

In affiliation with New York-Presbyterian Hospital

Columbia University Medical Center

Rveom Lab Update

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**Department of Surgery** 

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Herbert Irving Comprehensive Cancer Center Associate Director Office of Diversity, Equity and Inclusion https://www.cancer.columbia.edu/about-

My lab at Columbia Medical Center has a large effort focused on understanding stomach cancer and esophageal cancer, collectively referred to as upper gastrointestinal (GI) cancers. While upper GI cancers are less common in the United States, they are very common in Asia and in Latin America. However, recently there has been an alarming trend of increasing incidence of gastroesophageal cancer in younger Hispanic women in the US. Our research is focused on developing new treatments for this cancer type by investigating the biology that drives cancer in the stomach and esophagus. We are also trying to understand whether race and ethnicity may play a role in the incidence of cancer in a certain population or if different races respond differently to cancer treatment. We are using mouse models of stomach and esophageal cancer as well as minitumors in a dish referred to as patient-derived organoids to study the pathways in the cells that are dysregulated. We use these organoids as mini avatars to understand the effects of treatment on a specific patient. When patients are initially diagnosed with cancer, a biopsy (small piece of tissue) is removed from the tumor to confirm the type of cancer and the stage of tumor progression. We can grow mini tumors in a dish (or organoids) from a small piece of these patient biopsies allowing us to study individual patients. Support from TedDriven is allowing us to focus on generating patientderived organoids from Hispanic patients to understand the biology in this specific population.

We are grateful for your support!

Sandra Ryeom, Ph.D.