



Scientific Abstract

**SU2C-Torrey Coast Foundation Gastroesophageal  
Cancer Research Team:**

**“Novel Therapeutic Approaches for Esophageal  
Squamous Cell Carcinoma”**



Esophageal squamous cell cancer (ESCC) is common in the US and worldwide, especially in disadvantaged groups. Globally, there were an estimated 604,100 new cases of, and 544,100 deaths from, esophageal cancer in 2020. Of these, 85% were ESCC, the 6th leading cause of cancer related mortality. It is projected by 2040 there will be 957,000 new cases (806,000 ESCC) and 880,000 deaths from esophageal cancers. 5-year survival rates of ESCC are about 15-20% despite standard treatments including surgery, radiation, chemotherapy, and immunotherapy. This Research Team's collaborative, interdisciplinary and inter-institutional team of scientists, physicians, trainees and staff has a long-standing track record of discovery science, translational medicine, comprehensive clinical care, community outreach, and diversity/equity/inclusion. Hypothesizing that eliminating an unfavorable metabolic environment for tumor growth can improve outcomes in ESCC, the Research Team seeks to exploit glutamine dependence of ESCC and calibrate anti-tumor immune cell function by impeding glutamine metabolism in combination with inhibitors of cyclin-dependent kinases. The researchers emphasize with equal conviction the development of early career investigators as next generation leaders, and work very closely with patient advocates to tie their advances seamlessly to patient care.

