

# Does gut microbiota hold the key to improved diagnosis and treatment of esophageal cancer?

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Oesophageal microbiota may help to improve the diagnosis and management of oesophageal cancer, according to the results of a study presented today. Researchers from Italy directed by Professor Cammarota have found a unique pattern of microbes living in the oesophagus of people with oesophageal cancer or Barrett's oesophagus, which could potentially be used to identify at-risk individuals and pave the way for new types of treatment in the future.

Speaking at UEG Week 2018 in Vienna, Austria, lead researcher, Dr. Loris Riccardo Lopetuso from the Catholic University of Rome, Italy, said: "Despite the introduction of novel therapies such as surgery, chemotherapy, and radiotherapy, the prognosis for people with oesophageal [cancer](#) remains poor. We need to develop a better understanding of what causes normal oesophageal cells to become malignant so we can find at-risk individuals as early as possible and develop alternative therapeutic strategies."

Oesophageal cancer is the 8th most common cancer worldwide and the 6th most common cause of cancer-related death. Most people present with established disease, so rates of mortality are high in most countries. Known risk factors include [gastroesophageal reflux disease](#) (GORD), obesity, smoking, low fruit/vegetable intake, and alcohol consumption, but other factors, including upper digestive tract [microbiota](#) are thought to be involved.

In the study presented today, researchers aimed to characterize the composition of the oesophageal microbiota in patients with oesophageal cancer compared with patients with Barrett's oesophagus and a control group of people with no evidence of the disease. Biopsy samples from six newly-diagnosed patients with oesophageal cancer, 10 with Barrett's oesophagus and 10 controls were analysed for microbiota composition.

A higher level of bacterial diversity was reported for patients with oesophageal cancer compared with the controls; there was a relative abundance of Bacteroidetes and a relative paucity of Firmicutes (different categories of microbiota) in the patients with oesophageal cancer compared with the controls. There were also lower levels of Streptococcus, and higher levels of Veillonella, Porphyromonas, and Prevotella (different types of bacteria) in those with oesophageal cancer compared with Barrett's oesophagus [patients](#) and the controls.

"These results indicate that there is a unique microbial signature for [oesophageal cancer](#) that might represent a risk factor for this condition," said Dr. Lopetuso. "If these findings are confirmed in our further analyses, it may be possible to imagine innovative diagnostic and therapeutic tools to help us manage this condition more successfully."

Provided by United European Gastroenterology

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