

Study shows characterization of lung micro-organisms could help lung cancer patients

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A study of the microbes that inhabit human lungs and how they may relate to the development of lung cancer, led by Cancer Treatment Centers of America (CTCA) at Western Regional Medical Center (Western) in Goodyear, Arizona, was presented today during the 16th World Conference on Lung Cancer (WCLC) in Denver.

Dr. Glen Weiss, Director of Clinical Research and Medical Oncologist at CTCA at Western presented the study abstract at today's WCLC poster session on Biology, Pathology and Molecular Testing.

The human body consists of multiple "microbiomes," each of which is inhabited by various kinds of microscopic organisms, or microbes, including many different types of bacteria.

In this study, Analysis of [lung microbiome](#) from patients undergoing bronchoscopy, Dr. Weiss and his team, including collaborators at Northern Arizona University (NAU), sought to characterize the microbes that inhabit the lung microbiome. They examined bronchial lavage samples from 22 patients with [lung cancer](#) and 17 individuals without lung cancer.

"Characterization of lung microbial communities may not just serve as a predictor of cancer development, but also as a target of pharmacological cancer prevention strategies," said Dr. Weiss, M.D., M.B.A., a physician-scientist, who not only provides patient care in the clinic, but also is intricately involved in pioneering biomedical laboratory research and

discoveries.

"We sought to characterize the lung microbiome diversity within patients with cancer, specifically those with lung cancer, compared to those without lung cancer," said Dr. Weiss, the study's first author.

Every year, lung cancer kills more than 158,000 people—more than breast, colon and prostate cancers combined.

In this study, a significant portion of the bacterial community found in the patients' lungs was Streptococcaceae family of bacteria, which contains a variety of species, some of which cause disease in humans and animals, while others are important in the manufacture of certain fermented products.

"Lung microbiota associated with lung cancer have not been well-characterized or associated with treatment and outcome," said Dr. Weiss.

More than 9,000 delegates from across the globe attended the WCLC, one of the largest international gatherings of clinicians and scientists in the field of lung cancer and thoracic malignancies. The program covered a wide range of disciplines, including more than 300 invited talks and 3,000 scientific abstracts presented in oral and poster sessions.

Delegates included those interested in all aspects of lung cancer, including surgeons, medical oncologists, radiation oncologists, pulmonologists, radiologists, pathologists, epidemiologists and basic research scientists, with special sessions for nurses, allied health professionals and advocacy members. The WCLC convention is sponsored by the International Association for the Study of Lung Cancer (IASLC).

Dr. Weiss, who recently was nominated for the second year in a row as

AZ Business magazine's Researcher of the Year, also is an author of three other study abstracts related to new drug treatments that will be presented at WCLC.

Provided by Cancer Treatment Centers of America

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