

CURRICULUM VITAE

EDUARDO G. MOROS, PH.D., DABR, FAAPM, FASTRO

Updated: November 2024

Current Position: Senior Member (*tenured*) and Chief of Medical Physics
Department of Radiation Oncology
Department of Diagnostic Imaging and Interventional Radiology
Department of Machine Learning (Secondary Appointment)
H. Lee Moffitt Cancer Center & Research Institute (MCC)
12902 Magnolia Drive
CSB-5 RAD ONC
Tampa, FL 33612
Office: 813 745 4380 (MA: Ruth Robinson); Cell: 813 476 3303;
Email: eduardo.moros@moffitt.org

Current Academic

Appointments: Professor, Department of Oncologic Sciences
College of Medicine
University of South Florida (USF)

Professor, Department of Physics
College of Arts and Sciences
University of South Florida

Place of Birth: Caracas, D.F., Venezuela.

Citizenships: Venezuela (birth), United States of America (naturalized), Italy (sanguine).

Education:

1987 - 1990 Doctor of Philosophy in Mechanical Engineering with a Minor in Electrical Engineering, August 1990, University of Arizona.

1985 - 1987 Master of Science in Mechanical Engineering, May 1987, University of Arizona.

1981 - 1984 Bachelor of Science in Mechanical Engineering, December 1984, University of Arizona.

Postgraduate Training:

1990 – 1991 Associate Researcher and Medical Physicist, Department of Human Oncology, University of Wisconsin-Madison; Officer of the Hyperthermia Physics Center (NCI contract), Allegheny-Singer Research Institute, Pittsburgh, PA. Site-visited and evaluated hyperthermia equipment of institutions participating in national clinical trials with James Zagzebski Ph.D., Bhudatt Paliwal Ph.D., Tillman Saylor Ph.D., and Prakash Shrivastava Ph.D. Moreover, I performed research on Simultaneous Ferromagnetic Hyperthermia and ¹²⁵Iodine Brachytherapy in Rabbit Choroidal Melanomas with Richard Steeves M.D. (PI).

Current Academic Appointments and Employment:

2011 – pres Senior Member, Clinical Academician Pathway, Dept. of Radiation Oncology and Dept. of Diagnostic Imaging and Interventional Radiology, MCC, *Tenured*, July 1, 2015.

2011 – pres Chief of Medical Physics, Dept. of Radiation Oncology and Dept. of Diagnostic Imaging and Interventional Radiology, MCC.

- 2011 – pres Professor, Research Scientist Pathway, Department of Oncological Sciences, Morsani College of Medicine, USF.
- 2011 – pres Professor (Affiliate), Department of Physics, USF.
- 2012 – pres Director, USF-MCC Ph.D. in Applied Physics with Concentration in Medical Physics Program, CAMPEP.ORG accredited January 1, 2015, through June 30, 2023.
- 2020 – 2021 Director, MCC Medical Physics Residency, CAMPEP.ORG accredited May 16, 2020.
- 2023 – pres Senior Member, Dept. of Machine learning, secondary appointment, effective May 1, MCC.

Former Academic Appointments and Employment:

- 2012 – 2022 Department of Cancer Physiology (formerly Cancer Imaging and Metabolism), secondary appointment as Senior Member, MCC/MRI. Vice-Chair 11/16/2012 to 01/16/2019.
- 2016 – 2018 Director, Physics of Medical Imaging, Course for Radiology Residents.
- 2005 – 2011 Professor of Radiation Oncology (*Tenured*). Director, Division of Radiation Physics and Informatics, Department of Radiation Oncology, University of Arkansas for Medical Sciences (UAMS), Little Rock, AR.
- 2005 – 2011 Professor of Medical Dosimetry. Department of Imaging and Radiation Sciences, College of Health-Related Professions, UAMS.
- 2005 – 2005 Professor of Radiation Oncology (*Tenured*). Head, Research Physics Section, Radiation Physics Division, Department of Radiation Oncology, Washington University School of Medicine (WUSM).
- 2003 – 2005 Associate Professor of Radiation Oncology (*Tenured*). Head, Research Physics Section, Radiation Physics Division, Department of Radiation Oncology, WUSM.
- 2001 – 2002 Associate Professor of Radiation Oncology (*Tenured*). Chief, Hyperthermia Physics Clinical Service, Department of Radiation Oncology, WUSM.
- 1999 – 2002 Associate Professor of Radiology (*Tenured*). Chief, Hyperthermia Physics Clinical Service, Radiation Physics Section, Mallinckrodt Institute of Radiology (MIR), WUSM.
- 1991 – 1999 Assistant Professor of Radiology. Chief, Hyperthermia Physics Clinical Service, Radiation Physics Section, MIR, WUSM.
- 2001 – 2005 Affiliated Associate Professor of Biomedical Engineering. Dept. of Biomedical Engineering, Washington University in St. Louis (WUSTL).

Former Academic Titles:

- 2005 – 2011 Research Member, Winthrop P. Rockefeller Cancer Institute, UAMS.
- 1997 – 2005 Research Faculty Member, Siteman Cancer Center at Barnes-Jewish Hospital and WUSM.
- 1994 – 2005 Leader, Non-Ionizing Electromagnetic Radiation Engineering/Physics Core. Radiation and Cancer Biology Division, Dept. of Radiation Oncology, WUSM.
- 1991 – 2005 Chief, Hyperthermia Physics Clinical Service. Radiation Oncology Center/Department, WUSM.
- 1991 – 1994 Therapeutic Radiologic Physicist. Radiation Oncology Center/Department, WUSM.
- 1990 – 1991 Associate Researcher and Medical Physicist. University of Wisconsin - Madison, Department of Human Oncology, Radiotherapy Physics, Madison, Wisconsin.
- 1988 – 1990 Graduate Research Associate. University of Arizona, Departments of Aerospace and Mechanical Engineering and Radiation Oncology, Tucson, Arizona.
- 1985 – 1987 Graduate Research Assistant. University of Arizona, Departments of Aerospace and Mechanical Engineering and Radiation Oncology, Tucson, Arizona.

Licenses:

- 2012 – pres Therapeutic Radiological Physics License No. TRP 391 (Control No. 1669), State of Florida, Department of Health, Division of Medical Quality Assurance; issued 01/31/2012; expires 1/31/2023. Renewable.
- 2007 – 2011 Qualified Expert (Medical Physicist), Particle Accelerator License (to CARTI/UAMS) No. ARK-042-ACC-12.
- 2007 – 2011 Authorized Medical Physicist for HDR Brachytherapy, Arkansas Radioactive Material License (to CARTI/UAMS) No. ARK-0930-02230.
- 2007 – 2011 Authorized Medical Physicist for Gamma Knife and Manual Brachytherapy, Arkansas Radioactive Material License (to UAMS) No. ARK-0001-02110.

Board Certifications:

- 2007 – pres Certified (Diplomate) by the American Board of Radiology (DABR) in Therapeutic Radiologic Physics, certificate number P4442. Compliant with MOC.
- 1996 Certified by ABC Laboratories, Inc., on Good Laboratory Practice (GLP) Standards.

Languages: Spanish (1st), English (2nd, expert in writing, reading and speaking), Italian (3rd, A2-B1)

Teaching**University Courses:****USF Medical Physics Program****Semesters** (S=spring, U= summer, F=fall)

- | | | | |
|------------|-----------|-------------------------------------|--|
| 2012–pres | PHY6938-7 | Clinical Rotations (3 ch): | F12, S13, S14, S15 |
| 2012–pres | PHY6938-8 | Med Phys Seminars (1 ch): | F12, S13, S14, S15, S16, F18 |
| 2012–pres | PHY7910 | Directed Research (3-9 ch): | U12, S14, U14, F14, S15, U15, F15, S16, U16, F16, S17, U17, F17, U18, F18, S19, U19, F19 |
| 2014–pres | PHY7980 | Dissertation (3-9 ch): | F14, S15, U15, F15, S16, U17, F17, S18, U19, F19 |
| 2014, 2020 | PHY6938 | Radiobiology for Physicists (3 ch): | F14, S20, F22 |

UAMS Medical Dosimetry Program

- 2010 Lead Instructor, MED 4306, Medical Dosimetry Research (3 credit hr). Taught independent research and scientific writing on a current medical dosimetry topic.
- 2006 – 2010 Lead Instructor, MED 4605, Medical Dosimetry Practicum III (6 credit hr). Radiation treatment planning training. College of Health-Related Professions.

WUSM Educational Programs

- 2001 – 2005 Lecturer on Medical Physics: Lectured on Thermoradiotherapy Systems as part of the annual Physics Course for Radiation Oncology Residents, Physics Residents, Dosimetrists and Radiation Therapists. Dept. of Radiation Oncology.
- 1992 – 1999 Main Instructor and Coordinator: The Physics of Clinical Hyperthermia, a course for Radiation Oncology Residents and Physics Residents. Radiation Oncology Center, Mallinckrodt Institute of Radiology, 1992, 1994, and 1999.

Didactic Lectures and Audiences at MCC and USF:

- Jan 2012 *Basic Hyperthermia Physics*, Imaging Biomarkers Group.
- Feb 2012 *The NCI, Protons and Research*, MCC leadership.
- Mar 2012 *Distinguishing Heat-Killed from Viable Cells by Autofluorescence*, Targeted Ligands and Nanomedicine Group.
- Mar 2012 *Causes and Prevention of Accidents and Errors in Radiation Therapy*, Medical Physics and Dosimetry Group.
- Apr 2012 *Proton Therapy: Evidence and Market Forces*, MCC leadership.
- May 2012 *4D-RT As Theranostic*, Cancer Imaging Course directed by Dr. Gillies.
- Aug 2012 *The Atomic Nucleus & Mathematics of Radioactive Decay*, Physics Course for Radiation Oncology Residents.
- Aug 2012 *Radiation Production: X-Rays Basics*, Physics Course for Radiation Oncology Residents.
- Oct 2012 *Machines for Producing High Energy Radiation: The Medical Electron Linear Accelerator*, Physics Course for Radiation Oncology Residents.
- Jun 2013 *Quantifying Tumor Heterogeneity Using 18F-FDG PET/CT Imaging by Texture Analysis*, Quantitative Imaging Group.
- Jun 2013 *Gold Nanoparticles in Cancer Therapy*, Molecular Imaging and Nanomedicine Group.
- Jul 2013 *CT Reconstruction Kernels, Filters and Algorithms*, Radiomics Group.
- Aug 2013 *USF-MCC Medical Physics Program*, Faculty of the USF Physics Department.
- Aug 2013 *Medical Physics Vision and Plan*, Department of Radiation Oncology Retreat.
- Aug 2013 *Atomic Nuclei and Radioactivity, and Physics & Mathematics of Radioactive Decay*, Physics Course for Radiation Oncology Residents.
- Aug 2013 *Radiation Production: X-Rays Basics*, Physics Course for Radiation Oncology Residents.
- Sep 2013 *Noninvasive Monitoring of Microvascular Changes with Partial Irradiation Using DCE and BOLD MRI*, Quantitative Imaging Group.
- Oct 2013 *Machines for Producing High Energy Radiation: The Medical Linear Electron Accelerator*, Radiation Oncology Residents.
- Sep 2013 *Factors Affecting a PET Image*, Medical Physics and Dosimetry Group.
- Apr 2014 *Normalizing Tumor Microenvironment for Cancer Therapy*, Quantitative Imaging Group.
- Apr 2014 *Radiation Protection Principles*, Physics Course for Radiation Oncology Residents.
- Aug 2014 *Atomic Nuclei and Radioactivity*, Physics Course for Radiation Oncology Residents.
- Aug 2014 *X-Rays: Basic Technology and Physical Properties*, Physics Course for Radiation Oncology Residents.
- Oct 2014 *Introduction to the Medical Linear Electron Accelerator*, Physics Course for Radiation Oncology Residents.
- Dec 2014 *Basic Concepts of Radiation Biology*, Molecular Imaging and Nanomedicine Group.
- Fall 2014 Directed and gave 28 lectures in the *Radiobiology for Physicists* course for USF graduate students in the Medical Physics Ph.D. program.
- Mar 2015 *Protons in Radiation Therapy: The Physics of the Bragg Peak and the SOBP*. USF Physics Course on Advanced Radiation Therapy Physics.
- Aug 2015 *Physics and Mathematics of Radioactive Decay*, Physics Course for Radiation Oncology Residents.
- Aug 2015 *The X-ray Tube, Bremsstrahlung and Characteristic Spectra*, Physics Course for Radiation Oncology Residents.
- Oct 2015 *FDG-Based Radiomics Features*. Special organizing meeting for a Moffitt's Center of Excellence in Imaging.

- Oct 2015 *Linear Accelerators for Radiation Therapy*, Physics Course for Radiation Oncology Residents.
- Aug 2016 *The Basic Mathematics and Physics of Radiation Medicine*, Physics Course for Radiation Oncology Residents.
- Aug 2016 *Basic Mathematics and Basic Physics for Radiology: Structure of the Atom and Radioactive Decay*, Physics Course for Radiology Residents.
- Aug 2016 *X-rays: Basic Physical Properties & The X-ray Tube*, Physics Course for Radiation Oncology Residents.
- Oct 2016 *The Basics of MRI Physics*, Physics Course for Radiation Oncology Residents.
- Oct 2016 *Charged Particle Accelerators for Radiation Therapy*, Physics Course for Radiation Oncology Residents.
- Nov 2016 *Quantitative Imaging For Personalized Radiation Therapy at Moffitt: Vision and Challenges*. This talk was given to 30 medical professionals from the Armed Forces Hospital of Ecuador, South America, who visited Moffitt on 11/17/2016.
- Jan 2017 *Radiation Protection*, Physics Course for Radiology Residents.
- Jun 2018 *The Scientific Method*. Lecture to Medical Dosimetrists interested in research.
- Aug 2018 *The Future of Medical Physics at the Moffitt Cancer Center*. Lecture given at MCC SRB, open to everyone.
- Sep 2018 *The challenge of Total Adaptive Radiation Therapy*. Lecture given to MCC Medical Dosimetrists and Medical Physicists.
- Oct 2018 *The Potential Role of Radiomics in Biologically Adaptive Radiation Therapy*. Moffitt Cancer Center Radiomics Workshop, Clearwater, FL October 15, 2018.
- Apr 2019 Ultra-high Dose Rate or FLASH Irradiation—Recent *In Vivo* Evidence. Radiation Oncology Faculty meeting.
- May 2020 *Medical Physics Advances to Personalize Radiation Therapy*, presentation to Novocure, Inc.
- Fall 2014 Directed and gave 28 lectures in the Radiobiology for Physics course for USF graduate students in the Medical Physics Ph.D. program. Sep 2020 *Radiomics Studies*. Radiation Oncology Research Retreat.
- May 2021 *Radiation Oncology-Biology Integration Network “ROBIN” U54 Program*. Radiation Oncology Research Retreat.
- May 2021 *Carbon Ion Radiotherapy-Physical, Biological and Clinical Rationale*. Radiation Oncology Research Retreat.
- Aug-Sep 2021 Gave 4 1-hr lectures in the *Radiation Protection and Safety* course for USF graduate students in the Medical Physics Ph.D. program.
- Mar 2022 *Protons Physics in Radiation Therapy*. USF graduate students in the Medical Physics Ph.D. program.
- Jun 2022 *Medical Errors in Radiation Therapy*, Radiation Oncology Physicists and Dosimetrists.
- Fall 2022 Directed and gave 24 lectures in the *Radiobiology for Physicists* course for USF graduate students in the Medical Physics Ph.D. program. A few lectures were cancelled or shortened due to Hurricane Ian.
- Jul 2023 *Ultra-High Dose Rate Radiation Therapy — What’s all that Buzz about FLASH?* Presented at the Advanced Practice Providers (APP) Journal Club.
- Aug 2023 *New Technologies to Propel Research*. Radiation Oncology Department Retreat 2023.
- Aug 2023 *Current Status of the USF-MCC PhD Program in Applied Physics with Concentration in Medical Physics*. Given to the faculty of the USF Physics Department during their annual retreat.

- Dec 2023 *The CAMPEP-Accredited USF-MCC Applied Physics with Concentration in Medical Physics PhD Program.* Presented at the Maria Salomea Skłodowska-Curie Retreat organized by the Machine Learning Department. This retreat focused on ML education and training activities at different levels from K12 through post-doctoral fellowships.
- Dec 2023 *Mentoring Medical Physics Residents on how to become national leaders at the NCI.* Resident Leadership Class (directed by Dr. Sarah Hoffe) on how to put mentorship and sponsorship plans into action to align to strategic leadership goals.
- Mar 2024 *Update on the USF-MCC Medical Physics Ph.D. Program.* USF Physics Department Annual Retreat.

Invited Symposia, Seminars and Lectures

(listed chronologically, most recent first)

1. Taught five lectures: 1) *El Proceso de Radioterapia*, 2) *El Rol del Fisico Medico*, 3) *El Rol del Dosimetrista*, 4) *Imágenes en Radioterapia*, 5) *Los Controles de Calidad en Radioterapia*. Faculty member for the Regional Training Course on *Introduction to Administrative Aspects of Radiation Oncology for Administrative Staff*, at MD Anderson Cancer Center, Houston, TX, USA, organized by the IAEA Programs at Argonne National Laboratory (US DOE). This course was in spanish and the participants were from several Central and South America countries. August 19-23, 2024.
2. *Artificial Intelligence at the Moffitt Cancer Center.* Issan El Naqa and Eduardo G. Moros. Presentation and one-day-discussion at Siemens Healthineers AI Technology Center, Princeton, NJ, March 26, 2024.
3. *A Vision for the Future of Academic Medical Physics.* Department of Radiation Oncology, Duke University Medical Center, Durham, NC, October 20, 2023.
4. *A Vignette on the Impact of Bob Gillies on Radiation Oncology Research at the Moffitt Cancer Center*, presented at The Dr. Robert Gillies Machine Learning Workshop in Image Analytics, Hyatt Regency Hotel, Clearwater, November 14, 2022.
5. *Development of A Monte Carlo Voxel-Based 3D Radiodosimetry Method for A Targeted Alpha Particle Therapy.* International Conference on Mini-Micro-Nano-Dosimetry (MMND 2020), Centre for Medical Radiation Physics (CMRP), University of Wollongong, NSW, Australia, February 12, 2020.
6. *Novel Medical Physics Approaches to Personalize Radiation Therapy.* International Conference on Mini-Micro-Nano-Dosimetry (MMND 2020), Centre for Medical Radiation Physics (CMRP), University of Wollongong, NSW, Australia, February 12, 2020.
7. *Medical Physics Advances to Personalize Radiation Therapy.* University of Arkansas for Medical Sciences, Winthrop P. Rockefeller Cancer Institute's Forum, Little Rock, AR, November 18, 2019.
8. *Further Personalization of Radiation Therapy Using Existing Data.* AAPM Florida Chapter meeting (FLAAPM), St. Petersburg, FL, September 26-27, 2019.
9. *Radiomics, Imaging Habitats and Mathematics for the Personalization of Radiation Therapy – Recent Research and a Vision for the Future.* Division of Radiation Oncology, MD Anderson Cancer Center, Houston, TX, December 14, 2018.
10. *Recent History of Errors in Radiation Therapy and National Mitigating Initiatives.* Moffitt Cancer Center Radiation Oncology Conference & Workshops, Jan 25-27, 2018, Tampa, FL.
11. *Avances de La Física Medica en la Radioterapia Corporal Ablativa Estereostática para Tumores de Pulmón.* ASTRO annual meeting, Latin American Refresher Course, International Session 1, Boston, MA, Sept 24-28, 2016.
12. *Implementation of QA Procedures and Their Effects on the Radiation Treatment Delivery Error Rate.* ASTRO annual meeting, Latin American Refresher Course, International Session 1, San Antonio, TX, October 17-21, 2015.
13. *Avances Modernos para Desarrollar Programas de Radioterapia y Radiocirugía Estereostática Fraccionada para Tumores de Pulmón.* XVI Congreso Internacional de la Sociedad Dominicana de

- Hematología y Oncología, y 2da. Jornada Científica del Instituto de Oncología Dr. Heriberto Pieter, Punta Cana, Republica Dominicana, Julio 29 – Agosto 1, 2015.
14. *Scanned Focused Ultrasound Hyperthermia—There and Back Again*. 24th J. Eugene Robinson Award Lecture, 30th Annual Meeting of the Society for Thermal Medicine, Aruba, April 20th, 2013
 15. *Potentialities in Radiation Oncology: HIFU, DMH-Based Optimization, and Evolutionary Dynamics*. Dept. of Medical Physics, Memorial Sloan-Kettering Cancer Center, New York, NY, January 7, 2013.
 16. *Potential Application of Image Feature Analysis in IGRT*. Invited Professor, Servicio de Radiofísica y Protección Radiológica, Hospital Universitario Puerta de Hierro Majadahonda, Madrid, Spain, December 13, 2012.
 17. *Total Energy Optimization in Radiation Treatment Planning*. Invited Professor, FisyMat Advanced Course on Cancer Modeling: Evolutionary Issues and Radiotherapy Methods, Facultad de Ciencias, Universidad de Granada, Spain, December 11, 2012.
 18. *The Prospect of Focused Ultrasound Therapeutic Interventions in Radiation Oncology*. Department of Radiation Oncology, Mallinckrodt Institute of Radiology, Washington University School of Medicine, St. Louis, MO, August 24, 2012.
 19. *Bob, STRT, Fractionation and Evolutionary Dynamics*. Robert J. Myerson, Ph.D., M.D. Symposium. Department of Radiation Oncology, Washington University in St. Louis, June 5, 2012.
 20. *SonoKnife: Development, Testing and Treatment Planning*. American Association of Physicists in Medicine meeting (Joint AAPM-COMP meeting), Special Therapeutic Ultrasound Symposium – Novel Technologies & Therapeutic Strategies, Vancouver, Canada, August 3, 2011.
 21. *Development of Ultrasound Devices for Research and Therapy*. Department of Radiation Oncology, Montefiore Center for Radiation Therapy and Albert Einstein College of Medicine of Yeshiva University, Bronx, New York, January 28, 2011.
 22. *Strategies for Developing a Successful Comprehensive Medical Physics Group*. Departments of Radiology and Radiation Oncology, H. Lee Moffitt Cancer Center and Research Institute, Tampa, Florida, August 26, 2010.
 23. *SonoKnife -- Feasibility of Line-Focused Ultrasound for Thermal Ablation*. American Association of Physicists in Medicine meeting, Session on Advances of Image-Guided Interventions, Philadelphia, PA, July 21, 2010.
 24. *Accidents and Errors in XXI Century Radiation Therapy (a review of recent literature and reports in the New York Times)*. University of Arkansas for Medical Sciences, Winthrop P. Rockefeller Cancer Institute Grand Rounds, Little Rock, AR, Mar 24, 2010.
 25. *Integrated Robotic-Based Irradiation System*. Therapy session on Technical and Biological Innovations in Small Animal Image-Guided Radiotherapy. Industrial Physics Forum 2009 on Frontiers in Quantitative Imaging for Cancer Detection and Therapy, American Institute of Physics, co-hosted by the AAPM 51st annual meeting, July 26-28, Anaheim, CA.
 26. *High Resolution Thermal and SAR Models for Millimeter Waves Nociception Mechanism Investigation*. Non-Lethal Weapons & EM Fields Annual Review, Office of Naval Research, Arlington, VA, June 29, 2009.
 27. *A New Ultrasound System for Simultaneous Hyperthermia and IMRT*. Workshop for Clinicians, Engineers, and Investigators: Disease Site-Specific Applicators: What Clinicians Need, What's Available, and What's Being Developed. Society for Thermal Medicine annual meeting, Tucson, AZ, Sunday April 5, 2009.
 28. *Development of a Laboratory Animal Conformal Radiation Therapy System from the Ground Up*. Workshop 2 on Small Animal Precision Irradiation and Imaging, 54th Annual Meeting of the Radiation Research Society, Boston, MA, Sunday September 21, 2008.
 29. *System for 3D Conformal Radiation of Laboratory Animals*. University of Arkansas for Medical Sciences, Winthrop P. Rockefeller Cancer Institute Grand Rounds, Little Rock, AR, Sep 18, 2008.
 30. *Thermal Modeling of In Vitro GHz Applicators for Concurrent Optical Microscopy*. Non-Lethal

- Weapons Bioeffects (6.1) Program, Office of Naval Research, Arlington, VA, July 17-18, 2007.
31. *Hyperthermia for Superficial Breast Cancer*. Rural Hospital Program of UAMS. Tele-lecture from UAMS to multiple sites around Arkansas. April 3, 2007.
 32. *Use of Hyperthermia in Breast Cancer*. Breast Cancer Challenge 2007, Big Cedar Lodge, Ridgedale, MO, February 17-19, 2007.
 33. *SACRTD – A Small Animal Conformal Radiation Therapy Device—Rationale and Prospects*. Dean's Research Forum, College of Medicine, University of Arkansas for Medical Sciences, Little Rock, AR, August 22, 2006.
 34. *Clinical Strategies for Biologically Meaningful Thermoradiotherapy*. Department of Radiation Oncology, University of Arizona Health Sciences Center, Arizona Cancer Center, Tucson, AZ, April 3, 2006.
 35. *Thermoradiotherapy, HIR and Re-oxygenation*. University of Arkansas for Medical Sciences, Arkansas Cancer Research Center Grand Rounds, Little Rock, AR, June 15, 2005.
 36. *Thermoradiotherapy R&D at WU ROD*. University of Arkansas for Medical Sciences, Department of Radiation Oncology, March 14, 2005.
 37. *WU Clinical Systems for Simultaneous Thermoradiotherapy and Monitoring Heat-Induced Tumor Oxygenation with a New Hypoxia PET Marker*. Department of Radiation Oncology, University of Virginia, Charlottesville, VA, April 25, 2005.
 38. *Highlights of Engineering/Physics*. Plenary Session: Open Discussion on the State of Thermal Medicine, Summarized and discussed Engineering/Physics oral/poster presentations given during the Society for Thermal Medicine 2005 meeting, Bethesda, MD, April 3.
 39. *SURLAS*. Plenary Session – Engineering/Physics, Society for Thermal Medicine 2005 annual meeting, Bethesda, MD, April 3.
 40. *Basic Bio-Heat Transfer Considerations and Effective Heating of Tumors in Animal Models*. STM Workshop on Thermal Medicine, Heat Shock Proteins and Cancer, NIH Natcher Center, Bethesda, MD, March 31, 2005.
 41. *Highlights of Physics/Engineering Presentations*. Summary of salient Physics and Engineering oral/poster presentations given during the 9th International Congress on Hyperthermic Oncology (ICHO 2004), St. Louis, MO, April 24.
 42. *The Development of Systems to Expose Cells and Animals to Electromagnetic Radiation. Engineering Experience and Summary of Biological Results*. University of Memphis & University of Tennessee Health Science Center, Joint Graduate Program in Biomedical Engineering, Spring 2004 Seminar Series, March 12, 2004.
 43. *The Washington University Radial Transmission Line In Vitro Irradiation Facility*. Department of Bioengineering, University of Illinois – Chicago, March 21, 2003.
 44. *Why is Non-Invasive Thermometry Important for Thermal Therapies?* Research Review, Department of Electrical Engineering, Washington University in St. Louis, April 5, 2002.
 45. *The Radial Transmission Line In Vitro Irradiation System for RF Bioeffects Studies*. Radiofrequency Micronucleus Working Group, Food and Drug Administration, Rockville, MA, August 1, 2000.
 46. *Careers in Science Lecture Series*. Southern Illinois University at Edwardsville. Public series targeted to under-represented students interested in learning about scientific and technical careers. Speakers: women and minorities professionals. Invited lecture, December 4, 1999.
 47. *Physical Aspects of Ultrasound Hyperthermia of the Chest Wall*. First Joint Meeting of the Biomedical Engineering Society (BMES) and the IEEE Engineering in Medicine and Biology Society (EMBS), Atlanta, GA, October 13-16, 1999.
 48. *Can Recent Developments in Hyperthermia Technology be Applied to Physical Therapy?* University of Texas Health Sciences Center, San Antonio, Department of Physical Therapy, November 21, 1997.
 49. *Present and Future Devices For Simultaneous Thermoradiotherapy of Superficial Tumors*. Symposium

- on Hyperthermia, 2nd World Congress for Electricity and Magnetism in Biology and Medicine, Bologna, Italy, June 8-13, 1997.
50. *Concurrent External Beam Radiation and Ultrasound Hyperthermia: Devices, Clinical Process and Temperature Distributions*. Workshop on "Hyperthermia Treatment Systems in North America: Are We Ready for a Clinical Trial?" NAHS 16th Annual Meeting, Providence, RI, May 3-7, 1997.
 51. *Simultaneous Thermoradiotherapy at Washington University*. Duke Medical Center, Department of Radiation Oncology Grand Rounds, October 3, 1996.
 52. *Lateral Conformability and Penetration Depth Controllability Using Ultrasound Arrays and Reflectors*. 1996 Surgical Application of Energy Sources Conference, Estes Park, CO, May 17-19, 1996.
 53. *Simultaneous Ultrasound Hyperthermia and Ionizing Radiation*. The Conference for Ultrasonics in Biophysics and Bioengineering, 1995 Topic: Ultrasonic Therapy, Allerton Park, Monticello, IL, Bioacoustics Research Laboratory, University of Illinois-Urbana, May 30-June 2, 1995.
 54. *A Scanned-Reflected Ultrasound Applicator for Simultaneous Thermoradiotherapy*. 3rd Annual Biological & Biomedical Engineering Workshop, Washington University, St. Louis, May 16, 1995.
 55. *Quality Assurance Needs in Future Clinical Trials*. Joint RRS and NAHS (15th) annual meeting, San Jose, CA, April 1-6, 1995.
 56. *Simultaneous Thermoradiotherapy of Superficial Tumors: Physical Aspects and Clinical Experience*. Symposium on Simultaneous Hyperthermia and Radiation Treatments: Physical Feasibility, chaired by K. Hynynen. Joint RRS and NAHS (15th) annual meeting, San Jose, CA, April 2, 1995.
 57. *A Scanning Ultrasound Reflector Linear Array System (SURLAS) for Simultaneous Thermo-Radio-Therapy (STRT)*. Session on "Therapeutic uses of Ultrasound", AAPM 36th Annual Meeting, Anaheim, California, July 24-28, 1994.
 58. *Temperature Distributions Measured During Interstitial Microwave Hyperthermia. The RTOG 84-19 Data*. NAHS 14th Annual Meeting, Nashville, TN, April 29-May 4, 1994.
 59. *Simultaneous Ultrasound Hyperthermia and External Beam Teletherapy*. Missouri River Valley Chapter, AAPM, 1993 Scientific Meeting, St. Louis, MO, October 23, 1993.
 60. *Simultaneous Delivery of External Photon/Electron Beam Radiation & Superficial Microwave/Ultrasound Hyperthermia*. Department of Radiation Oncology Grand Rounds, University of California-San Francisco, September 14, 1993.

Mentoring:

Undergraduate Students

Name / Year(s) in Program	Degree / Program / Status/	Thesis / Project / Comment
Prashant Kolluri 2002	Main Mentor of Biomedical Engineering Senior Project, WUSTL. Summer 2002 2023: Attorney, Chicago, IL	Thermal Contribution of Compact Bone To Intervening Tissuelike Media Exposed To Planar Ultrasound.
Victoria T. Johnson (Pre-Med Student) 2004	Main Mentor for Siteman Cancer Center's Summer Research Program, WUSM. Southern Illinois University School of Medicine. Graduated in 2009. 2023: Internal Medicine and Psychiatry, Bellevue, WA	Numerical Optimization of an Ultrasound Hyperthermia Radiator for T3 Rectal Cancers.

Name / Year(s) in Program	Degree / Program / Status/	Thesis / Project / Comment
Omar Orbe-Toledo 2012	Selected as Mentor, Diversity Recruitment through Education and Mentoring Program. 2014: B.S. in Physics. 2023: Motion Sensor Test Engineer at NXP Semiconductors, Tempe, AZ.	Directed and engaged mentee in many aspects of Medical Physics in the radiotherapy clinic of the MCC Dept. of Radiation Oncology for 10 wks.
Mirthe E. Pijls Summer 2016	B.S in Medical Imaging and Radiation Therapy (MIRT) at Fontys University of Applied Science, The Netherlands. Moffitt Mentor.	Comparison between the numerical output of the Maastricht and Moffitt Radiomics software and the impact of image intensity resampling for textural features – a study in lung tumors
Marlon van den Broek Summer 2016	B.S in Medical Imaging and Radiation Therapy (MIRT) at Fontys University of Applied Science, The Netherlands. Moffitt Mentor.	Comparison between the numerical output of the Maastricht and Moffitt Radiomic software implementations for lung and head and neck tumors.
Helena Hurbon Summer 2017	NSF Research Experience for Undergraduates (REU) program, USF Physics Department. Mentors: E. Moros and H. Enderling. 2023: University of Arizona, MD/PhD Medical Scientist Training Program.	Qualitative Comparison of Cytotoxic and Immunologic Consequences of Spatially Homogeneous and Heterogeneous Radiation Dosing. Presented at American Physical Society (APS) Conf. for Undergraduate Women in Physics, Jan 2018, Jacksonville, FL, & at APS Meeting, Mar 2018, Los Angeles.
Bailey Bond Summer 2018	NSF Research Experience for Undergraduates (REU) program, USF Physics Department. Mentors: E. Moros & H. Enderling. 2021: Engineering PhD student at Florida International University.	Mathematically Modeling Tumor-Immune Interaction for Spatially Fractionated Radiation. Best Poster Presentation.
Michael (James) Taylor Summer 2018	NSF Research Experience for Undergraduates (REU) program, USF Physics Department. Mentors: E. Moros & D. Gintz. 2023: medical physics resident, UPMC, PA.	A comparison of Tomotherapy and VMAT plans based on OAR doses and outcomes.
Jacob Moriarty Summer 2022	NSF Research Experience for Undergraduates (REU) program, USF Physics Dept. Mentor: E. Moros Fall 2023: joined USF-MCC PhD in Applied Physics with Concentration in Medical Physics Program.	Exploration of Delta Radiomics of Ultra-Central Lung Tumors.

Graduate Students

Name / Year(s) in Program	Degree / Program / Status/	Thesis / Project / Comment
Daniel L. Mckinnis, Ph.D., 1993	M.S. Thesis Committee Member. Dept. of Electrical Engineering, WUSTL.	Piezoelectric and Acoustic Properties of GaAs.
Thomas W Hayne, M.D. (Medical Student) 1993	Advisor for Hyperthermia Physics. 1993 Summer Oncology Program, MIR, WUSM. 2014: Pediatrician, Orlando, FL.	Effect of an Attenuating Plug on SAR and Temperature Distributions in External Beam Hyperthermia.
Michael C. Kolios, Ph.D. 1998	Ph.D. Dissertation Committee Member, External Examiner, Department of Medical Biophysics, University of Toronto, Canada. 2023: Associate Dean Research & Innovation and External Partnerships.	Applications and Validation of Models of Heat Transfer in Perfused Tissues. https://www.linkedin.com/in/michaelkolios/
Yuzheng Guo, Ph.D. 2009	Ph.D. Dissertation Committee Member, Department of Electrical and Systems Engineering, WUSTL. 2014: Senior DSP Engineer at Motorola.	A Framework for Temperature Imaging Using the Change in Backscattered Ultrasonic Signals. Resulted in peer-reviewed publications.
Joshua Robinson, M.S. 2012 - 2013	Graduate Student in the USF-MCC Medical Physics Program. Mentor. 2023: Medical Physicist, Tampa, FL.	Flattening filter free compensator based IMRT studies. DABR June 2018.
Cassandra K. Stambaugh, Ph.D. 2012 – 2015	Ph.D. Student on the USF-MCC Medical Physics Program. Mentor & Dissertation Committee Member. 2015: Physics Resident, Mayo Clinic, Phoenix, AZ. 2023: Medical Physicist, Tufts Medical Center, Boston, MA.	Dissertation: The Evaluation and Study of Modern Radiation Dosimetry Methods as Applied to Advanced Radiation Therapy Treatments Using Intensity Modulated Megavoltage Photon Beams. Graduation: May 2015. Medical Physics Editor's Pick. DABR Jun 2018.
Jasmine A. Graham Ph.D. (formerly Oliver) 2012 - 2016	Ph.D. Student on the USF-MCC Medical Physics Program. Mentor & Dissertation Committee Member. 2016: Postdoc Fellow, UF Orlando Health 2018: Physics Resident, UF Orlando Health DABR June 2021 2023: Assistant Member at MCC; Assistant Professor at USF.	Dissertation: Increasing 18F-FDG PET/CT Capabilities in RT for Lung and Esophageal Cancer via Image Feature Analysis. Feb 2015: 2 nd place for Graduate Oral Presentation in Nanoscience & Physics, Emerging Researchers National (ERN) Conference in STEM. 2014: NCI F31 grant applicant. 2015: AAPM Travel Grant award. Invited to 64 th Lindau Nobel Laureate Mtg, Germany.
Balderaldeen AlTazi, Ph.D. 2014 - 2017	Ph.D. Student on the USF-MCC Medical Physics Ph.D. Program. Main Mentor & Dissertation Committee Member. 2023: Founder, Paradigm Shifters, Saudi Arabia.	18F-FDG PET/CT Based Radiomics For The Prediction of Radiochemotherapy Treatment Outcomes Of Cervical Cancer. Dissertation research ASTRO 2015 highly ranked abstract resulted in plenary lecture Graduation: December 2017.

