

Medical Physics - 2012 Student publications, abstracts, and presentations

Peer-reviewed publications: 6

1. **Panda A**, Jones S, Raghavan RS, Sandrasegaran K, Bansal N, Dydak U (2012). Phosphorus Liver MRSI at 3T Using a Novel Dual Tuned 8-Channel 31P/1H Coil. *Magnetic Resonance in Medicine* 68:1346-56 PMID 22287206
2. Choi Mi-Ran, Bardhan R, Stanton-Maxey KJ, Badve S, Nakshatri H, Stantz KM, **Cao N**, Halas NJ, Clare SE. Delivery of nanoparticles to brain metastases of breast cancer using a cellular Trojan horse, *Cancer Nanotechnology*, **3**: 47-54, 2012, 10.1007/s12645-012-0029-9
3. Chee-Wai Cheng, Li Zhao, Mark Wolanski, Qingya Zhao, Josuha James, Kate Dikeman, Michael Mills, Mei Li, **Shiv P. Srivastava**, Xing Qi Lu, Indra J. Das, Comparison of tissue characterization curves for different CT scanners: implication in proton therapy treatment planning, *TCR*, 1(4), 236-246, 2012.
4. **Srivastava SP**, Das IJ, Effect of processor temperature on film dosimetry in radiation therapy, *Med Dosim.* 37(2), 138-139, 2012.
5. **Junqing Wu**, Dan Ruan, Byungchul Cho, Amit Sawant, Jay Petersen, Laurence J. Newell, Herbert Cattell, and Paul J. Keall. Electromagnetic Detection and Real-time DMLC Adaptation to Target Rotation During Radiotherapy, *International Journal of Radiation Oncology, Biology and Physics*, **82**(3): e545-e553, 2012.
6. H Wu, **Zhao Q**, Cao M, Cheng C-W, Das I. A line profile based fusion method with double partial CT imaging of oversized patients with small bore CT scanners used in radiation treatment. *Journal of Applied Clinical Medical Physics* **13**(2):20-31, 2012.

Published abstracts and presentations: 30

1. **Dharmadhikari S**, Dydak U, Dziedzic M, Romito L, Byrd K. Quantification of GABA and other metabolite levels in brain regions implicated in PTSD, temporomandibular disorder, and traumatic brain injury. Poster presentation at *Society for Neuroscience, New Orleans, USA, Oct 13-17 2012*.
2. **Brander WS**, **Jones SR**, Conley TB, Sayer D, Zhou J, Fisher S, Dydak U, Campbell WW. Changes in Estimated of Muscle Lipid Contamination Following Transition from Standing to Supine. *Ohio River Valley Chapter of AAPM meeting, Indianapolis, IN, Oct 12, 2013*.
3. **Jones S**, **Panda A**, Cardenas Hm Fletcher J, Hutchins G, Dydak U. Spatially Resolved Evaluation of Radiation Induced Metabolic Response in Normal and Malignant Liver with 3D 31P MRSI. *Purdue University Center for Cancer Research (PUCRR) Scientific Retreat, West Lafayette, IN, USA, Sept 13, 2013*.
4. **Clevenger T**, **Panda A**, **Jones S**, Dydak U. Accelerated 31P Liver Magnetic Resonance Spectroscopic Imaging. *Purdue University Center for Cancer Research (PUCRR) Scientific Retreat, West Lafayette, IN, USA, Sept 13, 2013*.

5. **Panda A**, Heberlein K, Neji R, Dydak U. Implementing GRAPPA for fast 2D MRSI on Siemens MAGNETOM Trio. Oral presentation at *American IDEA User Group Meeting, Utah Center for Advanced Imaging Research, Salt Lake City, UT, June 4-6 2012*.
6. **Panda A, Jones S, Raghavan RS**, Heberlein K, Neji R, Dydak U. Accelerated In-vivo Liver 31P MRSI using GRAPPA. *ISMRM 20th Scientific Meeting & Exhibition, Melbourne, Australia, May 5-11 2012. Proc. Intl. Soc. Mag. Reson. Med. 20:4422. (ISMRM educational travel award to Mr. Panda)*
7. **Jones S, Panda A**, Cardenes H, Fletcher J, Hutchins G, and Dydak U. A Spatially Resolved Evaluation of Radiation Induced Metabolic Response in Normal and Malignant Liver with 3D 31P MRSI, *ISMRM 20th Scientific Meeting & Exhibition, Melbourne, Australia, May 5-11 2012. Proc. Intl. Soc. Mag. Reson. Med. 20: 1536*.
8. **Long Z, Xu J**, McGlothan JL, Edden R, Barker P, Guilarte TR, Dydak U. Baseline Comparison of Brain Metabolites between Rhesus Monkeys and Humans by MRS. *ISMRM 20th Scientific Meeting & Exhibition, Melbourne, Australia, May 5-11 2012. Proc. Intl. Soc. Mag. Reson. Med. 20:4435*.
9. **Panda A, Jones S**, Dydak U. Implementation of GRAPPA Algorithm for Fast 2D 31P Liver MRSI. Oral presentation at *37th Annual Campbell-Klatte Lecture Series, Indianapolis, IN, April 17 2012. (Best presentation award 1st Place to Mr. Panda)*
10. **Jones S, Panda A**, Dydak U. A Spatially Resolved Evaluation of Radiation Induced Metabolic Response in Normal and Malignant Liver with 3D 31P MRSI. Oral presentation at *37th Annual Campbell-Klatte Lecture Series, Indianapolis, IN, April 17 2012*.
11. **Dharmadhikari S, Xu J, Epur A**, Zheng W, Dydak U. Increased cortical GABA levels in Manganese-treated rats. *SOT Annual Meeting, San Francisco, USA, March 11-15 2012*.
12. **Long Z, Xu J**, McGlothan JL, Edden R, Barker P, Guilarte TR, Dydak U. Baseline Comparison of Brain Metabolites between Rhesus Monkeys and Humans by MRS. Accepted for presentation at *SOT Annual Meeting, San Francisco, USA, March 11-15 2012*.
13. **Long Z**, Jiang YM, Li XR, Xu J, Long LL, Zheng W, Murdoch J, Dydak U. Comparison of Brain Metabolite Changes in Manganese-exposed Welders and Smelters. Accepted for presentation at *SOT Annual Meeting, San Francisco, USA, March 11-15 2012. (2nd place of Metal Speciality Section Student Award)*
14. **Ai H**, Liang Y, Anthony CB, Wetherill L, Ward R, Zhou FC and CIFASD Consortium. Postnatal brain dysmorphology and cranial bone density deficiency induced by prenatal alcohol exposure in C57BL/6J mouse model. Poster presented at *35th Annual Research Society on Alcoholism (RSA) Scientific Meeting, San Francisco, 2012*.
15. Shen L, **Ai H**, Liang Y, Anthony CB, Goodlett C, Ward R, Zhou FC and CIFASD Consortium. Effect of fetal alcohol exposure on craniofacial bone development in C57BL/6J mouse models: a dose and timing study. Poster presented at *35th Annual RSA Scientific Meeting, San Francisco, 2012*.
16. **Ning Cao**, Minsong Cao, Helen J. Chin-Sinex, Marc S. Mendonca, Song-Chu Ko, Keith Stantz, Identifying Prognostic Factors in Combined Anti-angiogenesis and Radiotherapy for Pancreatic Cancer, *Molecular Imaging and Biology*, **14**(2), Supplemental, 2012.
17. **Ning Cao**, Seung Hyun Song, Michael Shaffer, Minsong Cao, Teimour Maleki, Helen J. Chin-Sinex, Marc S. Mendonca, Babak Ziaie, Song-Chu Ko, Keith M.

