

WORKSHOP 12

THE ROLE OF THE MICROBIOME IN CANCER ETIOLOGY, TREATMENT AND OUTCOMES AND STRATEGIES FOR DIAGNOSING AND TREATING THE MICROBIOME IN ONCOLOGY

105 minutes

Integrative Oncology providers are often not trained to recognize, diagnose, and prescribe supportive treatments for patients presenting with symptoms related to neuroinflammation and GI dysfunction, and yet patients are frequently seeking input in this area and even pursuing harmful, expensive, and invalidated approaches to “fix” their microbiome. This workshop will focus on the pathophysiology of the microbiome both in tumor etiology and impact of tumor directed treatment and resulting side effects, best strategies for recognizing and diagnosing GI dysfunction, treatment strategies including when it is important to partner with GI experts and differences in strategies to diagnose and support the microbiome across different types of cancers. Additionally, this workshop will discuss how integrative oncology modalities such as diet, physical activity and mindfulness practices may support a healthy microbiome during and beyond cancer treatment, and how this can impact cancer outcomes as well as quality of life.

1. (15 min) Dr. Piawah - the risk factors, pathophysiology, and the role of the microbiome in the etiology of cancer and the impact of tumor directed treatments on the microbiome. The impact of the microbiome in how patients respond to systemic therapies. How lifestyle factors can alter microbiome diversity and composition. Addressing the microbiome in patients with GI malignancies.

2. (15 min) Dr. Kuon - the impact and physiology of systemic therapy on the microbiome, mechanisms linking microbiome imbalance to common cancer symptoms. The types of microbiome imbalances typically seen in patients with cancer including SIBO (Small Intestinal Bacterial Overgrowth), SIFO (Small Intestinal Fungal Overgrowth), IMO (Intestinal Methanogen Overgrowth), dysbiosis, and loss of gut membrane integrity, aka “leaky gut.” Strategies for diagnosis and treatment options including pitfalls, cautions and barriers to treating patients. The impact of long COVID and systemic therapy on microbiome imbalance and resulting symptoms.

3. (15 min) Dr. Fogh - the microbiome as a marker of central nervous system (CNS) diseases including cancer and how the microbiome impacts and impacts neuropathology and subsequent symptoms. How systemic and tumor directed anti-cancer therapies and supportive treatments such as steroids can impact the microbiome. The interaction and impact of cardiometabolic health and the gut microbiome and strategies to improve the gut microbiome. Mechanisms of tumorigenesis and response to treatment that are specific to brain tumors and how alterations in gut microbiome from CNS tumor directed and supportive therapies such as temozolomide and steroids impact outcomes.

4. 15 minutes questions and discussion among the panel and the audience.

Speakers

Dr. Sorbarikor Piawah - Medical Oncologist and cancer researcher specializing in gastrointestinal cancer, particularly colorectal cancer, at the UCSF Helen Diller Comprehensive Cancer Center. Her current research is focused on understanding the roles that the gut microbiome (the population of microorganisms living in the intestinal tract), diet and lifestyle play in disparities among those with colorectal cancer and on designing therapies that target these factors.

Dr. Carla Kuon - internist and Integrative Oncologist at the UCSF Osher Center for Integrative Health. As both an integrative internist and oncologist, she has training in functional immunology and significant expertise diagnosing and treating functional gut disorders in her clinical practice. She directs the inpatient hematology massage service at UCSF and has published articles on C. Difficile management in oncology patients. She has authored and published a book on outpatient management of Long COVID.

Dr. Shannon Elizabeth Fogh - Radiation Oncologist specializing in primary and metastatic brain tumors at the UCSF Helen Diller Comprehensive Cancer Center and an Integrative Oncologist at the UCSF Osher Center for Integrative Health. with additional training and interest in functional medicine. Her research has focused on patient quality of life and neuro cognition, and she is interested in the interplay between the microbiome, hormones, metabolic health and patients' outcomes and quality of life.