Name / Year(s) in Program	Degree / Program / Status/	Thesis / Project / Comment
Muhammed Shafiq-ul-Hassan, Ph.D. 2015 - 2018	Ph.D. Student on the USF-MCC Medical Physics Program. Main Mentor & Dissertation Committee 2018-19: Physics Resident, Yale University 2023: Assistant Professor at MDACC	Characterization of CT Radiomic Features using Heterogeneous Textured Phantoms Dissertation Defense: April 3, 2018 Graduation: May 2018.
Saeed Ahmed, Ph.D. 2015 - 2019	Ph.D. Student on the USF-MCC Medical Physics Program. Mentor & Dissertation Committee Member. 2019: Physics Resident at the Cleveland Clinic, Cleveland, OH. 2023: Assistant Prof, Univ of Kansas	Development and Validation of Advanced Techniques for Treatment Planning and Verification in Megavoltage Radiotherapy. Graduation: May 2019. DABR Oct 2023
Thomas Lewin, Ph.D. 2015 – 2019	Ph.D. Student, Wolfson Centre for Mathematical Biology, Oxford Univ, UK. Mentor and Industrial supervisor. 2023: Mathematical Scientist at Roche, Switzerland.	Dissertation: Modelling the response of heterogeneous tumours to fractionated radiotherapy. Graduation: May 2019.
Christopher Tichacek, Ph.D. 2015 - 2019	Ph.D. Student on the USF-MCC Medical Physics Program. Main Mentor & Dissertation Cmte Member 2020-pres: Assistant Member at MCC; Assistant Professor at USF.	Radiation Dosimetry of Targeted Alpha Particle Therapy for Uveal Melanoma Graduation: Dec 2019 DABR Oct2023 (cond.)
Rebecka Ericsson Szecsenyi, M.S. Jan-Jul 2020	Master of Science Thesis VT20, Lund University, Sweden. Visiting Scholar. 2022: PhD student at Lund Univ., Sweden.	Thesis: Characterization of Radiomics Features Extracted from Images Generated by the 0.35 T Scanner of an Integrated MRI-Linac. 1 peer-reviewed paper 2022
Shraddha Pandey, Ph.D. Spring 2021 - Fall 2022	Ph.D. Student, Electrical Engineering, USF. Dissertation Committee Member. 2023: Postdoctoral Researcher of Radiology, University of Pennsylvania.	Dissertation: Accelerating Multiparametric MRI for Adaptive Radiotherapy. Defended 09/28/2022 https://www.linkedin.com/in/shraddha-pandey-18715678/
Ji Hye Koo, M.S., Ph.D. Fall 2018 – Spring 2023	Ph.D. Student in the USF-MCC Medical Physics Program Dissertation Committee Member Jul 2023: Medical Physics Resident, MCC	Dissertation: Evaluation of a Prototype Deep Learning-based Autosegmentation Algorithm on a High-Quality Database of Head and Neck Cancer RT Patients Fitzgerald Award, FLAAPM, Mar 2021 Graduation: May 2023
Nour Nasser, M.S., Ph.D. Fall 2019 – Spring 2024	Ph.D. Student on the USF-MCC Medical Physics Program. Dissertation Committee Member.	Dissertation: Development and Evaluation of Applications for the Novel CBCT-guided Ethos Online Adaptive RT System Graduation: May 2024

Name / Year(s) in Program	Degree / Program / Status/	Thesis / Project / Comment
Jesutofunmi Ayo Fajemisin Summer 2022 –	Ph.D. Student on the USF-MCC Medical Physics Program.	Delta-Radiomics Using Machine Learning with Auxiliary Datasets to Predict Disease Progression during MRgRT
Diego A. Hernandez Fall 2022 –	Ph.D. Student on the USF-MCC Medical Physics Program.	Cherenkov Imaging Applications in Radiation Therapy
Caleb Sawyer Fall 2022 –	Ph.D. Student on the USF-MCC Medical Physics Program.	Artificial Intelligent Tools for Automatic Total Body Irradiation Planning
Jacob Moriarty Fall 2023 –	Ph.D. Student on the USF-MCC Medical Physics Program.	Companion imaging SPECT and PET Tracers for Image-Based Dosimetry of Targeted Alpha Particle Therapy
Shea Ramkarran Fall 2024 –	Ph.D. Student on the USF-MCC Medical Physics Program.	Taking Core Courses
Sean Ryan Fall 2024 –	Ph.D. Student on the USF-MCC Medical Physics Program.	Taking Core Courses
NOTE: DABR denotes the year the American Board of Radiology certification was completed.		

Medical Physics Residents and Physician Residents

Name / Year(s) in Program	Role / Degree / Program / Status /	Thesis / Project / Comment
Anurag K. Singh, M.D. 2002 - 2003	Main Mentor, Resident Research Rotation. Dept. of Radiation Oncology, WUSM. 2023: Professor of Oncology & Medicine, Roswell Park Cancer Institute.	A Micro-PET Compatible, Small Animal Hyperthermia Ultrasound System. Resulted in a peer-reviewed paper and conference presentation.
Xin Zhang, Ph.D. 2006 - 2008	Main Mentor of Medical Physics Resident, Dept. of Radiation Oncology, UAMS. 2023: Professor at BUMC.	Clinical Residency in Therapeutic Radiologic Physics. DABR May 2011
Carlos Velasco, Ph.D. 2008 - 2010	Main Mentor of Medical Physics Resident, Dept. of Radiation Oncology, UAMS. 2023: Medical Physicist, DePaul Medical Center, Norfolk, Va.	Clinical Residency in Therapeutic Radiologic Physics. DABR May 2016
Richard Clarkson, Ph.D. 2011 - 2012	Main Mentor of Medical Physics Resident, Dept. of Radiation Oncology, UAMS. 2023: Medical Physicist, Ocala, FL.	Clinical Residency in Therapeutic Radiologic Physics.

Name / Year(s) in Program	Role / Degree / Program / Status /	Thesis / Project / Comment
Joseph Weygand, Ph.D. 2021-2023	Mentor of Medical Physics Resident, Dept. of Radiation Oncology, MCC.	Clinical Residency in Therapeutic Medical Physics. DWI & ADC imaging in low-field MRI-Linac.
Ibrahim Oraiqtat, Ph.D. 2022-2024	Mentor of Medical Physics Resident, Dept. of Radiation Oncology, MCC.	Clinical Residency in Therapeutic Medical Physics. Mobetron e-Flash.

NOTE: DABR denotes the year the American Board of Radiology certification was completed.

Research Assistants, Research Associates & Postdoctoral Fellows

Name, Role, Institution	Year(s):	Research Project / Status
Muhammad Yousaf, M.S. Research Assistant, WUSM	Jan 93 – Apr 94	Scanning Ultrasound Reflector Linear Array System (SURLAS).
Xiaobing Fan, Ph.D. Research Associate (Postdoc) WUSM	Sep 95 – Sep 98	Ultrasound Systems for Simultaneous Thermoradiotherapy. Bioelectromagnetics/NIEMR research. 2023: Research Professor, Dept. Radiology, U. Chicago, IL.
Petr Novak, Ph.D. Research Associate (Postdoc) WUSM	Nov 01 – Aug 05	Ultrasound Systems for Simultaneous Thermoradiotherapy, Development of SAHUS, Bioelectromagnetics, and ONR Twin-wire Chamber Thermal Characterization. 2006: Assistant Professor, Dept. of Radiation Oncology, UAMS 2018: IBM Engineer, Prague, Czech Republic
Bibianna Cha, B.S., M.S. Research Assistant and Graduate Student WUSM	May 02 – Aug 05	RTL for High SAR Studies, Ultrasound Systems for Simultaneous Thermoradiotherapy, Evaluation of Potential Effects on the P38MAPK Stress Inducible Phosphorylation, and ONR Twin-wire Chamber Thermal Characterization. 2023: Senior Director, Device Product Development, Blaze Bioscience, Seattle, WA. https://www.linkedin.com/in/bibianna-cha-6a7902a/
Volodymyr Nahirnyak, Ph.D. Postdoctoral Fellow, UAMS	May 07 – May 09	Thermal Therapy Physics Research and Analysis of Doppler Signals Observed During High Temperature Thermal Ablation. 2023: Associate Professor, Bukovina State Medical Univ, Ukraine. https://www.linkedin.com/in/volodymyr-nahirniak-81883b40/
Sunil Sharma, Ph.D. Postdoctoral Fellow, UAMS	June 07 – June 09	Small Animal Conformal Radiation Therapy Device Development. 2023: Clinical Associate Professor of Radiation Oncology, ECU. https://www.linkedin.com/in/sunil-sharma-phd-dabr-1b529338/
Duo Chen, Ph.D. Postdoctoral Fellow, UAMS	Dec 09 – Dec 11	SonoKnife – Acoustic Simulations. New Investigator Travel Award winner, STM, 2011.
Jose Rey, Ph.D. Postdoctoral Fellow, MCC	Aug 11 – Mar 14	Computational and <i>In Vivo</i> Studies of MR Theragnostics by Inductive Heating of Gliomas. 2018: Working for the FDA

Name, Role, Institution	Year(s):	Research Project / Status
Kujtim Latifi, Ph.D. Postdoctoral Fellow, MCC	Jan 12 – Jul 13	4D-CT Ventilation in Radiation Treatment Planning for Sparing Functional Lung. Evaluation of fiducials in breast and cervix cancers for patient positioning. 2023: Assistant Member, Radiation Oncology, MCC. DABR Oct 2023
Mikalai Budzevich, Ph.D. Postdoctoral Fellow, MCC	Feb 12 – Jun 13	4D-PET/CT for Radiotherapy Treatment Planning and Response Assessment and related research projects. 2023: Senior Staff Scientist, SAIL, MCC.
Ibrahim Oraiqat, Ph.D. Postdoctoral Fellow, MCC	Jan 20 – Jun 22	iRIA and CMSI irradiation experiments in linacs. Also, efforts relating to the Mobetron procurement 2023: Medical Physics Residency at MCC
NOTE: DABR denotes the year the American Board of Radiology certification was completed.		

Faculty (*substantive*)

Name, Rank, Department & University at time of mentoring	Year(s)	Comments / Status
William Straube, M.S., Instructor/Assistant Prof, Dept. of Radiation Oncology, WUSM	1992 – 2005	2023: Associate Professor, WUSM
Gal Shafirstein, Ph.D., Assistant/Associate Professor (Tenured), Dept. of Otolaryngology, UAMS	2005 – 2011	2023: Professor of Oncology, Director of PDT Clinical Research, Roswell Park Cancer Institute. https://www.linkedin.com/in/gal-shafirstein-43522630/
Jose Penagaricano, M.D., Assistant/Associate Professor (Tenured), Dept. of Radiation Oncology, UAMS	2005 – 2011	2024: Senior Member, Director of the Wesley Chapel Radiation Therapy Clinic at MCC/Advent Health
Yulong Yan, Ph.D., DABR Assistant/Associate Professor (Tenured), Dept. of Radiation Oncology, UAMS	2005 – 2011	2019: Associate Professor, Dept. of Radiation Oncology, UT Southwestern Medical Center
Ivaylo Mihaylov, Ph.D., Assistant Professor, Dept. of Radiation Oncology, UAMS	2006 – 2009	DABR 2009. Obtained 1NIH R01 in 2012. 2023: Associate Prof., Radiation Oncology, U Miami.
Ming Chao, Ph.D., Assistant Professor, Dept. of Radiation Oncology, UAMS	2008 – 2011	DABR 2011. 2023: Associate Professor, Dept. of Radiation Oncology, Mount Sinai Medical Center, NYC
Xin Zhang, Ph.D., Instructor/Assistant Prof, Dept. of Radiation Oncology, UAMS	2008 – 2011	DABR 2011. 2023: Clinical associate professor, Department of Radiation Oncology, Boston University School Medicine.
Xin Chen, Ph.D., Instructor, Dept. of Radiation Oncology, UAMS	2009 – 2011	2014: Instructor, Dept. of Radiation Oncology, Stanford University School of Medicine

Name, Rank, Department & University at time of mentoring	Year(s)	Comments / Status
Sunil Sharma, Ph.D., Postdoc/Instructor, Dept. Radiation Oncology, UAMS	2009 – 2011	DABR 2015 2023: Clinical Associate Professor, Radiation Oncology, ECU.
Eun-Young Han, Ph.D., DABR, Assistant Professor, Radiation Oncology, UAMS	2010 – 2011	2019: Medical Physicist and Assistant Professor, MDACC.
Gary Martinez, Ph.D., Core Staff Scientist, SAIL, MCC	2011 – 2014	MRI to Induce Hyperthermia in Gliomas & other projects Submitted two R21 and one K01. 2016: SAIL Core Facility Manager, MCC 2019: Assistant Member, Imaging Physics, MDACC
Vladimir Feygelman, Ph.D., Senior Member, MCC	2011 – 2017	Research on Advance Patient-Specific QA Technology and Methods 2017: Promoted to Senior Member. 2018: Tenure
Geoffrey Zhang, Ph.D., Senior Member, MCC	2011 – 2016	Mentoring in Research Strategies. 2016: Promoted to Senior Member with Tenure.
Kujtim Latifi, Ph.D., Assistant Member, MCC	2013 – pres	Mentoring as Associate faculty in all aspects of academic activities and clinical functions. DABR Oct 2023
Gage Redler, Ph.D., Associate Member, MCC	2019 – pres	Mentoring as Junior faculty in all aspects of academic activities and clinical functions. Promoted to Associate Member on 12/25/2022
Jasmine A. Graham, Ph.D. Assistant Member, MCC	2019 – pres	Mentoring as Junior faculty in all aspects of academic activities and clinical functions. DABR June 2021
Christopher Tichacek, Ph.D. Assistant Member, MCC	2020 – pres	Mentoring as Junior faculty in all aspects of academic activities and clinical functions. DABR Oct 2023 cond
Jacqueline Andreozzi, Ph.D., Assistant Member, MCC	2020 – pres	Mentoring as Junior faculty in all aspects of academic activities and clinical functions. DABR August 2021
Rawan Faramand, MD Assistant Member, BMT Program, MCC	2021 – 2023	Women in Oncology Mentoring Program. Discussed strategies and evaluated requirements for promotion.
Ibrahim Oraiqtat, Ph.D. Assistant Member, MCC	2024 -- pres	Mentoring as Junior faculty in scholarly activities and clinical functions. Past ABR Part 2 August 2024
NOTE: DABR denotes the year the American Board of Radiology certification was completed.		

Honors and Awards

(listed chronologically, most recent first)

2022 Fellow American Society for Radiation Oncology (**FASTRO**), award in recognition for exemplary service and significant contributions to the Society and the field of Radiation

- Oncology, San Antonio, Tx, October 25, 2022.
- 2019 Appointed to the Distinguished University Professor Discipline Committee for Dr. Hariharan Srikanth, by Dr. Dwayne Smith, Senior Vice Provost and Dean, School of Graduate Studies, University of South Florida.
- 2015 Fellow American Association of Physicists in Medicine (**FAAPM**), award in recognition of distinguished contributions for the field of Medical Physics, Anaheim, CA, July 13, 2015.
- 2015 Awarded **Tenure**, Moffitt Cancer Center and Research Institute, July 1, 2015.
- 2014 Past President Medal in recognition of continuous service to the Society. 31th Annual Meeting of the Society for Thermal Medicine (**STM**), Minneapolis, MN, May 6-10, 2014.
- 2013 24th J. Eugene Robinson Award Recipient. In recognition of service and leadership in the Society, impact on the fields of hyperthermic oncology and ablation biophysics, and outstanding contributions to the advancement of Thermal Medicine. This is the most prestigious award of the Society for Thermal Medicine. 30th Annual STM Meeting, Aruba, April 20th, 2013.
- 2012 Mentor (selected). American Association of Physicists in Medicine (**AAPM**) Diversity Recruitment through Education and Mentoring Program "DREAM". Mentee: Mr. Omar Ober-Toledo. Directed and engaged mentee in many aspects of Medical Physics in the radiotherapy clinic of the MCC Dept. of Radiation Oncology for 10 weeks.
- 2011 Elected, Board of Directors of the Bioelectromagnetics Society representing Engineering & Physical Sciences, 2010-2011.
- 2010 Selected participant for the "2010 Workshop on Advances in Breast Cancer Research" <http://breastcancer.uark.edu/>, sponsored by the National Science Foundation, University of Arkansas-Fayetteville, October 26-29, 2010.
- 2009 Recipient of a (ARRA Act) NIH Challenge Grant in Health and Science Research (RC1), 2009-2011.
- 2004 IAHO, President, 2004-2008. The International Association for Hyperthermic Oncology (IAHO), coordinates and promotes interactions among the Society for Thermal Medicine (STM in North America), the European Society for Hyperthermic Oncology (ESHO) and the Asian Society for Hyperthermic Oncology (ASHO). The IAHO also participates in the organization of the International Congress on Hyperthermic Oncology (ICHO) held every four years. The 10th ICHO was held in Munich, Germany, April 9-12, 2008.
- 2007 American Association of Physicists in Medicine, plaque presented in recognition and appreciation of distinguished service as an Associate Editor of Medical Physics, 2000-2007.
- 2006 RSNA Research and Education Foundation 25-Questions Project. Selected Submission Award, Nov. 2006.
- 2005 U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, Center for Scientific Review, plaque presented in grateful appreciation of services as a member of the Radiation Therapeutics and Biology (RTB) Study Section, 2002-2005
- 2005 Plaque presented in recognition and appreciation for outstanding contributions as the Twentieth President of the Society for Thermal Medicine, 2004-2005.
- 2005 NAHS/STM, Past-President, 2005-2006; President, 2004-05; President-Elect, 2003-04; Vice President-Elect, 2002-03.
- 2002 NAHS, Secretary-Treasurer-Elect, 2001-2002.
- 2001 Certificate for Distinguished Service. Meritorious ten-year service award for contributions for quality patient care, research and education (nominated by supervisor), Radiation Oncology Center, Mallinckrodt Institute of Radiology, WUSM, April 13, 2001.
- 1997 NAHS, Physics & Engineering Councilor, 1995-1997.
- 1996 The Whitaker Foundation Biomedical Engineering Research Award, 1993-1996.

- 1985 Outstanding Conference Paper Award entitled “Focused, Scanned Ultrasound for Local Hyperthermia”, 7th Annual Frontiers of Engineering and Computing in Health Care Conference, IEEE Engineering in Medicine and Biology Society.
- 1984 Bachelor of Science in Mechanical Engineering, With Distinction, December 1984. University of Arizona.
- 1984 Life Member of The Golden Key National Honor Society since 1984.
- 1984 Dean's Award, Outstanding Academic Achievement, 1983-84, College of Engineering, University of Arizona.
- 1983 Dean's List, Commendable Accomplishment, Fall 1983, College of Engineering, University of Arizona.
- 1983 Dean's Award, Outstanding Academic Achievement, 1982-83, College of Engineering, University of Arizona.
- 1980 Honor Roll, The Center For English as a Second Language, University of Arizona, Fall Semester 1980.

Research Funding

Governmental: (listed chronologically by ending date)

Period	Title	PI	Role	Source	Direct	Status
1985-1990	Ultrasound Hyperthermia System for Cancer Therapy	Robert B. Roemer, Ph.D.	Graduate Student	NCI, R01CA033922	https://reporter.nih.gov/	Completed
1990-1991	Hyperthermia Physics Center, Allegheny-Singer Research Institute	Prakash Shrivastava, Ph.D.	Officer/Site Visitor	NCI, contract N01-CM-37512.	https://reporter.nih.gov/	Completed
07/01/95-07/01/00	Ultrasonic Systems for Simultaneous Thermoradiotherapy	Eduardo G. Moros, Ph.D.	PI	NCI R29 CA63121	\$350,000	Completed
09/01/96-08/30/00	Simultaneous Thermoradiotherapy Dose Escalation Trial	Robert J. Myerson, Ph.D., M.D.	Co-I	NCI R01 CA71638	\$356,024	Completed
07/01/99-06/30/00	Radial Transmission Line (RTL) Irradiators for NIOSH	Eduardo G. Moros, Ph.D.	PI	NIOSH 0009937060	\$27,456	Completed
12/01/01-12/31/04	Noninvasive Temperature Estimation with Ultrasound	R. Martin Arthur, Ph.D.	Co-I	NCI R21 CA090531	\$250,000	Completed
10/01/02-09/30/05	Integrated Approaches to Determine Molecular and Subcellular Effects in Response to Non-Lethal EM Radiation Exposure	Michael Cho, Ph.D. (UIC)	Co-I	Office of Naval Research; N00014-03-1-0329	WUSM: \$227,586	Completed
09/07/05-05/01/06	SAHUS (Small Animal Hyperthermia Ultrasound System) for NCI	Eduardo G. Moros, Ph.D.	PI	NCI service order 263-MQ-515175	\$18,093 (Total)	Completed

Period	Title	PI	Role	Source	Direct	Status
01/01/01-12/31/06	Simultaneous Thermoradiotherapy for Breast Carcinoma	Robert J. Myerson, Ph.D., M.D.	Co-I; PI 7/1/03-12/31/03	NCI R01 CA71638	\$675,000	Completed
12/01/04-11/30/05	Heat Induced Suicide Gene Therapy for Head and Neck Cancer	Buck Rogers, Ph.D.	Co-I	NCI R21 CA106587	\$120,000	Completed
01/01/01-12/31/06	Ultrasonic Systems for Simultaneous Thermoradiotherapy	Eduardo G. Moros, Ph.D.	PI	NCI R01 CA63121	\$850,750	Completed
07/01/05-06/31/08	3D Noninvasive Temperature Estimation with Ultrasound. UAMS <u>Subcontract</u> : <i>Translating CBE Non-Invasive Thermometry to Clinic</i>	R. Martin Arthur, Ph.D.	Co-I	NCI R01 CA107558	UAMS Sub \$20,000	Completed
07/01/06 - 06/30/08	Breast Tissue Ablation by Conductive Heating	Gal, Shafirstein, Ph.D.	Co-I	NCI R21 CA108678	\$219,068	Completed
10/17/05-09/30/08	UIC contract: Determination of Nociceptive Molecular Effects in Engineered Tissues in Response to Active Denial 94-GHz Irradiation. UAMS <u>Subc</u> : <i>Heat Transfer Modeling of In Vitro Electromagnetic Applicators for Concurrent Optical Microscopy.</i>	Michael Cho, Ph.D.	PI of Sub	Office of Naval Research; N00014-06-1-0100	UAMS Sub \$161,972	Completed
07/01/04-06/30/09	Radiosensitization by the Cellular Stress Response. UAMS <u>Subcontract</u> : <i>Development of SAHUS-2 and Technical Support</i>	Joseph Roti Roti, Ph.D.	PI of Sub	NCI P01 CA104457	UAMS Sub \$34,481 /yr	Completed
07/01/06-06/30/09	SACRTD-Small Animal Conformal Radiation Therapy Device	Eduardo G. Moros, Ph.D.	PI	Arkansas Biosciences Institute	\$90,000 /yr	Completed
08/01/09-07/31/11	Simultaneous Ablation and Radiation Therapy – <i>ARRA Supplement</i>	Robert Griffin, Ph.D.	Co-I	NCI 3 R01 CA044114–19S1	\$301,802	Completed
09/30/09-08/31/11	A SonoKnife for Advanced Cancers – <i>ARRA Challenge Grant</i>	Eduardo G. Moros, Ph.D.	PI	NCI 1 RC1 CA147697	\$344,882/ yr	Completed
10/01/08-09/30/11	UIC: Determination of Nociceptive Molecular Effects in Engineered Tissues in Response to Active Denial 94-GHz Irradiation. UAMS <u>Subcontract</u> : <i>High Resolution Thermal and SAR Models for Millimeter Waves Nociception Mechanism Investigation</i>	Michael Cho, Ph.D.	PI of Sub	Office of Naval Research: N00014-06-1-0100	UAMS Sub \$42,413 /yr	Completed
07/22/08-07/21/13	Physiological Factors in Hyperthermia	Robert Griffin, Ph.D.	Co-I	NCI R01 CA044114	\$1,044,463	Completed

Period	Title	PI	Role	Source	Direct	Status
07/01/10-04/30/16	Radiation-Induced Heart Disease, Mechanisms and Interventions.	Marjan Boerma, Ph.D.	Co-I to 2011; Consult to 2017	NCI 1 R01 CA148679	\$207,500 /yr	Completed
07/09/12-04/30/18	Improving Cancer Treatment Planning by DMH-Based Inverse Optimization	Ivaylo B. Mihaylov, Ph.D.	Consultant	NCI 1 R01 CA163370	\$207,500 /yr	Completed
09/18/17-09/16/20 + 1 year no cost ext.	Targeted ²²⁵ Ac Radiopharmaceutical for Metastatic Uveal Melanoma. Subcontract with Modulation Therapeutics, Inc. (MTI)	Subcontract PI David Morse, Ph.D.	Co-I	NCI SBIR Phase II Subcontract to Moffitt, Project# 261201700035C	\$337,371 (subcontract)	Completed. Clinical trial ongoing.
10/01/14-07/31/21	Radiomics of NSCLC	Robert Gillies, Ph.D.	Co-I	NCI 1 U01 CA143062	\$381,294 /yr	Completed
12/01/20-11/30/21	Cerenkov Multi-Spectral Imaging (CMSI) for Adaptation and Real-Time Imaging in Radiotherapy. Subcontract with Endectra, LLC	Issam El Naqa, Ph.D.	Co-I	R41 CA243722	\$327,240 (total)	Completed
09/20/22-08/31/27	An Ionizing Radiation Acoustics Imaging (iRAI) Approach for Guided FLASH Radiotherapy	Issam El Naqa, Ph.D.	Co-I	R01 CA266803	\$3,309,851 (total)	Active
09/01/23-08/31/27	Translational Studies for Targeted Alpha-Particle Therapy for Rare Melanomas. HT9425-23-1-0909	David Morse, Ph.D.	Leader Project 2	US Army, DOD HT94252310909 Log#ME220239	\$3,216,122 (total)	Active

Non-Governmental: (listed chronologically by ending date)

Period	Title	PI(s)	Role	Source	Direct	Status
01/01/93-12/31/94	Ultrasonic Arrays for Simultaneous Hyperthermia and External Beam Radiation of Superficial Tumors	Eduardo G. Moros, Ph.D.	PI	WUSM Radiation Oncology Ctr	\$9,860	Completed
08/01/93-01/31/97	An Ultrasound Array System For Simultaneous Hyperthermia and External Beam Radiation of Superficial Neoplasms	Eduardo G. Moros, Ph.D.	PI	Whitaker Foundation	\$153,733	Completed
07/01/97-06/30/98	Fourth Year Award. An Ultrasound Array System for Simultaneous Hyperthermia & External Beam Radiation of Superficial Neoplasms	Eduardo G. Moros, Ph.D.	PI	Whitaker Foundation	\$44,226	Completed

Period	Title	PI(s)	Role	Source	Direct	Status
01/01/94-05/30/03	1) Research & <i>In Vivo/In Vitro</i> Testing for Carcinogenic Potential of FMCW & CDMA 850 MHz, 2) Acute Low Intensity MW Exposure & DNA Damage, 3) Follow-Up <i>In Vitro</i> Studies: Transformation, Oxidative Stress & Gene Expression, 4) Eng/Phys Core: <i>In Vivo/In Vitro</i> UHF Irradiator R&D, SAR Dosimetry & Tech Support; & 5) Additional Biol&Physics Studies	Joseph Roti Roti, Ph.D.	Leader Engr. & Physics Core	Motorola, Inc.	~ \$5M	Completed
07/01/01-05/30/04	RTL Development and Control for High SAR Exposures	Joseph Roti Roti, Ph.D.	Leader Physics Core	ILS, Inc.	\$85,974	Completed
07/01/02-06/30/04	Transrectal Ultrasound Hyperthermia Applicator	Eduardo G. Moros, Ph.D.	PI	WUSM Dept of Radiation Oncology	\$4,000	Completed
07/01/02-06/30/04	Imaging of Hyperthermia-Induced Tumor Oxygenation with Cu-ATSM PET	Robert J. Myerson, Ph.D., M.D.	Co-I	WUSM Dept of Radiation Oncology	\$10,000	Completed
10/01/03-09/30/04	Evaluation of Potential Effects on the P38MAPK Stress Inducible Phosphorylation	Joseph L. Roti Roti, Ph.D.	Co-I	Mobile Manufacturers Forum	\$34,945	Completed
07/01/09-06/30/10	Feasibility of Down-Staging Chemoradiotherapy Resistant Locally Advanced Breast Cancer with Thermal Ablation and/or GRID Radiation Therapy	Eduardo G. Moros, Ph.D.	PI	FFANY/QVC via Winthrop P. Rockefeller Cancer Institute Breast Cancer Program	\$45,283	Completed
11/08/06-05/07/08	Contrast-Enhanced Ultrasound Guidance of Thermal Ablation Therapy – Proof of Concept	Petr Novak, Ph.D.	Co-I and Mentor	UAMS Intramural Grant Prog.	\$15,000	Completed
06/18/10-06/20/10	Threshold For Therapeutic Efficacy Via Vascular Damage After Spatially Fractionated Radiation	Robert Griffin, Ph.D.	Co-I	European Synchrotron Radiation Facility (ESRF)	ID17 Beamline Time	Completed
01/01/10-06/30/11	Partial Heart Irradiation, Radiation-Induced Heart Disease and the UAMS SACRRS	Ming Chao, Ph.D. and Sunil Sharma, Ph.D.	Co-I and Mentor	UAMS Medical Research Endowment	\$13,700	Completed
07/01/11-06/30/12	MRgFUS Hypoxic-Tissue Ablation in Solid Tumors	Xin Chen, Ph.D.	Co-I and Mentor	Focused Ultrasound Surgery Foundation	\$100,000	Completed

Period	Title	PI(s)	Role	Source	Direct	Status
04/02/14-06/30/16	Increasing the Likelihood of a Patient-Specific Abscopal Effect in Metastatic Renal Cell Carcinoma.	Heiko Enderling, Ph.D.	Co-PI	DeBartolo Family Personalized Med. Inst. PRAPM Award	Phase 1: \$20,000 Phase 2: \$50,000	Completed
05/15/16-05/14/19	Targeted Alpha Therapy for Uveal Melanoma (Team Science Award requiring three PIs from different disciplines and at least one young investigator)	Eduardo G. Moros, Ph.D., David Morse, Ph.D., Mark McLaughlin, Ph.D.	Co-PI	Melanoma Research Alliance. Team Science Award #402889	\$900,000	Completed
01/01/19-12/31/19	American Association of Physicists in Medicine (AAPM) Diversity and Inclusion Videos. https://w4.aapm.org/memb/index.php	AAPM Leads: J. Pollard-Larkin, Ph.D., MDACC and E.G. Moros, Ph.D., MCC	Co-PI	AIP Venture Partnership Fund	\$17,500	Completed
09/01/20-01/31/22	Evaluation of the Adaptive Radiotherapy Ethos Treatment System for Head and Neck Cancers	Gage Redler, Ph.D. and Eduardo G. Moros, Ph.D.	Co-PI	Varian Medical Systems, Inc.	\$70,721 Total	Completed
02/01/21-12/31/22	Ethos Workflow Development for Adaptive Low Dose Radiation Treatment of Widespread Metastases in Stage IV NSCLC Patients Receiving Systemic Immunotherapy	Gage Redler, Ph.D.	Co-I	Varian Medical Systems, Inc.	\$84,147 Total	Completed
04/15/19-08/30/24	Objective Evaluation of Machine Learning Potential for Automated Segmentation and Generation of Head and Neck Plans with Proven Reduced Toxicity	Vladimir Feygelman, Ph.D.	Co-I Co-PI on 2023-24	Varian Medical Systems, Inc.	\$343,636 Total	Active
10/31/22-07/01/23	Artificial Intelligence for Effective MR-Linac Adaptive Radiotherapy	Issam El Naqa, Ph.D.	Co-I	ViewRay Technologies	\$74,427	Interrupted
06/01/23-05/31/26	Image-Based Three-Dimensional Radiation Dosimetry for Ac-225-MTI-201	Chris Tichacek, Ph.D.	Mentor	ASTRO-MRA Young Investigator Rad Onc Award	\$241,320 (total)	Active

Academic Service

At Moffitt Cancer Center and Research Institute (MCC):

Radiation Oncology

2023 – pres Radiopharmaceutical Therapy & Theranostics Committee

2022 – 2023 FORT Intramural Funding Review Committee
 2021 – pres Medical Physics Residency Program, Senior Advisor
 2019 – 2022 Proton Therapy Technology (Assessment) Committee, Chair
 2019 – 2023 ViewRay-Moffitt Joint Scientific Committee (JSC), Member (Discontinued)
 2019 – pres Medical Physics Residency Program Steering Committee, Member
 2017 – 2018 Radiation Oncology Conference Organizing Committee Member, Jan 26 & 27, 2018
 2015 – 2022 FORT Committee, Member
 2012 – pres USF-MCC Medical Physics Ph.D. Program, Director
 2012 – pres USF-MCC Medical Physics Ph.D. Program Steering Committee, Chair
 2011 – pres Clinical Operations Committee, Member
 2011 – pres Medical Physics Faculty Committee, Chair
 2011 – 2021 Executive Management Committee, Member (Discontinued)
 2020 – 2021 Radiation Oncology Resident Recruitment Committee
 2019 – 2021 Medical Physics Residency Program, Director
 2019 – 2021 Medical Physics Residency Program Steering Committee, Chair
 2018 – 2019 MR-Linac Readiness Committee, Co-Chair
 2015 – 2021 Faculty & Staff Recruitment Committee, Member
 2014 – 2017 Physician Resident Recruitment Committee, Member
 2014 – 2017 Residency Program Clinical Competency Committee
 2012 – 2012 Academic Advisory Committee, Member
 2012 – 2014 Chair Search Committee, Member
 2012 – 2018 Physics & Dosimetry Journal Club; Organizer
 2011 – 2014 Clinical Research (ROCR) Committee, Member
 2011 – 2016 4D-PET/CT Committee, Physics Leader

Diagnostic Imaging and Interventional Radiology

2016 - 2018 *Physics of Medical Imaging* Course for USF Radiology Residents, Director

Cancer Physiology Department (formerly Cancer Imaging and Metabolism)

2012 – 2022 Secondary appointment as Senior Member, Vice-Chair 11/16/2012 to 01/16/2019.
 2020 – 2022 Targeted Radiopharmaceutical Group, Member
 2012 – 2022 Radiomics Group, Member
 2012 – 2019 Nanomedicine & Molecular Imaging Group, Member
 2012 – 2018 Quantitative Pre-Clinical Imaging Group, Member

Moffitt Cancer Center

2023 Vivarium New Advanced Small Animal X-ray Equipment Task Group
 2023 Moffitt Innovators of Tomorrow Symposium (MIOT), met one-on-one with Yuqi Wang, an engineering graduate student from Duke University
 2023 Appointment, Promotion and Tenure (APT) Committee, *Ad Hoc* Reviewer
 2022 – pres Proton Therapy Center Design and Development Committee, Member
 2022 – pres Proton Therapy Center Site Planning Committee, Member
 2022 – pres Radioisotopes and Radioactive Drug Research Advisory Committee (RADRAC)
 2021 – pres Women in Oncology Mentoring Program, Mentor to an Assistant Member MD
 2021 – 2022 Proton Therapy Center Steering Committee, Member
 2020 – 2022 Carbon Ion Treatment Center Assessment Task Force, Physics Leader
 2014 – pres Innovation and Technology Committee (ITC), Member and grant application reviewer
 2011 – pres Cancer Center Support Grant (CCSG), Member, Cancer Biology and Evolution Program
 2021 Proton Therapy Technology RFP Committee, Chair

- 2020 – 2021 APT’s Early Promotion Guidance Subcommittee, Member
- 2019 – 2020 Radiomics Design Sprint (Enterprise-wide working groups to develop a business plan for Radiomics and Image Bank)
- 2017 – 2022 Appointment, Promotion and Tenure (APT) Committee, appointed by the Vice-President, Division of Clinical Sciences, Dr. Douglas Letson, Physician-in-Chief
- 2018 – 2019 APT Criteria Work Group to revise the academic pathway structure and promotion criteria for faculty in the Division of Clinical Sciences (DCS), Member. Appointed by Dr. Lynn Moscinski, CAO
- 2014 – 2019 Faculty Advisory Committee, Member
- 2012 – 2013 Mock Grant Reviewer, Member

At the University of South Florida (USF):

- 2021-2022 Faculty Recruitment Committee, Member, Department of Physics
- 2019 Distinguished University Professor Discipline Committee for Dr. Hariharan Srikanth, Member. Appointed by Dr. Dwayne Smith, Senior Vice Provost and Dean, School of Graduate Studies

At the University of Arkansas for Medical Sciences (UAMS):

- 2005 – 2011 Radiation Safety Committee (UAMS College of Medicine), Member
- 2006 – 2007 College of Medicine Research Council, Member, 2006-2007
- 2006 – 2007 Faculty Diversity and Community Outreach (FDCO) Committee and Mentoring Program for underrepresented minority (URM) faculty and students
- 2006 – 2011 Medical Physics Residency Program, Director
- 2006 – 2011 Medical Physics Residency Program Steering Committee, Chair
- 2007 Faculty Marshal for Medical Dosimetry, UAMS Commencement, May 19
- 2007 – 2011 Radiation Safety Officer (RSO) of CARTI/UAMS, Radiation Material License No. ARK-0930-02230, and Particle Accelerator License No. ARK-042-ACC-12
- 2007 – 2011 Interviewer of Medical School Applicants
- 2010 – 2011 Radiation Safety Committee, Chair, appointed by the Chancellor of UAMS

At Washington University in St. Louis & School of Medicine (WUSTL, WUSM):

