

# **Biomedical Informatics Grand Rounds**



Joel H. Saltz, MD, PhD SUNY Distinguished Professor & Cherith Endowed Chair; Department of Biomedical Informatics at Stony Brook University

AI Driven Pathomics - the next diagnostic frontier

## Wednesday, Nov 18, 2020 3 pm - 4 pm

#### Abstract:

I will give a survey of the AI driven pathomics landscape and will exemplify the state of the art by describing methods, tools and open source algorithms our group has developed to extract information from routinely available anatomic pathology studies and from multiplex immunohistochemical analyses. This work leverages deep learning methods to compute biologically significant Pathology features, including spatial maps of tumor infiltrating lymphocytes (TILs), cancer regions along with segmented and classified cell nuclei. I will describe how these methods are being employed in studies that relate patterns of tumor and TILs to outcome and molecular characterizations with the goal of targeting treatments, I will also describe the use of pathomics characterizations in cancer surveillance studies to elucidate cancer population characteristics.

#### Bio:

Joel Saltz is a Digital Pathology pioneer having worked for the past twenty years in the development of digital Pathology whole slide image software, methods, tools and algorithms. He is a boarded Clinical Pathologist, holds an MD-PhD in Computer Science from Duke, completed a Clinical Pathology residency from Hopkins and has founded Biomedical Informatics departments at Stony Brook, Emory and Ohio State. Dr. Saltz holds Cherith Endowed Chair, Department of Biomedical Informatics at Stony Brook, SUNY Distinguished Professor and Associate Director at Stony Brook Cancer Center.

#### Continuing Medical Education Credits:

The School of Medicine, State University of New York at Stony Brook, is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. The School of Medicine, State University of New York at Stony Brook designates this live activity for a maximum of 1.00 AMA PRA Category 1 Credit(s)<sup>™</sup>. Physicians should only claim the credit commensurate with the extent of their participation in the activity. Disclosure Policy: All those in control of CME content are expected to disclose any relevant financial relationship with a commercial interest (defined as any entity producing, marketing, reselling, or distributing health care goods or services consumed by, or used on, patients) that relates to the content that will be discussed in the educational presentation. All commercial relationships that create a conflict with the planners, speakers, authors' control of content must be resolved before the educational activity occurs. \*

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## Questions? Please call the Biomedical Informatics Department at 631-638-2590.