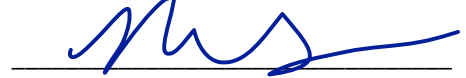


Date of Preparation: March 20, 2014



**MICHAEL G. SNYDER**

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**EDUCATION**

M.S. : Wayne State University School of Medicine, Radiological Physics 2009–2010  
Ph.D. : University of Texas at Austin, Physics 1999–2006  
B.S. : University of Michigan, Ann Arbor, Physics, Astrophysics and Astronomy 1994–1998

**POSTGRADUATE TRAINING**

- Medical Physics Resident, Karmanos Cancer Institute, Detroit MI 2009–2010
- Clinical Intern, Karmanos Cancer Institute, Detroit MI 2009
- Postdoctoral Fellow, Center for Complex Quantum Systems, University of Texas at Austin. 2006

**FACULTY APPOINTMENTS**

- Assistant Professor, Department of Radiation Oncology, Wayne State University School of Medicine, Detroit, MI 2010–Present

**MAJOR PROFESSIONAL SOCIETIES**

- American Society of Radiotherapy and Oncology 2012–Present
- Society of Directors of Academic Medical Physics Programs 2011–Present
- Radiological Society of North America 2011–2012
- American Association of Physicists in Medicine 2008–Present
- American Physical Society 2000–2008

**SERVICE**

**Wayne State University**

- Judge, Graduate School Research Award 2013
- Member, Multidisciplinary Research Group Nano Incubator Program 2012–Present

**Wayne State University School of Medicine**

- Member, Bone Metastasis Group 2012–Present

**Wayne State University – Department of Radiation Oncology**

- Medical Resident Interview and Evaluation 2012–2013
- Prospective Attending Physician Interview 2011–2013

**Wayne State University – Department of Radiation Oncology, Division of Physics**

- Co-Chair, Radiation Physics Student Research Award Committee 2012–Present
- Member, Medical Physics Alumni Lifetime Achievement Award Committee 2012–Present
- Member, Graduate Admissions Committee 2010–Present
- Member, Student Advisory Committee 2010–Present
- Member, Curriculum and Evaluations Committee 2010–Present

### **Karmanos Cancer Institute**

- Member, Molecular Imaging and Diagnostics Group 2012–Present

### **Professional**

- Member, Task Group No. 244 – Medical Physics Practice Guideline (MPPG) for Treatment Planning Systems 2012–Present
- Member, AAPM Working Group on Intensity Modulated Radiotherapy (WGIMRT) Committee 2012–Present
- Member, Task Group No. 231 – Cognitive Science and Education Resources 2012–2013

### **Scholarly Service**

- Reviewer of Manuscripts for Medical Physics Journal 2012–Present
- Reviewer of Manuscripts for Journal of Applied Clinical Medical Physics 2012–Present

### **TEACHING**

- Assistant Professor, Wayne State University, Department of Radiation Oncology 2010–Present
- Adjunct Faculty, Macomb Community College, Warren MI 2008
- Associate Instructor, Department of Physics, University of Texas at Austin. 1999–2006

### **Teaching at Wayne State University**

#### ***Undergraduate Students***

- RAD 6710–Physics in Medicine, Primary Instructor 2011–Present

#### ***Graduate students***

- RAD 7110–Treatment Planning, Primary Instructor 2012–Present
- RAD 7120–Brachytherapy Physics, Primary Instructor 2010–Present

#### ***Medical Students***

- Medical Resident Physics, Co-Instructor 2010–Present

### **Teaching at Other Institutions**

#### ***Undergraduate Students***

- Introduction to Astronomy: The Solar System, Primary Instructor 2008
- Introduction to Newtonian Mechanics Laboratory, Primary Instructor 1999–2006
- Physical Sciences II: Electricity and Magnetism, Primary Instructor 2003–2004
- Physical Sciences I: Mechanics, Primary Instructor 2001–2004