- 1993 – 2005 Radiation Oncology Center Research Committee, Member
- 1998 – 1999 Radiation Oncology Center Steering Committee, Member elected by peers, 1998-1999
- 2000 – 2002 Joint Office of Strategic Planning, Barnes-Jewish Hospital & WUSM. Radiation Oncology Strategic Planning, Member of the Clinical Effectiveness Design Team
- 2000 – 2003 Radiation and Cancer Biology Program Project Grant (P01), Advisory Board Member
- 2000 – 2005 Physics Principal Investigators Committee, Dept. of Radiation Oncology, Chair
- 2001 – 2002 Radiation Oncology Center Computer Support Taskforce, Member
- 2003 – 2004 Research Committee, Department of Radiation Oncology, Chairman (interim)
- 2003 – 2005 Radiation Oncology Department Steering Committee, Member
- 2004 Radiation Oncology Research Retreat, Organizer and Chair, held on 11/22/2004
- 2004 – 2005 Radiation Oncology Department Executive Committee, Member
- 2004 – 2005 Radiation Oncology Department Residents’ Grievance Committee, Member

Professional Service

Professional and Scientific Association Memberships:**Current**

1992 – pres	American Association of Physicists in Medicine (AAPM)
2001 – pres	American Society for Radiation Oncology (ASTRO)
2024 – pres	Society of Nuclear Medicine and Molecular Imaging (SNMMI)
2024 – pres	The European Federation of Organizations for Medical Physics (EFOMP)

Former

1984 – 2005	American Society of Mechanical Engineers (ASME)
1988 – 2005	North American Hyperthermia Society, Charter Member (NAHS, now STM)
1989 – 2004	Ultrasonics, Ferroelectrics and Frequency Control Society (IEEE-UFFC)
1989 – 2007	Institute of Electrical and Electronics Engineers (IEEE)
1994 – 2007	Engineering in Medicine and Biology Society (IEEE-EMBS)
1996 – 2012	Bioelectromagnetics Society (BEMS)
2000 – 2015	Radiation Research Society (RRS)
2005 – 2015	Society for Thermal Medicine (STM, formerly NAHS)
2009 – 2010	International Society for Therapeutic Ultrasound (ISTU)
2022 – 2023	Radiation Research Society (RRS)

Editorial Board Memberships:

2000 – 2007	<i>Board of Editors, <u>Medical Physics</u></i>
2006 – 2009	<i>Associate Editor, <u>International Journal of Hyperthermia</u></i>
2007 – 2019	<i>Associate Editor, <u>Journal of Applied Clinical Medical Physics</u></i>
2008 – 2013	<i>Associate Editor, <u>Radiation Research</u></i>
2009 – 2022	<i>International Editorial Board, <u>Biomedical Engineering: Applications, Basis and Communications</u></i>
2012 – 2020	<i>Editorial Board, Radiation Physics, <u>Journal of Radiation Oncology</u></i>
2022 – 2024	<i>Associate Section Editor, <u>Advances in Radiation Oncology</u></i>

Reviewer for the following Scientific Journals:

Manuscript referee/reviewer for the following peer-reviewed journals: *(listed alphabetically)*

Bioelectromagnetics (BEMS)
 Biomedical Engineering (IEEE)
 Biomedical Physics & Engineering Express (IOP)
 Cancers (MDPI)
 Cell Biology International (IFCB)
 European Radiology Experimental
 Health Physics Journal (HPS)
 International Journal of Hyperthermia (STM)
 International Journal of Radiation Oncology, Biology and Physics (ASTRO)
 Journal of Applied Clinical Medical Physics (AAPM)
 Journal of Biomechanical Engineering (ASME)
 Journal of the Acoustical Society of America (APS)
 Mathematical Medicine & Biology (IMA)
 Medical Physics (AAPM)
 Microwaves Theory and Techniques (IEEE)
 Molecular Pharmaceutics (ACS)
 Nature Scientific Reports

Numerical Heat Transfer
Physics in Medicine and Biology (IOP)
Radiation Research (RRS)
Technology for Cancer Research and Treatment
Theranostics
Ultrasonics, Ferroelectrics and Frequency Control (IEEE)

Reviewing and Judging Activities: *(listed chronologically, most recent first)*

AAPM Virtual Annual Meeting and Exhibition, July 25-29, 2021. Reviewer of proffered abstracts.
AAPM Science Council Reviewer for Task Group 198 Report: An implementation guide for TG-142 Quality Assurance of Medical Accelerators. Spring 2021.
Judge/Reviewer of the 2020 AAPM Early Career Investigator In Imaging Travel Award.
AAPM Virtual Joint AAPM/COMP Meeting, July 12-16, 2020. Reviewer of proffered abstracts.
AAPM Annual Meeting and Exhibition, Denver, CO, July 30-Aug 3, 2017. Reviewer of proffered abstracts.
AAPM Annual Meeting & Technical Exhibition, Austin, TX, Jul 20-24, 2014. Reviewer of proffered abstracts.
AAPM Joint Working Group for Research Seed Funding Initiative. Annual seed grant reviewer, 2008-2010, 2012, 2013.
AAPM Annual Meeting & Technical Exhibit, Indianapolis, In, August 4-8, 2013. Reviewer of proffered abstracts.
2013 Moffitt Scientific Symposium. Judge of posters.
AAPM Annual Meeting and Technical Exhibit, Charlotte, NC, July 29 – August 2, 2012. Reviewer of proffered abstracts.
2012 Moffitt Scientific Symposium. Judge of posters.
Joint meeting of the American Association for Physicists in Medicine (AAPM) and the Canadian Organization of Medical Physicists (COMP), Vancouver, BC, Canada, July 31-August 4, 2011. Reviewer of proffered abstracts.
Editor's Award for the best paper published in *Radiation Research* in 2008 by a Scientist in Training (SIT). Member of a four-judge panel that made the final selection.
Editor's Awards for the best papers published by a young investigator in the fields of Biology, Medicine and Physics/Engineering in the *International Journal of Hyperthermia* in 2007. Judge.
Best papers of 2007 published in the *Journal of Applied Clinical Medical Physics*. Judge.
9th International Congress of Hyperthermic Oncology (ICHO). Abstract reviewer and judge of the Young Investigators Award competition, April 20-24, 2004.
Annual Meeting of the American Association of Physicists in Medicine, Montreal, Canada, July 14 - 18, 2002. Reviewer of proffered abstracts.
Annual Meeting of the American Association of Physicists in Medicine, Salt Lake City, UT, July 22 - 26, 2001. Reviewer of proffered abstracts.
World Congress on Medical Physics and Biomedical Engineering, Chicago, IL, July 23-28, 2000. Reviewer of proffered abstracts.
International Mechanical Engineering Congress and Exposition (IMECE), American Society of Mechanical Engineers (ASME), Heat Transfer Division, Committee on Heat and Mass Transfer in Biotechnology (K-17), 1993-2000. National Heat Transfer Conference, 2000. Reviewer of Conference Papers:

Chairmanships, Appointments, Committees, Study Sections, Review Panels & Working/Task Groups:
(listed chronologically, most recent first)

American Association of Physicists in Medicine (AAPM)

Working Group on Early Career and Clinical Research Opportunities [WGECRCRO], voting member, 08/01/2021 to 12/31/2024.

Working Group on Student and Trainee Research [WGSTR], voting member, 09/2019 – 12/31/2024.

Chair and voting member, Working Group on Review of Journal Editorial Team and Operation [WGRJETO], 01/01/2022 to 12/31/2023.

Administrative Council [AC], voting member, 01/01/2020 to 12/31/2023.

Science Council [SC], voting member, 01/01/2018 to 12/31/2023.

Vice Chair and voting member, Research Committee [RSRCH], 01/01/2018 to 12/31/2023.

- Panelist on Webinar Series on Advances in Medical Physics, 2016-2021 organized by RSRCH.
- <http://www.aapm.org/meetings/> (click on webinars)

Radiomics Subcommittee [RSC] of the Data Science Committee, voting member, 07/23/2019 – 12/31/2022.

Management of Medical Physics Programs and Departments [MMPPD] Committee, voting member, 08/01/2019 – 12/31/2022.

Task Group No. 241 [TG241] MR-Guided Focused Ultrasound (MRgFUS), Working Group on the Assessment of Technologies for Image-Guided Interventions, Technology Assessment Committee, Science Council, voting member, 01/01/2013-12/31/2021.

Working Group on Biological Effects of Hypofractionated Radiotherapy/SBRT [WGSBRT], Biological Effects SC, Therapy Physics, Science Council. Member of Unit No. 1 TCP [UN01], Unit No. 2 NTCP [UN02], Unit No. 4 Rationale for Rx [UN04], Unit No. 5 Reporting Standards [UN05], Unit No. 7 TCP H&N [UN07], Unit No. 13 NTCP H&N [UN13]. Voting member from 1/16/2013 to 12/31/2021.

Vice Chair, Working Group on Review of Journal Editorial Team and Operation [WGRJETO], 01/01/2021 to 12/31/2021.

Appointed by AAPM President to the Ad Hoc Committee for Review of Medical Physics Journal Editorial Team and Operations [AHRMPJ], voting member, 06/25/2019 – 12/31/2020.

Task Group 294 [TG294] on Magnetic Resonance Biomarkers in Radiation Oncology, Member, 2017-2020.

Working Group on Molecular Imaging on Radiation Oncology [WGMIR], Therapy Imaging Subcommittee. Member from 01/01/2013 to 12/31/2020.

Biological Effects Subcommittee [BESC] of the Therapy Committee, Member, 2007-2020.

Chair, Radiomics Subcommittee [RSC] of the Data Science Committee, formative activities, 01/01/2018 - 07/22/20.

Moderator, scientific session on “Image Analysis and Response Assessment”, 2019 AAPM Annual Meeting, San Antonio, TX, July 14-18, 2019.

Data Science Committee [DSC], Member, 01/01/2019 to 12/31/2019.

Research Committee [RSRCH] of Science Council, Member, 7/12/2015 to 12/31/2017.

Moderator, Joint Imaging-Therapy Session on MRI-Guided Applications, with Dr. O. Green. 2018 annual meeting.

Therapy Scientific Session entitled “New Treatment Devices and Approaches”, Moderator. AAPM 59th Annual Meeting and Exhibition in Denver, CO from July 30 – August 3, 2017, Colorado Convention Center, Denver, CO.

SAM Ultrasound Educational Course entitled “Therapeutic Ultrasound and Immunotherapy: A Primer”, Moderator. AAPM 59th Annual Meeting and Exhibition in Denver, CO from July 30 – August 3, 2017, Colorado Convention Center, Denver, CO.

Working Group on Conformal Small Animal Irradiation Devices, Biological Effects Subcommittee [WGCSAI], Member, 2008-2018.

Working Group on the Development of a Research Database, Research Committee [WGDRD], Member, 2010-2018.

Working Group on Funding and Grantsmanship [WGFG], member from 8/17/2012 to 12/31/2016.

Task Group No. 193 [TG193] - Image-Guided Focused Ultrasound Surgery (FUS). Member 2009-2015. This TG morphed into TG241

Chair, [WGDRD] Working Group on the Development of a Research Database, Research Committee, 7/12/2015 to 12/31/2016.

Chair of session on Treatment Strategies, Modeling and Control, Ultrasound Symposium 4, Annual AAPM

meeting, Indianapolis, IN, August 6, 2013.
Ultrasound Therapy Symposium, session on “Treatment Strategies, Modeling, Control, and Assessment”, co-moderator, Vancouver, Canada, August 3, 2011.
Joint Working Group for Research Seed Funding Initiative, Therapy Research Subcommittee [JWGRSF], Member, 2007-2012.
Committee on Golden Anniversary Planning [AHGAPC] - *Medical Physics Board of Editors Representative*, 2006-2007.
Thermal Therapies Subcommittee of the Therapy Committee, Member, 2000-2003.
Chair, Session on “Therapy”, 44th Annual Meeting, Montreal, Canada, July 14-18, 2002.
Chair, Thermal Therapies Subcommittee of the Therapy Committee, 2000-2001.
Medical Physics journal, member of selection committee for the 2001 Sylvia Sorkin Greenfield award (best overall paper) and the Farrington Daniels award (best radiation dosimetry paper).
Chair, Session on “Thermal Therapy”, 43rd Annual Meeting, Salt Lake City, UT, July 22-26, 2001.
Chair, Hyperthermia Subcommittee of the Therapy Committee, 1997-1999.
Chair, Sessions entitled “Advances in Thermotherapy Bioengineering” and “Emerging Thermal Therapy Technologies” (Track 11). World Congress on Medical Physics and Biomedical Engineering, Chicago, IL, July 23-28, 2000. Organized six scientific sessions and served as reviewer of proffered abstracts.
Hyperthermia Subcommittee, Therapy Committee, Member, 1996-1999.
Ultrasound Hyperthermia Quality Assurance Subcommittee, Therapy Committee, Member, 1992-1998.
Hyperthermia Committee, Member, 1994-1995.

American Society for Radiation Oncology (ASTRO)

ASTRO Mentorship Award Review Committee, 2022.
Clinical, Translational and Basic Science Advisory Subcommittee, 2021-2022.
Advancing Research Talent Subcommittee, member, 2021-2022.
Nominated for Candidate for the Nominating Committee-Physicist, June 2021.
Promoting Science through Research and Training Committee, 2017-2021.
Moderator of Quick Pitch 11 - Physics 05 - Imaging for Response Assessment and Outcome Analysis, ASTRO annual meeting, Miami (virtual), October 25-29, 2020.
Moderator of Symposium SS 21, Physics 5 – Imaging for Response Assessment, ASTRO annual meeting, Chicago, September 15-18, 2019.
Research Funding Advocacy Subcommittee, Chair, 2016-2017.
Research Funding Advocacy Subcommittee, Vice Chair, 2015-2016.
Funding Advocacy and Clinical Trials Subcommittee, Vice Chair, 2014-2015.
Science Steering Committee, 2015-2016.
Science Education and Program Development Committee, 2013-2014.
Funding Advocacy and Clinical Trials Subcommittee, 2013-2014.
NIH Clinical Trials Committee, Science Council, 2012-2014.
Radiation Physics Committee, Science Council, 2010-2014.
Session proposals for the 2014 ASTRO annual meeting, reviewer.
SAM session proposals for the 2014 ASTRO annual meeting, reviewer.
NIH Subcommittee, Government Relations Council, 2007-2012.
Radiation Physics Committee 2011 Panel Proposals, Reviewer.
ASTRO Advocacy Day June 9, 2009. Visited with Arkansas Senators Blanche Lincoln and Mark Pryor (the first ever ASTRO representative from the State of Arkansas).

STM, RRS, ICHO & NAHS

STM, Finance Committee member, 2014-2015.
STM, Chair, Symposium on “New Devices and Approaches”, 31st Annual Meeting of the Society for Thermal Medicine, Minneapolis, MN, May 10, 2014.

STM, Awards Committee, member, 2013-2014.

ICHO&JCTM 2012: 11th International Congress of Hyperthermic Oncology & 29th Japanese Congress of Thermal Medicine. Member of the International Scientific Committee for Physics and Engineering. August 28-31, 2012, Kyoto, Japan.

STM, Chair/introducer of the Robinson Award Lecture, Robert J. Myerson, Ph.D., M.D., awardee. New Orleans, LA, May 1, 2011.

STM, Society for Thermal Medicine 28th annual meeting. Co-chair of the Joint BEMS-STM Session, New Orleans, LA, April 29-May 2, 2011.

RRS Finance Committee member, 2010-2012.

STM, Chair, scientific session on “Thermal Therapy Technology - Experimental and Computational Investigations”, Society for Thermal Medicine 27th Annual Meeting, Clearwater, FL, April 26, 2010.

STM, Society for Thermal Medicine, Chair/introducer of the Robinson Award Lecture, Chris J. Diederich, Ph.D., awardee. Clearwater, FL, USA, April 25, 2010.

STM, Society for Thermal Medicine 26th annual meeting. Member of the Organizing Committee and Chair of the Scientific Session “Advances in Thermal Ablation Technologies”, Tucson, AZ, April 3-7, 2009.

STM Organizing Committee of the 25th Annual Meeting in conjunction with the World Congress on Interventional Oncology, Washington DC, May 2007.

STM, Moderator of Oral Presentations 3, Society for Thermal Medicine 24th annual meeting, Bethesda, MD, April 7, 2006.

STM, Co-Moderator, Engineering/Physics Workshop, Society for Thermal Medicine 23th annual meeting, Bethesda, MD, April 1, 2005.

STM Organizing Committee for the 2005 Annual Meeting.

ICHO, Chair, the 2nd Sugahara Award; Dr. Chang Song, awardee. 10th International Congress on Hyperthermic Oncology, Munich, Germany, April 10, 2008.

International Organizing Committee member, ICHO/NAHS Scientific Coordinator, and Chair of Local Arrangements Committee. 9th International Congress of Hyperthermic Oncology (ICHO 2004), St. Louis, MO, April 20-24, 2004.

Chair/introducer, North American Hyperthermia Society’s Robinson Award Lecture, Kullervo H. Hynynen, Ph.D., awardee. St. Louis, MO, USA, April 20-24, ICHO 2004.

Chair, Special Lectures on "Non-Invasive Thermometry", Dr. H. Kato (JP) Co-Chair. ICHO 2004, St. Louis, MO, USA, April 20-24, 2004.

RRS Membership Committee, 2003-2006.

NAHS Long Range Planning Committee, appointed member, 2002-2003.

NAHS Conference Site Selection Committee, 1999-2003.

NAHS/RRS Annual Meeting Program Committee, appointed member, 2001-2003.

NAHS Membership Committee, appointed member, 2001-2003.

NAHS AAPM Liaison, appointed, 2000-2003.

NAHS Finance Committee, appointed member, 2001-2002.

NAHS, Co-Chair, Symposium on “Treatment Planning and Biothermal Modeling”, 19th Annual Meeting, San Juan, Puerto Rico, April 21-25, 2001.

ICHO, Co-Chair, Physics Symposium on “Developments in Heating Technology & Treatment Planning”. 8th Intl. Congress of Hyperthermic Oncology, Kyong-Ju, Korea, April 26-29, 2000.

NAHS, Chair, Engineering & Physics Paper Presentations - Physics Session, 18th Annual Meeting, April 8-10, Philadelphia, PA, 1999.

NAHS, Chair, Symposium on “Advances in Oncological Hyperthermia Technology”, 17th Annual Meeting, Louisville, KY, April 1998.

NAHS Conference/Program Organizing Committee, 17th annual meeting, Louisville, KY, April, 1998.

NAHS Web Site Committee, appointed member, 1997-2002.

RRS/NAHS, Chair, Session “Thermometry, Thermal Modeling and Quality Assurance”. Joint RRS/NAHS (16th) meeting, Providence, RI, May 1997.

NAHS Physics & Engineering Councilor (elected), 1996-1997.

RRS/NAHS, Moderator and Introducer, refresher course on “Simultaneous Heating and Radiation Therapy” by Peter Corry, Joint RRS/NAHS (16th) meeting, Providence, RI, May 4, 1997.

NIH, NRG, RTOG and Others: Working/Task Groups, Workshops, Assignments

European Federation of Organizations for Medical Physics (EFOMP), Special Interest Group for Radioisotopes Internal Dosimetry (SIG-FRID), member, March 2024-pres.

NRG-Oncology Working Group on Quality Assurance for Ultra-High Dose Rate (FLASH) Clinical Trials. 2021--pres.

NRG-NCI Working Group on Dosimetry of Radiopharmaceutical Therapy, 2018-2021.

NIH, NCI, Quantitative Imaging Network (QIN), Image Analysis & Performance Metrics Working Group (IAPMWG), PET/CT Subgroup; Member, 2016-2021.

Moderator, session on “Best Practices for Radiomics”, 10th annual MCC Radiomics Workshop, Clearwater, Oct 14-15, 2019.

NCI, Quantitative Imaging Network (QIN), Data Acquisition Working Group (DAWG); Member, 2013-2016.

IEEE, Chair and Organizer, session on “Thermal Therapies for Cancer and Benign Disease”. The First Joint Meeting of the Biomedical Engineering Society (BMES) and the IEEE Engineering in Medicine and Biology Society (EMBS), Atlanta, GA, October 13-16, 1999.

RTOG, Radiation Therapy Oncology Group, Interstitial Thermoradiotherapy Quality Assurance Physicist (RTOG-8419), 1992-1994.

Allerton Workshop Participant on “The Future of Biothermal Engineering”, University of Illinois at Urbana-Champaign (Grant No. NSF CTS 96-18518), JC Chato and RC Lee organizers, April 18-21, 1997.

National Institutes of Health (NIH) Study Sections: *(listed chronologically, most recent first)*

NIH/NCI Center for Scientific Review Special Emphasis Panel ZRG1 CTH-M (02), Radiation Therapeutics and Biology (RTB) Study Section, virtual, June 10, 2024.

NIH/NCI Center for Scientific Review Special Emphasis Panel ZRG1 CTH-B (02), Radiation Therapeutics and Biology (RTB) Study Section, virtual, March 29, 2024.

NIH/NCI Center for Scientific Review Special Emphasis Panel ZRG1 CTH-S (02), Radiation Therapeutics and Biology (RTB) Study Section, virtual, June 29, 2023.

National Institute of Allergy and Infectious Diseases (NIAID) Special Emphasis Panel, ZAI1 SB-I (C2), to evaluate the scientific and technical merit of contract proposals received in response to “Development of Radiation/Nuclear Medical Countermeasures (MCMs) and Biodosimetry Devices” (NIH-BAA-75N93021R00019), July 28 & 29, 2022.

National Cancer Institute Special Emphasis Panel/Scientific Review Group 2022/05 ZCA1 TCRB-9 (M1) S, SEP-8: NCI Clinical and Translational Cancer Research, review of R21 and R03 grants, virtual, March 10 & 11, 2022.

National Cancer Institute Special Emphasis Panel/Scientific Review Group 2022/01 ZCA1 TCRB-9 (J1) S, SEP-8: NCI Clinical and Translational Cancer Research, review of R21 and R03 grants, virtual, November 4 & 5, 2021.

National Cancer Institute Special Emphasis Panel/Scientific Review Group 2021/05 ZCA1 RPRB-J (M1) S, review of SPORE (P50) applications, virtual, February 26, 2021.

National Institute of Diabetes and Digestive and Kidney Diseases Special Emphasis Panel ZDK1 GRB-G (J1), NIDDK-KUH Fellowship Review Committee, Chicago, October 4, 2019.

Special Emphasis Panel/Scientific Review Group, NIBIB Quantum Review Meeting (2017 10) ZEB1 OSR-F (O1) S, Washington DC, June 28, 2017.

National Cancer Institute Special Emphasis Panel/Scientific Review Group 2014/10 ZCA1 SRB-J (O1) S, NCI Omnibus SEP-12 R03s (PAR14-007) and R21s (PAR13-146), Gaithersburg, MD, Jun 26 & 27, 2014.

National Cancer Institute Special Emphasis Panel/Scientific Review Group 2014/05 ZRG1 SBIB-Z (58) R, NCI Image-Guided Drug Delivery in Cancer (R01; PAR-13-185), Bethesda, MD, February 20, 2014.

National Cancer Institute Special Emphasis Panel/Scientific Review Group 2013/05 ZCA1 RTRB-Z (M1) R,

NCI Omnibus (R21/R03), Rockville, MD, February 27-28, 2013.

National Cancer Institute Special Emphasis Panel ZCA1 GRB-S J1 P, NCI Omnibus (R21/R03), Rockville, MD, Dec 4, 2012.

NCI Radiation Therapeutics and Biology (RTB) Study Section, Oncology 2 - Translational Clinical Integrated Review Group, Center for Scientific Review (CSR), Washington D.C., Jan 30-31, 2012.

Biomedical Imaging Technology B Study Section, Surgical Sciences, Biomedical Imaging and Bioengineering Integrated Review Group, CSR, San Antonio, TX, June 2-3, 2011.

Special Emphasis Panel/Scientific Review Group 2010/10 ICP1, Fogarty International Research Collaboration Award, FIRCA, CSR, June 10, 2010.

Study Section ZRG1 OTC-K (58) in Oncology-2 Translational Clinical IRG (OTC), CSR. Reviewer of ARRA RC1 Challenge Grant applications, June/July 2009.

Radiation Therapeutics and Biology (RTB) Study Section, Oncological Sciences Integrated Review Group, Center for Scientific Review (CSR), Washington D.C., January 29-30, 2007.

Special Emphasis Panel, 2007/01 Council ZRG1 ONC-R (11) S, SBIR/STTR, Center for Scientific Review (CSR), 10/30/06.

Special Emphasis Panel/Scientific Review Group 2006/01 ZRG1 SBIB-L (10) (B) meeting, CSR, 11/08/2005. Reviewer for Small Business grants: Bioelectromagnetics.

Radiation Therapeutics and Biology (RTB, formerly RAD) Study Section permanent member, CSR, 2003-05.

Radiation (RAD) Study Section member, Center for Scientific Review (CSR), 2002-2003.

Oncological Sciences Study Section (ONC), Special Emphasis Panel ZRG1 F09(20)L, Fellowships & AREA, CSR, July 17-18, 2003.

Oncological Sciences Study Section (ONC), Special Emphasis Panel ZRG1 F09(20)L, Fellowships & AREA, CSR, November 14-15, 2002.

Radiation Study Section (RAD) SBIR ZRG1 SSS-1(11)B, reviewer, CSR, March 13, 2002.

Radiation Study Section (RAD) invited reviewer, CSR, San Francisco, CA, Nov 2-4, 2001.

Subcommittee D – Clinical Trials, Initial Review Group, NCI-D GRB-4 (P2). Program Project (P01) Review and Site Visit, Feb. 2000.

Special Emphasis Panel, Radiation Study Section, ZRG1 RAD (2) S, Center for Scientific Review (CSR), reviewer, Jan 1999.

Multidisciplinary Sciences Special Emphasis Panel ZRG7 SSS-X (85), DRG, reviewer, Oct 1997.

Multidisciplinary Sciences Special Emphasis Panel ZRG7 SSS-X (47), DRG, reviewer, Feb 1995.

Radiation Study Section (RAD), Division of Research Grants (DRG), outside expert opinion, 1994, 1995.

National Cancer Institute, *ad hoc* grant reviewer, 1993.

Other National and International Study Sections: *(listed chronologically, most recent first)*

The European Research Council (ERC), Consolidator Grant 2024 Call, member of review panel of highly competitive proposals, chaired by Prof. Dr. Marianne Van Der Sande, July 2024.

The Netherlands Organisation for Scientific Research, NWO, domain: Applied and Engineering Sciences, Open Technology Programme, grant reviewer, May 2019.

Comisión Nacional de Investigación Científica y Tecnológica de Chile (CONICYT), FONDECYT Regular 2017 grant competition, Engineering Study Group 2, grant reviewer, November 2016.

Natural Sciences and Engineering Research Council of Canada (NSERC) (<http://www.nserc-crsng.gc.ca/>), Discovery grant reviewer, 2004, 2010.

Congressionally Directed Medical Research Programs (CDMRP), Breast Cancer Research Program (BCRP), U. S. Army Medical Research and Materiel Command (USAMRMC), Dept of Defense (DOD), Peer Review Panel Member-Scientist, March-September 2005.

International Science & Technology Center, Russia, (<http://www.istc.ru/>), grant reviewer, 2001, 2004.

Canada Foundation for Innovation (CFI) (<http://www.innovation.ca/>), grant reviewer, 2004.

Dutch Cancer Society, grant reviewer, 2002.

Canadian Institute of Health Research (CIHR), grant reviewer, 2002.

National Cancer Institute of Canada, grant reviewer, 1999-2001.

Cooperative Grants Program of the US Civilian Research & Development Foundation
(<http://www.crdf.org/CGP/cgp.html>), grant reviewer, 1999-2000.
American Cancer Society, grant reviewer, 1993.

Expert Panels, Advisory Boards, Consulting: *(listed chronologically, most recent first)*

Compatibility of Irradiation Research Protocols Expert Roundtable (CIRPER), Office of Radiological Security, National Nuclear Security Administration, Department of Energy, Invited expert, Waikoloa, HI, October 18th and 20th, 2022.
Advanced Molecular Imaging Division, Philips Healthcare, Medical Advisory Board Event on Novel Digital Positron Emission Technology (D-PET), November 5th, 2013, Cleveland, OH. Invited Thought Leader. (Also invited for 2014 but declined).
Science Café, one of three panelist for *Mysterious Physics* at the Vieux Carré / the Afterthought, 2721 Kavanaugh, Little Rock, AR, March 24, 2009, an evening of science with the open public encompassing everything from universal theories to medical applications.
Duke University Hyperthermia Program Project (P01), External Advisory Board member, 2007-2010.
2008 U.S. Food and Drug Administration Critical Path Workshop on Clinical Trials for Local Treatment of Breast Cancer by Thermal Ablation. FDA White Oak Campus Conference Center, Silver Spring, MD, September 15, 2008. Invited panelist/discussant.
Non-Lethal Weapons Bioeffects (6.1) Program Review, Office of Naval Research, Arlington, VA, July 17-18, 2007. Panel member and presenter.
Council of Ontario Universities, academic consultant for the appraisal of a proposed M.Sc. program in Biomedical Physics at Ryerson University, Toronto, Ontario, Canada. Site visit Nov 3 & 4, 2005.
Barnes-Jewish Hospital Office of Research Affairs, Barnes-Jewish Foundation Intramural Funding Program, proposal reviewer, 2003 - 2004.
Consultant to Cellular Phone Manufacturers on *In Vitro* and *In Vivo* Electromagnetic Irradiator Systems and SAR Dosimetry for Bioelectromagnetics Research, 1995-2001.
Radiofrequency Micronucleus Working Group, Food and Drug Administration (FDA), Rockville, MA, August 1-2, 2000. Invited scientific expert on RF irradiation systems. This meeting was an initial step in a Cooperative Research and Development Agreement (CRADA) between the FDA Center for Devices and Radiological Health (CDRH) and the Cellular Telecommunications Industry Association (CTIA).

American Society of Mechanical Engineers

ASME, Committee on Heat and Mass Transfer in Biotechnology (K-17), member, 1993-2003.
ASME, Chair, Session on "Visualization and Imaging in Biotransport", International Mechanical Engineering Congress and Exposition (IMECE), New York City, NY, November 11-16, 2001.
ASME, Chair, Symposium on "Thermal Therapies", International Mechanical Engineering Congress and Exposition (IMECE), Nashville, TN, November 14-19, 1999.
ASME, Chair, Symposia on "Modeling of Mass Transfer in Biological Systems" and "Modeling of Heat Transfer in Biological Systems". International Mechanical Engineering Congress and Exposition (IMECE), Anaheim, CA, November 15-20, 1998.
ASME, Chair, Session on "Clinical Applications of Bio-Heat and Mass Transfer". International Mechanical Engineering Congress and Exposition (IMECE), Dallas, TX, November, 1997.
ASME, Co-Chair, Session on "Advances in Bio-Heat and Mass Transfer". International Mechanical Engineering Congress and Exposition (IMECE), San Francisco, CA, November, 1995.

Peer-Reviewed Publications

(listed chronologically by publication date)
(underlined name = first/co-first or senior/co-senior author)
(The list of papers ordered by number of citations is at
<https://scholar.google.com/citations?hl=en&user=BslTuE0AAAAJ>)

1986:

1. Hynynen K, Roemer R, **Moros EG**, Johnson C and Anhalt D. The effect of scanning speed on temperature and thermal exposure distributions during ultrasound hyperthermia *in vivo*. IEEE Transactions on Microwave Theory and Techniques, 1986;34(5):552-559.

1988:

2. **Moros EG**, Roemer R and Hynynen K. Simulations of scanned focused ultrasound hyperthermia: the effect of scanning speed and pattern on the temperature fluctuations at the focal depth. IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control, 1988;35:552-560.

1989:

3. Hynynen K, DeYoung D, Kundrat M and **Moros EG**. The effect of blood perfusion rate on the temperature distribution induced by multiple, scanned and focused ultrasonic beams in dogs' kidneys *in vivo*. International Journal of Hyperthermia, Jul 1989;5(4):485-497.

1990:

4. **Moros EG**, Roemer RB and Hynynen K. Pre-focal high temperature regions induced by scanning focused ultrasound beams. International Journal of Hyperthermia, 1990; 5:351-366.

1992:

5. **Moros EG** and Hynynen K. A comparison of theoretical and experimental ultrasound field distributions in canine muscle tissue *in vivo*. Ultrasound in Medicine and Biology, 1992;18:81-92.
6. Lin WL, Roemer RB, **Moros EG** and Hynynen K. Optimization of temperature distributions in scanned focused ultrasound hyperthermia. International Journal Hyperthermia, Jan 1992;8(1):61-78.
7. Steeves RA, Murray TG, **Moros EG**, Boldt HC, Mieler WF and Paliwal BR. Concurrent ferromagnetic hyperthermia and ¹²⁵Iodine brachytherapy in a rabbit choroidal melanoma model. International Journal of Hyperthermia, Jul 1992; 8(4):443-450.

1993:

8. **Moros EG**, Dutton AW, Roemer, RB, Burton M and Hynynen K. Experimental evaluation of two simple thermal models using hyperthermia in muscle *in vivo*. International Journal of Hyperthermia, 1993;9:581-598.
9. **Moros EG**, Myerson RJ and Straube WL. Aperture size to therapeutic volume relation for a multielement ultrasound system - determination of applicator adequacy for superficial hyperthermia. Medical Physics, Sep 1993;20(5):1399-1409.

1994:

10. **Moros EG**, Straube WL and Myerson RJ. Devices and techniques for the clinical application of concomitant heat and ionizing radiation by external means. Biomedical Engineering: Application, Basis and Communications, 1994;6:328-339.
11. Straube WL, Meigooni AS, **Moros EG**, Williamson J and Myerson RJ. HDR induced temperature artifacts: thermometry considerations for simultaneous interstitial thermoradiotherapy. International Journal of Radiation Oncology, Biology and Physics, Sep 1994;30(2):399-403.

1995:

12. **Moros EG**, Straube WL, Klein EE, Maurath J and Myerson RJ. Clinical system for simultaneous external superficial microwave hyperthermia and Cobalt-60 radiation. International Journal of Hyperthermia, 1995;11:11-26.
13. Straube WL, **Moros EG** and Myerson RJ. Phase stability of a clinical phased array system for deep regional hyperthermia. International Journal of Hyperthermia, 1995;11:87-93.

14. **Moros EG**, Straube WL, Klein EE, Yousaf M and Myerson RJ. Simultaneous delivery of electron beam therapy and ultrasound hyperthermia utilizing scanning reflectors: a feasibility study. *International Journal of Radiation Oncology, Biology and Physics*, 1995;31:893-904.
15. Myerson RJ, Emami E, Straube W, **Moros EG**, Lee HK, Lai PL and Grigsby P. Probabilistic relation between temperature, time, and local specific absorption rate (SAR) for regional hyperthermia. *Endocurietherapy/Hyperthermic Oncology*, 1995;11:155-166.

1996:

16. Emami B, Scott C, Perez CA, Asbell S, Swift P, Grigsby P, Montesano A, Rubin P, Curran W, Delrowe J, Arastu H, Fu K and **Moros E**. Phase III study of interstitial thermoradiotherapy compared with interstitial radiotherapy alone in the treatment of recurrent or persistent human tumors: a prospectively controlled randomized study by the radiation therapy oncology group. *International Journal of Radiation Oncology, Biology and Physics*, 1996;34:1097-1104. **Over 190 citations as of August 2023.**
17. **Moros EG**, Straube WL and Myerson RJ. A reflected-scanned ultrasound system for external simultaneous thermoradiotherapy. *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*, 1996;43:441-449.
18. **Moros EG**, Straube WL and Myerson RJ. Potential for power deposition conformability using reflected-scanned planar ultrasound. *International Journal of Hyperthermia*, 1996;12:723-736.
19. Straube WL, **Moros EG**, Low DA, Klein EE, Willcut MS and Myerson RJ. An ultrasound system for simultaneous hyperthermia and photon beam irradiation. *International Journal of Radiation Oncology, Biology and Physics*, 1996;36:1189-1200.

1997:

20. **Moros EG**, Fan X and Straube WL. An investigation of penetration depth control using parallel opposed ultrasound arrays and a scanning reflector. *Journal of the Acoustical Society of America*, 1997;101:1734-1741.
21. Fan X, **Moros EG**, and Straube WL. Acoustic field calculation for a single planar continuous-wave source using an equivalent phased array method. *Journal of the Acoustical Society of America*, 1997;102:2734-2741.
22. Malyapa RS, Ahern EW, Straube WL, **Moros EG**, Pickard WF, and Roti Roti JL. Measurement of DNA damage after exposure to 2450 MHz electromagnetic radiation. *Radiation Research*, 1997;148:608-617. **155 citations as of August 2023.**
23. Malyapa RS, Ahern EW, Straube WL, **Moros EG**, Pickard WF, and Roti Roti JL. Measurement of DNA damage following exposure to electromagnetic radiation in the cellular phone communication frequency band (835.62 and 847.74 MHz). *Radiation Research*, 1997;148:618-627. **160 citations as of August 2023.**

1998:

24. **Moros EG**, Fan X, Straube WL and Myerson RJ. Numerical and *in vitro* evaluation of temperature fluctuations during reflected-scanned planar ultrasound hyperthermia. *International Journal of Hyperthermia*, Jul 1998;14:367-382.
25. **Moros EG**, Straube WL, and Pickard WF. A compact shielded exposure system for simultaneous long-term UHF irradiation of forty mammals. I. Electromagnetic and environmental design. *Bioelectromagnetics*, 1998;19:459-468.

