.

Wan, H., Pless, R., & Parikh, P. (2015). WE-G-BRD-03: Real-Time Tumor Motion Tracking in Low Field Cine-MR Images. *Medical Physics*, 42(6), 3688-3689.

Wang, Y., Mazur, T., Green, O., Hu, Y., Wooten, H., Yang, D., . . . Li, H. (2015). SU-E-T-36: A GPU-Accelerated Monte-Carlo Dose Calculation Platform and Its Application Toward Validating a ViewRay Beam Model. *Medical Physics*, 42(6), 3339- 3339.

Wojcieszynski, A., Hill, P., Rosenberg, S., Hullett, C., Labby, Z., Paliwal, B., . . . Baschnagel, A. (2015). A Dosimetric Comparison of MRI-Guided Cobalt-60 to Linear Accelerator--Based Stereotactic Ablative Radiation Lung Cancer Plans. *International Journal of Radiation Oncology*Biography*Physics*, 93(3).

Yan, Y., Saenz, D., Bayouth, J., & Paliwal, B. (2015). SU-E-J-211: Assessing the Consistency of the ViewRay 0.35 T MRI System. *Medical Physics*, 42(6), 3314-3314.

Yang, Y., Low, D., Cao, M., Sheng, K., Lamb, J., Thomas, D., . . . Hu, P. (2015). TH-CD-204-06: Diffusion MRI for Treatment Response Assessment of MRI-Guided Tri-Cobalt 60 Radiotherapy. *Medical Physics*, 42(6), 3733-3733.

2014

Feng, Y., Kawrakow, I., Olsen, J., Parikh, P., Noel, C., Wooten, H., . . . Hu, Y. (2014). SU-E-J-142: Performance Study of Automatic Image-Segmentation Algorithms in Motion Tracking Via MR-IGRT. *Medical Physics*, 41(6), 188-189.

Green, O., Kashani, R., Santanam, L., Hand, T., Steele, C., Victoria, J., . . . Mutic, S. (2014). SU-E-J-181: Magnetic Resonance Image-Guided Radiation Therapy Workflow: Initial Clinical Experience. *Medical Physics*, 41(6), 198-198.

Green, O., Hu, Y., Noel, C., Olsen, J., & Mutic, S. (2012). Observation of Radiation-induced Tissue Signal Intensity Changes With the First Commercial MRI-guided IMRT System. *International Journal of Radiation Oncology*Biography*Physics*, 84(3).

Hu, Y., Mutic, S., Du, D., Green, O., Zeng, Q., Nana, R., . . . Dempsey, J. (2014). WE-G-17A-01: Improving Tracking Image Spatial Resolution for Onboard MR Image Guided Radiation Therapy Using the WHISKEE Technique. *Medical Physics*, 41(6), 524-524.

Knutson, N., Li, H., Rodriguez, V., Hu, Y., Kashani, R., Wooten, H., . . . Green, O. (2014). SU-E-T-494: A MOSFET-Based In-Vivo Dosimetry System for MR Image-Guided Radiation Therapy (MR-IGRT). *Medical Physics*, 41(6), 340-340.

Li, H., Rodriguez, V., Green, O., Hu, Y., Kashani, R., Wooten, H., . . . Mutic, S. (2014). TH-C-12A-01: Develop a Patient- Specific QA Program for Radiation Therapy with On-Board MRI. *Medical Physics*, 41(6), 560-560.

Robinson, C., Bradley, J., Victoria, J., Dempsey, J., Mutic, S., & Kashani, R. (2014). Comparison of Spinal Cord Motion Versus Vertebral Body Motion During Magnetic Resonance Imaging–Guided Radiation Therapy (MR-IGRT). *International Journal of Radiation Oncology*Biography*Physics*, 90(1).

Rodriguez, V., Green, O., Wooten, H., Kashani, R., Mutic, S., Dempsey, J., & Li, H. (2014). SU-E-T-136: Dosimetric Robustness of a Magnetic Resonance Imaging Guided Radiation Therapy (MR-IGRT) System. *Medical Physics*, 41(6), 253-254.

Rodriguez, V., Li, H., Yang, D., Kashani, R., Wooten, H., Dempsey, J., . . . Green, O. (2014). SU-E-T-442: Sensitivity of Quality Assurance Tools to Delivery Errors On a Magnetic Resonance-Imaging Guided Radiation Therapy (MR-IGRT) System. *Medical Physics*, 41(6), 327-328.

Saenz, D., Bayouth, J., Christensen, N., Henzler, M., Forrest, L., & Paliwal, B. (2014). SU-E-J-130: ViewRay Real-Time Imaging of a Motion Phantom and In-Vivo Canine Patients. *Medical Physics*, 41(6), 185-186.

Wooten, H., Green, O., Li, H., Rodriguez, V., & Mutic, S. (2014). WE-G-17A-04: Measurements of the Electron-Return- Effect in a Commercial Magnetic Resonance Image Guided Radiation Therapy (MR-IGRT) System. *Medical Physics*, 41(6), 524-525.