### **Mentorship and Theses Directed**

#### ***Wayne State University School of Medicine – Ph.D. in Medical Physics***

- Slava Zakjevskii, “Development of an End-to-End Accuracy Test for TrueBeam” 2013–Present

#### ***Wayne State University School of Medicine – M.S. in Radiation Physics***

- Kathryn Masi, “Efficacy of Prostate SBRT When the Daily Anatomy Differs Significantly From the Baseline Anatomy” 2013–Present
- Ben Catt, “A Forward Scattering Approximation to Dose Calculation Using the Linear Boltzmann Transport Equation” 2013–Present
- Alan Mayville, “Contrast-Enhanced Low-Energy Radiation Therapy, A New Approach” 2013–Present
- Joseph Koh, “Construction of MicroMLC for use on Contrast Enhanced Low Energy Radiation Therapy” 2013–Present
- Steve Neilsen, “Mouse Irradiation Platform for Co-60” 2013–Present

- Andrew Veres, “Complexity Analysis of IMRT QA Surrogate Plans” 2012–2013
- Swetha Sabu, “Statistical Relationship Between Random Leaf Motion Error and Spinal Cord Dose in Lung SBRT Treatments” 2012–2013
- Mary Cherven, “Calibrating the Eclipse Treatment Planning System for use in Low-Energy Radiotherapy Treatments” 2012–2013
- Yashwanth Katkuri, “Investigating the Use of Microsoft Kinect Motion Tracking Toolkit in Quantifying Deviations in Patient Position during Radiotherapy Treatments” 2012–2013
- Jonathan DeLauter, “Non-Stochastic Effects of Machine Parameters on Mult-Leaf Collimator Leaf Positioning Errors” 2012–2013
- Robyn Spink, “Quality and Deliverability of Intensity Modulated Neutron Radiotherapy (IMNRT) Plans” 2011–2012
- David Jack, “Significance of Leaf Motion Error for RapidArc Lung SBRT in Proximity to the Heart” 2011–2012
- Michael Sigler, “A Comparative Study of Conventional Radiotherapy, Hypo-Fractionation, and SBRT in Prostate Cancer Using Biological Effective Dose” 2011–2012
- Peng Zhou, “Web-Based Database of Linac Morning Quality Assurance Data” 2011–2012
- Hao-Wen Cheng, “Modeling Dose Enhancement from High Atomic Number Nanoparticles Using the GEANT4 Monte Carlo Simulation Toolkit” 2011–2012
- Michael Derr, “The Sensitivity of RapidArc Lung SBRT Plans to Leaf Motion Error” 2011–2012
- Xiaodong Liu, “Fast Monte Carlo Simulation for Total Body Irradiation using a Co-60 Teletherapy Unit” 2010–2011
- Steve Laub, “A Technical Evaluation of Tomotherapy’s Automatic Roll Correction Feature” 2010–2011
- Ali Kakakhel, “Commissioning of a Cylindrical Teflon Phantom for SBRT Delivery Quality Assurance” 2010–2012

#### *Wayne State University School of Medicine – Graduate Research Projects*

- Shawon Joseph, “Cellular Automata Approach to Radiobiological Modeling” 2012–2013
- Ryan Price, “Analysis of Varian Linear Accelerator Dynalog Files using Data-Mining Techniques” 2012–2013
- Elizabeth Wennerstrom, “Deforming Planning CT Images to CBCT Images Using MIMVista” 2010–2011

#### **Course and Curriculum Development**

- RAD 7110–Treatment Planning: Installed and commissioned Eclipse v. 11 boxes 2014
- RAD 7110–Treatment Planning: Networked workstations to facilitate remote use of the treatment planning stations. Added lab section to curriculum and practicum to the final exam. 2012
- RAD 6710–Physics in Medicine: Restructured imaging physics lecture series. Created homework questions. Instituted Comprehensive Review lecture series. 2012
- RAD 7120–Brachytherapy Physics: Added hands-on laboratory component to course. 2010
- RAD 7120–Brachytherapy Physics: Developed entire curriculum including lectures, evaluation materials, and course-packet. 2010
- Medical Resident Physics: Recreated lectures describing Basic Nuclear Physics. Added example questions from past RAPHEX examinations to tie lecture material to examination material. 2010
- Introduction to Newtonian Mechanics Laboratory: Added four new lab exercises. Installed updated computer network for data collection and processing. 1999-2006