1999:

26. **Moros EG**, Straube WL, and Pickard WF. The radial transmission line as a broad-band shielded exposure system for microwave irradiation of large numbers of culture flasks. *Bioelectromagnetics*, 1999;20:65-80.
27. **Moros EG**, Straube WL and Pickard WF. A compact shielded exposure system for simultaneous long-term UHF irradiation of forty mammals. II Dosimetry. *Bioelectromagnetics*, 1999;20:81-93.
28. Goswami PC, Albee LD, Parsian AJ, Baty JD, **Moros EG**, Pickard WF, Roti Roti JL and Hunt CR. Proto-

oncogene mRNA levels and activities of multiple transcription factors in C3H 10T1/2 murine embryonic fibroblasts exposed to 835.62 and 847.74 MHz cellular phone communication frequency radiation. *Radiation Research*, 1999;151:300-309.

29. Pickard WF, Straube WL, **Moros EG**, and Fan X. Simplified model and measurement of specific absorption rate distribution in a culture flask within a transverse electromagnetic mode exposure system. *Bioelectromagnetics*, 1999;20:183-193.
30. **Moros EG**, Fan X and Straube WL. Experimental assessment of power and temperature penetration depth control with a dual frequency ultrasonic system. *Medical Physics*, 1999;26:810-817.
31. Straube WL, **Moros EG**, Myerson RJ, Fan X. A two-parameter method for the estimation of ultrasound induced temperature artifacts. *International Journal of Hyperthermia*, 1999;15:187-202.
32. Fan X, **Moros EG**, and Straube WL. A concentric-ring equivalent phased array method to model large axisymmetric ultrasound transducers. *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*, 1999;46:830-841.
33. Myerson RJ, Straube WL, **Moros EG**, Emami BN, Lee HK, Perez CA, Taylor ME. Simultaneous superficial hyperthermia and external radiotherapy: report of thermal dosimetry and tolerance to treatment. *International Journal of Hyperthermia*, 1999;15:251-266.
34. **Moros EG** and Pickard WF. On the assumption of negligible heat diffusion during the thermal measurement of a non uniform specific absorption rate. *Radiation Research*, Sep. 1999;152:312–320.
35. Straube WL, Myerson RJ, and **Moros EG**. A multi-user networked database for analysis of clinical and temperature data from patients treated with simultaneous radiation and ultrasound hyperthermia. *International Journal of Hyperthermia*, 1999;15:419-426.
36. **Moros EG**, Fan X and Straube WL. An ultrasound power deposition model for the chest wall. *Ultrasound in Medicine and Biology*, 1999;25:1275-1287.
37. Higashikubo R, Culbreth VO, Spitz DR, Pickard WF, La Regina M, Straube WL, **Moros EG**, Gutting KM, Kuepfert HL, and Roti Roti JL. Radiofrequency electromagnetic fields have no effects on the *in vivo* proliferation of the 9L brain tumor. *Radiation Research*, 1999;152:665-671.

2000:

38. Pickard WF, Straube WL, **Moros EG**, and Fan X. Experimental and numerical determination of SAR distributions within culture flasks in a dielectric loaded radial transmission line. *IEEE Transactions on Biomedical Engineering*, Feb 2000;47:202-208.
39. Fan X, **Moros EG**, and Straube WL. Ultrasound field estimation method using a secondary source-array numerically constructed from a limited number of pressure measurements. *Journal of the Acoustical Society of America*, Jun 2000;107:3259-3265.
40. **Moros EG**, Straube WL, Myerson RJ, and Fan X. The impact of ultrasonic parameters on chest wall hyperthermia. *International Journal of Hyperthermia*, Nov-Dec 2000;16:523-538.

2001:

41. Straube WL, Klein EE, **Moros EG**, Low DA, and Myerson RJ. Dosimetry and techniques for simultaneous hyperthermia and radiation therapy. *International Journal of Hyperthermia*, 2001;17:48-62.
42. Pickard WF and **Moros EG**. Energy deposition processes in biological tissue: nonthermal biohazards seem unlikely in the ultra-high frequency range. *Bioelectromagnetics*, 2001;22(2):97-105.
43. Vijayalaxmi, Pickard WF, Bisht KS, Leal BZ, Meltz ML, Roti Roti JL, Straube WL and **Moros EG**. Cytogenetic studies in human blood lymphocytes exposed *in vitro* to radiofrequency radiation at a cellular telephone frequency (835.62 MHz, FDMA). *Radiation Research*, 2001;155:113-121.
44. Roti Roti JL, Malyapa RS, Bisht KS, Ahern EW, **Moros EG**, Pickard WF, and Straube WL. Neoplastic transformation in C3H 10T1/2 cells after exposure to 835.62 MHz FDMA and 847.74 MHz CDMA Radiations. *Radiation Research*, 2001;155:239-247.

45. Li Li, Bisht KS, LaGroye I, Zhang P, Straube WL, **Moros EG**, Roti Roti JL. Measurement of DNA damage in mammalian cells exposed to radiofrequency fields at SARs of 3-5 W/kg. *Radiation Research*, 2001;156:328-332.
46. Vijayalaxmi, Pickard WF, Bisht KS, Prihoda TJ, Meltz ML, LaRegina MC, Roti Roti JL, Straube WL, and **Moros EG**. Chromosome damage and micronuclei formation in human blood lymphocytes exposed *in vitro* to radiofrequency radiation at a cellular telephone frequency (847.74 MHz, CDMA). *Radiation Research*, 2001;156:430-432. **106 citations as of August 2023.**
47. Vijayalaxmi, Pickard WF, Bisht KS, Prihoda TJ, Meltz ML, La Regina MC, Roti Roti JL, Straube WL and **Moros EG**. Micronuclei in the peripheral blood and bone marrow cells of rats exposed to 2450 MHz radiofrequency radiation. *International Journal of Radiation Biology*, 2001;77(11):1109-1115.
48. Higashikubo R, Ragouzis M, **Moros EG**, Straube WL, Roti Roti JL. Radiofrequency electromagnetic fields do not alter the cell-cycle progression of C3H10T $\frac{1}{2}$ and U87MG cells. *Radiation Research*, 2001;156:786-795.

2002:

49. Bisht KS, **Moros EG**, Straube WL and Roti Roti JL. The effect of 835.62 MHz FDMA or 847.74 MHz CDMA modulated radiofrequency radiation on the induction of micronuclei in C3H 10 T1/2 cells. *Radiation Research*, 2002;157(5):506-515.
50. Xu M, Myerson RJ, Straube WL, **Moros EG**, LaGroye I, Wang LL, Lee JT and Roti Roti JL. Radiosensitization of heat resistant human tumor cells by one hour at 41.1°C and its effect on DNA repair. *International Journal of Hyperthermia*, 2002;18(5):385-403.

2003:

51. Arthur RM, Straube WL, Starman JD and **Moros EG**. Noninvasive temperature estimation based on the energy of backscattered ultrasound. *Medical Physics*, 2003; 30(6):1021-1029. **128 citations as of August 2023.**
52. La Regina M, **Moros EG**, Pickard WF, Straube WL, Baty J and Roti Roti JL. The effect of chronic exposure to 835.62 MHz FDMA or 847.74 MHz CDMA on the incidence of spontaneous tumors in rats. *Radiation Research*, 2003;160:143-151.

2004:

53. Lagroye I, Anane R, Wettring BA, **Moros EG**, Straube WL, La Regina M, Niehoff M, Pickard WF, Baty J, Roti JL. Measurement of DNA damage after acute exposure to pulsed-wave 2450 MHz microwaves in rat brain cells by two alkaline comet assay methods. *International Journal of Radiation Biology*, 2004;80(1):11-20.
54. Singh AK, **Moros EG**, Novak P, Straube W, Zeug A, Locke JE, Myerson RJ. A microPET compatible, small animal hyperthermia ultrasound system (SAHUS) for sustainable, collimated and controlled hyperthermia of subcutaneously implanted tumors. *International Journal of Hyperthermia*, 2004;20(1):32-44.
55. Hook GJ, Zhang P, Lagroye I, Li L, Higashikubo R, **Moros EG**, Straube WL, Pickard WF, Baty J, Roti Roti JL. Measurement of DNA damage and apoptosis in Molt-4 cells following *in vitro* exposure to radiofrequency radiation. *Radiation Research*, 2004;161(2):193-200. **146 citations as of August 2023.**
56. Lagroye I, Hook GJ, Wettring BA, Baty JD, **Moros EG**, Straube WL, Roti Roti JL. Measurements of alkali-labile DNA damage and protein-DNA crosslinks after 2450 MHz microwave and low-dose Gamma irradiation *in vitro*. *Radiation Research*, 2004;161(2):201-214.
57. **Moros EG**, Novak P, Straube WL, Kolluri P, Yablonskiy DA, Myerson RJ. Thermal contribution of compact bone to intervening tissue-like media exposed to planar ultrasound. *Physics in Medicine and Biology*, 2004;49(6):869-886.
58. Xu M, Myerson RJ, Hunt C, Kumar S, **Moros EG**, Straube WL and Roti Roti JL. Transfection of human tumor cells with MRE11 siRNA and the increase radiation sensitivity and the reduction in heat-induced

radiosensitization. *International Journal of Hyperthermia*, 2004;20(2):157–162.

59. Myerson RJ, Roti Roti JL, **Moros EG**, Straube WL and Xu M. Modeling heat induced radiosensitization: Clinical implications. *International Journal Hyperthermia*, 2004;20(2):201–212.
60. Hook GJ, Spitz DR, Sim JE, Higashikubo R, Baty JD, **Moros EG**, Roti Roti JL. Evaluation of parameters of oxidative stress following *in vitro* exposure to FMCW and CDMA modulated radiofrequency radiation fields. *Radiation Research*, 2004;162(5):497-504.

2005:

61. Novak P, **Moros EG**, Straube WL and Myerson RJ. SURLAS. A new clinical grade ultrasound system for sequential or concomitant thermoradiotherapy of superficial tumors: Applicator description. *Medical Physics*, Jan 2005;32(1):230-240.
62. Locke J, Zeug A, Thompson D, Allan J, Mazzarella K, Novak P, Hanson D, Singh A, **Moros EG**, Pandita TK. Localized versus regional hyperthermia: Comparison of xenotransplants treated with a small animal ultrasound system and waterbath limb immersion. *International Journal of Hyperthermia*, May 2005;21(3): 271–281.
63. Laszlo A, **Moros EG**, Davidson T, Bradbury M, Straube W, Roti Roti JL. Lack of activation of the heat shock factor in mammalian cells exposed to cellular phone frequency microwaves. *Radiation Research*, Aug 2005;164(2):163–172.
64. Arthur RM, Trobaugh JW, Straube WL, **Moros EG**. Noninvasive estimation of hyperthermia temperatures with ultrasound. *International Journal of Hyperthermia*, Sept 2005;21(6):589-600. ***Peer-reviewed invited paper for a special issue on Non-Invasive Thermometry. Over 300 citations as of August 2023.***
65. Whitehead TD, Brownstein BH, Parry JJ, Thompson N, Cha B, **Moros EG**, Rogers BE, Roti Roti JL. Expression of the proto-oncogene Fos after exposure to radiofrequency radiation relevant to wireless communications. *Radiation Research*, Oct 2005;164(4):420-430.
66. Novak P, **Moros EG**, Parry JJ, Rogers BE, Myerson RJ, Zeug A, Locke J, Rossin R, Welch MJ, Straube WL, Singh AK. Experience with a Small Animal Hyperthermia Ultrasound System (SAHUS): Report on 83 Tumors. *Physics in Medicine and Biology*, Nov 2005;50(21):5127-5139.
67. Novak P, **Moros EG**, Straube WL and Myerson RJ. SURLAS: Treatment delivery software for a new clinical grade ultrasound system for thermoradiotherapy – Safety controls and risk analysis. *Medical Physics*, Nov 2005;32(11):3246-3256.
68. Arthur RM, Trobaugh JW, Straube WL, **Moros EG**. Temperature dependence of ultrasonic backscattered energy in motion-compensated images. *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*, Oct 2005;52(10):1644-1652. (*Electronic version includes movies of apparent motion of specimens due to temperature elevation*).

2006:

69. Myerson RJ, Singh AK, Bigott HM, Cha B, Engelbach JA, Kim J, Lamoreaux WT, **Moros EG**, Novak P, Sharp TL, Straube WL, Welch MJ, Xu M. Monitoring the effect of mild hyperthermia on tumor hypoxia by Cu-ATSM PET scanning. *International Journal of Hyperthermia*, Mar 2006;22(2):93-116.
70. Whitehead TD, **Moros EG**, Brownstein BH, Roti Roti JL. Gene-expression does not change significantly in C3H 10T ½ cells after exposure to 847.74 CDMA or 835.62 FDMA radiofrequency radiation. *Radiation Research*, 2006;165:626-635.
71. Whitehead TD, **Moros EG**, Brownstein BH, Roti Roti JL. The number of genes changing expression after chronic exposure to Code Division Multiple Access or Frequency DMA radiofrequency radiation does not exceed the false-positive rate. *Proteomics*, Sep 2006;6(17):4739-44.
72. Vanderwaal RP, Cha B, **Moros EG**, Roti Roti JL. HSP27 phosphorylation increases after 45 degrees C or 41 degrees C heat shocks but not after non-thermal TDMA or GSM exposures. *International Journal of Hyperthermia*, Sep 2006;22(6):507-19.

73. Pickard WF, **Moros EG**, Cha BA, and Novak P. Electromagnetic and thermal characterization of an UHF-applicator for concurrent irradiation and high resolution non-perturbing optical microscopy of cells. *Bioelectromagnetics*, Dec 2006;27(8):593-601.

2007:

74. Shafirstein G, Hennings H, Kaufmann Y, Ferguson S, Novak P, Siegel E, **Moros EG**, Klimberg SV, Waner M, Spring P. Intraoperative conductive interstitial thermal therapy (CITT) to minimize local recurrence following tumor resection of early-stage breast cancer. *Technology Cancer Research Treatment*, Jun 2007;6(3):235-46.
75. Xu M, Myerson RJ, Xia Y, Whitehead T, **Moros EG**, Straube WL, Roti Roti JL. The effects of 41°C hyperthermia on the DNA repair protein, MRE11, correlate with radiosensitization in four human cell lines. *International Journal of Hyperthermia*, Jun 2007;23(4):343-352.
76. Peñagaricano J, Yan Y, Corry P, **Moros EG**, Ratanatharathorn V. Retrospective evaluation of pediatric cranio-spinal axis irradiation plans with the Hi-ART Tomotherapy system. *Technology in Cancer Research and Treatment*, Aug 2007;6(4):355-360.
77. Shafirstein G, Novak P, **Moros EG**, Siegel E, Hennings L, Kaufmann Y, Ferguson S, Myhill J, Swaney M, Spring P. Conductive interstitial thermal therapy device for surgical margin ablation: In vivo verification of a theoretical model. *International Journal of Hyperthermia*, Sep 2007;23(6):477-92. **Featured on Front Cover of Journal.**

2008:

78. Trobaugh JW, Arthur RM, Straube WL, **Moros EG**. A simulation model for ultrasonic temperature imaging using change in backscattered energy. *Ultrasound in Medicine and Biology*, Feb 2008;34(2):289-298. [10.1016/j.ultrasmedbio.2007.07.015](https://doi.org/10.1016/j.ultrasmedbio.2007.07.015); PMID: PMC2269725
79. Rao VS, Titushkin IA, **Moros EG**, Pickard WF, Thatte HS, Cho MR. Nonthermal effects of radiofrequency-field exposure on calcium dynamics in stem cell-derived neuronal cells: elucidation of calcium pathways. *Radiation Research*, Mar 2008;169(3):319-29.
80. Novák P, Peñagaricano JA, Nahirnyak V, Corry P, **Moros EG**. Influence of the SURLAS applicator on radiation dose distributions during simultaneous thermoradiotherapy with helical tomotherapy. *Physics in Medicine and Biology*, Apr 2008;53(10):2509-2522. *Highlights of 2008, among the best 25 papers.*
81. Peñagaricano JA, **Moros E**, Novak P, Yan Y and Corry P. Feasibility of concurrent treatment with the scanning ultrasound linear array system (SURLAS) and the helical tomotherapy system. *International Journal of Hyperthermia*, Aug 2008;24(5):377-388. **Featured on Front Cover of Journal.** PMID: PMC2879076
82. Arthur RM, Straube WL, Trobaugh JW, **Moros EG**. *In vivo* change in ultrasonic backscattered energy with temperature in motion-compensated images. *International Journal of Hyperthermia*, Aug 2008;24(5):389-398.
83. Mihaylov IB, Corry P, Yan Y, Ratanatharathorn V and **Moros EG**. Modeling of carbon fiber couch attenuation properties with a commercial treatment planning system. *Medical Physics*, Nov 2008;35(11):4982-4988.

2009:

84. Parry JJ, Sharma V, Andrews R, **Moros EG**, Piwnica-Worms D, Rogers BE. PET imaging of heat-inducible suicide gene expression in mice bearing head and neck squamous cell carcinoma xenografts. *Nature's Cancer Gene Therapy*, Feb 2009;16(2):161-70. PMID: PMC2909672; [10.1038/cgt.2008.70](https://doi.org/10.1038/cgt.2008.70)
85. Peñagaricano J, Griffin R, Corry P, **Moros EG**, Yan Y, Ratanatharathorn V. Spatially fractionated (GRID) therapy for large and bulky tumors. *Journal of the Arkansas Medical Society*, May 2009;105(11):263-265.
86. Hennings L, Kaufmann Y, Griffin R, Siegel E, Novak P, Corry P, **Moros EG**, Shafirstein G. Dead or alive? Autofluorescence distinguishes heat-fixed from viable cells. *International Journal of Hyperthermia*, Aug 2009;25(5):355-363. **Featured on Front Cover of Journal.**

87. Shafirstein G, Kaufmann Y, Hennings L, Siegel E, Griffin RJ, Novák P, Ferguson S, **Moros EG**. Conductive interstitial thermal therapy (CITT) inhibits recurrence and metastasis in rabbit VX2 carcinoma model. *International Journal of Hyperthermia*, Sep 2009;25(6):446–454. [10.1080/02656730903013618](https://doi.org/10.1080/02656730903013618) - PMC2885861 - NIHMS205173
88. Mihaylov IB, Penagaricano J, **Moros EG**. Quantification of the skin sparing effect achievable with high-energy photon beams when carbon fiber tables are used. *Radiotherapy and Oncology*, Oct 2009;93(1):147-52.
89. Peñagaricano J, **Moros EG**, Corry P, Saylor R, Ratanatharathorn V. Pediatric craniospinal axis irradiation with helical tomotherapy: Patient outcome and lack of acute pulmonary toxicity. *International Journal of Radiation Oncology, Biology and Physics*, Nov 2009;75(4):1155-1161.
90. Titushkin IA, Rao VS, Pickard WF, **Moros EG**, Shafirstein G, Cho MR. Altered calcium dynamics mediates p19-derived neuron-like cell responses to millimeter-wave radiation. *Radiation Research* Dec 2009;172(6):725-36. [10.1667/RR1760.1](https://doi.org/10.1667/RR1760.1)

2010:

91. Pickard WF, **Moros EG**, Shafirstein G. Electromagnetic and thermal evaluation of an applicator specialized to permit high-resolution non-perturbing optical evaluation of cells being irradiated in the W-band. *Bioelectromagnetics*, Feb 2010;31:140-149. [10.1002/bem.20539](https://doi.org/10.1002/bem.20539)
92. Roti Roti JL, Pandita RK, Mueller JD, Novak P, **Moros EG**, Laszlo A. Severe, short-duration (0-3 min) heat shocks (50-52 degrees C) inhibit the repair of DNA damage. *International Journal of Hyperthermia*, Feb 2010;26(1):67-78. [10.3109/02656730903417947](https://doi.org/10.3109/02656730903417947)
93. Peñagaricano JA, **Moros EG**, Ratanatharathorn V, Yan Y, Corry PM. Evaluation of spatially fractionated radiotherapy (GRID) and definitive chemo-radiotherapy with curative intent for locally advanced squamous cell carcinoma of the head and neck: Initial response rates and acute toxicity. *International Journal of Radiation Oncology, Biology and Physics*, Apr 2010;76(5):1369–1375. [10.1016/j.ijrobp.2009.03.030](https://doi.org/10.1016/j.ijrobp.2009.03.030)
94. Mihaylov IB, Fatyga M, **Moros EG**, Penagaricano J, Fritz L. Lung dose for minimally-moving thoracic lesions treated under respiration gating. *International Journal of Radiation Oncology, Biology and Physics*. Jan 2010;77(1):285-291. [10.1016/j.ijrobp.2009.08.021](https://doi.org/10.1016/j.ijrobp.2009.08.021)
95. Chao M, Xie Y, Le Q-T, Xing L, **Moros EG**. Image-based modeling of tumor shrinkage in head and neck radiation therapy. *Medical Physics*, Mar 2010;37(5):2351-2358. [10.1118/1.3399872](https://doi.org/10.1118/1.3399872)
96. Mihaylov IB, Lerma FA, **Moros EG**. Relation Between Tumor Size and Range of Motion in IMRT Treatment Planning for Thoracic Lesions. *Journal of Cancer Science & Therapy*, 2010;2(4):95-99. [10.4172/1948-5956.1000031](https://doi.org/10.4172/1948-5956.1000031)
97. Arthur RM, Basu D, Guo Y, Trobaugh JW, **Moros EG**. 3D *In vitro* estimation of temperature using the change in backscattered ultrasonic energy. *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*, Aug 2010;57(8):1724-33. [10.1109/TUFFC.2010.1611](https://doi.org/10.1109/TUFFC.2010.1611)
98. Nahirnyak VM, **Moros EG**, Novák P, Klimberg S, Shafirstein G. Doppler signals observed during high temperature thermal ablation are the result of boiling. *International Journal of Hyperthermia*, 2010;26(6):586-93. [10.3109/02656731003801469](https://doi.org/10.3109/02656731003801469) - NIHMS205190 - PMC2922477.
99. Zhang X, Penagaricano J, **Moros EG**, Corry PM, Yan Y, Ratanatharathorn V. Dosimetric comparison of Helical Tomotherapy and Linac-IMRT treatment plans for head and neck cancer patients. *Medical Dosimetry*, 2010;35(4):264-268. [10.1016/j.meddos.2009.08.001](https://doi.org/10.1016/j.meddos.2009.08.001)
100. **Moros EG**, Penagaricano JA, Novák P, Straube WL, Myerson RJ. Present and future technology for simultaneous superficial thermoradiotherapy of breast cancer. *International Journal of Hyperthermia*. Sep 2010;26(7):699-709. *Peer-reviewed invited paper for a special issue on Breast Cancer*. [10.3109/02656736.2010.493915](https://doi.org/10.3109/02656736.2010.493915) - NIHMS205139 - PMC2943851.

2011:

101. Shafirstein G, **Moros EG**. Modeling millimetre wave propagation and absorption in a high resolution skin

model: the effect of sweat glands. *Physics in Medicine and Biology*, Mar 2011;56:1329-1339.
[10.1088/0031-9155/56/5/007](https://doi.org/10.1088/0031-9155/56/5/007)

102. Chen X, Benson Jr. DG, Novák P, Webber JS, Hennings L, Shafirstein G, Corry P, Griffin RJ, **Moros EG**. An alternating dual-transducer focused ultrasound system for thermal therapy studies using small animals. *Medical Physics*, April 2011;38(4):1877-1887. [10.1118/1.3553405](https://doi.org/10.1118/1.3553405) - PMC3069994
103. Penagaricano JA, Chao M, Van Rhee F., **Moros EG**, Corry P, Ratanatharathorn V. Clinical feasibility of TBI with Helical Tomotherapy. *Nature's Bone Marrow Transplantation*, 2011 Jul;46(7):929-35.
[10.1038/bmt.2010.237](https://doi.org/10.1038/bmt.2010.237)
104. Chen D, Xia R, Shafirstein G, Corry P, Griffin RJ, Penagaricano JA, Tulunay-Ugur OE, **Moros EG**. SonoKnife: Feasibility of a line-focused ultrasound device for thermal ablation therapy. *Medical Physics*, June 2011;38(7):4372-4385. [10.1118/1.3601017](https://doi.org/10.1118/1.3601017); PMC3145222

2012:

105. Chao M, Penagaricano JA, Yan Y, **Moros EG**, Corry P, Ratanatharathorn V. Voxel-based dose reconstruction for total body irradiation with Helical Tomotherapy. *International Journal of Radiation Oncology, Biology and Physics*, April 2012;82(5):1575–1583. [10.1016/j.ijrobp.2011.01.021](https://doi.org/10.1016/j.ijrobp.2011.01.021).
106. Mihaylov IB, Fatyga M, Bzdusek K, Gardner K, **Moros EG**. Biological optimization in volumetric modulated arc radiotherapy for prostate carcinoma. *International Journal of Radiation Oncology, Biology and Physics*, 2012 Mar 1;82(3):1292-8. [10.1016/j.ijrobp.2010.06.020](https://doi.org/10.1016/j.ijrobp.2010.06.020)
107. Han EY, Zhang X, Yan Y, Sharma S, Penagaricano J, **Moros E**, Corry P. Static jaw collimation settings to minimize radiation dose to normal brain tissue during stereotactic radiosurgery. *Medical Dosimetry*, Winter 2012;37(4):391–395. [10.1016/j.meddos.2012.02.005](https://doi.org/10.1016/j.meddos.2012.02.005)
108. Asur RS, Sharma S, Chang C-W, Penagaricano J, Kommuru IM, **Moros EG**, Corry PM, Griffin RJ. Spatially fractionated radiation induces cytotoxicity and changes in gene expression in bystander and radiation adjacent murine carcinoma cells. *Radiation Research*, Jun 2012;177:751-765. PMC3395590; [10.1667/RR2780.1](https://doi.org/10.1667/RR2780.1)
109. Griffin RJ, Koonce NA, Dings RPM, Siegel E, **Moros EG**, Bräuer-Krisch E, Corry PM. Microbeam radiation therapy alters vascular architecture and tumor oxygenation and is enhanced by a Galectin-1 targeted anti-angiogenic peptide. *Radiation Research*, Jun 2012;177:804-812. PMC3391740; [10.1667/RR2784.1](https://doi.org/10.1667/RR2784.1)
110. Nelms BE, Opp D, Robinson J, Wolf TK, Zhang G, **Moros E**, Feygelman V. VMAT QA: Measurement-guided 4D dose reconstruction on a patient. *Medical Physics*, Jul 2012;39(7):4228-4238.
[10.1118/1.4729709](https://doi.org/10.1118/1.4729709) **123 citations as of August 2023.**
111. Sridharan V, Tripathi P, Sharma SK, **Moros EG**, Corry P, Lieblong BJ, Kaschina E, Unger T, Thoene-Reineke C, Hauer-Jensen M, Boerma M. Cardiac inflammation after local irradiation is influenced by the kallikrein-kinin system. *Cancer Res*, Aug 2012;72:4984-4992. PMC3463770; [10.1158/0008-5472.CAN-12-1831](https://doi.org/10.1158/0008-5472.CAN-12-1831)
112. Varma S, Myerson R, **Moros E**, Taylor M, Straube W, Zoberi I. Simultaneous radiotherapy and superficial hyperthermia for high-risk breast carcinoma: A randomized comparison of treatment sequelae in heated vs. non-heated sectors of the chest wall. *International Journal of Hyperthermia*, Nov 2012; 28(7):583–590. [10.3109/02656736.2012.705216](https://doi.org/10.3109/02656736.2012.705216)
113. Chen D, Xia R, Corry P, **Moros EG**, Shafirstein G. SonoKnife for ablation of neck tissue: In vivo verification of a computer layered medium model. *International Journal of Hyperthermia*, Nov 2012; 28(7):698–705. [10.3109/02656736.2012.706730](https://doi.org/10.3109/02656736.2012.706730)
114. Zhang GG, Yu HHM, Stevens CW, Dilling TJ, Hoffe SE, **Moros EG**, Feygelman V. Motion Management in Stereotactic Body Radiotherapy. *Journal of Nuclear Medicine & Radiation Therapy*, 2012;S:6-012.
[10.4172/2155-9619.S6-012](https://doi.org/10.4172/2155-9619.S6-012)

2013:

115. Zhang RR, Feygelman V, Harris ER, Rao N, **Moros EG**, Zhang G. Is wax equivalent to tissue in electron conformal therapy planning? A Monte Carlo study of material approximation introduced dose difference. *Journal of Applied Clinical Medical Physics*, Jan 2013; 14(1):92-101.
116. Sharma S, **Moros EG**, Boerma M, Sridharan V, Han EY, Clarkson R, Hauer-Jensen M, Corry PM. A novel technique for image-guided local heart irradiation in the rat. *Technology in Cancer Research and Treatment*, Aug 2013;1(1):47-57. (Open Access) [10.7785/tcrtextpress.2013.600256](https://doi.org/10.7785/tcrtextpress.2013.600256)
117. Sridharan V, Sharma SK, **Moros EG**, Corry PM, Tripathi P, Lieblong BJ, Guha C, Hauer-Jensen M, Boerma M. Effects of radiation on the epidermal growth factor receptor pathway in the heart. *International Journal of Radiation Biology*, Jul 2013;89(7):539-47. PMC3700655; [10.3109/09553002.2013.782110](https://doi.org/10.3109/09553002.2013.782110)
118. Latifi K, Pritz J, Zhang GG, **Moros EG**, Harris EE. Fiducial-based image-guided radiotherapy for whole breast irradiation. *Journal of Radiation Oncology*, 2013;2:185-190. [10.1007/s13566-013-0102-y](https://doi.org/10.1007/s13566-013-0102-y)
119. Sridharan V, Tripathi P, Sharma S, Corry PM, **Moros EG**, Singh A, Compadre CM, Hauer-Jensen M, Boerma M. Effects of late administration of pentoxifylline and tocotrienols in an image-guided rat model of localized heart irradiation. *PLoS One*. 2013 Jul 22;8(7):e68762. PMC3700655; [10.1371/journal.pone.0068762](https://doi.org/10.1371/journal.pone.0068762)
120. Han EY, Clarkson R, Sharma S, Corry PM, **Moros EG** and Ratanatharathorn V. X-ray collimator design using Monte Carlo simulations. *Biomedical Engineering: Applications, Basis and Communications*, 2013;25(6):1350054 [9 pages] [10.4015/S1016237213500543](https://doi.org/10.4015/S1016237213500543)
121. Stambaugh C, Nelms BE, Dilling T, Stevens C, Latifi K, Zhang G, **Moros E**, Feygelman V. Experimentally studied dynamic dose interplay does not meaningfully affect target dose in VMAT SBRT lung treatments. *Medical Physics*, 2013;40(9):091710-1--091710-8. [10.1118/1.4818255](https://doi.org/10.1118/1.4818255). ***Featured Editor's Pick article.***
122. Latifi K, Zhang GG, **Moros EG** and Harris EE. Assessment of intact cervix motion using implanted fiducials in patients treated with Helical Tomotherapy with daily MVCT positioning. *Journal of Radiation Oncology*, Sep 2013;2(3):323-329. [10.1007/s13566-013-0113-8](https://doi.org/10.1007/s13566-013-0113-8)
123. Latifi K, Huang T-C, Feygelman V, Budzevich M, **Moros EG**, Dilling TJ, Stevens CW, van Elmpt W, Dekker A, Zhang GG. Effects of quantum noise in 4D-CT on deformable image registration and derived ventilation data. *Physics in Medicine and Biology*, 2013;58(21):7661-7672. [10.1088/0031-9155/58/21/7661](https://doi.org/10.1088/0031-9155/58/21/7661)
124. Latifi K, Huang T-C, Feygelman V, **Moros EG**, Stevens CW, Dilling TJ, Zhang GG. Normalization of ventilation data from 4D-CT to facilitate comparison between datasets acquired at different times. *PLoS One*, Dec 2013;8(12):e84083 [6 pages]. [10.1371/journal.pone.0084083](https://doi.org/10.1371/journal.pone.0084083).

2014:

125. Sridharan V, Tripathi P, Sharma S, **Moros EG**, Zheng J, Hauer-Jensen M, Boerma M. Roles of sensory nerves in the regulation of radiation-induced structural and functional changes in the heart. *International Journal of Radiation Oncology, Biology and Physics*, 2014 Jan 1;88(1):167-74. PMC3868013 [10.1016/j.ijrobp.2013.10.014](https://doi.org/10.1016/j.ijrobp.2013.10.014)
126. Sridharan V, Aykin-Burns N, Tripathi P, Krager KJ, Sharma SK, **Moros EG**, Corry PM, Nowak G, Hauer-Jensen M, Boerma M. Radiation-induced alterations in mitochondria of the rat heart. *Radiation Research*, Mar 2014;181(3):324-334. [10.1667/RR13452.1](https://doi.org/10.1667/RR13452.1).
127. Myerson RJ, **Moros EG**, Diederich CJ, Haemmerich D, Hurwitz MD, Hsueh I-C, McGough RJ, Nau WH, Straube WL, Turner PF, Vujaskovic Z, Stauffer PR. Components of a hyperthermia clinic: recommendations for staffing, equipment, and treatment monitoring. *International Journal of Hyperthermia*, Feb 2014;30(1):1-5. [10.3109/02656736.2013.861520](https://doi.org/10.3109/02656736.2013.861520)
128. Feygelman V, Stambaugh C, Opp D, Zhang G, **Moros EG**, Nelms B. Cross-validation of two commercial methods for volumetric high-resolution dose reconstruction on a phantom for non-coplanar VMAT beams.

- Radiotherapy and Oncology, Mar 2014;110(3):558–561. [10.1016/j.radonc.2013.12.011](https://doi.org/10.1016/j.radonc.2013.12.011) .
129. Latifi K, Oliver J, Baker R, Dilling TJ, Stevens CW, DeMarco M, Zhang G, **Moros EG**, Feygelman V. Study of 201 non small-cell lung cancer (NSCLC) SABR patients shows local control dependence on dose calculation algorithm, International Journal of Radiation Oncology, Biology and Physics, 2014;88(5):1108-1113. [10.1016/j.ijrobp.2013.12.047](https://doi.org/10.1016/j.ijrobp.2013.12.047)
 130. Mellon EA, Javedan K, Strom TJ, **Moros EG**, Biagioli MC, Fernandez DC, Wasserman SG, Wilder RB. A dosimetric comparison of volumetric-modulated arc therapy with step-and-shoot intensity modulated radiation therapy for prostate cancer. Practical Radiation Oncology, January–February 2015;5(1):11-15, [10.1016/j.prro.2014.03.003](https://doi.org/10.1016/j.prro.2014.03.003) [Epub April 2014]
 131. Javedan K, Feygelman V, Zhang R, **Moros EG**, Correa CR, Trotti A, Li W, Zhang G. Monte Carlo comparison of superficial dose between flattening filter free and flattened beams. Physica Medica, Mar 2014;30:503-508. [10.1016/j.ejmp.2014.03.001](https://doi.org/10.1016/j.ejmp.2014.03.001)
 132. Nelms B, Opp D, Zhang G, **Moros EG**, Feygelman V. Motion as perturbation II: Development of the method for dosimetric analysis of motion effects with fixed-gantry IMRT. Medical Physics, 2014;41:061704 [10 pages]. [10.1118/1.4873691](https://doi.org/10.1118/1.4873691)
 133. Zhang DG, Feygelman V, **Moros EG**, Latifi K, Zhang GG. Monte Carlo study of radiation dose enhancement by Gadolinium in megavoltage and HDR radiotherapy, PLoS ONE 2014;9(10): e109389 [7 pages]. [10.1371/journal.pone.0109389](https://doi.org/10.1371/journal.pone.0109389)
 134. Mihaylov IB and **Moros EG**. Mathematical formulation of DMH-based inverse optimization. Frontiers in Oncology, November 2014, Vol. 4, Article 331. [10.3389/fonc.2014.00331](https://doi.org/10.3389/fonc.2014.00331)

2015:

135. Sridharan V, Tripathi P, Aykin-Burns N, Krager KJ, Sharma SK, **Moros EG**, Melnyk SB, Pavliv O, Hauer-Jensen M and Boerma M. A tocotrienol-enriched formulation protects against radiation-induced changes in cardiac mitochondria without modifying late cardiac function or structure. Radiation Research, Mar 2015;183(3):357-366. [10.1667/RR13915.1](https://doi.org/10.1667/RR13915.1). [Epub 2015 Feb 24]. PMID: 25710576
136. Stambaugh C, Nelms B, Wolf T, Mueller R, Geurts M, Opp D, **Moros E**, Zhang G, Feygelman V. Measurement-guided volumetric dose reconstruction for Helical Tomotherapy. Journal of Applied Clinical Medical Physics, 2015;16(2):302-321. [10.1120/jacmp.v16i2.5298](https://doi.org/10.1120/jacmp.v16i2.5298)
137. Mihaylov IB and **Moros EG**. Dose-mass inverse optimization for minimally moving thoracic lesions. Physics in Medicine and Biology. May 2015;60(10):3927-37. [10.1088/0031-9155/60/10/3927](https://doi.org/10.1088/0031-9155/60/10/3927)
138. Lieblong BJ, Sridharan V, Srivastava AK, **Moros EG**, Sharma SK, Boerma M. Role of the bradykinin B2 receptor in a rat model of local heart irradiation. International Journal of Radiation Biology. June 2015;91(8):634-642. [10.3109/09553002.2015.1047041](https://doi.org/10.3109/09553002.2015.1047041)
139. Huang H-W, Lin W-L, **Moros EG**. A robust power deposition scheme for tumors with large counter-current blood vessels during hyperthermia treatment. Applied Thermal Engineering, 2015;89:897:907. [10.1016/j.applthermaleng.2015.06.085](https://doi.org/10.1016/j.applthermaleng.2015.06.085)
140. Prokopiou S, **Moros EG**, Poleszczuk J, Caudell J, Torres-Roca JF, Latifi K, Lee JK, Myerson R, Harrison LB, Enderling H. A proliferation saturation index to predict radiation response and personalize radiotherapy fractionation. Radiation Oncology, July 2015;10:159-167. [10.1186/s13014-015-0465-x](https://doi.org/10.1186/s13014-015-0465-x). **101 citations as of August 2023.**
141. Latifi K, Dilling T, Feygelman V, **Moros EG**, Stevens CW, Montilla-Soler J, Zhang GG. Impact of dose on lung ventilation change calculated from 4D-CT using deformable image registration in lung cancer patients treated with SBRT. Journal of Radiation Oncology, 13 June 2015;1-6. [10.1007/s13566-015-0200-0](https://doi.org/10.1007/s13566-015-0200-0)
142. Koonce NA, Chen X, **Moros EG**, Shafirstein G, Corry P and Griffin RJ. PET and MRI-guided focused ultrasound surgery for hypoxic-tissue ablation combined with radiotherapy in solid tumors. International Journal of Radiation Research, 2015;13(1):1-12. [10.7508/ijrr.2015.01.001](https://doi.org/10.7508/ijrr.2015.01.001)
143. Feygelman V, Tonner T, Stambaugh C, Hunt D, Zhang G, **Moros E**, Nelms BE. Motion-perturbation

method applied to dosimetry of dynamic MLC target tracking—A proof-of-concept, *Medical Physics*, 2015;42(11):6147-51. [10.1118/1.4931605](https://doi.org/10.1118/1.4931605)

144. Oliver JA, Budzevich M, Zhang GG, Dilling TJ, Latifi K, **Moros EG**. Variability of image features computed from conventional and respiratory-gated PET/CT images of lung cancer. *Translational Oncology*. 2015;8(6):524-534. [10.1016/j.tranon.2015.11.013](https://doi.org/10.1016/j.tranon.2015.11.013). **122 citations as of August 2023**.

