Dr. Peters’ research focuses on the genetic, molecular and nutritional epidemiology of cancer — particularly colorectal cancer — as well as obesity, type 2 diabetes and stroke. She also studies conditions or factors related to these complex diseases, such as inflammation, lipids, glucose and insulin.

Since 2009, she has led the Genetics and Epidemiology of Colorectal Cancer Consortium, known as GECCO. She has overseen genome-wide association scans for over 75,000 GECCO study participants and has undertaken one of the first large-scale whole-genome sequencing studies for colorectal cancer, sequencing the genomes of 2,000 patients with colorectal cancer and 1,000 healthy control participants.

Using GECCO data, Dr. Peters and her team guide colorectal cancer screening decisions based on an individual’s genetic risk profile and lifestyle risk factors. To understand the interplay between genes and the environment on colorectal cancer risk, she is conducting a genome-wide investigation of how genetic risk factors interact with many different lifestyle and environmental risk factors.

She is also leading a project in GECCO to integrate genetic information about both the patient and his or her tumor to study possible associations between environmental risk factors and inherited genetic risk factors for different colorectal cancer subtypes.

Working with several large, international collaborations, Dr. Peters and her team have identified 25 new locations in the human genome where people could have genetic variations that put them at increased risk for colorectal cancer. Findings could improve assessments of individual risk and provide clues about the underlying biology of this disease, the second leading cancer killer in the U.S.

Dr. Peters earned her Ph.D. in nutrition at the University of Kiel in 1998 and a master’s in public health from the University of North Carolina in 1999. Following a postdoctoral fellowship at the National Cancer Institute, she joined the faculties of UW and Fred Hutch in 2004.

Her awards include a Presidential Early Career Award for Scientists and Engineers from the National Science Foundation and a Scholar-in-Training Award from the American Association for Cancer Research.