#### **GRANTS, CONTRACTS, AND OTHER FUNDING**

##### **Active Other Grants and Contracts**

- Varian Medical Systems: PI – “Development of an End-to-End Accuracy Test for TrueBeam” – 2013–Present

\$115,200

- R21 - PA-11-261: Co-Investigator –“HPV, Tumor Metabolism and Radiosensitivity in Head and Neck Cancer” – \$418,000 2013–Present
- Department of Radiation Oncology Fund for Research and Medical Education: PI – “Contrast-Enhanced Kilovoltage-Energy Radiotherapy – Phase 0: Development of X-ray Source” – \$1,823 2013–Present

#### **Pending National/International Grants and Contracts**

- R03 - PA-12-145: PI – “Intensity modulated kilovoltage x-ray for contrast-enhanced radiotherapy” – \$140,325 2014–2016
- R03 - PA-12-145: PI – “Patient specific quality assurance in radiotherapy using 3D-printed patient replicas” – \$140,325 2014–2016

#### **Previously funded Grants and Contracts**

- WSU University Research Award: PI – “Boron nanoparticle enhancement of fast neutron IMRT for glioblastoma” – \$10,000 2011–2012

#### **Previously submitted, not funded Grants and Contracts**

- SONTAG Foundation – “Kilovoltage energy contrast enhanced intensity modulated radiotherapy for glioblastoma” – \$596,332 2013
- R21 - PA-12-145: PI – “Infrared Depth-Map Imaging to Increase Accuracy in Radiotherapy Delivery” – \$418,000 2012
- American Cancer Society: Pilot Project Grant: PI –“Radiotherapy enhancement using gold nanoparticles: dose characterization and clinical strategies” – \$29,977 2012
- NIH K-25 : PI – “Optimizing high-LET radiotherapy for resistant head and neck cancer” – \$850,000 2010
- PanCan Innovative : Co-Investigator –“High-LET radiotherapy for pancreatic cancer” – \$200,000 2010

#### **CLINICAL TRIALS ACTIVITIES**

- “A Phase II Study of a Highly Conformal Fast Neutron Radiotherapy (FNRT) Boost and Concurrent Cisplatin with Photon Radiotherapy in the Treatment of p16 Negative Squamous Cell Carcinoma of the Oropharynx”, Role:Co-Investigator, PI: Dr. Harold Kim M.D. 2011
- “A Phase II Study of a Highly Conformal Fast Neutron Radiotherapy (FNRT) Boost and Concurrent Cisplatin with Photon Radiotherapy in the Treatment of Unresectable Squamous Cell Carcinoma of the Head and Neck”, Role: Co-Investigator, PI: Dr. Harold Kim M.D. 2010

#### **PUBLICATIONS**

##### **Peer-Reviewed Publications**

- 1) J. Burmeister, E. McSpadden, J. Rakowski, A. Nalichowski, M. Yudelev, **M. Snyder**, “Correlation of admissions statistics to graduate student success in medical physics”, J App Clin Med Phys, *in press* 2014
- 2) M. Christensen, A.J. Najy, **M. Snyder**, L.S. Movilla, H.R. Kim, “A critical role of the PTEN/PDGF signaling network for the regulation of radiosensitivity in adenocarcinoma of the prostate”, Int J Radiat Oncol Biol Phys. **88**(1), 151-158 (2014)
- 3) M. Christensen, D. O. Kamson, **M. Snyder**, H. Kim, N. L. Robinette, S. Mittal, C. Juhász, “Tryptophan PET-defined gross tumor volume offers better coverage of initial progression than standard MRI-based planning in glioblastoma patients”, J. Rad. Onc. 10.1007/s13566-013-0132-5 (2013) 2013
- 4) C. Liu, **M. Snyder**, “Point/Counterpoint: Flattening Filter Free Delivery is the Future of IMRT