2016:

145. Poleszczuk J, Luddy KA, Prokopiou S, Robertson-Tessi M, **Moros EG**, Fishman M, Djeu JY, Finkelstein SE, Enderling H. Abscopal benefits of localized radiotherapy depend on activated T cell trafficking and distribution between metastatic lesions. *Cancer Res*. 2016;76(5):1009–18. PMID:26833128; [10.1158/0008-5472.CAN-15-1423](https://doi.org/10.1158/0008-5472.CAN-15-1423) **108 citations as of August 2023**.
146. Zhang GG, Latifi K, Du K, Reinhardt JM, Christensen GE, Ding K, Feygelman V, **Moros EG**. Evaluation of the ΔV 4D CT ventilation calculation method using in vivo Xenon CT ventilation data and comparison to other methods. *Journal of Applied Clinical Medical Physics*, 2016;17(7):550-560. [10.1120/jacmp.v17i2.5985](https://doi.org/10.1120/jacmp.v17i2.5985)
147. Sridharan V, Thomas CJ, Cao M, Melnyk SB, Pavliv O, Joseph J, Singh SP, Sharma S, **Moros EG**, Boerma M. Effects of local irradiation combined with sunitinib on early remodeling, mitochondria, and oxidative stress in the rat heart. *Radiother. Oncol*. 2016 Apr 9. pii: S0167-8140(16)31034-9. PMID:27072940. [10.1016/j.radonc.2016.03.027](https://doi.org/10.1016/j.radonc.2016.03.027)
148. Gintz D, Latifi K, Caudell, Nelms B, Zhang G, **Moros E**, Feygelman V. Initial evaluation of automated treatment planning software. *Journal of Applied Clinical Medical Physics*, 2016;17(3):331-346.
149. Oliver JA, Budzevich M, Hunt D, **Moros EG**, Latifi K, Dilling TJ, Feygelman V, Zhang G. Sensitivity of Image Features to Noise in Conventional and Respiratory-Gated PET/CT Images of Lung Cancer: Uncorrelated Noise Effects. *Technology in Cancer Research and Treatment*, [Epub 2016 Aug 8]. 2017 Oct; 16: (5) 595-608 PMID: 27502957. PMCID: PMC5665151 [10.1177/1533034616661852](https://doi.org/10.1177/1533034616661852)
150. Ahmed S, Nelms B, Kozelka J, Zhang G, **Moros E**, Feygelman V. Validation of an improved helical diode array and dose reconstruction software using TG-244 datasets and stringent dose comparison criteria. *Journal of Applied Clinical Medical Physics*, 2016;17(6):163-178.
151. Venkat P, Oliver JA, Jin W, Almhanna K, Frakes JM, Hoffe SE, **Moros EG**, Shridhar R and Latifi K. Prognostic Value of 18F-FDG PET/CT Metabolic Tumor Volume for Complete Pathologic Response and Clinical Outcomes after Neoadjuvant Chemoradiation Therapy for Locally Advanced Esophageal Cancer. *J Nucl Med Radiat Ther*, 2016;7(6):308. [10.4172/2155-9619.1000308](https://doi.org/10.4172/2155-9619.1000308)

2017:

152. Zhang DG, Feygelman V, **Moros EG**, Latifi K, Hoffe S, Frakes J and Zhang GG. Superficial and peripheral dose in compensator-based FFF beam IMRT. *J Appl Clin Med Phys*, 2017; 18:151–156. [10.1002/acm2.12018](https://doi.org/10.1002/acm2.12018)
153. Whelan B, **Moros E**, Fahrig R, Deye J, Yi T, Woodward M, Keall P, Siewerdsen J. Development and testing of a database of NIH research funding of AAPM members: A Report from AAPM Working Group for the development of a research database (WGDRD). *Special Report, Med. Phys*. 2017;44(4):1590-1602. [10.1002/mp.12098](https://doi.org/10.1002/mp.12098), PMID: 28074545
154. Shafiq-ul-Hassan M, Zhang GG, Latifi K, Ullah G, Hunt DC, Balagurunathan Y, Abdalah MA, Schabath MB, Goldgof DG, Mackin D, Court LE, Gillies RJ, **Moros EG**. Intrinsic dependencies of CT radiomic features on voxel size and number of gray levels. *Med. Phys*. 2017;43(3):1050-1062. [10.1002/mp.12123](https://doi.org/10.1002/mp.12123), PMID: 28112418. **Over 485 citations as of August 2023**.
155. Sharma S, Narayanasamy G, Przybyla B, Webber J, Boerma M, Clarkson R, **Moros EG**, Corry PM, Griffin RJ. Advanced Small Animal Conformal Radiation Therapy Device. *Technol Cancer Res Treat*. 2017 Feb;16(1):45-56. [10.1177/1533034615626011](https://doi.org/10.1177/1533034615626011), PMID: 26792490.
156. Scott JG, Berglund A, Schell MJ, Mihaylov I, Fulp WJ, Yue B, Welsh E, Caudell JJ, Ahmed K, Strom TS,

- Mellon E, Venkat P, Johnstone P, Foekens J, Lee J, **Moros E**, Dalton WS, Eschrich SA, McLeod H, Harrison LB, Torres-Roca JF. A genome-based model for adjusting radiotherapy dose (GARD): a retrospective, cohort-based study. *Lancet Oncol.* 2017 Feb;18(2):202-211. PMID: 27993569. [10.1016/S1470-2045\(16\)30648-9](https://doi.org/10.1016/S1470-2045(16)30648-9) **Over 385 citations as of August 2023.**
157. Sharma S, Narayanasamy G, Clarkson R, Chao M, **Moros EG**, Zhang X, Yan Y, Boerma M, Paudel N, Morrill S, Corry P, Griffin RJ. Study of Image Qualities From 6D Robot-Based CBCT Imaging System of Small Animal Irradiator. *Technology in Cancer Research & Treatment*, 2017;16(6):811-818, [10.1177/1533034617700558](https://doi.org/10.1177/1533034617700558).
 158. Ahmed S, Hunt D, Kapatoes J, Hayward R, Zhang G, **Moros EG**, Feygelman V. Validation of a GPU-Based 3D dose calculator for modulated beams. *J Appl Clin Med Phys.* PMID: 28371377. [10.1002/acm2.12074](https://doi.org/10.1002/acm2.12074).
 159. Caudell JJ, Torres-Roca JF, Gillies RJ, Enderling H, Kim S, Rishi A, **Moros EG**, Harrison LB. The future of personalised radiotherapy for head and neck cancer. *Lancet Oncol.* 2017 May;18(5):e266-e273. [10.1016/S1470-2045\(17\)30252-8](https://doi.org/10.1016/S1470-2045(17)30252-8). Review. PMID: 28456586 **167 citations as of August 2023.**
 160. Li Q, Kim J, Balagurunathan Y, Liu Y, Latifi K, Stringfield O, Garcia A, **Moros EG**, Dilling TJ, Schabath MB, Ye Z, Gillies RJ. Imaging features from pre-treatment CT scans are associated with clinical outcomes in non-small-cell lung cancer patients treated with stereotactic body radiotherapy. *Med Phys.* 2017 Aug; 44(8):4341-4349. [Epub 2017 Jun 24]. [10.1002/mp.12309](https://doi.org/10.1002/mp.12309). PMID: 28464316
 161. Oliver JA, Venkat P, Frakes JM, Klapman J, Harris C, Montilla-Soler J, Dhadham GC, Altazi BA, Zhang GG, **Moros EG**, Shridhar R, Hoffe SE, Latifi K. Fiducial markers coupled with 3D PET/CT offer more accurate radiation treatment delivery for locally advanced esophageal cancer. *Endosc Int Open.* 2017 Jun;5(6):E496-E504. [10.1055/s-0043-104861](https://doi.org/10.1055/s-0043-104861).
 162. Yasaka K, Akai H, Mackin D, Court L, **Moros E**, Ohtomo K, Kiryu S. Precision of quantitative computed tomography texture analysis using image filtering: A phantom study for scanner variability. *Medicine* 2017 May;96(21):e6993. [10.1097/MD.0000000000006993](https://doi.org/10.1097/MD.0000000000006993). PMID: 28538408
 163. Ahmed S, Nelms B, Gintz D, Caudell J, Zhang G, **Moros EG**, Feygelman V. A method for a priori estimation of best feasible DVH for organs-at-risk: Validation for head and neck VMAT planning. *Med Phys.* 2017 Oct;44(10):5486-5497 [Epub 2017 Aug 4]. [10.1002/mp.12500](https://doi.org/10.1002/mp.12500). PMID: 28777469
 164. Altazi BA, Zhang GG, Fernandez DC, Montejo ME, Hunt D, Werner J, Biagioli MC, **Moros EG**. Reproducibility of F18-FDG PET radiomic features for different cervical tumor segmentation methods, gray-level discretization, and reconstruction algorithms. *J Appl Clin Med Phys.* 2017 Nov;18(6):32-48. [10.1002/acm2.12170](https://doi.org/10.1002/acm2.12170). PMID: 28891217 **117 citations as of August 2023.**
 165. Geoffrey G. Zhang, Kujtim Latifi, Vladimir Feygelman,1 Kuei-Ting Chou, Tzung-Chi Huang, Thomas J. Dilling, Bradford A. Perez, and **Eduardo G. Moros**. Ventilation Series Similarity: A Study for Ventilation Calculation Using Deformable Image Registration and 4DCT to Avoid Motion Artifacts. *Contrast Media & Molecular Imaging*, (2017), Article ID 9730380, [10.1155/2017/973038](https://doi.org/10.1155/2017/973038)
 166. Qian Li, Jongphil Kim, Yoganand Balagurunathan, Jin Qi, Ying Liu, Kujtim Latifi, **Eduardo G. Moros**, Matthew B. Schabath, Zhaoxiang Ye, Robert J. Gillies and Thomas J. Dilling. CT imaging features associated with recurrence in non-small cell lung cancer patients after stereotactic body radiotherapy. *Radiation Oncology* (2017) 12:158, [10.1186/s13014-017-0892-y](https://doi.org/10.1186/s13014-017-0892-y), PMID: 28946909
 167. Poleszczuk J, **Moros E**, Fishman M, Walker R, Djeu J, Schoenfeld J, Finkelstein S, Enderling H. Modeling T cell trafficking to increase the likelihood of radiation-induced abscopal effects. *Journal of Targeted Therapies in Cancer*, 06.17, 36-40, 2017.
 168. Muhammad Shafiq-ul-Hassan, Geoffrey G. Zhang, Dylan C. Hunt, Kujtim Latifi, Ghanim Ullah, Robert J. Gillies, **Eduardo G. Moros**, Accounting for reconstruction kernel-induced variability in CT radiomic features using noise power spectra, *Journal of Medical Imaging* 2017;5(1):011013, [10.1117/1.JMI.5.1.011013](https://doi.org/10.1117/1.JMI.5.1.011013). PMID: 29285518
 169. Darrin Byrd, Rebecca Christopfel, John Buatti, **Eduardo Moros**, Sadek Nehmeh, Adam Opanowski, Paul

Kinahan, "Multicenter survey of PET/CT protocol parameters that affect standardized uptake values," *Journal of Medical Imaging* 5(1), 011012 (Accepted: 11/01/2017; Epub: 12/08/2017). [1.JMI.5.1.011012](#), PMID: 29250567

2018:

170. Darrin Byrd, Rebecca Christopfel, Grae Arabasz, Ciprian Catana, Joel Karp, Martin A. Lodge, Charles Laymon, **Eduardo G. Moros**, Mikalai Budzevich, Sadek Nehmeh, Joshua Scheuermann, John Sunderland, Jun Zhang, Paul Kinahan, "Measuring temporal stability of positron emission tomography standardized uptake value bias using long-lived sources in a multicenter network," *Journal of Medical Imaging* 2018;5(1):011016. [1.JMI.5.1.011016](#), PMID: 29322068
171. Baderaldeen A. Altazi, Daniel C. Fernandez, Geoffrey G. Zhang, Samuel Hawkins, Syeda M. Naqvi, Youngchul Kim, Dylan Hunt, Kujtim Latifi, Matthew Biagioli, PujaVenkat, **Eduardo G. Moros**. Investigating multi-radiomic models for enhancing prediction power of cervical cancer treatment outcomes. *Phys. Med.* 2018;46:180-188. [10.1016/j.ejmp.2017.10.009](#). PMID: 29475772
172. Vargo JA, Moiseenko V, Grimm J, Caudell J, Clump DA, Yorke E, Xue J, Vinogradskiy Y, **Moros EG**, Mavroidis P, Jain S, El Naqa I, Marks LB, Heron DE. Head and Neck Tumor Control Probability: Radiation Dose-Volume Effects in Stereotactic Body Radiation Therapy for Locally Recurrent Previously-Irradiated Head and Neck Cancer: Report of the AAPM Working Group. *Int J Radiat Oncol Biol Phys; HyTEC Organ-Specific Paper*. pii: S0360-3016(18)30107-X. [10.1016/j.ijrobp.2018.01.044](#). Epub: 2018 Jan 31, PMID: 29477291 – *IN PRESS, awaiting for more papers for a special issue on SBRT normal tissues tolerance*
173. Lewin TD, Maini PK, **Moros EG**, Enderling H, Byrne HM. The Evolution of Tumour Composition During Fractionated Radiotherapy: Implications for Outcome. *Bull Math Biol.* 2018;80(5):1207-1235. [10.1007/s11538-018-0391-9](#), PMID: 29488054
174. Latifi K, Caudell J, Zhang G, Hunt D, **Moros EG**, Feygelman V. Practical quantification of image registration accuracy following the AAPM TG-132 report framework. *J Appl Clin Med Phys.* 2018;19(4):125-133. [10.1002/acm2.12348](#). PMID: 29882231
175. Poleszczuk J, Walker R, **Moros EG**, Latifi K, Caudell JJ, Enderling H. Predicting Patient-Specific Radiotherapy Protocols Based on Mathematical Model Choice for Proliferation Saturation Index. *Bull Math Biol* 2018;80(5):1195-1206. [10.1007/s11538-017-0279-0](#), PMID: 28681150.
176. Shafiq-ul-Hassan M, Latifi K, Zhang G, Ullah G, Gillies R, **Moros E**. Voxel size and gray level normalization of CT radiomic features in lung cancer. *Scientific Reports.* 2018;8(1):10545. [10.1038/s41598-018-28895-9](#), PMID: 30002441 **167 citations as of August 2023.**
177. Ahmed S, Kapatoes J, Zhang G, **Moros EG** and Feygelman V, A hybrid volumetric dose verification method for single-isocenter multiple-target cranial SRS. *J Appl Clin Med Phys*, 2018;19:5:651–658. [10.1002/acm2.12430](#). PMID:30112817
178. Walker R, Poleszczuk J, Pilon-Thomas S, Kim S, Anderson AARA, Czerniecki BJ, Harrison LB, **Moros EG**, Enderling H. Immune interconnectivity of anatomically distant tumors as a potential mediator of systemic responses to local therapy. *Sci Rep.* 2018 Jun 21;8(1):9474. [10.1038/s41598-018-27718-1](#). PMID: 29930290 – **Spotlighted in:** Schoenfeld JD, We Are All Connected: Modeling the Tumor-Immune Ecosystem, *Trends in Cancer*, 2018;4(10):655-657. [j.trecan.2018.08.006](#), PMID: 29930290
179. Mihaylov IB and **Moros EG**. Integral dose based inverse optimization objective function promises lower toxicity in head-and-neck. *Phys. Med.* 2018;54:77-83. [10.1016/j.ejmp.2018.06.635](#). PMID: 30337013

2019:

180. Yu JB, Beck TF, Anscher MS, Baschnagel AM, Brock KK, Carlson DJ, Dominello MM, Kimple RJ, Knisely JP, Mendoca MS, Mian O, Singh AK, **Moros EG**, Keen JC. Analysis of the 2017 American Society for Radiation Oncology (ASTRO) Research Portfolio. *Int J Radiat Oncol Biol Phys.* 2019;103(2):297-304, [j.ijrobp.2018.07.2056](#), PMID: 30647006

181. Tafreshi NK[†], Tichacek CJ[†], Pandya DN, Doligalski ML, Budzevich MM, Kil H, Bhatt NB, Kock ND, Messina JL, Ruiz EE, Delva NC, Weaver A, Gibbons WR, Boulware DC, Khushalani NI, El-Haddad G, Triozzi PL, **Moros EG**, **McLaughlin ML**, Wadas T, Morse D. Melanocortin 1 Receptor Targeted Alpha-Particle Therapy for Metastatic Uveal Melanoma. *Journal of Nuclear Medicine*, August 1, 2019 vol. 60 no. 8, 1124-1133. [10.2967/jnumed.118.217240](https://doi.org/10.2967/jnumed.118.217240). PMID: 30733316 ***Featured Basic Science Article***. [†]Co-Senior author.
182. Sunassee ED, Tan D, Ji N, Brady R, **Moros EG**, Caudell JJ, Yartsev S, Enderling H. Proliferation Saturation Index in an adaptive Bayesian approach to predict patient-specific radiotherapy responses. *International Journal of Radiation Biology*, 95:10, 1421-1426. [10.1080/09553002.2019.1589013](https://doi.org/10.1080/09553002.2019.1589013), PMID: 30831050
183. Rockne RC, Hawkins-Daarud A, Swanson KR, Sluka JP, Glazier JA, Macklin P, Hormuth D, Jarrett AM, Lima EABDF, Oden J, Biros G, Yankeelov TE, Curtius K, Bakir IA, Wodarz D, Komarova N, Aparicio L, Bordyuh M, Rabadan R, Finley S, Enderling H, Caudell JJ, **Moros EG**, Anderson ARA, Gatenby R, Kaznatcheev A, Jeavons P, Krishnan N, Pelesko J, Wadhwa RR, Yoon N, Nichol D, Marusyk A, Hinczewski M, Scott JG. The 2019 Mathematical Oncology Roadmap. *Phys Biol*. 2019 Jun 19;16(4):041005. [10.1088/1478-3975/ab1a09](https://doi.org/10.1088/1478-3975/ab1a09). PMID: 30991381 ***143 citations as of August 2023***.
184. Narayanasamy, G., Zhang, G., Siegel, E., Campbell, G., **Moros, E.**, Galhardo, E.P., Morrill, S., Day, J., and Penagaricano, J. Radiomic Assessment of the Progression of Acoustic Neuroma After Gamma Knife Stereotactic Radiosurgery. *Journal of Solid Tumors* 2019;9(2):1-5. [10.5430/jst.v9n2p1](https://doi.org/10.5430/jst.v9n2p1)
185. Heiko Enderling, Juan Carlos López Alfonso, **Eduardo G. Moros**, Jimmy J. Caudell and Louis B. Harrison. Integrating Mathematical Modeling into the Roadmap for Personalized Adaptive Radiation Therapy. *Trends in Cancer*, 2019;5(8):467-474. [j.trecan.2019.06.006](https://doi.org/10.1016/j.trecan.2019.06.006). PMID: 31421904
186. Ahmed S, Zhang G, **Moros EG**, Feygelman V. Comprehensive evaluation of the high-resolution diode array for SRS dosimetry. *J Appl Clin Med Phys*. 2019;20(10):13–23. [10.1002/acm2.12696](https://doi.org/10.1002/acm2.12696). PMID: 31478343
187. Latifi, K., **Moros, E. G.**, Zhang, G., Harrison, L., & Feygelman, V. A Method to Determine the Coincidence of MRI-Guided Linac Radiation and Magnetic Isocenters. *Technology in Cancer Research & Treatment*. (2019) [10.1177/1533033819877986](https://doi.org/10.1177/1533033819877986). PMID: 31537173
188. Tichacek CJ, Budzevich MM, Wadas TJ, Morse DL, **Moros EG**. A Monte Carlo Method for Determining the Response Relationship between Two Commonly Used Detectors to Indirectly Measure Alpha Particle Radiation Activity. *Molecules* 2019;24(18):3397; [molecules24183397](https://doi.org/10.3390/molecules24183397), PMID: 31546752.
189. Tafreshi, N.K.; Doligalski, M.L.; Tichacek, C.J.; Pandya, D.N.; Budzevich, M.M.; El-Haddad, G.; Khushalani, N.I.; **Moros, E.G.**; McLaughlin, M.L.; Wadas, T.J.; Morse, D.L. Development of Targeted Alpha Particle Therapy for Solid Tumors. *Molecules*, 2019;24(23):E4314. [10.3390/molecules24234314](https://doi.org/10.3390/molecules24234314). PMID: 31779154.

2020:

190. T. Lewin, H. Byrne, P.K. Maini, J.C. Jimm, **E.G. Moros**, H. Enderling. The importance of dead material within a tumour on the dynamics in response to radiotherapy. *Phys Med Biol*. 2020 Jan 10;65(1):015007. [10.1088/1361-6560/ab4c27](https://doi.org/10.1088/1361-6560/ab4c27). PMID: 31593931.
191. Thomas D. Lewin, Philip K. Maini, **Eduardo G. Moros**, Heiko Enderling and Helen M. Byrne. Three Phase Model to Investigate the Effects of Dead Material On The Growth Of Avascular Tumours. *Math. Model. Nat. Phenom.*, Article 22, Vol. 15, 29 pages, 2020. [10.1051/mmnp/2019039](https://doi.org/10.1051/mmnp/2019039).
192. Yuan Z, Frazer M, Zhang GG, Latifi K, **Moros EG**, Feygelman V, Felder S, Sanchez J, Dessureault S, Imanirad I, Kim RD, Harrison LB, Hoffe SE, Frakes JM. CT-based radiomic features to predict pathological response in rectal cancer: A retrospective cohort study. *J Med Imaging Radiat Oncol*. 2020;64:444-449. [10.1111/1754-9485.13044](https://doi.org/10.1111/1754-9485.13044). PMID: 32386109
193. Rahul Paul, Mohammed Shafiq-ul Hassan, **Eduardo G. Moros**, Robert J. Gillies, Lawrence O. Hall, and Dmitry B. Goldgof. Deep Feature Stability Analysis Using CT Images of a Physical Phantom Across

Scanner Manufacturers, Cartridges, Pixel Sizes, and Slice Thickness. *Tomography*, 2020;6(2):250–260, [10.18383/j.tom.2020.00003](https://doi.org/10.18383/j.tom.2020.00003), PMID: 32548303

194. Tichacek CJ, Tafreshi NK, Kil H, Engelman RW, Doligalski ML, Budzevich MM, Gage KL, McLaughlin ML, Wadas TJ, Silva A, **Moros E**, **Morse DL**. Biodistribution and Multi-Compartment Pharmacokinetic Analysis of a Targeted Alpha Particle Therapy. *Mol Pharm*. Nov 2020;17(11):4180-4188, [10.1021/acs.molpharmaceut.0c00640](https://doi.org/10.1021/acs.molpharmaceut.0c00640). PMID: 32960613.

2021:

195. Rishi A, Zhang GG, Yuan Z, Sim AJ, Song EY, **Moros EG**, Tomaszewski MR, Latifi K, Pimiento JM, Fontaine J-P, Mehta R, Harrison LB, Hoffe SE and Frakes JM. Pretreatment CT and 18F-FDG PET-based radiomic model predicting pathological complete response and loco-regional control following neoadjuvant chemoradiation in oesophageal cancer. *J Med Imaging Radiat Oncol*. 2021 Feb;65(1):102-111. [10.1111/1754-9485.13128](https://doi.org/10.1111/1754-9485.13128). PMID: 33258556
196. Saini A, Tichacek C, Johansson W, Redler G, Zhang G, **Moros EG**, Qayyum M and Feygelman V. Unlocking a closed system: dosimetric commissioning of a ring gantry linear accelerator in a multivendor environment. *J Appl Clin Med Phys*, 2021;22:21-34. [10.1002/acm2.13116](https://doi.org/10.1002/acm2.13116), PMID: 33452738. **Received the George Starkschall Award of Excellence for an Outstanding Radiation Oncology Physics Paper in 2021. Received TOP DOWNLOADED PAPER within first year of publication certificate, March 2023.**
197. Yuan Z, Frazer M, Rishi A, Latifi K, Tomaszewski MR, **Moros EG**, Feygelman V, Felder S, Sanchez J, Dessureault S, Imanirad I, Kim RD, Harrison LB, Hoffe SE, Zhang GG, Frakes JM. Pretreatment CT and PET radiomics predicting rectal cancer patients in response to neoadjuvant chemoradiotherapy. *Rep Pract Oncol Radiother*. 2021;26(1):29-34. [10.5603/RPOR.a2021.0004](https://doi.org/10.5603/RPOR.a2021.0004). eCollection 2021. PMID: 33948299
198. Divgi C, Carrasquillo JA, Meredith R, Seo Y, Frey EC, Bolch WE, Zimmerman BE, Akabani G, Jacobson DA, Brown B, Davern SM, Hobbs RF, Humm J, **Moros EG**, Morse D, Papineni R, Zanzonico P, Benedict SH, Sgouros G. Overcoming Barriers to Radiopharmaceutical Therapy (RPT): An Overview from the NRG-NCI Working Group on Dosimetry of Radiopharmaceutical Therapy. *Int J Radiat Oncol Biol Phys*. 2021;109(4):905-912. [10.1016/j.ijrobp.2020.12.002](https://doi.org/10.1016/j.ijrobp.2020.12.002). PMID: 33309909.
199. Grimm J, Vargo JA, Mavroidis P, Moiseenko V, Emami B, Jain S, Caudell JJ, Clump DA, Ling DC, Das S, **Moros EG**, Vinogradskiy Y, Xue J, Heron DE. Initial Data Pooling for Radiation Dose-Volume Tolerance for Carotid Artery Blowout and Other Bleeding Events in Hypofractionated Head and Neck Retreatments. *Int J Radiat Oncol Biol Phys*. 2021;110(1):147-159. [10.1016/j.ijrobp.2020.12.037](https://doi.org/10.1016/j.ijrobp.2020.12.037). PMID: 33583641.
200. Tafreshi, Narges; Kil, HyunJoo; Pandya, Darpan; Tichacek, Christopher; Doligalski, Michael; Budzevich, Mikalai; Delva, Nella; Langsen, Michael; Vallas, John; Boulware, David; Engelman, Robert; Gage, Kenneth; **Moros, Eduardo**; Wadas, Thaddeus; McLaughlin, Mark; Morse, David. Lipophilicity Determines Routes of Uptake and Clearance, and Toxicity of an Alpha-Particle Emitting Peptide Receptor Radiotherapy, *ACS Pharmacol & Translational Science* 2021 4 (2), 953-965, [10.1021/acsptsci.1c00035](https://doi.org/10.1021/acsptsci.1c00035), PMID: 33860213.
201. Zahid MU, Mohamed ASR, Latifi K, Rishi A, Harrison LB, Fuller CD, **Moros EG**, Caudell JJ, Enderling H. Proliferation Saturation Index to Characterize Response to RT and Evaluate Altered Fractionation in Head and Neck Cancer. *Appl Rad Oncol*. March, 2021;10(1):18-25.
202. McGee KP, Hwang K, Sullivan DC, Kurhanewicz J, Hu Y, Wang J, Li W, Debbins J, Paulson E, Olsen JR, Hua C-h, Warner L, Ma D, **Moros E**, Tyagi N, Chung C. Magnetic Resonance Biomarkers in Radiation Oncology. *Medical Physics*. April, 2021;48(7):e697-e732. [10.1002/mp.14884](https://doi.org/10.1002/mp.14884), PMID: 33864283. **Top downloaded paper during first year of publication.**
203. Payne A, Chopra R, Ellens N, Chen L, Ghanouni G, Sammet S, Diederich C, ter Haar G, Parker D, Moonen C, Stafford J, **Moros E**, Schlesinger D, Benedict S, Wear K, Partanen A, Farahani, K. AAPM Task Group 241: A medical physicist's guide to MRI-guided focused ultrasound body systems. *Med Phys*. July 2021;48:e772-e806. doi.org/10.1002/mp.15076. PMID: 34224149

204. Zahid MU, Mohsin N, Mohamed ASR, Caudell JJ, Harrison LB, Fuller CD, **Moros EG**, Enderling H. Forecasting Individual Patient Response to Radiotherapy in Head and Neck Cancer with a Dynamic Carrying Capacity Model. *Int J Radiat Oncol Biol Phys*. November 2021;111(3):693-704. [10.1016/j.ijrobp.2021.05.132](https://doi.org/10.1016/j.ijrobp.2021.05.132). PMID: 34102299.
205. Zahid MU, Mohamed ASR, Caudell JJ, Harrison LB, Fuller CD, **Moros EG**, Enderling H. Dynamics-Adapted Radiotherapy Dose (DARD) for Head and Neck Cancer Radiotherapy Dose Personalization. *Journal of Personalized Medicine*. September 2021;11(11):1124. [10.3390/jpm11111124](https://doi.org/10.3390/jpm11111124). PMID: 34834476
206. Koo J, Nardella L, Degnan M, Andreozzi J, Yu M, Penagaricano J, Johnstone PA, Oliver D, Ahmed K, Rosenberg S, Wuthrick E, Diaz R, Feygelman V, Latifi K, **Moros EG**, Redler G. Triggered kV Imaging During Spine SBRT for Intrafraction Motion Management. *Technology in Cancer Research & Treatment*. December 2021;20. [10.1177/15330338211063033](https://doi.org/10.1177/15330338211063033). PMID: 34855577
207. Tomaszewski MR, Latifi K, Boyer E, Palm RF, El Naqa I, **Moros EG**, Hoffe SE, Rosenberg SA, Frakes JM, Gillies RJ. Delta radiomics analysis of Magnetic Resonance guided radiotherapy imaging data can enable treatment response prediction in pancreatic cancer. *Radiation Oncology*, 2021;16, article No. 237. [10.1186/s13014-021-01957-5](https://doi.org/10.1186/s13014-021-01957-5). PMID: 34911546

2022:

208. Feygelman V, Latifi K, Bowers M, Greco K, **Moros EG**, Isacson M, Angerud A, Caudell J. Maintaining dosimetric quality when switching to a Monte Carlo dose engine for head and neck volumetric-modulated arc therapy planning. *Journal of Applied Clinical Medical Physics*, February 2022;23(5):e13572. [10.1002/acm2.13572](https://doi.org/10.1002/acm2.13572). PMID: 35213089.
209. Sharmistha Chakraborty, Mayank Singh, Raj K. Pandita, Vipin Singh, Calvin S.C. Lo, Fransisca Leonard, Nobuo Horikoshi, **Eduardo G. Moros**, Deblina Guha, Clayton R. Hunt, Kalpana Makhijani, Eric Chau, Kazi M. Ahmed, Prayas Sethi, Vijaya Charaka, Biana Godin, Kalpana Makhijani, Harry Scherthan, Jeanette Deck, Michael Hausmann, Arjamand Mushtaq, Mohammad Altaf, Kenneth S. Ramos, Krishna M. Bhat, Nitika Taneja, Chandrima Das, Tej K. Pandita. Heat-induced SIRT1-mediated H4K16ac deacetylation impairs resection and SMARCAD1 recruitment to double strand breaks, *iScience*, April 2022, 104142, [10.1016/j.isci.2022.104142](https://doi.org/10.1016/j.isci.2022.104142). PMID: 35434547.
210. Ericsson-Szeccsenyi R, Zhang G, Redler G, Feygelman V, Rosenberg S, Latifi K, Ceberg C, **Moros EG**. Robustness Assessment of Images From a 0.35T Scanner of an Integrated MRI-Linac: Characterization of Radiomics Features in Phantom and Patient Data. *Technology in Cancer Research & Treatment*. May 2022;21. [10.1177/15330338221099113](https://doi.org/10.1177/15330338221099113). PMID: 35521966.
211. Koo J, Caudell JJ, Latifi K, Jordan P, Shen S, Adamson PM, **Moros EG**, Feygelman V. Comparative evaluation of a prototype deep learning algorithm for autosegmentation of normal tissues in head and neck radiotherapy, *Radiotherapy and Oncology*, September 2022;174:52-58. [10.1016/j.radonc.2022.06.024](https://doi.org/10.1016/j.radonc.2022.06.024). PMID: 35817322.

2023:

212. Zhang W, Oraiqat I, Litzenberg D, Chang K-W, Hadley S, Sunbul NB, Matuszak M, Tichacek CJ, **Moros EG**, Carson PL, Cuneo K, Wang X, El Naqa I. Real-time, volumetric imaging of radiation dose delivery deep into the liver during cancer treatment. *Nature Biotechnology*, January 2023;41:1160-1167. [10.1038/s41587-022-01593-8](https://doi.org/10.1038/s41587-022-01593-8). PMID: 36593414.
213. Zou W, Zhang R, Schueler E, Taylor PA, Mascia AE, Diffenderfer ES, Zhao T, Ayan AS, Sharma M, Yu SJ, Lu W, Bosch WR, Tsien C, Surucu M, Pollard-Larkin JM, Schuemann J, **Moros EG**, Bazalova-Carter M, Gladstone DJ, Li H, Simone CB 2nd, Petersson K, Kry SF, Maity A, Loo BW Jr, Dong L, Maxim PG, Xiao Y, Buchsbaum JC. NRG Framework for Quality Assurance of Ultra-High Dose Rate Clinical Trials Investigating FLASH Effects and Current Technology Gaps, *International Journal of Radiation Oncology, Biology, Physics*, August 2023;116(5):1202-1217. [ijrobp.2023.04.018](https://doi.org/10.1016/j.ijrobp.2023.04.018). PMID: 37121362.
214. Lotey R, Latifi K, **Moros EG**, Feygelman V. Evaluation of an MRI linac magnetic isocenter walkout with

gantry rotation in the presence of angle-specific corrections. *Physics in Medicine and Biology*, April 2023;68:08NT01. [10.1088/1361-6560/acc724](https://doi.org/10.1088/1361-6560/acc724), PMID: 36958055.

215. Nasser N, Yang GQ, Koo J, Bowers M, Greco K, Feygelman V, **Moros EG**, Caudell JJ, Redler G. A head and neck treatment planning strategy for a CBCT-guided ring-gantry online adaptive radiotherapy system. *Journal of Applied Clinical Medical Physics*, August 2023;24(12):e14134. [10.1002/acm2.14134](https://doi.org/10.1002/acm2.14134). PMID: 37621133.
216. Joseph Weygand, Tess Armstrong, John Michael Bryant, Jacqueline M. Andreozzi, Ibrahim M. Oraiqt, Steven Nichols, Casey L. Liveringhouse, Kujtim Latifi, Kosj Yamoah, James R. Costello, Jessica M. Frakes, **Eduardo G. Moros**, Issam M. El Naqa, Arash O. Naghavi, Stephen A. Rosenberg, Gage Redler. Accurate, repeatable, and geometrically precise diffusion-weighted imaging on a 0.35 T magnetic resonance imaging-guided linear accelerator. *Physics and Imaging in Radiation Oncology*, October 2023;28:100505, [10.1016/j.phro.2023.100505](https://doi.org/10.1016/j.phro.2023.100505).