Zhang, L., Du, D., Green, O., Rodriguez, V., Wooten, H., Xiao, Z., . . . Li, H. (2014). TU-C-BRE-04: 3D Gel Dosimetry Using ViewRay On-Board MR Scanner: A Feasibility Study. *Physics*, 41(6), 455-455.

2013

Green, O., Wooten, H., Hu, Y., Santanam, L., Li, H. & Mutic,S. (2013). SU-ET-139: Evaluation of Surface, Peripheral, and Buildup Dose in MR- IGRT. *Medical Physics*, 40(6), 236.

Hu, Y., Green, O., Feng, Y., Du, D., Wooten, O., Li, H. Santanam, L., Parikh, P., Olsen, J., & Mutic, S. (2013). Image Performance Characterization of an MRI-Guided Radiation Therapy System. *International Journal of Radiation Oncology*Biography*Physics*, 87 , S13.

Jaffray, D., Mutic, S., Fallone, B., & Raaymakers, B. (2013). MO-A-WAB- 01: MRI- Guided Radiation Therapy. *Medical Physics*, 40(6), 390.

2012

Goddu, S., Green, O., & Mutic, S. (2012). WE-G-BRB-08: TG-51 Calibration of First Commercial MRI-Guided IMRT System in the Presence of 0.35 Tesla Magnetic Field. *Medical Physics*, 39(6), 3968.

Green, O., Hu, Y., Noel, C., Olsen, J. & Mutic, S. (2012). Observation of Radiation-Induced Tissue Signal Intensity Changes With the First Commercial MRI-guided IMRT System. *International Journal of Radiation Oncology*Biography*Physics*, 84, S758-759.

Green, O., Hu, Y., Zeng, Q., Nana, R., Patrick, J., Shvartsman, S., Eagan, T., Mutic, S., & Dempsey, J. (2012). Realizing the QUANTEC Vision by Applying Weighted Hybrid Iterative Spiral K-Space Encoding Estimation (WHISKEE) to Actual Dose (DA) Accumulation via Image Deformation (DAAVID). *International Journal of Radiation Oncology* Biology* Physics*, 84, S758-759.

Green, O., Goddu, S., & Mutic, S. (2012). SU-E-T-352 Commissioning and Quality Assurance of the First Commercial Hybrid MRI-IMRT System. *Medical Physics*, 39(6), 3785.

Hsi, W., Vargas, C., Saito, A., Dempsey, J., Keole, S., Lin, L., et al. (2008). Automatic Deformable Registration On Prostate Cine-MRI Images For Studying Intra-fraction Motion In Supine And Prone Position With And Without Rectal Balloon. *International Journal of Radiation Oncology* Biology* Physics*, 72(1), S557-S557.

Hu, Y., Green, O., Parikh, P., Olsen, J., & Mutic, S. (2012). TH-E-BRA-07: Initial Experience with the ViewRay System-Quality Assurance Testing of The Imaging Component. *Medical Physics*, 39(6), 4013.

Noel, C., Olsen, J., Green, O., Hu, Y. & Parikh, P. (2012). TU-G-217A- 09: Feasibility of Bowel Tracking Using Onboard Cine MRI for Gated Radiotherapy. *Medical Physics*, 39(6), 3928.

Parikh, P., Noel, C., Spencer, C., Green, O., Hu, Y., Mutic, S., & Olsen, J. (2012). Comparison of Onboard Low-field MRI Versus CBCT/MVCT for Anatomy Identification in Radiation Therapy. *International Journal of Radiation Oncology* Biology* Physics*, 84, S133.

2007

Yanez, R., & Dempsey, J. F. (2007). WE-C-AUD-04: Monte Carlo Simulations Of Air Cavities In Phantoms Submerged In Magnetic Fields.

2006

Dempsey, J., Romeijn, H., Palta, J., Mutic, S., Low, D., Li, J., et al. (2006). WE-E- ValA-06: A Real-Time MRI Guided External Beam Radiotherapy Delivery System. *Medical Physics*, 33(6), 2254.

Fox, C., Aleman, D., Romeijn, H., Li, J., & Dempsey, J. (2006). 2825 Gamma-Ray Intensity Modulated Radiation Therapy. *International Journal of Radiation Oncology* Biology* Physics*, 66(3), S673-S674.

Saito, A., Li, J., Liu, C., Olivier, K., & Dempsey, J. (2006). 2831 Accurate Heterogeneous Dose Calculation For Lung Cancer Patients Without High Resolution CT Densities. *International Journal of Radiation Oncology Biology Physics*, 66(3), S677-S678.

2005

Dempsey, J., Romeijn, H., Palta, J., Mutic, S., Low, D., Li, J., et al. (2005). A Device For Realtime 3D Image-Guided IMRT. *International Journal of Radiation Oncology* Biology* Physics*, 63, S202-S202.