- and SBRT", *Med Phys*, 40(6):060601 (2013)
- 5) X. Liu\*, D. Lack, J. Rakowski, C. Knill, **M. Snyder**, "Fast Monte Carlo Simulation for Total Body Irradiation using a Co-60 Teletherapy Unit", *J App Clin Med Phys*, 14(4), doi:10.1120/jacmp.v14i3.4214
  - 6) J. Burmeister, R. Spink\*, L. Liang, T. Bossenberger, R. Halford, J. Brandon, J. Delauter, **M. Snyder**, "Commissioning of Intensity Modulated Neutron Radiotherapy (IMNRT)", *Med Phys* **40**, 021718 (2013)
  - 7) **M. Snyder**, A. Hammoud, T. Bossenberger, R. Spink\*, J. Burmeister, "Optimization of intensity modulated neutron radiotherapy by photon proxy", *Med Phys* **39**, 4992 (2012) 2012
  - 8) **M. Snyder**, M. Joiner, T. Bossenberger, A. Konski, J. Burmeister, "Dose escalation in prostate cancer using intensity modulated neutron radiotherapy", *Radiotherapy & Oncology* 99(2): 201-206 (2011). 2011
  - 9) C. Knill, **M. Snyder**, "A Analysis of Confidence Limit Calculations used in AAPM Task Group 119", *Med Phys* 38(4): 1779-1784 (2011).
  - 10) L. Reichl, **M. Snyder**, "Shot Noise in an Electron Waveguide  $\sqrt{N}$  OT Gate", *Phys. Rev. A* 74, 012318 (2006) 2006
  - 11) L. Reichl, **M. Snyder**, "Coulomb Entangler and Entanglement Testing Network for Waveguide Qubits", *Phys. Rev. A* 72, 032330 (2005) 2005
  - 12) **M. Snyder**, L. Reichl, "Ballistic Electron Waveguide Adder", *Phys. Rev. A* 70, 052330 (2004) 2004
  - 13) G. Akguc, L. Reichl, A. Shaji, **M. Snyder**, "Bell States in a Resonant Quantum Waveguide Network", *Phys. Rev. A* 69, 042303 (2004)
  - 14) L. Reichl, G. Akguc, A. Sha ji, **M. Snyder**, "Conduction and Entanglement in Nanometer-Scale Ballistic Electron Waveguides", *Proc. 20th Symp. on Energy Eng. Sci.*, Argonne National Laboratory, May 20-21, 2002 2002