- Stantz. Re-oxygenation of Pancreatic Cancer in Radiotherapy: Integrating Photoacoustic Imaging and IMOG Medical Device, *Molecular Imaging and Biology*, **14**(2), Supplemental, 2012
18. **N Cao**, S Song, M Cao, M Shaffer, T Maleki, B Ziaie, S Ko, K Stantz. In Vivo Imaging to Monitor the Effects of Anti-Angiogenesis and Re-Oxygenation on Pancreatic Tumor Radiosensitivity, *Med Phys* **39**:3936, 2012. (Travel Award)
 19. **Cao N**, Song S, Shaffer MR, Maleki T, Cao M, Kao C, Stantz KM, Ziaie B, Ko S-C. Monitoring the Radiosensitizing Effects of Implantable Micro-oxygen Generator in Pancreatic Cancer Xenografts, *IJROBP*, **84**(3), 2012 (*SIT Award*)
 20. Cao M, **Cao N**, Cardenes H, Fakiris A, Desrosiers C, Das I. Clinical Evaluation of Positioning Accuracy of Two Immobilization Devices for Stereotactic Body Radiotherapy Using Cone Beam CT, AAPM Annual Meeting, 2012
 21. Zhao L, Coutinho L, **Cao N**, Cheng C, Das I. A Mathematical Model of the Optical Density Growth of EBT2 Film after Proton Irradiation. AAPM Annual Meeting, 2012
 22. **Cao Ning**, Song Seung Hyun, Cao Minsong, Shaffer Michael, Maleki Teimour, Ziaie Babak, Ko Song-Chu. Monitoring the Effects of Anti-angiogenesis and Re-oxygenation on Radiotherapy in Pancreatic Cancer Xenografts, Ohio River Valley Chapter of the AAPM March 2012 (*1st Place, Best Presentation in the Ohio River Valley Chapter of the AAPM*)
 23. **Srivastava S**, Nohadani O, Medawar C, Cheng C, Das I, Inter Planner Dosimetric Variations in IMRT, *Med Phys* **39**(6), 3845, 2012.
 24. Nohadani O, C Medawar, A Ray, **Srivastava SP**, Das IJ, Metrics for Comparing Dose Volume Histogram in IMRT planning, *Med Phys* **39**(6), 3851, 2012.
 25. Nohadani O, **Srivastava SP**, Medawar C, Das IJ, Unbiased Metrics of dosimetric variation in IMRT planning, Presented in ASTRO annual meeting, poster#3435, 2012.
 26. **Wu JJ**, Fahimian BB, Wu HH, Xing LL. Dual Gated Volumetric Modulated Arc Therapy. *Med Phys* **39**(6):3909, 2012. (2012 AAPM Annual Meeting)
 27. **J Wu**, Huanmei Wu, Dose Verification for Linac-Based SRS Commissioning and Patient Specific QA. 2012 AAPM Annual Meeting, P 3799, *Med Phys*.
 28. **J Wu**, Implementation of Cyberknife End-to-End test on Linac Based Frameless SRS program, 2012 AAPM ORVC Spring Symposium.
 29. **Zhao Q**, Wu H, Das I, Quality Assurance of Compensator for Proton Therapy, in the proceeding of the International Federation for medical and Biological Engineering, 2012. (presentation for the world Congress on medical Physics and Biomedical Engineering)
 30. Wu H, **Zhao Q**, Das I, Real-time Treatment Failure Detection for Moving Tumor with Image Guidance, AAPM Annual Meeting, 2012.