



***RNA Innovation Seminar
Monday, November 13th at 3:00pm
ABC Seminar rooms, Biomedical Research
Science Building (BSRB), 109 Zina Pitcher***

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***“Clinical Sequencing for Precision Oncology:
Growing footprint of RNA-seq”***

Keywords: Precision oncology, clinical sequencing, RNA-Seq

Abstract: Precision oncology applies genomic analyses of tumor biopsies to improve the diagnosis and treatment of cancers. Clinical sequencing efforts performed under time and cost constraints, have progressively involved analyses of hotspot mutations, small to large panels of actionable cancer genes, occasionally whole exome, and matched germline samples, but relatively rarely, RNA sequencing. The MI_Oncoseq initiative of University of Michigan was one of the earliest clinical sequencing programs to incorporate RNA-seq analyses to provide a readout of aberrant gene expression, gene fusions, and more recently expression of neo-antigens and tumor infiltrating lymphocytes etc. Using whole exome capture probes, we developed an RNA-capture-seq methodology that facilitated efficient use of poor quality RNA, including from FFPE samples, that expanded the scope of RNA sequencing over a wide range of cancer cases and sample types. This talk will provide a quick overview of the clinical sequencing workflow focusing on the various application involving RNA-seq in real time clinical sequencing. A brief discussion of ongoing developments/ future outlook will be presented, followed by time for questions.