CAMB 701: The Tumor Microenvironment
Directors: Celeste Simon, PhD and Todd Ridky, MD, PhD
TA: Hunter Reavis

Syllabus Spring 2022
Tuesdays 3:30-5:30 pm
901 BRB II/III

Reminder: each week students that are not presenting on a given day will submit two questions they
would like to discuss concerning impact/novelty/implications and/or questions about the papers to
Celeste, Todd, and Hunter, the day of class.

Class Schedule:
- Students present background (30-40 minutes).
- 10-minute break.
- Students present key data in paper (45-50 minutes).
- Feedback from Celeste and Todd to presenters only (10 minutes).

Class 1: (1/18/2022). Organizational meeting; intro to Immunology, Tumor Microenvironment etc. (Hunter)

Class 2: (1/25/22) Crosstalk between the Tumor and Microenvironment (Celeste)

Class 3: (2/1/22) Immune Surveillance (Hunter)


Class 4: (2/8/22) Cancer Heterogeneity, Plasticity, and Tumor Evolution (Celeste)
Concepcion et al. “SMARCA4 inactivation promotes lineage-specific transformation and early metastatic features in the lung” Cancer Discovery (2021)

Class 5: (2/15/22) Metastatic Niche (Hunter)


Class 6: (2/22/22) Inflammation and Tumor Progression (Celeste)
Liudahl et al. "Leukocyte Heterogeneity in Pancreatic Ductal Adenocarcinoma: Phenotypic and Spatial Features Associated with Clinical Outcome" Cancer Discovery (2021)

Class 7: (3/1/22) Mock Study Section (Celeste)

Spring Break: March 7-11, 2022

Class 8: (3/15/22) Systemic Factors and Tumor Progression (Hunter, Celeste, Todd)
Monje et al. “Roadmap for the Emerging Field of Cancer Neuroscience” Cell (2020)
Katarkar et al. “NOTCH1 gene amplification promotes expansion of Cancer Associated Fibroblast populations in human skin” Nature Communications (2020)

Zhang et al. “Macropinocytosis in Cancer-Associated Fibroblasts Is Dependent on CaMK2/ARHGEF2 Signaling and Functions to Support Tumor and Stromal Cell Fitness” Cancer Discovery (2021)


Ubellacker et al. “Lymph protects metastasizing melanoma cells from ferroptosis” Nature (2020)

Lam et al. “Microbiota triggers STING-type I IFN-dependent monocyte reprogramming of the tumor microenvironment” Cell (2021)


Garcia Silva et al. “Melanoma-derived small extracellular vesicles induce lymphangiogenesis and metastasis through an NGFR-dependent mechanism” Nature Cancer (2021)

Stella Stasso “Lymphangiogenesis-inducing vaccines elicit potent and long-lasting T cell immunity against melanomas” Science Advances (2021)

Ma et al. “Sustained androgen receptor signaling is a determinant of melanoma cell growth potential and tumorigenesis” J. Exp. Med (2020)

Aguirre-Portoles et al. “ZIP9 is a druggable determinant of Sex Differences in Melanoma” Cancer Research (2021)


Mock Study Section: each student submits a one page Specific Aims on an assigned paper from class. Each student will be assigned as the primary reviewer of someone else’s aims page to present that day.