

Spatial Omics Consortium & Bern Center for Precision Medicine present:

Spatial omics: The Discussion Sessions

When: Thursday, April 25th, 2024, 16:00 CET

Where: online via Zoom. To register, please scan the QR-code



Title: "Tumor micro-environment profiling to improve care of pancreatic cancer patients"

Speaker: Jonathan Nowak, MD, PhD, Investigator, Hale Family Center for Pancreatic Cancer Research. Department of Pathology, Brigham and Women's Hospital & Dana-Farber Cancer Institute Assistant Professor of Pathology, Harvard Medical School, Associate Director, Center for Advanced Molecular Diagnostics

Bio:

Jonathan Nowak is a molecular and gastrointestinal pathologist at Brigham and Women's Hospital and the Dana-Farber Cancer Institute, and an assistant professor of pathology at Harvard Medical School in Boston. He is board-certified in anatomic and clinical pathology and molecular genetic pathology. As the associate director for the Brigham and Women's Center for Advanced Molecular Diagnostics, Dr. Nowak oversees clinical next-generation-sequencing assays for solid tumors and hereditary cancer predisposition. Dr. Nowak also runs a research laboratory at the Dana-Farber focused on multi-omic tissue-based analysis of gastrointestinal cancers.

Abstract:

Pancreatic and colorectal cancer are two of the four tumor types with the highest aggregate mortality rates in the United States. Despite extensive research, genomically directed therapies benefit only a minority of these patients. The Wolpin-Nowak laboratory at the Dana-Farber Cancer Institute works to understand the cellular composition and functional status of these deadly tumors in order to detect cancer earlier and develop new therapies for patients. To accomplish these goals, we use digital imaging, supervised machine learning, customized analysis pipelines and in-house developed multiplex assays designed specifically for interrogating these tumor types. We design these assays to be run in an automated, reproducible manner that enables uniform analysis of many specimens. Cumulatively, we have analyzed tissue from more than 4000 patients across large landscape cohorts of tumors and as part of clinical trial correlative studies. In this webinar, we will review representative multiplexed assays for protein and RNA profiling that have been built in the lab and will discuss the necessary elements to operationalize this type of testing in a translational research laboratory. We will also explore the advantages of different types of assays and key considerations for ensuring consistently high data quality at the scale spanning hundreds to thousands of specimens.