#### Published Abstracts

- 1) M. Buczek, G. Lawes, **M. Snyder**, Y. Hillman, J. Rakowski, "Radiochromic Film Measurement of Nanoparticle Radiation Dose Enhancement" 2013
- 2) M. Sigler\*, **M. Snyder**, "A Comparative Study of Conventional Radiotherapy, Hypofractionation, and SBRT in Prostate Cancer Using Biological Effective Dose"
- 3) M. Cherven\*, J. Burmeister, J. Rakowski, **M. Snyder**, "Commissioning the Eclipse Pencil Beam for Low Energy X-Rays"
- 4) A. Veres\*, **M. Snyder**, "To Better Understand IMRT and Planned Dose Distributions: A Measure of Entropy"
- 5) B. Halford\*, **M. Snyder**, "Graticule for Verification of Treatment Position in Neutron Therapy", *Med. Phys.* 39, 3679 (2012) 2012
- 6) R. Spink\*, J. Burmeister, T. Bossenberger, **M. Snyder**, "Quality and Deliverability of Intensity Modulated Neutron Radiotherapy (IMNRT) Plans", *Med. Phys.* 39, 3837 (2012)
- 7) P. Paximadis, A. Najy, **M. Snyder**, M. Christensen, H.R. Kim, "PTEN Modulation of Androgen Receptor Response to External Beam Radiation in Murine Prostate Cancer Cell Lines", *Int J Radiat Oncol Biol Phys* **84**, S164-S165 (2012)
- 8) M. Christensen, D. Kamson, **M. Snyder**, A. Hallock, H. Kim, S. Mittal, C. Juhasz, "Tumor Volume for Glioblastoma as Defined by Tryptophan PET Offers Superior Coverage of Recurrence Site than Standard MRI Based GTV", *Int J Radiat Oncol Biol Phys* **84**, S271 (2012)
- 9) M. Dominello, K. Ku, G. Chen, L. Tait, **M. Snyder**, E. McSpadden, J. Maier, S. Miller, A. Konski, "Volumetric Modulated Arc Therapy Decreases Incidence of Acute Rectal Toxicity in the Treatment of Low and Intermediate Risk Prostate Cancer", *Int J Radiat Oncol Biol Phys* **84**, S365 (2012)
- 10) **M. Snyder**, J. Burmeister, M. Joiner, J. Meyer, L. Tait, S. Cohen, E. McSpadden, A. Konski, "Potential gender differences in a Normal Tissue Complication Probability Model for Heart

Toxicity during Radiotherapy for Esophageal Cancer”, *Int J Radiat Oncol Biol Phys* **84**, S757-S758 (2012)

- 11) S. Laub\*, **M. Snyder**, J. Burmeister, “Technical Evaluation of TomoTherapy Roll Correction”, *Med. Phys.* 38, 3381 (2011) 2011
- 12) E. Wennerstrom\*, C. Knill, T. Bossenberger, **M. Snyder**, “Deforming Planning CT Images to CBCT Images Using MIMVista”, *Med. Phys.* 38, 3552 (2011)
- 13) A. Kakakhel\*, D. Lack, **M. Snyder**, “Applicability of Image Smoothing for Dose Calculation of High Density Phantoms in Patient Specific Delivery Quality Assurance”, *Med. Phys.* 38, 3619 (2011)
- 14) A. Weyh, C. Knill, **M. Snyder**, D. Lack, “Effect of PTV Overlap with Chest Wall on Plan Quality of Rapid Arc Lung Stereotactic Body Radiotherapy (SBRT)”, *Med. Phys.* 38, 3697 (2011)
- 15) G. Chen, G. Hillman, V. Singh-Gupta, L. Runyan, C. Yunker, **M. Snyder**, J. Burmeister, M. Joiner, A. Konski, “Radiosensitivity and DNA Damage in HPV Positive and HPV Negative Head and Neck Cancer Cell Lines: Comparison of Photon versus Neutron Irradiation”, *Int J Radiat Oncol Biol Phys* **81**, S725 (2011)
- 16) A. Konski, D. Antwih, **M. Snyder**, M. Joiner, S. Zielske, “Potential Relative Biological Effectiveness of High-LET versus Photon Radiotherapy in Pancreatic Cancer”, *Int J Radiat Oncol Biol Phys* **81**, S726 (2011)
- 17) C. Knill, T. Bossenberger, J. Rakowski, E. Wennerstrom\*, **M. Snyder**, “Deformable Image Registration (DIRART) Testing Using Thin-Plate Spline Deformations”, *Int J Radiat Oncol Biol Phys* **81**, S820 (2011)
- 18) **M. Snyder**, M. Joiner, J. Burmeister, “An RBE Rescaling Method for the Comparison of Intensity Modulated Neutron Radiotherapy Plans to Conventional Photon Intensity Modulated Radiotherapy Plans”, *Med. Phys.* 37, 3302 (2010) 2010
- 19) D. Worthy, **M. Snyder**, R. Starin, “Delivery Quality Assurance for Stereotactic Body Radiotherapy (SBRT) Using a Teflon Cylindrical Phantom”, *Med. Phys.* 37, 3242 (2010)
- 20) **M. Snyder**, M. Joiner, A. Konski, T. Bossenberger, J. Burmeister, “Equivalent Radiobiological Dose Comparison between Photon IMRT and Intensity Modulated Neutron Radiotherapy”, *Int J Radiat Oncol Biol Phys* **78**, S808 (2010)

