2020 Radiosurgery Society®
GRID/Lattice, FLASH & Microbeam Radiation Therapies Virtual Session

The symposia will focus on the proposed mechanisms of action and strategies for clinical translation of the novel unconventional spatial-temporal modalities GRID and Lattice radiotherapy, Microbeam and FLASH Radiotherapy. Clinical translation will focus on developing a consensus approach for appropriate clinical trial concepts to investigate clinical utility. Mechanisms and clinical translational aspects of the immune effects ("radiation as a drug") of GRID/Lattice, Microbeam and FLASH radiotherapy will be emphasized.

Target Audience: Radiation oncologists, medical physicists, cancer biologists, radiation biologists, medical oncologists and surgical oncologists.

Symposium Objectives:

- Provide a forum for experts and the established working groups on GRID/Lattice, Microbeam and FLASH radiotherapy to share most current knowledge and new scientific results.
- Define challenges of GRID/Lattice, Microbeam and FLASH radiotherapy for clinical translation aimed at improving radiation delivery and clinical care.
- Develop clinical studies using GRID/Lattice, Microbeam and FLASH radiotherapy for the treatment of cancer.

Organizing Committee:

Soren Bentzen, PhD, Professor of Radiation Oncology, Dept. of Radiation Oncology, University of Maryland, Maryland, MD

Robert Griffin, PhD, Professor and Director, Radiation Biology Division, University of Arkansas for Medical Sciences, Dept. of Radiation Oncology, Little Rock, AR

Quynh-Thu Le MD, FACR, FASTRO, Professor & Chair, Department of Radiation Oncology, Stanford School of Medicine, Palo Alto, CA

Charlie Limoli, PhD, Professor, Vice Chair of Research and Academic Affairs, Dept. of Radiation Oncology, University of California, Irvine, CA

Nina Mayr, MD, Professor of Radiation Oncology, University of Washington, Seattle, WA

Majid Mohiuddin, MD, Medical Director, Radiation Oncologist, Lutheran General Hospital, Parkridge, IL

Charles Simone, MD, Professor and Chief Medical Officer, New York Proton Center and Memorial Sloan Kettering Cancer Center

James (JW) Snider, MD, Assistant Professor, Dept. of Radiation Oncology, University of Maryland School of Medicine, Maryland, MD

Xiaodong Wu, PhD, Founder & President Medical Physics Associates and Biophysics Research Institute of America, Adjunct Professor, Department of Biomedical Engineering, University of Miami, Miami, FL

Hualin Zhang, PhD, Associate Professor, Dept. of Radiation Oncology, Northwestern Memorial Hospital, Chicago, IL

AGENDA

Session 1: GRID Therapy

Activation of Anti-Tumor Immune Response By Spatially Fractionated GRID Radiotherapy
Adriana Haimovich- Friedman, PhD Memorial Sloan Kettering, New York, NY

Spatially Fractionated (GRID) Radiotherapy for High-risk Soft Tissue Sarcoma: An illustrative, Initial Clinical Experience
JW Snider, MD University of Alabama, Birmingham, AL

A Novel 3D-VMAT Based GRID Therapy
Xin Zhang, PhD Boston University, Boston, MA

Minibeam Radiation Therapy: From Photons to Charged Particles
Yolanda Prezado, PhD CNRS-Institute Curie, France

Emerging Clinical Trial Concepts for GRID
Majid Mohiuddin, MD University of Chicago

Session 2: Lattice Therapy

Clinical Applications of Lattice: The Innovative Cancer Institute Experience
Beatriz E. Amendola, MD, FACR, FASTRO, FACRO Innovative Cancer Institute, South Miami, FL

Modeling Bilogical Effects for SFRT
Xiadong Wu, PhD University of Miami, Miami, FL

Lattice Radiation Therapy Practical Clinical Protocol Concepts
Anand Mahadevan, MD Geisinger Health, Danville, PA
Xiadong Wu, PhD University of Miami, Miami, FL

Session 3: Microbeam Therapy

Combined Preclinical Studies Using Microbeam Radiation Therapy
Valentin Djonov, MD University of Bern, Switzerland

Immune Modulation with Radiation-Is it a Hoax? Results of Phase III Study with Mini (Micro)beam Treatment of Canine Brain Tumor
Vijayananda Kundapur, MD, FRCR Saskatoon Cancer Centre, Saskatoon, Saskatchewan, Canada

Should Peak Dose be Used to Prescribe Spatially-fractionated Radiation Therapy Treatment?
Sha Chang, PhD University of North Carolina, Durham, NC

4. FLASH Therapy

The Evolving Saga of FLASH Radiotherapy: An Effective Treatment Against Glioblastoma that Minimizes Neurocognitive Side Effects
Charles Limoli, PhD University of California, Irvine, CA
Marie-Catherine Vozenin, PhD, HDR University of Lausanne, Switzerland

FLASH RT – Clinical Translation – The Physics Perspective
Claude Bailat, PhD University of Lausanne, Switzerland

Emerging Clinical Trial Concepts in FLASH Therapy
Charles Simone, MD New York Proton Center, New York, NY