2024:

217. Koo J, Caudell J, Latifi K, **Moros EG**, Feygelman V. Essentially unedited deep-learning-based OARs are suitable for rigorous oropharyngeal and laryngeal cancer treatment planning. *Journal of Applied Clinical Medical Physics*, 2024;e14202, [10.1002/acm2.14202](https://doi.org/10.1002/acm2.14202). PMID: 37942993. **More than 1200 full text views on Oct 16, 2024.**
218. Browning AP, Lewin TD, Baker RE, Maini PK, **Moros EG**, Caudell J, Byrne HM, Enderling H. Predicting Radiotherapy Patient Outcomes with Real-Time Clinical Data Using Mathematical Modelling, *Bull Math Biol.* 2024 Jan 18;86(2):19. [10.1007/s11538-023-01246-0](https://doi.org/10.1007/s11538-023-01246-0)
219. Warren Stern, Parham Alaei, Ross Berbeco, Larry A. DeWerd, Jacob Kamen, Carolyn MacKenzie, **Eduardo G. Moros**, Yannick Poirier, Charles A. Potter, Dörthe Schae, Ileana Silvestre Patallo, Michael Abend, Steven Swarts, François Trompier. Achieving Consistent Reporting of Radiation Dosimetry by Adoption of Compatibility in Irradiation Research Protocols Expert Roundtable (CIRPER) Recommendations. *Radiat Res* 2024; [10.1667/RADE-23-00234.1](https://doi.org/10.1667/RADE-23-00234.1)
220. Nour Nasser, Bradford A. Perez, Jose A. Penagaricano, Jimmy J. Caudell, Daniel E. Oliver, Kujtim Latifi, **Eduardo G. Moros**, Gage Redler. Technical feasibility of novel immunostimulatory low-dose radiation for polymetastatic disease with CBCT-based online adaptive and conventional approaches. *Journal of Applied Clinical Medical Physics*, 2024;e14303. [10.1002/acm2.14303](https://doi.org/10.1002/acm2.14303).
221. Stern W, Parham A, Berbeco R, DeWerd LA, Kamen J, MacKenzie C, **Moros EG**, Poirier Y, Potter CA, Schae D, Patallo IS, Abend M, Swarts S, Trompier F. Recommendations for harmonized reporting of radiation Dosimetry by adoption of Compatibility in Irradiation Research Protocols Expert Roundtable (CIRPER). *Int J Radiat Biol.* 2024 Apr 3:1-3. PMID: 38568854. [10.1080/09553002.2024.2331130](https://doi.org/10.1080/09553002.2024.2331130).
222. Jesutofunmi Ayo Fajemisin, Glebys Gonzalez, Stephen A. Rosenberg, Ghanim Ullah, Gage Redler, Kujtim Latifi, **Eduardo G. Moros**, Issam El Naqa. Magnetic Resonance-guided Cancer Therapy Radiomics and Machine Learning Models for Response Prediction, *Tomography* **2024**;10(9):1439-1454, PMID: [39330753](https://doi.org/10.3390/tomography10090107), [10.3390/tomography10090107](https://doi.org/10.3390/tomography10090107).
223. Rebecca A Bekker, Nina Obertopp, Gage Redler, José Penagaricano, Jimmy J Caudell, Kosj Yamoah, Shari Pilon-Thomas, **Eduardo G Moros**, Heiko Enderling. Spatially fractionated GRID radiation potentiates immune-mediated tumor control, *Radiat Oncol Sep* 2024;19(1):121. [10.1186/s13014-024-02514-6](https://doi.org/10.1186/s13014-024-02514-6), PMID: 39272128.

Peer-Reviewed Conference Proceedings:

(listed chronologically by publication date)
(underlined name = first or senior/co-senior author)

1. Hynynen K, Roemer RB, Anhalt D, Johnson C and **Moros E**. Focused scanned ultrasound for local hyperthermia. Proceeding of the Institute of Electrical and Electronics Engineers (IEEE), Engineering in Medicine and Biology Society (EMBS), 1985; 341-345.
2. Hynynen K, Roemer RB, Johnson C, **Moros E** and Anhalt D. Temperature fluctuations during scanned focused ultrasound hyperthermia. In: Advances in Bioengineering, the American Society of Mechanical Engineers, United Engineering Center, New York, 1985; 69-70.
3. Hynynen K, Johnson C, **Moros E**, Roemer RB and DeYoung D. Evaluation of physical parameters of ultrasound hyperthermia. Proceedings of the Institute of Electrical and Electronics Engineers (IEEE), 8th Annual Conference of Engineering in Medicine and Biology Society, 1986; 1444-1447.
4. Roemer RB, **Moros EG** and Hynynen K. A comparison of bio-heat transfer and effective conductivity equation predictions to experimental hyperthermia data. In: Bioheat Transfer Applications in Hyperthermia, Emerging Horizons in Instrumentation and Modeling. Edited by Roemer R.B., McGrath J.J. and Bowman H.F., The American Society of Mechanical Engineers, United Engineering Center, New York, 1989; HTD-Vol. 126/BED-Vol. 12,11-15.
5. **Moros EG**, Straube W and Myerson RJ. Ultrasonic heating of superficial tumors and peripheral normal tissue: the effect of a thermally significant vessel pair. In: Advances in Biological Heat and Mass Transfer - 1992. Edited by McGrath J.J., The American Society of Mechanical Engineers, United Engineering Center, New York, 1992; HTD-Vol. 231, 65-74.
6. **Moros EG**, Straube WL and Myerson RJ. Finite difference vascular model for 3-D cancer therapy with hyperthermia. In: Advances in Bioheat and Mass Transfer 1993. Edited by Roemer, R.B., The American Society of Mechanical Engineers, United Engineering Center, New York, 1993; HTD-Vol. 268, 107-111.
7. **Moros EG**, Straube WL and Myerson RJ. Design optimization of a scanning ultrasound reflector-linear array system for external simultaneous thermoradiotherapy. In: Advances in Heat and Mass Transfer in Biological Systems. Edited by Hayes L. and Roemer R.B., The American Society of Mechanical Engineers, United Engineering Center, New York, 1994; HTD-Vol. 288, 127-135.
8. **Moros EG**, Straube WL, Fan X and Myerson RJ. Power deposition conformability of the SURLAS, a system for external simultaneous thermoradiotherapy. In: Hyperthermic Oncology 1996, Proceedings of the 7th International Congress on Hyperthermic Oncology, Edited Franconi C., Arcangeli G. and Cavaliere R. Tor Vergata, Rome, Italy, 1996; Vol. 2, p. 470-472.
9. Myerson RJ, **Moros EG**, Straube WL, Emami B, Lee HK, and Taylor ME. Feasibility and tolerance of simultaneous external radiation and superficial hyperthermia. In: Hyperthermic Oncology 1996, Proceedings of the 7th International Congress on Hyperthermic Oncology, Edited Franconi C., Arcangeli G. and Cavaliere R., Tor Vergata, Rome, Italy, 1996; Vol. 2, p. 167-169.
10. **Moros EG**, Fan X and Straube WL. Penetration depth control with dual frequency ultrasound. In: Advances in Heat and Mass Transfer in Biotechnology 1996. Edited Hayes, L. and Clegg S., The American Society of Mechanical Engineers, United Engineering Center, New York, 1996; HTD-Vol. 337/BED-Vol. 34, 59-65.
11. **Moros EG**, Fan X and Straube WL. Theoretical study of the temperature fluctuations induced during reflected-scanned planar ultrasound hyperthermia. In: Advances in Heat and Mass Transfer in Biotechnology - 1997. Clegg S. ed., The American Society of Mechanical Engineers, United Engineering Center, New York, HTD-Vol. 355/BED-Vol. 37, 173-177, 1997.
12. **Moros EG** and Fan X. Model for ultrasonic heating of chest wall recurrences. In: Advances in Heat and Mass Transfer in Biotechnology - 1998, Clegg S. ed., The American Society of Mechanical Engineers, United Engineering Center, New York, HTD-Vol. 362/BED-Vol. 40, pp. 27-33, 1998.
13. **Moros EG**, Straube WL and Fan X. Use of A-scan for penetration control during dual-frequency ultrasound thermal therapy of superficial tissues overlaying bone and lung. In: "Thermal Treatment of Tissue with Image Guidance", Ryan T.P. and Wong T.Z. eds., Proceedings of SPIE Vol. 3594, pp. 159-167, 1999.
14. **Moros EG**, Straube WL and Myerson RJ. Temperature feedback control for hyperthermia of chest wall volumes with dual frequency ultrasound. In: Advances in Heat and Mass Transfer in Biotechnology - 1999, Scott E.P. ed., American Society of Mechanical Engineers, United Engineering Center, New York, HTD-

- Vol. 363/BED-Vol. 44, pp. 119-126, 1999.
15. Arthur RM, Trobaugh JW, Straube WL, **Moros EG** and Sangkatumvong S. Temperature dependence of ultrasonic backscattered energy in images compensated for tissue motion. Proceedings of the 2003 IEEE Ultrasonics Symposium, pp. 990-993, 2003.
 16. Arthur RM, Trobaugh JW, Straube WL, and **Moros EG**. Developing ultrasonic temperature imaging to aid cancer treatment. 12 February 2007, SPIE Newsroom. [10.1117/2.1200701.0595](https://doi.org/10.1117/2.1200701.0595).
 17. Novak P, Jamshidi-Parsian A, Benson DG, Webber JS, **Moros EG**, Shafirstein G, Griffin RJ. Multi-angle switched HIFU: A new ultrasound device for controlled non-invasive induction of small spherical ablation zones—Simulation and ex vivo results. American Institute of Physics Proceedings of the 8th International Ultrasound Symposium on Therapeutic Ultrasound, 2009;1113(1):387-391.
 18. Chen X; Chen D; Xia R; Shafirstein G; Corry P; **Moros EG**. Thermal treatment planning for SonoKnife focused-ultrasound thermal treatment of head and neck cancers. *Proc. SPIE 7901, Energy-based Treatment of Tissue and Assessment VI*, 790109 (February 10, 2011); [10.1117/12.876537](https://doi.org/10.1117/12.876537)
 19. Shafirstein G; Barnes K; Hennings L; Webber J; **Moros EG**; Przybyla B; Griffin RJ. Dual thermal ablation modality of solid tumors in a mouse model. *Proc. SPIE 7901, Energy-based Treatment of Tissue and Assessment VI*, 79010Z (February 23, 2011); [10.1117/12.876427](https://doi.org/10.1117/12.876427)
 20. Xia R; Chen D; Shafirstein G; Chen ; Corry P; Griffin R; **Moros EG**. Experimental characterization of a SonoKnife applicator. *Proc. SPIE 7901, Energy-based Treatment of Tissue and Assessment VI*, 79010Q (February 22, 2011); [10.1117/12.876379](https://doi.org/10.1117/12.876379)
 21. Shafirstein G and **Moros EG**. Computed effects of sweat gland ducts on the propagation of 94 GHz waves in skin. *Proc. SPIE 7901, Energy-based Treatment of Tissue and Assessment VI*, 790113 (February 23, 2011); [10.1117/12.888085](https://doi.org/10.1117/12.888085)
 22. Zhang RR, Feygelman V, Harris E, **Moros E**, Li W, Zhang GG. Monte Carlo study of dose difference in electron conformal therapy planning introduced by bolus material approximation. Proceedings of the 2012 World Congress on Medical Physics and Biomedical Engineering, IFMBE Proc. Vol. 39, pp. 1787-90.
 23. Jose I Rey, **Eduardo G Moros**, Robert J Gillies and Gary V Martinez. In silico electromagnetic simulation of a murine glioma model at 7T MRI conditions. *Proc Intl Soc Mag Reson Med 20*, 2012.
 24. Kujtim Latifi, Thomas J Dilling, Craig W Stevens, Vladimir Feygelman, **Eduardo G Moros**, Geoffrey G Zhang, “Evaluation of the effects of dose on lung ventilation calculated from 4D-CT using deformable image registration”, Proceedings of the 1st International Conference on Bioimaging – BIOIMAGING 2014, pp. 5-11, March 3-5, Angers, Loire Valley, France.
 25. Geoffrey G. Zhang, Kujtim Latifi, Vladimir Feygelman, Thomas J. Dilling, **Eduardo G. Moros**, “Reproducibility Analysis of 4DCT Derived Ventilation Distribution Data-An Application of a Ventilation Calculation Algorithm based on 4DCT”, Proceedings of the 2nd International Conference on Bioimaging – BIOIMAGING 2015, pp. 40-43, Jan 12-15, 2015, Lisbon, Portugal.
 26. V Feygelman, T J Dilling, **E G Moros** and G G Zhang, “On the dose to a moving target in stereotactic ablative body radiotherapy to lung tumors”, *Journal of Physics: Conference Series*, Volume 777, Number 1, 012027, 2017. [10.1088/1742-6596/777/1/012027](https://doi.org/10.1088/1742-6596/777/1/012027)
 27. Zhang G.G., Latifi K., Feygelman V., Dilling T.J., **Moros E.G.** (2017) 4DCT-Derived Ventilation Distribution Reproducibility Over Time. In: Fred A., Gamboa H. (eds) *Biomedical Engineering Systems and Technologies. BIOSTEC 2016. Communications in Computer and Information Science*, vol 690, pp. 56-66. Springer. [10.1007/978-3-319-54717-6_4](https://doi.org/10.1007/978-3-319-54717-6_4)
 28. Chou, K-T., Latifi, K., **Moros, E.**, Feygelman, V., Huang, T-C., Dilling, T., Perez, B. and Zhang, G. Evaluation of Radiomic Features Stability When Deformable Image Registration Is Applied. In Proceedings of the 11th International Joint Conference on Biomedical Engineering Systems and Technologies (BIOSTEC 2018) - Volume 2: BIOIMAGING, pages 153-158. ISBN: 978-989-758-278-3
 29. Rahul Paul, Muhammad Shafiq-ul-Hassan, **Eduardo G. Moros**, Robert J. Gillies, Lawrence O. Hall, Dmitry B. Goldgof. Stability of deep features across CT scanners and field of view using a physical phantom. *Proc. SPIE Vol. 10575*, p. 105753P, *Medical Imaging 2018: Computer-Aided Diagnosis*, (27 February 2018);

[10.1117/12.2293164](https://doi.org/10.1117/12.2293164)

30. J Koo, J Caudell, V Feygelman, **E Moros** and K Latifi. Training and validation of a commercial deep learning contouring platform. Journal of Physics: Conference Series 1662 (2020) 012017. [10.1088/1742-6596/1662/1/012017](https://doi.org/10.1088/1742-6596/1662/1/012017)
31. Wei Zhang, Dale Litzenberg, Yaocai Huang, Kai-Wei Chang, Ibrahim Oraiqtat, Scott Hadley, **Eduardo G. Moros**, Man Zhang, Paul L. Carson, Kyle C. Cuneo, Issam EI Naqa, Xueding Wang, "The development of ionizing radiation acoustic imaging (iRAI) for mapping the dose deep in the patient body during radiation therapy," Proc. SPIE 12842-15, Photons Plus Ultrasound: Imaging and Sensing 2024, 1284207 (12 March 2024); <https://doi.org/10.1117/12.3000346>. **BEST PAPER AWARD.**
32. Wei Zhang, Ibrahim Oraiqtat, Yaocai Huang, Kaiwei Chang, Muhammad B. Alli, Dale Litzenberg, Scott Hadley, Christopher Tichacek, **Eduardo Moros**, Man Zhang, Paul Carson, Kyle Cuneo, Issam EI Naqa, and Xueding Wang "Combined ionizing radiation acoustic and ultrasound dual-modality volumetric imaging for mapping the dose on anatomical structure during radiation therapy", Proc. SPIE PC12842, Photons Plus Ultrasound: Imaging and Sensing 2024, PC1284210 (13 March 2024); <https://doi.org/10.1117/12.3000234>

Books, Book Chapters, Theses, Letters, Editorials and Others

Books:

Physics of Thermal Therapy: Fundamentals and Clinical Applications, **Eduardo G. Moros**, *Editor*, 359 pages, Series: Imaging in Medical Diagnosis and Therapy, William R. Hendee, Series Editor, CRC Press, Taylor and Francis Group, December 2012. <https://doi.org/10.1201/b13679>
<https://www.taylorfrancis.com/books/edit/10.1201/b13679/physics-thermal-therapy-eduardo-moros>

Compatibility of Irradiation Research Protocols Experts Roundtable (CIRPER) Summary Report, **Eduardo Moros** was an expert participant, Brookhaven National Laboratory, Department of Nonproliferation and National Security, Department of Nuclear Energy, U.S. Department of Energy, R&R: BNL-NN-20230131-0096-00-FORE, February 2023.

Book Chapters:

Xin Zhang, Jose Penagaricano and **Eduardo G Moros**. Rotational Arc SFRT, Chapter 11, in Spatially Fractionated, Microbeam and Flash Radiation Therapy: Physics and Multidisciplinary Approach, Nina Mayr and Hualin Zhang, Editors, Iop Publ Ltd, published on June 30, 2023.

Issam El Naqa (University of Michigan), Michael T. Milano (University of Rochester), Nitin Ohri (Albert Einstein College of Medicine), Vitali Moiseenko (University of California – San Diego), **Eduardo G. Moros** (Moffitt Cancer Center), Joseph O. Deasy (Memorial Sloan-Kettering Cancer Center), Jimm Grimm (Johns Hopkins University Hospital), Jinyu Xue (New York University Medical Center), Mary Martel (MD Anderson) and Randall K. Ten Haken (University of Michigan). Big Data Approaches to Improve Stereotactic Body Radiation Therapy (SBRT) Outcomes: Big Data for SBRT, Chapter 4 of Emerging Developments and Practices in Oncology, Edited by Issam El Naqa, IGI Global, February 2018.

Lili Chen, Faqi Lee, Feng Wu and **Eduardo G. Moros**, Clinical External Ultrasonic Treatment Devices. In: Physics of Thermal Therapy: Fundamentals and Clinical Applications, **Eduardo G. Moros**, Editor, CRC Press, Taylor and Francis Group, December 2012.

I. Lagroye, B.A. Wettring, **E.G. Moros**, W.L. Straube, W.F. Pickard and J.L. Roti Roti, R.S., Measurement of Alkali Labile DNA Damage and Cross-Links Following 2450 MHz Microwave and Low Dose Gamma Irradiation In Vitro. In: Wireless Phones and Health II, State of the Science, Edited by George L. Carlo, Kluwer Academic Publishers, Chapter 10, pp. 135-142, 2002.

J.L. Roti Roti, R.S. Malyapa, R. Hagashikubo, P. Zhang, L. Li, W.L. Straube, **E.G. Moros**, W.F. Pickard, The Carcinogenic Potential of 835.62 MHz FMCW and 847.74 MHz CDMA Radiations: Ongoing Studies. In: *Wireless Phones and Health II, State of the Science*, Edited by George L. Carlo, Kluwer Academic Publishers, Chapter 14, pp. 161-172, 2002.

Bhudatt Paliwal, Prakash Shrivastava, **Eduardo Moros**, and Richard Steeves. Hyperthermia. In: “The Modern Technology of Radiation Oncology”, First Edition, edited by J. Van Dyk, Medical Physics Publishing, Madison, Wisconsin, Chapter 22, pp. 919-932, 1999.

Robert J Myerson, **Eduardo Moros**, and Joseph L Roti Roti. HYPERTHERMIA. In: “Principles and Practice of Radiation Oncology”, Third Edition, edited by C. A. Perez and L. W. Brady, Lippincott - Raven Publishers, Philadelphia, Chapter 24, pp. 637-683, 1998.

Theses:

Ph.D. Dissertation: *Experimental Evaluation of Scanned Focused Ultrasound Hyperthermia Models in Canine Muscle In Vivo*. University of Arizona, 1990.

M.S. Thesis: *Simulations of Scanned Focused Ultrasound Hyperthermia: The Effects of Scanning Speed, Scanning Pattern and Multiple Tilted Transducers*. University of Arizona, 1987.

Book Reviews:

Yulong Yan and **Eduardo G. Moros**. Review of E.B. Podgorsak, Editor, *Radiation Oncology Physics: A Handbook for Teachers and Students*, International Atomic Energy Association, Vienna, Austria (2005) 657 pages, Euro 65, paperbound, ISBN 92-0-107304-6. *International Journal of Radiation Oncology, Biology and Physics*, 2006;66(5):1591.

Letters, Editorials and Opinion Papers:

Paul Kinahan and **Eduardo Moros**. RSRCH Re-Boot, Evolution and Transition. Science Council Research Committee Report, AAPM Newsletter, November/December 2023, Volume 48, Number 6.

Dominello MM, Sanders T, Anscher M, Bayouth J, Brock KK, Carlson DJ, Hugo G, Joseph S, Knisely J, Mendonca MS, Mian OY, **Moros EG**, Singh AK, Yu JB. Responses to the 2018 and 2019 'One Big Discovery' Question: ASTRO membership's opinions on the most important research question facing radiation oncology...where are we headed? *Int J Radiat Oncol Biol Phys*. 2021;109(1):38-40. [10.1016/j.ijrobp.2020.08.032](https://doi.org/10.1016/j.ijrobp.2020.08.032). PMID: 32798605

Yu JB, Beck TF, Anscher MS, Baschnagel AM, Brock KK, Carlson DJ, Dominello MM, Kimple RJ, Knisely JPS, Mendonca MS, Mian OY, Singh AK, **Moros EG**, Keen JC. The ASTRO Research Portfolio: Where Do We Go From Here? *Int J Radiat Oncol Biol Phys*. 2019;103(2):308-309. [10.1016/j.ijrobp.2018.09.009](https://doi.org/10.1016/j.ijrobp.2018.09.009).

Michael M. Dominello, DO, Judith C. Keen, PhD, Tyler F. Beck, PhD, John Bayouth, PhD, Jonathan Knisely, MD, David J. Carlson, PhD, Marc S. Mendonca, PhD, Omar Mian, MD, PhD, Kristy K. Brock, PhD, Mitchell Anscher, MD, Geoffrey Hugo, PhD, **Eduardo G. Moros, PhD**, Anurag K. Singh, MD, James B. Yu, MD. Responses to the 2017 '1 Million Gray Question': ASTRO membership's opinions on the most important research question facing radiation oncology. *Int J Radiat Oncol Biol Phys*. 2018;102(2):249-250. [10.1016/j.ijrobp.2018.06.045](https://doi.org/10.1016/j.ijrobp.2018.06.045)

Poleszczuk J, **Moros E**, Fishman M, Walker R, Djeu J, Schoenfeld J, Finkelstein S, Enderling H. Modeling T cell trafficking to increase the likelihood of radiation-induced abscopal effects. *Contemporary Radiation Oncologist*, April 2017.

Eduardo G. Moros, Ph.D., Per H. Halvorsen, M.S., and Colin G. Orton, Ph.D., (Moderator), POINT/COUNTERPOINT: Open access journals benefit authors from more affluent institutions. *Medical Physics*, Oct 2016;43(10):5265-5267.

Jose A. Peñagaricano, **Eduardo Moros** and Peter Corry. Intensity-Modulated Radiotherapy for Craniospinal Irradiation: Target Volume Considerations, Dose Constraints and Competing Risks: In

Regard to Parker et al. (Int J Radiat Oncol Biol Phys 2007;69:251–257). International Journal of Radiation Oncology, Biology and Physics, March 2008;70(3):964.

Eduardo G. Moros, Ph.D., Peter M. Corry, Ph.D., and Colin G. Orton, Ph.D., POINT/COUNTERPOINT: Thermoradiotherapy is underutilized for the treatment of cancer. Medical Physics, Jan 2007;34(1):1-4.

Ellen L. Jones, Leonard R. Prosnitz, Mark W. Dewhurst, Zeljko Vujaskovic, Thaddeus V. Samulski, James R. Oleson, Daohi Yu, Robert J. Myerson, **Eduardo G. Moros**, Mark D. Hurwitz and Joan M.C. Bull. In regard to Vasanathan et al. (Int J Radiat Oncol Biol Phys 2005;61:145–153). International Journal of Radiation Oncology, Biology and Physics, 2005;63(2):644.

FDA Approvals:

Investigational Device Exemption (IDE) for Washington University and University of California-San Francisco. IDE No. G900216/A1&A2 for the “Helios Ultrasound Hyperthermia System”. 1992-1994 (Included IRB approved protocols). PI: Robert J. Myerson, M.D., Ph.D.; Monitor: Bahman Emami, M.D.; WU Co-I: Perry W. Grigsby, M.D, **Eduardo Moros, Ph.D.** (applicant), Gilbert Nussbaum Ph.D.; UCSF Co-I: Theodore L. Phillips M.D., Penny K. Sneed M.D., Paul R. Stauffer M.S., Chris J. Diederich Ph.D.

Trademarks:

USPTO serial number: 77809823, Mark: SONOKNIFE, Date: April 13, 2010. UAMS No. 2009-27. International Class 010: medical device, namely, a device designed and developed to induce thermal ablation using line focused, scanned, high power ultrasound noninvasively.

Patents:

Radiotherapy Targeted To Promote A Systemic Abscopal Effect. United States Patent No. US 9,990,715 B2. Granted June 5, 2018. Inventors: Heiko Enderling, Jan T. Poleszczuk, Kimberly A. Luddy, **Eduardo G. Moros**. Assignee: H. Lee Moffitt Cancer Center and Research Institute, Inc.

Licenses Written and Approved for Medical Use of Radiation:

Arkansas Particle Accelerator License No. ARK-42-ACC-12-10. Arkansas Department of Health, 2007.

Arkansas Radioactive Material License No. ARK-0930-02230. S Arkansas Department of Health, 2009.

CAMPEP Applications:

Self-Study (application) for CAMPEP accreditation of a Residency Program in Medical Physics, UAMS Department of Radiation Oncology, January 2011. Program Accredited April 2012.

Self-Study (application) for CAMPEP accreditation for a Ph.D. in Applied Physics with Emphasis on Medical Physics Program, MCC Department of Radiation Oncology and USF Department of Physics, May 2014. Program Accredited January 1, 2015.

Self-Study (application) for CAMPEP re-accreditation for the Ph.D. in Applied Physics with Concentration on Medical Physics Program, MCC Department of Radiation Oncology and USF Department of Physics, September 2019. The program was re-accredited through 06/30/23.

Self-Study (application) for CAMPEP accreditation of a Medical Physics Residency Program, MCC Department of Radiation Oncology, December 2019. Program Accredited May 2020.

Self-Study (application) for CAMPEP re-accreditation for the Ph.D. in Applied Physics with Concentration on Medical Physics Program, MCC Department of Radiation Oncology and USF Department of Physics, September 2022. The program was re-accredited through 06/30/28.

Data Sharing:

Credence Cartridge Radiomics Phantom CT Scans (and paper) with Controlled Scanning Approach (CC-

Radiomics-Phantom-2) deposited in NIH's TCIA (<https://www.cancerimagingarchive.net/>) at: <http://doi.org/10.7937/TCIA.2019.4124tz5g>

- The CC-Radiomics-Phantom-2 collection was posted on 2/27/2019.
- The collection consists of 251 CT scans of the Credence Cartridge Radiomic (CCR) phantom.
- Since first published on TCIA to Feb 2024, researchers have downloaded 36587 scans.

Oral Presentations / Poster Presentations / Scientific Abstracts

Eighty published abstracts as of 6/2000 when abstract tracking was discontinued until 8/2011.

Selected Published Abstracts / Posters / Presentations: (since 2011)

2011:

1. SU-E-T-312: Development of a Rat Model of Radiation-Induced Heart Disease Using SACRTD. S Sharma, V Sridharan, M Boerma, P Corry, and **E Moros**, Med. Phys. 38, 3559 (2011), 10.1118/1.3612263
2. WE-E-220-03: SonoKnife: Development, Testing and Treatment Planning. **E Moros**, R Xia, G Shafirstein, D Chen, X Chen, P Corry, and R Griffin, Med. Phys. 38, 3824 (2011), 10.1118/1.3613398
3. SU-E-T-318: Using Monte Carlo in the Design of Small Animal Irradiator Collimators. E Han, S Sharma, Y Yan, **E Moros**, and P Corry, Med. Phys. 38, 3560 (2011), 10.1118/1.3612269
4. SU-E-T-802: Dosimetric Examination and Verification of Megavoltage Computed Tomography (MVCT) Based IMRT Treatment Planning with Helical Tomotherapy. M Chao, J Huang, X Chen, Y Yan, Y Xie, K Boyd, and **E Moros**, Med. Phys. 38, 3675 (2011), 10.1118/1.3612766
5. SU-E-T-848: Dose Mass-Based IMRT Inverse Planning for Radiotherapy of Thoracic Cancer. X Chen, M Chao, J Penagaricano, Y Yan, P Corry, V Ratanatharathorn, and **E Moros**, Med. Phys. 38, 3686 (2011), 10.1118/1.3612812
6. SU-E-T-572: Dose Mass Histogram (DMH) versus Dose Volume Histogram (DVH) for SBRT and Craniospinal Patients: What Can We Learn? M Chao, X Chen, J Penagaricano, **E Moros**, V Ratanatharathorn, and P Corry, Med. Phys. 38, 3621 (2011), 10.1118/1.3612534
7. WE-E-220-04: Focused Ultrasound Ablation of Tumour Hypoxic Tissue of Small Animals under PET and MRI Guidance. X Chen, R Griffin, J Webber, P Corry, G Shafirstein, and **E Moros**, Med. Phys. 38, 3824 (2011), 10.1118/1.3613399
8. SU-E-T-537: A Dosimetric Study of Gafchromic EBT2 Film for Small Field Size Stereotactic Radiosurgery QA. X Zhang, Y Yan, S Sharma, P Corry, V Ratanatharathorn, and **E Moros**, Med. Phys. 38, 3612 (2011), 10.1118/1.3612499
9. SU-E-I-15: CBCT Using a Robotic-Arm Based Small Animal Irradiation System. S Sharma, M Chao, Y Yan, P Corry, and **E Moros**, Med. Phys. 38, 3398 (2011), 10.1118/1.3611588
10. SU-C-BRB-01: Spatially Fractionated Radiation Therapy (GRID) Using a Tomotherapy Unit. Y Yan, J Penagaricano, P Corry, **E Moros**, K Gardner, EY Han, X Zhang, M Chao, Robert J. Griffin, and V Ratanatharathorn, Med. Phys. 38, 3369 (2011), 10.1118/1.3611467

2012:

11. SU-E-T-479: Skin Dose from Flattening Filter Free Beams: A Monte Carlo Investigation of Skin Dose with Flattened Beams. G Zhang, K Javedan, **E Moros**, K Latifi, V Feygelman, and H. Lee Moffitt, Med. Phys. 39, 3815 (2012), 10.1118/1.4735568
12. SU-E-J-167: Optimal Number of Respiratory Phases in 4D PET for Radiotherapy Planning: Motion-Simulated Phantom Study. M Budzevich, T Dilling, G Zhang, C Kuykendall, and **E Moros**, Med. Phys. 39, 3691 (2012), 10.1118/1.4735006
13. SU-E-J-187: Evaluation of the Effects of Dose on 4DCT-Calculated Lung Ventilation. K Latifi, T

- Dilling, S Hoffe, C Stevens, **E Moros**, and G Zhang, Med. Phys. 39, 3695 (2012), 10.1118/1.4735028
14. SU-E-T-553: Dose-Mass Vs. Dose-Volume Optimization: A Phantom Study. I Mihaylov, **E Moros**, and J Siebers, Med. Phys. 39, 3832 (2012), 10.1118/1.4735642

2013:

15. TH-C-137-12: Comparison of Dose-Volume and Dose-Mass Inverse Optimization in NSCLC. I Mihaylov and **E Moros**. Med. Phys. 40 , 535 (2013) ; 10.1118/1.4815755
16. SU-E-T-239: Implementation of QA Procedures and Their Effect On the Radiation Treatment Delivery Error Rate Over a 12 Year Period. S Wasserman , V Feygelman and **E Moros**. Med. Phys. 40 , 259 (2013) ; 10.1118/1.4814674
17. SU-E-J-69: Normalization of Ventilation Data From 4D-CT for Comparison Before and After Treatment. K Latifi , T Huang, V Feygelman, **E Moros** , C Stevens, T Dilling and G Zhang. Med. Phys. 40, 165 (2013) ; 10.1118/1.4814281
18. TH-A-137-07: Local Control Differences for SBRT Lung Patients Planned with Pencil Beam Vs. Collapsed Cone Convolution Algorithms. K Latifi, J Oliver, T Dilling, C Stevens, M DeMarco, G Zhang, **E Moros** and V Feygelman. Med. Phys. 40, 518 (2013) ; 10.1118/1.4815689
19. SU-E-J-203: Texture Analysis of 3D and 4D PET/CT Images of Lung Cancer. J Oliver, M Budzevich, G Zhang, K Latifi, C Kuykendall, S Hoffe, J Montilla-Soler, E Eikman and **E Moros**. Med. Phys. 40, 198 (2013) ; 10.1118/1.4814415
20. SU-E-J-66: Effects of Noise in 4D-CT On Deformable Image Registration and Derived Ventilation Data. K Latifi, T Huang, V Feygelman, M Budzevich, C Stevens, T Dilling, **E Moros**, W Van Elmpt, A Dekker and G Zhang. Med. Phys. 40, 165 (2013); 10.1118/1.4814278
21. Normalization of 4D-CT derived ventilation data to facilitate intra-patient comparison. Zhang G, Latifi K, Huang T, Feygelman V, **Moros E**, Stevens C, Dilling T. ASTRO Annual Meeting 2013.
22. Dynamic dose interplay does not meaningfully affect target dose in VMAT SBRT treatments. Feygelman V, Stambaugh C, Dilling T, Latifi K, Stevens C, Zhang G, **Moros E**, Nelms B. ASTRO Annual Meeting 2013.
23. A Method to Determine the Optimal Number of Bins in 4D PET. M M Budzevich, C C Kuykendall, K Latifi, J Oliver, T J Dilling, S E Hoffe, E A Eikman, J I Montilla-Soler, G G Zhang, **E G Moros**, Cancer Imaging and Radiation Therapy Symposium, Orlando, FL, USA, 2013. Pract Radiat Oncol. 2013 Apr-Jun;3(2 Suppl 1):S25. 10.1016/j.prro.2013.01.088.
24. Optimizing Options For Re-irradiation With Deformable Image Registration Of Prior Plans. K. Latifi, S. Hoffe, N. Saeed, A. Cruz, D. Opp, **E. Moros**, G. Zhang, M. Budzevich, R. Shridhar, T. Dilling, Cancer Imaging and Radiation Therapy Symposium, Orlando, FL, USA, 2013. Pract Radiat Oncol. 2013 Apr-Jun;3(2 Suppl 1):S16-S17. 10.1016/j.prro.2013.01.060.
25. Dosimetric Implications of Treating 4D PET/CT-Defined Maximum Inhale Versus Exhale Target Volumes In Esophageal Cancer. Figura N, Latifi K, Dilling T, Kuykendall CC, Eikman EA, **Moros EG**, Zhang GG, Leuthold S, Mehra C, Hoffe SE. Cancer Imaging and Radiation Therapy Symposium, Orlando, FL, USA, 2013. Pract Radiat Oncol. 2013 Apr-Jun;3(2 Suppl 1):S34-S35. 10.1016/j.prro.2013.01.116.
26. 4D PET/CT: Radiology Imaging to Radiation Therapy. C Kuykendall, M Budzevich, K Latifi, **E Moros**, S Hoffe, T Dilling, G Zhang, E Eikman. Cancer Imaging and Radiation Therapy Symposium, Orlando, FL, USA, 2013. Pract Radiat Oncol. 2013 Apr-Jun;3(2 Suppl 1):S28. 10.1016/j.prro.2013.01.096.
27. Positron Emission Tomography Texture Analysis of Necrosis in Primary Adenocarcinomas of the Lung. J Oliver, M Budzevich, G Zhang, **E G Moros**, K Latifi, C Kuykendall, S Hoffe, J Montilla-Soler, E Eikman, T Dilling. Cancer Imaging and Radiation Therapy Symposium, Orlando, FL, USA, 2013. Pract Radiat Oncol. 2013 Apr-Jun;3(2 Suppl 1):S29-30. 10.1016/j.prro.2013.01.100.
28. Evaluating Effects of Radiation Therapy Treatment on 4DCT-Calculated Lung Ventilation. K Latifi, T Dilling, S Hoffe, C Stevens, **E Moros**, G Zhang. Cancer Imaging and Radiation Therapy Symposium, Orlando, FL, USA, 2013. Pract Radiat Oncol. 2013 Apr-Jun;3(2 Suppl 1):S6-7. 10.1016/j.prro.2013.01.022.

29. Effects of Noise in 4D CT on Deformable Image Registration and Derived Ventilation Data. K Latifi, T Huang, V Feygelman, C W Stevens, T J Dilling, **E G Moros**, W van Elmpt, A Dekker, G G Zhang. Cancer Imaging and Radiation Therapy Symposium, Orlando, FL, USA, 2013. Pract Radiat Oncol. 2013 Apr-Jun;3(2 Suppl 1):S7-8. 10.1016/j.prro.2013.01.025.
30. Moberg VE, Foroutan P, Budzevich MM, Sewda K, Coppola D, Zhang GG, **Moros EG**, Malafa M, Gillies RJ, Martinez G, Mash EA, Morse DL (2013) Molecular Colonography. Moffitt Scientific Symposium, Tampa, FL.
31. Moberg VE, Foroutan P, Budzevich MM, Martinez G, Sewda K, Coppola D, Zhang GG, **Moros EG**, Malafa M, Gillies RJ, Mash EA, Morse DL (2013) Molecular Colonography. World Molecular Imaging Congress, Savannah, GA.
32. Budzevich MM, Moberg VE, Epifanio R, Zhang GG, **Moros EG**, Morse DL. (2013) Preclinical Imaging Methods Meeting, Co-hosted by Sanford Burnham and PerkinElmer, Orlando, FL.