## PRESENTATIONS

### Podium Presentations (refereed)

- 1) A. Veres\*, **M. Snyder**, “To Better Understand IMRT and Planned Dose Distributions: A Measure of Entropy” 2013
- 2) P. Paximadis, A. Najy, **M. Snyder**, M. Christensen, H.R. Kim, “PTEN Modulation of Androgen Receptor Response to External Beam Radiation in Murine Prostate Cancer Cell Lines”, ASTRO, 2012 2012
- 3) A. Konski, A. Hallock, **M. Snyder**, E. McSpadden, A. Weyh, S. Savasan, M. Henry, B. Cushing, J. Maier, Y. Ravindranath, D. Bergman, J. Taub, “Normal Tissue Complication Probability Model for Lung Toxicity after Radiotherapy in Pediatric Patients with Hodgkins Lymphoma Receiving Bleomycin”, SIOP, 2012
- 4) M. Christensen, A. Najy, **M. Snyder**, M.K. Conley-LaComb, H.R. Kim, “A Critical Role of the PTEN/PDFG Signaling Network for the Regulation of Radio-Sensitivity in Adenocarcinoma of the Prostate”, ICTR, 2012
- 5) A. Konski, **M. Snyder**, J. Burmeister, J. Meyer, L. Tait, S. Cohen, M. Joiner, E. McSpadden, “Dosimetric Modeling of Cardiac Toxicity in Patients with Esophageal Cancer Receiving Radiotherapy”, ICTR, 2012
- 6) S. Laub\*, **M. Snyder**, J. Burmeister, “Technical Evaluation of TomoTherapy Roll Correction”, AAPM, 2011 2011

- 7) L. Reichl, G. Akguc, A. Sha ji, **M. Snyder**, "Conduction and Entanglement in Nanometer-Scale Ballistic Electron Waveguides", Symposium on Energy Engineering and Science, Argonne National Laboratory, 2002

