



# Multiplex Three-Dimensional (3D) Microscopy for Cancer Immunotherapy

Thursday, November, 4, 2021

11:30 AM to 12:30 PM

<https://purdue-edu.zoom.us/j/99822915094>

The tumor microenvironment is a three-dimensional (3D) system of diverse cellular and non-cellular components whose heterogeneous structure is typically defined by haphazard growth of cancer cells and a disordered microvasculature. Drug transport occurs within this context, providing a challenge for analysis of the drug distribution in tumor by two-dimensional (2D) methods such as immunohistochemistry (IHC). Toward overcoming the limitations of 2D methods, Dr. Lee developed Transparent Tissue Tomography (T3) as a new tool for quantitative 3D imaging and analysis of macromolecular drug transport to tumors. The use of T3 to map immunotherapeutic agent distribution, recruitment of cytotoxic T lymphocytes, and immune biomarker expression within the tumor microenvironment offers new insights into pharmacokinetics/pharmacodynamics of cancer immunotherapy.



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