2014:

33. Adamos Kyriakou, Esra Neufeld, Gal Shafirstein, **Eduardo Moros**, Gabor Szekely, Niels Kuster. Numerical Investigation of scanning approaches, vasculature impact and standing-wave effects in HIFU based tumor ablation. International Society for Therapeutic Ultrasound 2014 annual meeting, April 2-5, Las Vegas, NV.
34. Adamos Kyriakou, Esra Neufeld, Gal Shafirstein, **Eduardo Moros**, Gabor Szekely, Niels Kuster. Numerical Investigation of HIFU Tumor Ablation: Focus Scanning Approaches, Vasculature, and Standing-Waves. Workshop on Computational Methods in Treatment Planning, 31st Annual Meeting of the Society for Thermal Medicine, Minneapolis, MN, May 6-10, 2014.
35. Jung Choi and **Eduardo Moros**. A novel theranostic approach to prostate cancer using gold nanoparticle directed photoacoustic imaging and photothermal therapy. Symposium: Thermosensitive and Photothermal Nanomedicine, 31st Annual Meeting of the Society for Thermal Medicine, Minneapolis, MN, May 6-10, 2014.
36. SU-E-T-498: Energy Minimization and Dose-Volume Inverse Optimization in Prostate Cancer, I Mihaylov and **E Moros**, Med. Phys. 41 , 341 (2014) ; <http://dx.doi.org/10.1118/1.4888831>
37. SU-E-QI-17: Dependence of 3D/4D PET Quantitative Image Features on Noise, J Oliver, M Budzevich, G Zhang, K Latifi, T Dilling, Y Balagurunathan, Y Gu, O Grove, V Feygelman, R Gillies, **E Moros**, Med. Phys. 41 , 380 (2014) ; <http://dx.doi.org/10.1118/1.4888997>
38. SU-E-QI-16: Reproducibility of Computed Tomography Quantitative Structural Features Using the FDA Thoracic Phantom Image Database, M Budzevich, O Grove, Y Balagurunathan, Y Gu, H Wang, J Oliver, K Latifi, G Zhang, T Dilling, R Gillies, **E Moros**, Med. Phys. 41 , 380 (2014); <http://dx.doi.org/10.1118/1.4888996>
39. SSG13-03: Monte Carlo Study of Radiation Dose Enhancement by Gadolinium in Megavoltage and HDR Radiotherapy, Daniel G. Zhang | Vladimir M. Feygelman PhD | **Eduardo G. Moros PhD** | Kujtim Latifi | Geoffrey Zhang PhD, 100th meeting of the Radiological Society of North America, December 2014.
40. Mihaylov I and **Moros EG**. Mass-based generalized equivalent uniform dose inverse optimization, ESTRO 2014, Vienna, Austria.
41. Moberg VE, Budzevich MM, Zhang GG , **Moros EG** , Morse DL. In vivo validation of gold nanoparticles for CT contrast in virtual colonoscopy, Proceedings of the 2014 World Molecular Imaging Congress, Seoul, Korea.

2015:

42. A systems biology approach to predict immunotherapy augmented abscopal effects. Jan Poleszczuk, Sotiris Prokopiou, Mark Robertson-Tessi, Kimberly Luddy, **Eduardo Moros**, Mayer Fishman, Julie Djeu, Heiko Enderling. Proceedings of the AACR Special Conference: Tumor Immunology and Immunotherapy: A New Chapter; December 1-4, 2014; Orlando, FL. Philadelphia (PA): AACR; Cancer Immunol Res 3(10 Suppl): Abstract A18, 2015.
43. Systems biology approach predicts the diagnostic value of T effector: T regulatory cell ratio in clinical

- response to combined radiation/immunotherapy of high-risk soft tissue sarcoma. Sotiris Prokopiou, Jan Poleszczuk, Mark Robertson-Tessi, Kimberly A. Luddy, Mayer Fishman, **Eduardo Moros**, Julie Y. Djeu, Heiko Enderling. Proceedings of the AACR Special Conference: Tumor Immunology and Immunotherapy: A New Chapter; December 1-4, 2014; Orlando, FL. Philadelphia (PA): AACR; Cancer Immunol Res 3(10 Suppl): Abstract A19, 2015.
44. Prokopiou S, **Moros E**, Poleszczuk J, Caudell J, Torres-Rocca JF, Latifi K, Myerson R, Harrison LB, Enderling H. Non-invasive prediction of radiation response to personalized radiotherapy fractionation. Radiation Research Society Annual Meeting, Weston, FL, USA, 2015.
 45. SU-E-T-205: Comparison of Dose-Volume and Dose-Mass 4D Inverse Optimization in NSCLC. I Mihaylov and **E Moros**. Med. Phys. 42, 3379 (2015); <http://dx.doi.org/10.1118/1.4924566>
 46. TU-F-CAMPUS-J-05: Effect of Uncorrelated Noise Texture on Computed Tomography Quantitative Image Features. J Oliver, M Budzevich, D Hunt, **E Moros** and G Zhang. Med. Phys. 42, 3642 (2015); <http://dx.doi.org/10.1118/1.4925810>
 47. SU-E-J-258: Prediction of Cervical Cancer Treatment Response Using Radiomics Features Based on F18-FDG Uptake in PET Images. B Altazi, D Fernandez, G Zhang, M Biagioli, **E Moros**. Med. Phys. 42, 3326 (2015); <http://dx.doi.org/10.1118/1.4924344>
 48. SU-E-J-243: Reproducibility of Radiomics Features Through Different Voxel Discretization Levels in F18-FDG PET Images of Cervical Cancer. B Altazi, D Fernandez, G Zhang, M Biagioli, **E Moros**. Med. Phys. 42, 3322 (2015); <http://dx.doi.org/10.1118/1.4924329>
 49. SU-E-J-270: Repeated 18F-FDG PET/CTs Based Feature Analysis for the Predication of Anal Cancer Recurrence. J Wang, M Chuong, K Latifi, N Saeed, S Tan, W Choi, S Hoffe, R Shridhar, **E Moros** and W Lu. Med. Phys. 42, 3329 (2015); <http://dx.doi.org/10.1118/1.4924356>
 50. SU-E-J-254: Evaluating the Role of Mid-Treatment and Post-Treatment FDG-PET/CT in Predicting Progression-Free Survival and Distant Metastasis of Anal Cancer Patients Treated with Chemoradiotherapy. H Zhang, J Wang, M Chuong, W D'Souza, K Latifi, Nadia Saeed, S Tan, W Choi, S Hoffe, R Shridhar, **E Moros** and W Lu. Med. Phys. 42, 3325 (2015); <http://dx.doi.org/10.1118/1.4924340>
 51. Comparing Radiomics Features and SUV as Predictors for Cervical Cancer Treatment Outcomes. BA Altazi, GG Zhang, **EG Moros**, MC Biagioli, DC Fernandez. International Journal of Radiation Oncology • Biology • Physics, Vol. 93, Issue 3, S2–S3, 2015. ASTRO presentation.
 52. Investigating Quantitative Image Features and SUV Measurements as Predictors for Locally Advanced Cervical Cancer Prognostic Endpoints. BA Altazi, GG Zhang, **EG Moros**, MC Biagioli, DC Fernandez. International Journal of Radiation Oncology • Biology • Physics, Vol. 93, Issue 3, S179, 2015. ASTRO presentation.
 53. Fiducials Versus 18F-FDG PET/CT for Esophageal Cancer GTV Delineation for Radiation Therapy Treatment Planning. K Latifi, JA Oliver, J Montilla-Soler, J Klapman, GC Dhadham, C Harris, K Emanuel, J Werner, and **EG Moros**. International Journal of Radiation Oncology • Biology • Physics, Vol. 93, Issue 3, E177, 2015. ASTRO presentation.
 54. The Potential Role for 18F-FDG PET/CT Scan as an Imaging Biomarker in Unresectable Hepatocellular Carcinoma. YA Abuodeh, AO Naghavi, PS Venkat, SE Hoffe, K Latifi, KA Ahmed, JA Oliver, GG Zhang, and **EG Moros**. International Journal of Radiation Oncology • Biology • Physics, Vol. 93, Issue 3, E181–E182, 2015. ASTRO presentation.
 55. Reproducibility over time of 4DCT derived ventilation distribution data. Geoffrey G. Zhang, Kujtim Latifi, Vladimir Feygelman, Thomas J Dilling, Emad Alsayed, **Eduardo G Moros**. World Molecular Imaging Congress, Honolulu, HI, September 2-5, 2015
 56. Evaluation of the ΔV Ventilation Calculation Method Using In Vivo XeCT Ventilation Data. GG Zhang, K Latifi, K Du, JM Reinhardt, GE Christensen, K Ding, V Feygelman, **EG Moros**. Quantitative Imaging for Diagnosis and Treatment Track, World Congress on Medical Physics and Biomedical Engineering, Toronto, Canada, June 7-12, 2015.
 57. PSI: The Proliferation Saturation Index to Personalize Radiotherapy Fractionations. **Eduardo Moros**, Sotiris Prokopiou, Jan Poleszczuk, Jimmy Caudell, Javier F. Torres-Roca, Kujtim Latifi, Jae K. Lee, Robert Myerson, Louis B. Harrison, Heiko Enderling. IBPRO 2015: Integrating Radiobiology with Medical Physics, Detroit, MI, May 3-8, 2015.

58. Enabling Big Data Analytics in Radiation Oncology. Javier Torres-Roca, Rein Siegel, Dana Rollison, **Eduardo Moros**, Steven Eschrich, Peter Johnstone, William Dalton, Louis Harrison. Big Data Workshop: Exploring Opportunities for Radiation Oncology in the Era of Big Data. ASTRO, NCI, AAPM, August 13-14, 2015, NIH Campus, Bethesda, MD.
59. Radiomics of NSCLC. Gillies R, Goldgof D, Balagurunathan Y, **Moros E**, Stringfield (Grove) O, Gatenby R, Liu Y, Li Q, Hawkins S, Garcia A, Dekker A, Hall L, Lambin P, Aerts H, Gray J, Schabath M, Kim J, Rios E, Dilling T, Eschrich S, Berlung A. Quantitative Imaging Network Annual Meeting, NCI Cancer Imaging Program, Shady Grove, April 13-14, 2015.
60. Reproducibility of F18-FDG PET Radiomics Features **Through** Different Cervical Tumors Delineation Methods. B Altazi, D Fernandez, G Zhang, M Biagioli, **E Moros**, Radiological Society of North America 101st Annual Meeting, Chicago, IL. November 29th – Dec 4th 2015.
61. Multivariate Modeling for Prediction of Cervical Cancer Treatment Outcomes. B Altazi, D Fernandez, G Zhang, M Biagioli, **E Moros**, Radiological Society of North America 101st Annual Meeting, Chicago, IL. November 29th – Dec 4th 2015.

2016:

62. Lewin T, Kim J, Latifi K, Poleszczuk J, Bull J, Byrne H, Torres-Roca J, **Moros E**, Gatenby R, Harrison L, Heukelom J, Mohamed A, Rosenthal D, Fuller C, Caudell J, Enderling H. Proliferation saturation index predicts oropharyngeal squamous cell cancer gross tumor volume reduction to prospectively identify patients for adaptive radiation therapy. Multidisciplinary Head and Neck Cancer Symposium, Scottsdale, AZ, 2016. Int J Radiat Oncol Biol Phys 94(4): 903, 2016.
63. Reinhard RB, Smith BJ, Ulrich EJ, Bauer C, Huang Q, Tan Y, Zhao B, Budzevich MM, Gillies RJ, Goldgof D, **Moros E**, Grkovski M, Mehmeh S, Laymon CM, Oborski MJ, Mountz JM, Kihahan PE, Muzi M, Muzi JP, Ahmadvand P, Hamarneh G, Sunderland JJ, Buatti JM--QIN PET-CT Analysis Working-Group. PET Segmentation Challenge: Multi-Site Quality and Variability Analysis. NCI Cancer Imaging Program, The Quantitative Imaging Network Annual Meeting 2016, April 11-12, Shady Grove, MD.

FIFTY-EIGHTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE -- Medical Physics June 2016:

64. SU-F-J-90: Effects of Optimization Cost Function On Ventilation in SBRT of NSCLC. Mihaylov I, Latifi K, De Ornelas-Couto M, **Moros E**, Zhang G.
65. SU-F-T-372: Surface and Peripheral Dose in Compensator-Based FFF Beam IMRT. Zhang D, Feygelman V, **Moros E**, Latifi K, Hoffe S, Frakes J, Zhang G.
66. SU-F-R-30: Interscanner Variability of Radiomics Features in Computed Tomography (CT) Using a Standard ACR Phantom. Shafiq-ul-Hassan M, Budzevich M, Zhang G, Latifi K, Hunt D, Gillies R, **Moros E**.
67. WE-FG-BRA-10: Radiodosimetry of a Novel Alpha Particle Therapy Targeted to Uveal Melanoma: Absorbed Dose to Organs in Mice. Tichacek Christopher J., Tafreshi Narges K., Budzevich Mikalai M., Ruiz Epifanio, Wadas Thaddeus J., McLaughlin Mark L., **Moros Eduardo G.**, L. Morse David.
68. MO-DE-207B-04: Impact of Reconstruction Field of View On Radiomics Features in Computed Tomography (CT) Using a Texture Phantom. Shafiq-ul-Hassan M, Zhang G, Latifi K, Oliver J, Hunt D, Guzman R, Balagurunathan Y, Mackin D, Court L, Gillies R,
69. Voxel volume dependent features in CT radiomics. M. Shafiq-ul-Hassan and **E. G. Moros**.

70. Altazi, B. A., Zhang, G. G., Naghavi, A. O., **Moros, E. G.**, & Caudell, J. J. Radiomic Features Prognostic for Recurrence in Human Papillomavirus-Positive Oropharyngeal Cancer. International Journal of Radiation Oncology Biology Physics, 2016;96(2):S70-S71.

<https://doi.org/10.1016/j.ijrobp.2016.06.180>

2017:

FIFTY-NINETH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE -- Medical Physics, August 2017:

71. SU-E-605-0: Assessing the Imaging Habitats of Cervical Cancer Using PET/CT Images to Predict Treatment Outcomes. B Altazi*, G Zhang, **E Moros**, D Fernandez.
72. SU-I-GPD-J-18: Estimation of Mean Bladder Volume Based On Cone-Beam Computed. Tomography Modeling for Post-Operative Prostate Cancer Patients. B Housawi*, **E Moros**, P Johnstone, K Latifi.
73. SU-J-CAMPUS-TT-05: Dosimetry of a Novel Targeted Alpha Particle Therapy for Metastatic Uveal Melanoma. Christopher J. Tichacek, Narges K. Tafreshi, Michael L. Doligalski, Mikalai M. Budzevich, Epi Ruiz, Nella C. Delva, Thaddeus J. Wadas, Mark L. McLaughlin, David L. Morse, **Eduardo G. Moros**
74. TU-H-FS4-06: The Impact of Deformable Image Registration On the Robustness of Radiomic Features. K Chou, K Latifi, **E Moros**, V Feygelman, T Huang, G Zhang.
75. WE-RAM2-GePD-J(B)-06: Larger Ventilation Allows More Lung Sparing. I Mihaylov, K Latifi, **E Moros**, G Zhang.
76. WE-RAM2-GePD-IT-02: Impact of Radial Location Inside a CT QA Phantom On Radiomic Features Using 3D-Printed Cylindrical Textured Inserts. M Shafiq-ul-Hassan, G Zhang, K Latifi, G Ullah, D Hunt, R. Gillies, **E Moros**. ePoster Presentation in 59th AAPM Annual Meeting & Exhibition, July 30-August 03, 2017, Denver, CO, USA.
77. WE-RAM2-GePD-IT-03: 3D Printed Cylindrical Texture Inserts for a Commonly Used CT Phantom for Radiomics Quality Assurance. M Shafiq-ul-Hassan, G Zhang, K Latifi, G Ullah, D Hunt, R. Gillies, **E Moros**. ePoster Presentation in 59th AAPM Annual Meeting & Exhibition, July 30-August 03, 2017, Denver, CO, USA.
78. WE-RAM3-GePD-J(B)-01: Evaluation of Radiomic Features in MRI of Acoustic Neuromas. G Narayanasamy, G Zhang, G Campbell, E Siegel, **E Moros**, X, Zhang, S Morrill, J Penagaricano.
79. WE-RAM3-GePD-IT-05: Precise Monte Carlo Simulations of NaI(Tl) Spectra for Measurement of Actinium-225 Targeted Alpha Particle Bio-Distribution Christopher J. Tichacek, Mikalai M. Budzevich, Gary V. Martinez, David L. Morse, **Eduardo G. Moros**.

80. Mathematical Model of Head and Neck Cancer Response to Predict Fractionation Schema for Robust Responses During Radiation Therapy. H. Enderling, K. Latifi, A. Rishi, R. Howard, **E.G. Moros**, J. Heukelom, A.S.R. Mohamed, C.D. Fuller, L.B. Harrison, J.J. Caudell. 59th ASTRO Annual Meeting, 24-27 September, 2017, San Diego, CA, USA. International Journal of Radiation Oncology • Biology • Physics, Vol. 99, Issue 2, E656.
81. Mid-treatment Nodal Response is Associated with Outcome in Head and Neck Squamous Cell Cancer. K. Latifi, A. Rishi, H. Enderling, **E.G. Moros**, J. Heukelom, A.S.R. Mohamed, C.D. Fuller, L.B. Harrison, J.J. Caudell. 59th ASTRO Annual Meeting, 24-27 September, 2017, San Diego, CA, USA. International Journal of Radiation Oncology • Biology • Physics, Vol. 99, Issue 2, E683.
82. CT-Based Nodal Radiomic Features and Outcome in Head and Neck Squamous Cell Carcinoma. A. Rishi, K. Latifi, A.O. Naghavi, G.G. Zhang, H. Enderling, **E.G. Moros**, J. Heukelom, A.S.R. Mohamed, C.D. Fuller, L.B. Harrison, J.J. Caudell. 59th ASTRO Annual Meeting, 24-27 September, 2017, San Diego, CA, USA. International Journal of Radiation Oncology • Biology • Physics, Vol. 99, Issue 2, E715.
83. M. Shafiq-ul-hassan, G.G. Zhang, K. Latifi, D.C. Hunt, R.J. Gillies, **E.G. Moros**. Validation of Voxel-Size Normalization of CT Radiomic Features in Lung Cancer Patients. Poster presentation in 59th ASTRO Annual Meeting, 24-27 September, 2017, San Diego, CA, USA. International Journal of Radiation Oncology • Biology • Physics, Vol. 99, Issue 2, E721.
84. Tafreshi NK, Pandya DN, Doligalski ML, Tichacek CJ, Budzevich MM, Ruiz E, Delva NC, Bhatt NB, Kil HJ, Weaver A, Gibbons WR, Khushalani N, El-Haddad G, **Moros E**, Wadas TJ, McLaughlin ML,

- Morse DL. Melanocortin 1 Receptor Targeted Alpha-particle Therapy for Uveal Melanoma. Moffitt Scientific Symposium 2017, Tampa, FL.
85. Tichacek C, Budzevich M, Martinez G, **Moros E**, Morse D. (2017) Precise Monte Carlo Simulations of NaI(Tl) Spectra for Measurement of ²²⁵Ac Targeted Alpha Particle Bio-Distribution. Moffitt Scientific Symposium 2017, Tampa, FL.
 86. Gintz D, Ahmed S, **Feygelman V**, Caudell J, **Zhang G**, **Moros E**, Nelms B. “A novel method for a priori estimation of “best possible sparing” DVH for organs at risk: Validation for head and neck VMAT planning.” ASTRO Annual Meeting, San Diego, CA, 2017.
 87. Shafiq-ul-Hassan M, Zhang G, Latifi K, Hunt D, Ullah G, Gillies R and **Moros E**, Relating reconstruction kernel-induced variability in CT radiomic features with noise power spectra, (Oral Presentation) Moffitt’s Radiomics Workshop, Clearwater, FL, October 23-24, 2017.
 88. Tafreshi NK, Pandya DN, Doligalski ML, Tichacek CJ, Budzevich MM, Ruiz E, Delva NC, Bhatt NB, Kil HJ, Weaver A, Gibbons WR, Khushalani N, El-Haddad G, Moros E, Wadas TJ, McLaughlin ML, Morse DL. (2017) Melanocortin 1 Receptor Targeted Alpha-particle Therapy for Uveal Melanoma. Moffitt Scientific Symposium, Tampa, FL.

2018:

89. Paul R, Shafiq-ul-Hassan M, **Moros E**, Gillies R, Hall L, Goldgof D, Stability of deep features across CT scanners and Field Of View (FOV) using a physical phantom, paper, SPIE Medical Imaging Conference, Texas, February 2018.
90. Ahmed S, Kapatoes J, Zhang G, **Moros E**, Feygelman V. Validation of a hybrid verification technique for patient specific QA of single isocenter multi-metastatic SRS treatments. FLAAPM Spring Meeting, February 22-24, 2018, Orlando, FL (Oral presentation).
91. Ahmed S, Kapatoes J, Zhang G, **Moros E**, Feygelman V. PO-BPC-Foyer-32: Evaluation of a hybrid verification technique for pre-treatment QA of single isocenter multi-metastatic SRS treatments. AAPM Spring Meeting April 7-10, Las Vegas, NV. J. Appl. Clin. Med. Phys. 19(3), 381, 2018.
92. Grass GD, Chou K, Zhang G, Liveringhouse C, Latifi K, Arrington J, **Moros E**, Yu M. Development of Relapse-Free Survival Classifiers in Glioblastoma Patients by Integrating Multiparametric Magnetic Resonance Imaging Features. 60th Annual American Association of Physicists in Medicine. Nashville, TN July 29-August 2 2018.
93. Shafiq-ul-Hassan M, Zhang G, Latifi K, Ullah G, Gillies R and **Moros E**, Impact of X-ray beam quality on CT radiomic features across multiple scanners. (Oral presentation in 60th AAPM Annual Meeting, July 29-August 02, 2016, Nashville, TN, USA).
94. Tichacek, C. J., Budzevich, M. M., Tafreshi, N. K., Wadas, T. J., McLaughlin, M. L., Morse, D. L., & **Moros, E. G.** (2018, June). Biodistribution and Pharmacokinetic Analysis of a Targeted Alpha Particle Therapy. Medical Physics, Vol. 45, No. 6, pp. E575-E575. (Oral presentation in 60th AAPM Annual Meeting, July 29-August 02, 2016, Nashville, TN, USA).
95. Anupam Rishi, India Eaford, Geoffrey G. Zhang, Alexander Viera, Kujtim Latifi, Jessica M. Frakes, Jose M. Pimiento, Jacques-Pierre Fontaine, Vladimir Feygelman, **Eduardo G. Moros**, Louis B. Harrison, Peter A. Johnstone, Sarah E. Hoffe, “Radiomic signatures for prediction of pathological response following neoadjuvant chemoradiotherapy in esophageal cancer”, IUPESM 2018, Prague, Czech Republic, 2018.
96. Anupam Rishi, Ethan Song, Geoffrey Zhang, Kujtim Latifi, India Eaford, Alexander Mviera, Jose Pimiento, Jacques Fontaine, **Eduardo Moros**, Louis Harrison, Sarah Hoffe, Jessica Frakes. Integrated CT and 18F-FDG PET based Radiomic Prediction Models for Pathological Response and Outcome in Esophageal Cancer Patients treated with Neoadjuvant Chemo-radiotherapy and Esophagectomy. Poster #: SU-10-2093, ASTRO 2018.
97. Tichacek CJ, Budzevich MM, Morse DL, Moros EG. (2018) A Monte Carlo Method for Determining the Response Relationship Between Two Commonly Used Detectors to Indirectly Measure Alpha Particle Activity. NCI Workshop on Dosimetry of Systemic Radiopharmaceutical Therapy (SRT), Bethesda, MD, 2018.

98. Tichacek CJ, Budzevich MM, Moros EG, Morse DL. (2018) Multicompartment Pharmacokinetics Modeling of ²²⁵Ac-based Targeted Alpha Particle Therapy. NCI Workshop on Dosimetry of Systemic Radiopharmaceutical Therapy (SRT), Bethesda, MD, 2018.
99. Moros EG, Tichacek CJ, Budzevich MM, Morse DL. (2018) Voxel-based Radiation Dosimetry for Clinical Translation of Targeted Alpha Particle Therapy. NCI Workshop on Dosimetry of Systemic Radiopharmaceutical Therapy (SRT), Bethesda, MD, 2018.

2019:

100. Taylor M, Gintz D, Caudell J, Feygelman F, Latifi K, **Moros EG**. A statistical comparison of OAR doses between Helical Tomotherapy and VMAT plans, Abstract: F67.00008. American Physical Society, Boston, MA, March 4-8, 2019.
101. Tafreshi NK, Kil HJ, Pandya DN, Doligalski ML, Tichacek CJ, Budzevich MM, Delva NC, Bhatt NB, Langsen ML, **Moros EG**, Wadas TJ, McLaughlin ML, Morse DL. Lipophilicity Determines Route of Clearance of a Melanocortin 1 Receptor Targeted Radiopharmaceutical. SNMMI annual meeting, Anaheim, CA, J Nucl Med 2019;60:546.
102. Hyun Joo Kil, Narges Tafreshi, Darpan Pandya, Michael Doligalski, Chris Tichacek, Mikalai Budzevich, **Eduardo G. Moros**, Thad Wadas, David Morse, Mark McLaughlin. La-DOTA-melanocortin 1 receptor targeting ligand clearance route is controlled by linker polarity. American Cancer Society Meeting, March 2019.
103. S Ahmed, G Zhang, **E Moros**, V Feygelman. Evaluation of a Dense Planar Diode Array for True Composite SRS Measurements. PO-BPC-Exhibit Hall-10, AAPM Spring Clinical Meeting 2019.
104. Tafreshi NK, Tichacek CJ, Pandya DN, Kil HJ, Budzevich MM, **Moros EG**, McLaughlin ML, Wadas TJ, Morse DL. (2019) Development of a ⁶⁷Ga-DOTA-MC1RL companion SPECT imaging tracer for a uveal melanoma targeted alpha-particle therapy. 2019 Moffitt Scientific Symposium, Tampa, FL.
105. Rahul Paul, Muhammad Shafiq-ul-Hassan, **Eduardo Moros** (presenter), Robert Gillies, Lawrence Hall, Dmitry Goldgof. Stability of Deep Features Across CT Scanners and Field of View using a Physical Phantom. Varian Research Partnership Symposium, May 12-15, 2019 Chicago, IL.
106. C Tichacek, M Budzevich, N Tafreshi, B Miller, H Kil, T Wadas, M McLaughlin, D Morse, **E Moros**. Spatial Distribution of Targeted Alpha Particle Therapy in Rat Kidney. TU-F115-GePD-F1-01. AAPM 61st Annual Meeting, San Antonio, TX, 2019.
107. M Shafiq-ul-Hassan, F Guo, H Chen, G Zhang, **E Moros**, Z Chen. Subset of Reproducible Radiomic Features as a Function of Multiple CT Imaging Parameters. SU-I430-GePD-F9-06. AAPM 61st Annual Meeting, San Antonio, TX, 2019.
108. M Shafiq-ul-Hassan, F Guo, H Chen, G Zhang, **E Moros**, Z Chen. Step-Wise Solution to Evaluate CT Radiomic Feature Variability Due to Correlated Noise Texture. SU-I430-GePD-F9-05. AAPM 61st Annual Meeting, San Antonio, TX, 2019.
109. Z.M. Yuan, G.G. Zhang, K. Latifi, **E.G. Moros**, S. Felder, J. Sanchez, S. Dessureault, I. Imanirad, R. Kim, L.B. Harrison, S. Hoffe, J.M. Frakes. Composite Pretreatment CT and ¹⁸F-FDG PET Radiomic-Based Prediction of Pathological Response of Rectal Cancer Patients Treated with Neoadjuvant Chemoradiotherapy. Proceedings of the American Society for Radiation Oncology 61st Annual Meeting, International Journal of Radiation Oncology Biology Physics, Vol. 105, Issue 1, Supplement, 1 September 2019, Page E177.
110. M. Zahid, D. Glazar, R. Brady, **E.G. Moros**, L.B. Harrison, J.J. Caudell, H. Enderling. Proliferation Saturation Index to Prospectively Predict Patient-Specific Responses to Radiation in Oropharyngeal Cancer. Proceedings of the American Society for Radiation Oncology 61st Annual Meeting International Journal of Radiation Oncology Biology Physics, Vol. 105, Issue 1, Supplement, 2019, Page E792.
111. Mohammad U. Zahid, Nuverah Mohsin, Daniel Glazar, Renee Brady, **Eduardo G. Moros**, Louis B. Harrison, Jimmy J. Caudell, Heiko Enderling. Predicting Patient-Specific Responses to Radiation in Oropharyngeal Cancer: Tumor Volume Reduction versus Carrying-Capacity Reduction. 3rd Annual CBE Symposium Program, MCC October 14, 2019.
112. Zhigang Yuan, Geoffrey G. Zhang, Kujtim Latifi, **Eduardo G. Moros**, Vladimir Feygelman, Seth

Felder, Julian Sanchez, Sophie Dessureault, Iman Imanirad, Richard D. Kim, Louis B. Harrison, Sarah E. Hoffe, Jessica M. Frakes. A radiomics approach to predict pathological response in rectal cancer: a retrospective cohort study. World Molecular Imaging Congress (WMIC), September 4-7, 2019 - Montréal, Québec, Canada, 2019.

2020:

113. Christopher J. Tichacek, Mikalai M. Budzevich, David L. Morse and **Eduardo G. Moros**. Development of a Monte Carlo Voxel-Based 3d Radiodosimetry Method For a Targeted Alpha Particle Therapy. International Conference on Mini-Micro-Nano-Dosimetry (MMND 2020), Abstract 127. Centre for Medical Radiation Physics (CMRP), University of Wollongong, NSW, Australia, February 12, 2020.
114. **Eduardo G. Moros**. Novel Medical Physics Approaches To Personalize Radiation Therapy. International Conference on Mini-Micro-Nano-Dosimetry (MMND 2020), Abstract 126, Centre for Medical Radiation Physics (CMRP), University of Wollongong, NSW, Australia, February 12, 2020.
115. Palm RF, Han Q, Latifi L, **Moros EG**, Zhang GG, Naghavi AO. MRI Radiomic Habitats Predict for Radiation Response in Soft Tissue Sarcoma. Proceedings of ASTRO annual meeting, Poster Q&A Session, Int J Radiat Oncol Biol Phys, Supplement, 2020;108(3):e1-e2, 2020.
116. Tomaszewski MR, Latifi L, Frakes JM, Ericsson-Szecsényi, RS, Kim DW, Denbo JW, Carballido EM, Hodul P, **Moros EG**, Hoffe S, Rosenberg SA, Harrison LB, Gillies RJ. Analysis of MR Guided SBRT Imaging Data for Quantification of Early Radiotherapy Response Signal in Pancreatic Adenocarcinoma, Proceedings of ASTRO annual meeting, Poster Q&A Session, Int J Radiat Oncol Biol Phys, Supplement, 2020;108(3):e283-e284.
117. J Koo, J Caudell, V Feygelman, **E Moros**, K Latifi. Training and Validation of a Commercial Deep Learning Contouring Platforms. Imaging ePoster PO-GeP-I-219, Virtual Joint AAPM/COMP Meeting, July 12 - 16, 2020.
118. R Ericsson-szecsényi, G Zhang, G Redler, K Latifi, V Feygelman, M Tomaszewski, **E Moros**. Identifying Robust Radiomic Features Extracted From Images Generated by 0.35T MR-Linac. Multi-Disciplinary General ePoster PO-GeP-M-239, Virtual Joint AAPM/COMP Meeting, July 12 - 16, 2020.
119. M Zahid, N Mohsin, A Mohamed, J Caudell, L Harrison, C Fuller, **E Moros**, H Enderling. Forecasting Individual Patient Response to Radiotherapy with a Dynamic Carrying Capacity Model, Multi-Disciplinary **Blue Ribbon ePoster** BReP-SNAP-M-75, Virtual Joint AAPM/COMP Meeting, July 12 - 16, 2020.
120. Q Han, R Palm, K Latifi, **E Moros**, A Naghavi, G Zhang. An Empirical Comparison of Weka Classifiers for Outcome Prediction Using An Imaging Habitats Definition and Feature Extraction Method On MRI, Imaging **Blue Ribbon ePoster** BReP-SNAP-I-5, Virtual Joint AAPM/COMP Meeting, July 12 - 16, 2020.
121. Mohammad Zahid, Nuverah Mohsin, Abdallah Mohamed, Jimmy Caudell, Louis Harrison, Clifton Fuller, **Eduardo Moros**, Heiko Enderling. Forecasting Response to Radiotherapy by Combining Historical Response Data and Clinical Measurements, Abstract ID: 1643, accepted for oral presentation at the Biomedical Engineering Society (BMES) Virtual Annual Meeting, October 14-17, 2020.

2021:

122. Mohammad U. Zahid, Abdallah SR Mohamed, Clifton D Fuller, Louis B. Harrison, **Eduardo G Moros**, Jimmy J Caudell, Heiko Enderling. Dynamics-Adapted Radiotherapy Dose (DARD) for head and neck cancer radiotherapy dose personalization", Seventh Computational Approaches for Cancer Workshop (CAFCW21) in conjunction with The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC21), Poster, St. Louis, MO, November 14, 2021.
123. J. Koo, L. Nardella, M. Degnan, J. Androzzi, H. Yu, J. Penagaricano, P. Johnstone, D. Oliver, K. Ahmed, S. Rosenberg, E. Wuthrick, R. Diaz, V. Feygelman, **E. Moros**, G. Redler, Clinical Implementation and Utility of Triggered kV Imaging During Spine Stereotactic Body Radiotherapy

- for Intrafraction Motion Management, 63rd ASTRO Annual Meeting, Chicago, October 2021.
124. N. Nasser, J.J. Caudell, **E.G. Moros**, V. Feygelman, G. Redler, Initial plan quality evaluation using a novel AI-driven planning system and paradigm for adaptive head and neck patients, 63rd ASTRO Annual Meeting, Chicago, October 2021. *International Journal of Radiation Oncology, Biology, Physics* 2021;111(3) Sup:e97.
 125. Zahid MU, Caudell JJ, **Moros EG**, Mohamed AS, Fuller CD, Harrison LB, Enderling. In Silico Trial to Estimate Personalized RT Dose in Head and Neck Cancer. 63rd ASTRO Annual Meeting, Chicago, October 2021. *International Journal of Radiation Oncology, Biology, Physics*, 2021;111(3) Sup:e146–e147.
 126. Matthew Mills, Michal Tomaszewski, Kujtim Latifi, Vladimir Feygelman, Evan Wuthrick, **Eduardo Moros**, Sarah Hoffe, Jessica Frakes, Robert Gillies, Stephen Rosenberg. Radiomic Feature Changes in Adrenal Lesions Treated with MR-Guided Stereotactic Body Radiation Therapy, 63rd ASTRO Annual Meeting, Chicago, October 2021. *International Journal of Radiation Oncology, Biology, Physics*, 2021;111(3) Sup:S98–S99.
 127. J. Koo, L. Nardella, M. Degnan, J. Andreozzi, H. Yu, J. Penagaricano, P. Johnstone, D. Oliver, K. Ahmed, S. Rosenberg, E. Wuthrick, R. Diaz, V. Feygelman, **E. Moros**, G. Redler, Feasibility of intrafraction motion management using triggered kV imaging during spine stereotactic radiosurgery, 63rd AAPM Meeting, Virtual, July 2021.
 128. N. Nasser, J. Caudell, **E. Moros**, V. Feygelman, G. Redler, Evaluation of initial planning techniques for adaptive head and neck patients, 63rd AAPM annual meeting, Virtual, July 2021.
 129. J. Koo, L. Nardella, M. Degnan, J. Andreozzi, M. Yu, J. Penagaricano, P. Johnstone, D. Oliver, K. Ahmed, S. Rosenberg, E. Wuthrick, R. Diaz, V. Feygelman, **E. Moros**, G. Redler, Triggered kV imaging during spine stereotactic body radiotherapy for intrafraction motion management, FLAAPM Spring Meeting Student Competition, March 2021. (*1st Place Fitzgerald Award*).

2022:

140. V Feygelman, K Latifi, M Bowers, K Greco, **E Moros**, M Isacson, A Angerud, J Caudell. Switching from Type B to Type C Dose Calculation Algorithm: Maintaining Treatment Planning Continuity in Head & Neck Treatments. Poster 60669, AAPM Clinical Spring Meeting, New Orleans, LA, March 26-29, 2022.
141. N. Nasser, J.J. Caudell, G. Yang, **E.G. Moros**, V. Feygelman, G. Redler. Feasibility of Novel Low Dose Radiation Treatment of Polymetastatic disease in Stage IV NSCLC Patients Receiving Systemic Immunotherapy to Improve Response, FLAAPM Spring Meeting, March 2022, Orlando, FL.
142. N. Nasser, G. Yang, J. Caudell, **E. Moros**, V. Feygelman, G. Redler, Evaluation of Initial and Online Adapted Plan Quality in Ethos for Head and Neck Patients, Abstract 65445, 64th AAPM annual meeting, Washington DC, July 2022.
143. N. Nasser, B. Perez, J. Penagaricano, K. Latifi, **E. Moros**, J. Caudell, G. Redler, Feasibility of Novel Low Dose Radiation Treatment of Polymetastatic Disease in Stage IV NSCLC Patients Receiving Systemic Immunotherapy to Improve Response, Abstract 65871, 64th AAPM annual meeting, Washington DC, July 2022.
144. H. Enderling, M. Zahid, **E. Moros**, J. Caudell, A. Mohamed, C. Fuller, Personalization of Patient Specific Radiation Dose and Dose Fractionation Using Volumetric Tumor Dynamics, Abstract 65907, 64th AAPM annual meeting, Washington DC, July 2022.
145. P. G. Saghand, I. El Naqa, S. Rosenberg, J. Bryant, K. Latifi, J. Frakes, S. Hoffe, **E. Moros**, A Deep Learning Approach for Progression Prediction Using Morphological Changes in GTV During Treatment with MR-Guided Radiation Therapy, Abstract 66528, 64th AAPM annual meeting, Washington DC, July 2022.
146. I. Oraiqat, I. El Naqa, W. Zhang, N. Ba Sunbul, C. Tichacek, K. Chang, X. Wang, **E. Moros**, K. Cuneo, M. Matusza, P. Carson, D. Litzenberg, In Vivo Demonstration of 3D-Dosimetry and Radiation Beam Localization Via Ionizing Radiation Acoustics Imaging (iRAI) in a Rabbit Model, Abstract 66688, 64th AAPM annual meeting, Washington DC, July 2022.
147. Tomaszewski MR, Latifi K, Boyer E, Palm RF, El Naqa I, **Moros EG**, Rosenberg SA, Hoffe SE,

Frakes JM, Gillies RJ. Magnetic Resonance guided radiotherapy imaging data for treatment response prediction in pancreatic cancer, Abstract 3285 (Poster). ISMRM, London, England, United Kingdom, May 7-12, 2022.

