

VIDD Scientific Seminar Series Special Seminar

Deciphering the Immune Landscape of Human Cancer Microenvironment



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To elucidate the underlying mechanisms of immune responses and define new potential targets for immune-based cancer therapy, we performed a comprehensive RNA-sequencing analysis of CD4⁺ effector cells and regulatory T cells (Treg) infiltrating colorectal cancer (CRC) and non-small cell lung cancer (NSCLC), showing that tumor infiltrating Treg cells are described by the expression of a subset of specific signature genes. Moreover, single-cell transcriptomic analysis of CD4⁺ T cells isolated from both NSLC and CRC samples showed that tumor infiltrating CD4⁺ T cells display a distinct molecular landscape from peripheral blood and the normal adjacent tissue, which might reflect the functional specialization of different CD4⁺ T cells subsets within the tumor that is now under investigation. Analysis of these data suggests an underlying heterogeneity of these cells that cannot be appreciated at the population level. These findings illustrate the importance of studying CD4⁺ cells contextually at tumor sites.

Thursday, February 7, 2019
10:00 - 11:00 am
E3-200/201, Eastlake Building



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