**Poster Presentations (refereed)**

- 1) M. Buczek, G. Lawes, M. Snyder, Y. Hillman, J. Rakowski, "Radiochromic Film Measurement of Nanoparticle Radiation Dose Enhancement" 2013
- 2) M. Sigler\*, M. Snyder, "A Comparative Study of Conventional Radiotherapy, Hypofractionation, and SBRT in Prostate Cancer Using Biological Effective Dose"
- 3) M. Cherven\*, J. Burmeister, J. Rakowski, M. Snyder, "Commissioning the Eclipse Pencil Beam for Low Energy X-Rays"
- 4) B. Halford\*, **M. Snyder**, "Graticule for Verification of Treatment Position in Neutron Therapy", AAPM, 2012 2012
- 5) R. Spink\*, J. Burmeister, T. Bossenberger, **M. Snyder**, "Quality and Deliverability of Intensity Modulated Neutron Radiotherapy (IMNRT) Plans", AAPM, 2012
- 6) M. Christensen, D. Kamson, **M. Snyder**, A. Hallock, H. Kim, S. Mittal, C. Juhasz, "High Risk CTV for GBM as Defined by Tryptophan PET Offers Superior Coverage of Recurrence Site than Standard MRI-based CTV", ASTRO, 2012
- 7) M. Dominello, K. Ku, G. Chen, L. Tait, **M. Snyder**, E. McSpadden, J. Maier, S. Miller, A. Kanski, "Volumetric Modulated Arc Therapy Decreases Incidence of Acute Rectal Toxicity in the Treatment of Low and Intermediate Risk Prostate Cancer", ASTRO, 2012
- 8) **M. Snyder**, J. Burmeister, M. Joiner, J. Meyer, L. Tait, S. Cohen, E. McSpadden, A. Kanski, "Potential gender differences in a Normal Tissue Complication Probability Model for Heart Toxicity during Radiotherapy for Esophageal Cancer", ASTRO, 2012
- 9) E. Wennerstrom\*, C. Knill, T. Bossenberger, **M. Snyder**, "Deforming Planning CT Images to CBCT Images Using MIMVista", AAPM, 2011 2011
- 10) A. Kakakhel\*, D. Lack, **M. Snyder**, "Applicability of Image Smoothing for Dose Calculation of High Density Phantoms in Patient Specific Delivery Quality Assurance", AAPM, 2011
- 11) A. Weyh, C. Knill, **M. Snyder**, D. Lack, "Effect of PTV Overlap with Chest Wall on Plan Quality of Rapid Arc Lung Stereotactic Body Radiotherapy (SBRT)", AAPM, 2011
- 12) G. Chen, G. Hillman, V. Singh-Gupta, L. Runyan, C. Yunker, **M. Snyder**, J. Burmeister, M. Joiner, A. Kanski, "Radiosensitivity and DNA Damage in HPV Positive and HPV Negative Head and Neck Cancer Cell Lines: Comparison of Photon versus Neutron Irradiation", ASTRO, 2011
- 13) A. Kanski, D. Antwih, **M. Snyder**, M. Joiner, S. Zielske, "Potential Relative Biological Effectiveness of High-LET versus Photon Radiotherapy in Pancreatic Cancer", ASTRO, 2011
- 14) C. Knill, T. Bossenberger, J. Rakowski, E. Wennerstrom\*, **M. Snyder**, "Deformable Image Registration (DIRART) Testing Using Thin-Plate Spline Deformations", ASTRO, 2011
- 15) **M. Snyder**, M. Joiner, J. Burmeister, "An RBE Rescaling Method for the Comparison of Intensity Modulated Neutron Radiotherapy Plans to Conventional Photon Intensity Modulated Radiotherapy Plans", AAPM, 2010 2010
- 16) D. Worthy, **M. Snyder**, R. Starin, "Delivery Quality Assurance for Stereotactic Body Radiotherapy (SBRT) Using a Teflon Cylindrical Phantom", AAPM, 2010
- 17) **M. Snyder**, M. Joiner, A. Kanski, T. Bossenberger, J. Burmeister, "Equivalent Radiobiological Dose Comparison between Photon IMRT and Intensity Modulated Neutron Radiotherapy", ASTRO, 2010

**Invited Lectures / Presentations**

***International***

- 1) **M. Snyder**, M. Joiner, L. Santanam, J. Burmeister, "Intensity Modulated Neutron" 2009

Radiotherapy vs. 3D Conformal Neutron Radiotherapy”, Neutrons for Therapy Symposium, NEUDOS-11. Cape Town, South Africa; 2009.

*Local / Regional*

- 1) **M. Snyder**, “Intensity Modulated Neutron Radiotherapy”, Wayne State Cyclotron External Advisory Board Meeting, 2011

*Invited Seminars and Grand Rounds*

- 1) **M. Snyder**, “The Effect of Inter-Fraction Motion on the Biological Effectiveness of Prostate SBRT”, Wayne State School of Medicine Radiation Oncology Department 2012
- 2) **M. Snyder**, “LKB Modeling for Cardiac Toxicity in Radiotherapy for Esophageal Cancer”, Wayne State School of Medicine Radiation Oncology Department, 2012
- 3) **M. Snyder** “Intensity Modulated Neutron Radiotherapy Planning: Methodology and Early Results”, Wayne State School of Medicine Radiation Oncology Department, 2011