148. Feygelman V, **Moros E**, Caudell J. Can we show that technology makes a clinical difference? IUPESM World Congress and Biomedical Engineering, Singapore, June 12-17, 2022. Abstract ID;163. *Selected for oral presentation.*
149. William R. Gibbons, BS; Tuan T. Phung, BS; Ghassan El-Haddad, MD; **Eduardo G. Moros**, PhD; Christopher J. Tichacek, PhD. An end-to-end validation study of ⁹⁰Y microsphere post administration dosimetry software. Poster PS5-51, Radiation Research Society annual meeting, Waikoloa, HI, October 16-19, 2022.

2023:

150. Wei Zhang, Ibrahim Oraiqat, Dale Litzenberg, Kai-Wei Chang, Scott Hadley, Noora Sunbul, Martha Matuszak, Christopher Tichacek, **Eduardo G. Moros**, Paul Carson, Kyle Cuneo, Xueding Wang, Issam M. El Naqa, Ionizing Radiation Acoustic Imaging (iRAI) for mapping the dose deep in the liver during radiation therapy Proceedings Volume PC12379, Photons Plus Ultrasound: Imaging and Sensing 2023; PC123790 (2023) <https://doi.org/10.1117/12.2647771>.
151. Ibrahim Oraiqat, Wei Zhang, Noora Sunbul, Christopher Tichacek, Kai-Wei Chang, Xueding Wang, **Eduardo G. Moros**, Kyle Cuneo, Martha Matuszak, Paul Carson, Dale Litzenberg, Issam M. El Naqa, In Vivo Demonstration of 3D-Dosimetry and Radiation Beam Localization via Ionizing Radiation Acoustics Imaging (iRAI) in a Rabbit Model. BioEngineering in Cancer Summit, BAM For the Cure, Tampa, Florida, February 15-16, 2023.
152. Zhang W, Oraiqat I, Litzenberg D, Chang K-W, Hadley S, Ba Sunbul N, Matuszak MM, Tichacek C, **Moros EG**, Carson PL, Cuneo KC, Wang X, El Naqa I. Ionizing radiation acoustic imaging (iRAI) for volumetric mapping the dose deep in the liver during radiation therapy. *Journal of Clinical and Translational Science Abstract Collection*. Abst# 434, 2023;7(s1):129. [10.1017/cts.2023.463](https://doi.org/10.1017/cts.2023.463).
153. Jacob Moriarty, **Eduardo G. Moros**, Kujtim Latifi and Geoffrey G. Zhang. Delta Radiomics in Ultra-Central Lung Lesions Treated in MR-Linac. Early-Career Investigator Symposium, AAPM Spring Clinical Meeting, ID: 1322, April 2023, Orlando, FL.
154. Jihye Koo, Jimmy J Caudell, Kujtim Latifi, **Eduardo G Moros**, and Vladimir Feygelman, “Unedited deep learning based OARs are suitable for rigorous head and neck treatment planning”, ESTRO 2023 (European Society of Radiotherapy and Oncology) annual conference, May 13-16, Vienna, Austria. Radiotherapy and Oncology, PD-0325, Vol. 182, Supplement 1, pp. S259-S260. [https://doi.org/10.1016/S0167-8140\(23\)08856-4](https://doi.org/10.1016/S0167-8140(23)08856-4).
155. J.M. Bryant, P.G. Saghand, K. Latifi, J. Frakes, S. Hoffe, **E. Moros**, K. Mittauer, R. Kotecha, I. El Naqa, S. Rosenberg. A novel multi-task hybrid deep neural network (DNN) predicts tumor progression during MRgRT, ESTRO 2023 (European Society of Radiotherapy and Oncology) annual conference, May 13-16, Vienna, Austria. MO-0959 Radiotherapy and Oncology, Vol. 182, Supplement 1, pp. S807-S808, doi:[10.1016/S0167-8140\(23\)08499-2](https://doi.org/10.1016/S0167-8140(23)08499-2).
156. J. Weygand, T. Armstrong, J. Bryant, J. Andreozzi, I.M. Oraiqat, C.L. Liveringhouse, K. Latifi, K. Yamoah, J.R. Costello, **E.G. Moros**, I.M. El Naqa, A.O. Naghavi, S.A. Rosenberg, G. Redler, A novel multi-task hybrid deep neural network (DNN) predicts tumor progression during MRgRT, ESTRO 2023 (European Society of Radiotherapy and Oncology) annual conference, May 13-16, Vienna, Austria. PO-1820 Radiotherapy and Oncology, Vol. 182, Supplement 1, pp. S1549-S1551, [https://doi.org/10.1016/S0167-8140\(23\)66735-0](https://doi.org/10.1016/S0167-8140(23)66735-0).
157. N. Nasser, G. Q. Yang, J. Koo, M. Bowers, K. Greco, V. Feygelman, **E.G. Moros**, J.J. Caudell, G. Redler. Evaluation of a CBCT-guided online adaptive radiotherapy platform for treating head and neck patients with sequential boost, Abstract #3855, 65th AAPM Meeting, July 2023, Houston, TX.
158. Joseph Weygand, John M Bryant, Ibrahim M. Oraiqat, Kosj Yamoah, **Eduardo G Moros**, Stephen A Rosenberg, and Gage H. Redler, Abstract #4497, 65th AAPM Meeting, July 2023, Houston, TX.
159. N. Nasser, B. A. Perez, J. A. Penagaricano, K. Latifi, **E. G. Moros**, J. J. Caudell, G. Redler. Feasibility of Novel Low Dose Radiation Treatment of Polymetastatic disease in Stage IV NSCLC

Patients Receiving Systemic Immunotherapy to Improve Response, 65th AAPM Meeting, July 2023, Houston, TX.

160. Teresa Rodriguez Gonzalez, Jan Schuemann, Wei Zhang, Ibrahim Oraiqtat, Glebys Gonzalez, Ethan Casccio, **Eduardo G. Moros**, Paul L. Carson, Muhammad Alli, Thomas Bortfeld, Xueding Wang, Issam El Naqa. An Ionizing Radiation Acoustics Imaging (iRAI) system for dose monitoring in FLASH proton therapy. IV Jornadas RSEF / IFIMED de Física Médica, 29 Nov 2023 - 01 Dec 2023, CNA, Sevilla, Spain.

2024:

161. Wei Zhang, Ibrahim Oraiqtat, Yaocai Huang, Kaiwei Chang, Muhammad B. Alli, Dale Litzenberg, Scott Hadley, Christopher Tichacek, **Eduardo Moros**, Man Zhang, Paul Carson, Kyle Cuneo, Issam El Naqa, Xueding Wang. Combined ionizing radiation acoustic and ultrasound dual-modality volumetric imaging for mapping the dose on anatomical structure during radiation therapy. Proceedings Volume PC12842, Photons Plus Ultrasound: Imaging and Sensing 2024; PC128421 (2024) <https://doi.org/10.1117/12.3000234>.
162. Wei Zhang, Dale Litzenberg, Yaocai Huang, Kai-Wei Chang, Ibrahim Oraiqtat, Scott Hadley, **Eduardo Moros**, Man Zhang, Paul Carson, Kyle Cuneo, Issam El Naqa, Xueding Wang. The new development of ionizing radiation acoustic imaging (iRAI) for mapping the dose deep in the patient body during radiation therapy. Proceedings Volume 12842, Photons Plus Ultrasound: Imaging and Sensing 2024; 1284207 (2024) <https://doi.org/10.1117/12.3000346>
163. Khushalani N, El-Haddad G, Gage K, Budzevich M, Schell, **Moros E**, Tichacek C, Gibbons W, Rogers, Nickels, Tetteh, Eroglu, Karapetyan, Brohl, Markowitz, Tarhini, Hayes, Hazlehurst L, McLaughlin M, Morse D. First-in-Human Study of 225Actinium MTI-201 (225Ac-MTI-201) in Metastatic Uveal Melanoma (UM), Abstract# TPS9612, Poster# 389b, ASCO Annual Meeting 2024.
164. Wei Zhang, Ibrahim M. Oraiqtat, PhD, Yaocai Huang, Dale W. Litzenberg, PhD, Kai-Wei Chang, Glebys Gonazles, Muhammad Alli, Scott W. Hadley, PhD, Christopher J. Tichacek, PhD, **Eduardo G. Moros, PhD**, Man Zhang, Paul L. Carson, PhD, Kyle Cuneo, MD, Issam M. El Naqa, PhD and Xueding Wang, PhD, Dual-Modality Volumetric Dose on Anatomy Mapping during Radiation Therapy. Abstract #12062, 66th AAPM Meeting, July 2024, Los Angeles, CA.

Other Research and Creative Works (MCC):

Clinical and Pre-Clinical Protocols:

MCC Protocol No.	Additional Protocol No.	Title	PI Name	Current Status	Role
16640	Pro4781 USF IRB	Discovery of a MicroRNA Signature to Differentiate Between High-Grade and Low or Moderate-Grade Intraductal Papillary Mucinous Neoplasms of the Pancreas	Permeth, Jenny	Completed	Co-I
17062	Pro7930 USF IRB	Retrospective Study of Regional Lung Ventilation Change Using Pre - and Post-Treatment 4D-CTs	Zhang, Geoffrey	Completed 3/26/2018	Co-I
17064	Pro9323 USF IRB	Retrospective Analysis of Patients with Head and Neck Malignancies (primary and metastatic) Treated with External Beam Radiation at MCC	Caudell, Jimmy	Open 08/16/2012	Co-I

17070	Pro9571 USF IRB	Pilot Study of Regional Lung Ventilation: Comparing Ventilation Images Computed from 4D CTs vs. Traditional Nuclear Medicine Ventilation images	Dilling, Thomas	Completed 8/25/2016	Co-I
18800	Pro26984 USF IRB	Automated Bladder Volume Determination from Daily Conebeam CT Imaging	Johnstone, Peter	Completed 6/05/2018	Co-I
18883	Pro28086 USF IRB	Retrospective Analysis of Patients with Thoracic Malignancies (primary and metastatic) Treated with External Beam Radiation or Brachytherapy	Dilling, Thomas	Open 12/01/2016	Co-I
19599	Pro35641 USF IRB	Total Tumor Mapping (TTM) for Resectable Pancreatic Cancer: Establishing the Radiomic/Pathologic Foundation of Heterogeneity	Hoffe, Sarah	Withdrawn 12/11/2020	Co-I
19868	Pro32117 Advarra IRB	First in Human Phase I Study of 225Actinium- DOTA-Ahx-MC1RL (225Ac-MTI-201) in Metastatic Melanoma. NCT05496686	Khushalani, Nikhil	Open 1/27/2023	Co-I
20383	Pro40260 Advarra IRB	Retrospective Analysis of Patients Treated with MR-Guided External Beam Radiation at MCC	Rosenberg, Stephen	Open 11/14/2019	Co-I
20750	Pro40260	Optimal Decision Making in Oncology Using Panomics Analytics	El Naqa, Issam	Open 07/24/2020	Co-I
21270	Pro53447 Advarra IRB	Retrospective Analysis of Patients Treated with MR-Guided External Beam Radiation Across Multiple Institutions	Rosenberg, Stephen	Open 04/20/2021	Co-I
IACUC	IS1378	Optimization of concurrent radiotherapy and immunotherapy to induce abscopal responses in metastatic breast cancer	Enderling, Heiko	Completed 10/4/2018	Co-I
IACUC	IS5474	Optimization of concurrent Radiotherapy and Immunotherapy to induce abscopal responses	Enderling, Heiko	Completed 10/13/2021	Co-I
IACUC	IS8026	Combined radiation acoustics and ultrasound imaging for real-time guidance in radiotherapy.	El Naqa, Issam	Completed 06/23/2023	Co-I
IACUC	IS8036	Cerenkov Multi-Spectral Imaging (CMSI) for Adaptation and Real-Time Imaging in Radiotherapy	El Naqa, Issam	Completed 06/17/2022	Co-I
IACUC	IS9736	Predict radiation-induced shifts in patient-specific tumor immune ecosystem composition to harness immunological consequences of radiotherapy	Shari Pilon- Thomas	Completed 08/20/2024	Co-I
IACUC	IS10822	An Ionizing Radiation Acoustics Imaging (iRAI) Approach for guided Flash Radiotherapy	El Naqa, Issam	Open 06/01/2022	Co-I
IACUC	IS11938	Cerenkov Multi-Spectral Imaging (CMSI) for Real-Time Spectroscopic Imaging in Radiotherapy	El Naqa, Issam	Open 05/11/2023	Co-I
IACUC	IS11992	Combined radiation acoustics and ultrasound imaging for real-time guidance in radiotherapy	El Naqa, Issam	Open 05/15/2023	Co-I
IACUC	IS13079	Optimization of concurrent radiotherapy and immunotherapy to induce abscopal responses	Shari Pilon- Thomas	Open 6/10/2024	Co-I

Media: Videos, Articles, Webpages, etc.

Radiotherapia. Despierta Tampa Bay. Moffitt Cancer Center. Published on Nov 30, 2016.
<https://www.youtube.com/watch?v=78I0pif0SeU&list=PLR4CAMZRCyxZJqBaf1PfuBbiR7pcCykcE>

Diagnóstico por Imagenes. Despierta Tampa Bay. Moffitt Cancer Center. Published on Jan 31, 2017.
<https://www.youtube.com/watch?v=PJJ2SGK-ic&list=PLR4CAMZRCyxZJqBaf1PfuBbiR7pcCykcE>

Invited to James A. Purdy's 15th Annual Purdy Lectureship & Reunion at the Department of Radiation Oncology, Washington University School of Medicine, April 12, 2019.
<https://radonc.wustl.edu/dr-purdy-honored-at-the-15th-annual-purdy-lectureship/>

Google Scholar Webpage: <https://scholar.google.com/citations?user=BsITuE0AAAAJ>

LinkedIn Webpage: <https://www.linkedin.com/in/eduardomoros/>

ORCID Webpage: <https://orcid.org/0000-0003-1964-2460>

ResearchGate Website: <https://www.researchgate.net/profile/Eduardo-Moros>

Professional Development

(listed chronologically)

- Third International Brachytherapy and Remote Afterloading Symposium and Workshop, Mallinckrodt Institute of Radiology, WUSM, May 19-21, 1993. (16 hours)
- Surgical Applications of Energy Sources Workshop. Valleylab, Inc., Estes Park, CO, May 17-19, 1996. Participated both as an attendee and an instructor. (16 hours)
- Therapy Physics Review Course AAPM, Pittsburg, PA, July 2004. (16 hours)
- Workshop on Thermal Medicine, Heat Shock Proteins and Cancer, Society for Thermal Medicine, NIH Natcher Center, Bethesda, MD, Mar 31, 2005. Participated both as an attendee and an instructor, (7 hours)
- New Methods and Technology in Seeds Brachytherapy for Prostate Cancer Clinical Workshop. Tom Baker Cancer Centre – Nucletron. Calgary, Alberta, Canada, September 26-27, 2005. (12 hours)
- Gamma Knife Training Course. The Cleveland Clinic Health System Gamma Knife Center, Cleveland, OH, October 23-27, 2006. (36 hours)
- Tomotherapy Inc., Physics Training Program, December 10-14, 2007, Madison WI. (33 hours)
- Gamma Knife Perfexion Radiosurgery Course, Washington Hospital Healthcare System, Taylor McAdam Bell Neuroscience Institute, Fremont, CA, February 4-6, 2008. (21.75 hours)
- Radiomics Workshops organized by the Moffitt's Department of Cancer Physiology (formerly Cancer Imaging and Metabolism) and attended by national and international researchers. Participant and presenter. (14 hours each)
 - Clearwater Nov 1-2, 2012
 - Clearwater Oct 31-Nov 1, 2013
 - MD Anderson Cancer Center, Houston, Sep 29-30, 2014
 - Clearwater Oct 26-27, 2015
 - Clearwater Oct 24-26, 2016
 - Clearwater Oct 23-24, 2017
 - Clearwater Oct 16-17, 2018
 - Clearwater Oct 14-15, 2019

- Moffitt’s Integrative Mathematical Oncology Workshop, Urogenital Team Leaders: Eduardo G. Moros and Heiko Enderling, Nov 18-22, 2013. (40 hours)
- Moffitt Cancer Center Radiation Oncology Conference, Nov 14&15, 2014, Tampa, FL. (12 hours)
- IBPRO 2015: An Integrated Course in Biology and Physics of Radiation Oncology (ibpro.org), Wayne State University School of Medicine, Detroit, MI, May 3-8, 2015. (44.5 hours)
- Proton Therapy: Physical Principles and Practice, AAPM Summer School, Colorado Springs, CO, June 14-18, 2015. (39 hours)
- BIG DATA WORKSHOP: Exploring Opportunities for Radiation Oncology in the Era of Big Data. Co-sponsored by AAPM, ASTRO and NCI. August 13-14, 2015, National Institutes of Health, Bethesda, MD. (15 hours)
- IBPRO 2016: An Integrated Course in Biology and Physics of Radiation Oncology (ibpro.org), Wayne State University School of Medicine, Detroit, MI, May 4-7, 2016. Selected from previous years’ participants to train as a course facilitator/leader. (22 hours)
- Precision Medicine in Radiation Oncology: Personalizing Radiation Treatment, June 16-17, 2016, NIH Campus, Bethesda, MD. (15 hours)
- NCI Workshop on Dosimetry of Systemic Radiopharmaceutical Therapy (SRT) / Targeted Radionuclide Therapy (TRT), Rockville, MD, April 19-20, 2018. (13 hours)
- Practical Big Data Workshop 2018, AAPM Science Council FOREM, University of Michigan, Ann Arbor, June 1-2, 2018. (14 hours)
- NCI Workshop on Artificial Intelligence in Radiation Oncology, Rockville, MD, April 4-5, 2019. (16 hours)
- Modern Applications of MR in Radiation Therapy, 2021 AAPM Summer School, June 26-29, 2021. (20 CME credit hours)
- The Dr. Robert Gillies Machine Learning Workshop in Image Analytics, presenter and participant, Hyatt Regency Hotel, Clearwater, FL, November 14 & 15, 2022. (14 hours)
- Heavy Ion Therapy Symposium LIVE (in-person), January 25, 2024 - January 26, 2024, Mayo Clinic, Jacksonville, Florida. (12.75 CME credit hours)

▪ Community Involvement

2022 – pres Jesuit High School Dad’s Club, Sabre Tooth Tiger Member (Dad of alumni).

2023 – 2024 CTK-Tampa.org, EDGE Youth Ministry, volunteer.

2018 – 2022 Jesuit High School Dad’s Club, Member. Over 50 hours a year in various school and community-building activities. Fundraising activities collected over half a million dollars a year toward student financial aid. <https://www.jesuittampa.org/page.cfm?p=611>

▪ Selected (Non-Comprehensive) Contributions to Science and Medicine

▪ *(four representative papers per topic)*

Image-Based Dosimetry of Targeted Alpha Particle Therapy (TAT) Radiopharmaceuticals: Our team has developed various TAT compounds, the best candidate for first-in-humans trial based on pre-clinical studies was licensed by Molecular Therapeutics Inc. An IND was granted by the FDA and the trial started August 2022. I have been leading dosimetry and PK modeling for about 10 years.

- Tafreshi, N; Kil, H; Pandya, D; Tichacek, C; Doligalski, M; Budzevich, M; Delva, N; Langsen, M; Vallas, J; Boulware, D; Engelman, R; Gage, K; **Moros, E**; Wadas, T; McLaughlin, M; Morse, D. Lipophilicity Determines Routes of Uptake and Clearance, and Toxicity of an Alpha-Particle Emitting Peptide Receptor Radiotherapy, ACS Pharmacol & Translational Science 2021;4(2):953-965.

- Tichacek CJ, Tafreshi NK, Kil H, Engelman RW, Doligalski ML, Budzevich MM, Gage KL, McLaughlin ML, Wadas TJ, Silva A, **Moros E**, Morse DL. Biodistribution and Multi-Compartment Pharmacokinetic Analysis of a Targeted Alpha Particle Therapy. *Mol Pharm*. Nov 2020;17(11):4180-4188.
- Tafreshi NK[†], Tichacek CJ[†], Pandya DN, Doligalski ML, Budzevich MM, Kil H, Bhatt NB, Kock ND, Messina JL, Ruiz EE, Delva NC, Weaver A, Gibbons WR, Boulware DC, Khushalani NI, El-Haddad G, Triozzi PL, **Moros EG**, McLaughlin ML, Wadas T, Morse D. Melanocortin 1 Receptor Targeted Alpha-Particle Therapy for Metastatic Uveal Melanoma. *Journal of Nuclear Medicine*, 2019;60(8):1124-1133. *Featured Basic Science Article*.
- Tichacek CJ, Budzevich MM, Wadas TJ, Morse DL, **Moros EG**. A Monte Carlo Method for Determining the Response Relationship between Two Commonly Used Detectors to Indirectly Measure Alpha Particle Radiation Activity. *Molecules* 2019;24(18):3397.

Mathematical Oncology to Model Complex Biological Tumor and Normal Dynamics in Radiation Therapy Alone or in Combination with Immunotherapy: We have developed radiation response models that have led to new knowledge and a clinical trial to adapt radiation dose fractionation to H&N patients.

- Zahid MU, Mohamed ASR, Caudell JJ, Harrison LB, Fuller CD, **Moros EG**, Enderling H. Dynamics-Adapted Radiotherapy Dose (DARD) for Head and Neck Cancer Radiotherapy Dose Personalization. *J. Personalized Medicine*. September 2021;11(11):1124.
- Zahid MU, Mohsin N, Mohamed ASR, Caudell JJ, Harrison LB, Fuller CD, **Moros EG**, Enderling H. Forecasting Individual Patient Response to Radiotherapy in Head and Neck Cancer with a Dynamic Carrying Capacity Model. *Int J Radiat Oncol Biol Phys*. November 2021;111(3):693-704.
- Sunassee ED, Tan D, Ji N, Brady R, **Moros EG**, Caudell JJ, Yartsev S, Enderling H. Proliferation Saturation Index in an adaptive Bayesian approach to predict patient-specific radiotherapy responses. *Int. J. Radiat Biol*, 2019;95:10, 1421-1426.
- Poleszczuk J, **Moros E**, Fishman M, Walker R, Djeu J, Schoenfeld J, Finkelstein S, Enderling H. Modeling T cell trafficking to increase the likelihood of radiation-induced abscopal effects. *Journal of Targeted Therapies in Cancer*, 06.17, 36-40, 2017.

Radiomics Applications to Radiation Oncology and Medical Physics:

- Shafiq-ul-Hassan M, Zhang GG, Latifi K, Ullah G, Hunt DC, Balagurunathan Y, Abdalah MA, Schabath MB, Goldgof DG, Mackin D, Court LE, Gillies RJ, **Moros EG**. Intrinsic dependencies of CT radiomic features on voxel size and number of gray levels. *Medical Physics*. 2017;43(3):1050-1062.
- Muhammad Shafiq-ul-Hassan, Geoffrey G. Zhang, Dylan C. Hunt, Kujtim Latifi, Ghanim Ullah, Robert J. Gillies, **Eduardo G. Moros**, Accounting for reconstruction kernel-induced variability in CT radiomic features using noise power spectra, *Journal of Medical Imaging* 2017;5(1):011013, [10.1117/1.JMI.5.1.011013](https://doi.org/10.1117/1.JMI.5.1.011013). PMID: 29285518
- Altazi BA, Zhang GG, Fernandez DC, Montejo ME, Hunt D, Werner J, Biagioli MC, **Moros EG**. Reproducibility of F18-FDG PET radiomic features for different cervical tumor segmentation methods, gray-level discretization, and reconstruction algorithms. *J Appl Clin Med Phys*. 2017 Nov;18(6):32-48.
- Oliver JA, Budzevich M, Zhang GG, Dilling TJ, Latifi K, **Moros EG**. Variability of image features computed from conventional and respiratory-gated PET/CT images of lung cancer. *Translational Oncology*. 2015;8(6):524-534.

Radiation Therapy Quality Assurance: I have contributed through research, clinical practice and national working groups to quality assurance and quality improvement in radiotherapy.

- Zou W, Zhang R, Schueler E, Taylor PA, Mascia AE, Diffenderfer ES, Zhao T, Ayan AS, Sharma M, Yu SJ, Lu W, Bosch WR, Tsien C, Surucu M, Pollard-Larkin JM, Schuemann J, **Moros EG**, Bazalova-Carter M, Gladstone DJ, Li H, Simone CB 2nd, Petersson K, Kry SF, Maity A, Loo BW Jr, Dong L, Maxim PG, Xiao Y, Buchsbaum JC. NRG Framework for Quality Assurance of Ultra-High Dose Rate Clinical Trials Investigating FLASH Effects and Current Technology Gaps, *International Journal of Radiation Oncology, Biology, Physics* (2023), [j.ijrobp.2023.04.018](https://doi.org/10.1016/j.ijrobp.2023.04.018). PMID: 37121362.

- Zhang W, Oraiqat I, Litzenberg D, Chang K-W, Hadley S, Sunbul NB, Matuszak M, Tichacek CJ, **Moros EG**, Carson PL, Cuneo K, Wang X, El Naqa I. Real-time, volumetric imaging of radiation dose delivery deep into the liver during cancer treatment. *Nat Biotechnol* (2023). [10.1038/s41587-022-01593-8](https://doi.org/10.1038/s41587-022-01593-8). PMID: 36593414.
- Feygelman V, Latifi K, Bowers M, Greco K, **Moros EG**, Isacson M, Angerud A, Caudell J. Maintaining dosimetric quality when switching to a Monte Carlo dose engine for head and neck volumetric-modulated arc therapy planning. *J Appl Clin Med Phys*. February 2022;23(5):e13572. [10.1002/acm2.13572](https://doi.org/10.1002/acm2.13572). PMID: 35213089.
- Ahmed S, Zhang G, **Moros EG**, Feygelman V. Comprehensive evaluation of the high-resolution diode array for SRS dosimetry. *J Appl Clin Med Phys*. 2019;20(10):13–23. [10.1002/acm2.12696](https://doi.org/10.1002/acm2.12696). PMID: 31478343.

Radiation Oncology Physics (VMAT, SABR, Treatment Planning): I am an American Board of Radiology certified Therapeutic Radiologic Physicist. As a leader and team member in a clinical environment I have made many contributions to the science and practice of radiation therapy physics.

- Gintz D, Latifi K, Caudell, Nelms B, Zhang G, **Moros E**, Feygelman V. Initial evaluation of automated treatment planning software. *Journal of Applied Clinical Medical Physics*, 2016;17(3):331-346.
- Mihaylov IB and **Moros EG**. Mathematical formulation of DMH-based inverse optimization. *Frontiers in Oncology*, November 2014, Vol. 4, Article 331.
- Latifi K, Oliver J, Baker R, Dilling TJ, Stevens CW, DeMarco M, Zhang G, **Moros EG**, Feygelman V. Study of 201 non small-cell lung cancer (NSCLC) SABR patients shows local control dependence on dose calculation algorithm, *International Journal of Radiation Oncology, Biology and Physics*, 2014;88(5):1108-1113.
- Stambaugh C, Nelms BE, Dilling T, Stevens C, Latifi K, Zhang G, **Moros E**, Feygelman V. Experimentally studied dynamic dose interplay does not meaningfully affect target dose in VMAT SBRT lung treatments. *Medical Physics*, 2013;40(9):091710-1--091710-8. *Editor's Pick*.

Development of Advanced Image-Guided Small Animal Irradiator and Radiation Induced Heart Disease Studies: In order to advance the field of radiation oncology and radiobiology in the era of IGRT, IMRT and VMAT, my team developed an image-guided small animal irradiator capable of precision conformal radiation therapy. Our system has been highly productive in the study of radiation induced heart disease in rats. Our work significantly contributed to the development and dissemination of this technology along with other academic groups. Today there are two commercial systems from two different vendors with over 70 units worldwide.

- Sharma S, Narayanasamy G, Clarkson R, Chao M, **Moros EG**, Zhang X, Yan Y, Boerma M, Paudel N, Morrill S, Corry P, Griffin RJ. Study of Image Qualities From 6D Robot-Based CBCT Imaging System of Small Animal Irradiator. *Technology in Cancer Research & Treatment* 2017 March 30.
- Sharma S, Narayanasamy G, Przybyla B, Webber J, Boerma M, Clarkson R, **Moros E**, Corry P, Griffin R. Advanced small animal conformal radiation therapy device. *Technol Cancer Res Treat*. 2017 Feb;16(1):45-56. [10.1177/1533034615626011](https://doi.org/10.1177/1533034615626011), PMID: 26792490.
- Sridharan V, Thomas CJ, Cao M, Melnyk SB, Pavliv O, Joseph J, Singh SP, Sharma S, **Moros EG**, Boerma M. Effects of local irradiation combined with sunitinib on early remodeling, mitochondria, and oxidative stress in the rat heart. *Radiother Oncol*. 2016 May;119(2):259-64.
- Sridharan V, Tripathi P, Aykin-Burns N, Krager KJ, Sharma SK, **Moros EG**, Melnyk SB, Pavliv O, Hauer-Jensen M and Boerma M. A tocotrienol-enriched formulation protects against radiation-induced changes in cardiac mitochondria without modifying late cardiac function or structure. *Radiation Research*, Mar 2015;183(3):357-366.

Simultaneous Thermoradiotherapy Research: Early experimental *in vitro* and *in vivo* results showed a synergistic cytotoxic radiosensitization effect when ionizing radiation was administered simultaneously with heat. My team at Washington University in St. Louis worked for over a decade to demonstrate this effect in the clinic. This great and prolong effort required adaptation of existing hyperthermia equipment to external beam

radiation machines (linacs), extensive thermal and radiation dosimetry, development of new specialized heating systems, development and validation of treatment planning models, clinical trials with human subjects, and analysis of treatment outcomes.

- **Moros EG**, Penagaricano JA, Novák P, Straube WL, Myerson RJ. Present and future technology for simultaneous superficial thermoradiotherapy of breast cancer. *International Journal of Hyperthermia*. Sep 2010;26(7):699-709. *Peer-reviewed invited paper for a special issue on Breast Cancer*.
- Novák P, Peñagaricano JA, Nahirnyak V, Corry P, **Moros EG**. Influence of the SURLAS applicator on radiation dose distributions during simultaneous thermoradiotherapy with helical tomotherapy. *Physics in Medicine and Biology*, Apr 2008;53(10):2509-2522. *Highlights of 2008, among the best 25 papers*.
- Novak P, **Moros EG**, Straube WL and Myerson RJ. SURLAS. A new clinical grade ultrasound system for sequential or concomitant thermoradiotherapy of superficial tumors: Applicator description. *Medical Physics*, Jan 2005;32(1):230-240.
- **Moros EG**, Straube WL, Klein EE, Yousaf M and Myerson RJ. Simultaneous delivery of electron beam therapy and ultrasound hyperthermia utilizing scanning reflectors: a feasibility study. *International Journal of Radiation Oncology, Biology and Physics*, 1995;31:893-904.

Advanced *In Vitro* and *In Vivo* Electromagnetic Irradiators for Biological Studies: For over 10 years I was the lead Engineering/Physics Scientist at Washington University in charge of development, SAR characterization and operation of novel cell culture and animal electromagnetic irradiators. Through our novel irradiator developments, we made possible a great number of both *in vitro* and *in vivo*, large-scale experiments testing the carcinogenic potential of cellular telephony signals.

- La Regina M, **Moros EG**, Pickard WF, Straube WL, Baty J and Roti Roti JL. The effect of chronic exposure to 835.62 MHz FDMA or 847.74 MHz CDMA on the incidence of spontaneous tumors in rats. *Radiation Research*, 2003;160:143-151.
- Vijayalaxmi, Pickard WF, Bisht KS, Leal BZ, Meltz ML, Roti Roti JL, Straube WL and **Moros EG**. Cytogenetic studies in human blood lymphocytes exposed *in vitro* to radiofrequency radiation at a cellular telephone frequency (835.62 MHz, FDMA). *Radiation Research*, 2001;155:113-121.
- **Moros EG**, Straube WL, and Pickard WF. The radial transmission line as a broad-band shielded exposure system for microwave irradiation of large numbers of culture flasks. *Bioelectromagnetics*, 1999;20:65-80.
- **Moros EG**, Straube WL, and Pickard WF. A compact shielded exposure system for simultaneous long-term UHF irradiation of forty mammals. I. Electromagnetic and environmental design. *Bioelectromagnetics*, 1998;19:459-468.

Non-Invasive Estimation of Temperature Using Ultrasound Imaging: In collaboration with Prof. Arthur of the Department of Electrical and System Engineering of Washington University, we developed ultrasonic devices and data acquisition algorithms to measure changes backscattered ultrasound energy to estimate the temperature of soft-tissue-like medium non-invasively.

- Arthur RM, Basu D, Guo Y, Trobaugh JW, **Moros EG**. 3D *In vitro* estimation of temperature using the change in backscattered ultrasonic energy. *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*, Aug 2010;57(8):1724-33.
- Trobaugh JW, Arthur RM, Straube WL, **Moros EG**. A simulation model for ultrasonic temperature imaging using change in backscattered energy. *Ultrasound in Medicine and Biology*, Feb 2008;34(2):289-298.
- Arthur RM, Trobaugh JW, Straube WL, **Moros EG**. Temperature dependence of ultrasonic backscattered energy in motion-compensated images. *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*, Oct 2005;52(10):1644-1652.
- Arthur RM, Straube WL, Starman JD and **Moros EG**. Noninvasive temperature estimation based on the energy of backscattered ultrasound. *Medical Physics*, 2003; 30(6):1021-1029. **128 citations as of August 2023**.

High Intensity Focused Ultrasound: My work as a graduate student and postdoctoral fellow made seminal

contributions to the development and validation of computational simulation models for external beam focused ultrasound. This technology has evolved over the last few decades and presently is a clinical and commercial reality. Furthermore, in 2009 I received an ARRA award (RC1) to develop the SonoKnife—a device that focuses ultrasonic energy into a blade, not a point, to “carve out” superficial lesions by thermal ablation.

- Payne A, Chopra R, Ellens N, Chen L, Ghanouni G, Sammet S, Diederich C, ter Haar G, Parker D, Moonen C, Stafford J, **Moros E**, Schlesinger D, Benedict S, Wear K, Partanen A, Farahani, K. AAPM Task Group 241: A medical physicist’s guide to MRI-guided focused ultrasound body systems. *Med Phys*. July 2021;48:e772-e806. doi.org/10.1002/mp.15076. PMID: 34224149
- Chen D, Xia R, Corry P, **Moros EG**, Shafirstein G. SonoKnife for ablation of neck tissue: In vivo verification of a computer layered medium model. *Int. J. Hyperthermia*, Nov 2012; 28(7):698–705.
- **Moros EG** and Hynynen K. A comparison of theoretical and experimental ultrasound field distributions in canine muscle tissue *in vivo*. *Ultrasound in Medicine and Biology*, 1992;18:81-92.
- **Moros EG**, Roemer R and Hynynen K. Simulations of scanned focused ultrasound hyperthermia: the effect of scanning speed and pattern on the temperature fluctuations at the focal depth. *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*, 1988;35:552-560.

Bio-Heat Transfer Modeling for Thermal Therapy/Hyperthermia Applications: For my PhD dissertation I performed large animal experiments to study the effects of blood flow during hyperthermia and to compare partial differential bioheat transfer models. Then I used the better model, the Pennes’ bioheat equation, to performed focused ultrasound heating simulations.

- **Moros EG**, Fan X, Straube WL and Myerson RJ. Numerical and *in vitro* evaluation of temperature fluctuations during reflected-scanned planar ultrasound hyperthermia. *International Journal of Hyperthermia*, Jul 1998;14:367-382.
- **Moros EG**, Dutton AW, Roemer, RB, Burton M and Hynynen K. Experimental evaluation of two simple thermal models using hyperthermia in muscle *in vivo*. *International Journal of Hyperthermia*, 1993;9:581-598.
- **Moros EG**, Roemer RB and Hynynen K. Pre-focal high temperature regions induced by scanning focused ultrasound beams. *International Journal of Hyperthermia*, 1990; 5:351-366.
- Hynynen K, DeYoung D, Kundrat M and **Moros EG**. The effect of blood perfusion rate on the temperature distribution induced by multiple, scanned and focused ultrasonic beams in dogs' kidneys *in vivo*. *International Journal of Hyperthermia*, Jul 1989;5(4):485-497.