

Global Health Day

Characterizing the Gut Microbiome of Colorectal Cancer Patients in Mali by Disease Stage

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It has been demonstrated that the microbiota is associated with the development of many types of cancer including colorectal cancer. Furthermore, the microbiota has been shown to play an essential role in the efficacy of cancer chemotherapy and immunotherapy by modulating the tumor microenvironment, thus, suggesting its direct involvement not only in the development but also in the propagation of cancer. Early studies have shown significant changes in the gut microbiome during colorectal cancer, but the types of changes reported in microbial populations are not consistent in these studies. This may be due to differences in disease stages within the studied population. This particular study will analyze the gut microbiome in colon cancer patients in Mali by cancer stage, which may clarify the differences from the prior studies. We found that for the same disease stage, the gut microbiome diversity is well-conserved and significantly different from healthy controls in terms of both microbial composition and metabolic pathways, including inflammation and drug metabolism pathways. This may have implications for microbiome-based prevention and treatment strategies, such as probiotics, prebiotics and fecal transplants.

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