

Comorbidities increase risk of mortality in COPD patients

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Comorbidities are common among patients with chronic obstructive pulmonary disease (COPD), and a number of these comorbidities are independently associated with an increased mortality risk, according to a new study.

"We followed 1,664 COPD patients recruited from five pulmonary clinics in the United States and Spain for a median of 51 months," said lead author Miguel Divo, MD, a physician in the Pulmonary and Critical Division at Brigham and Women's Hospital and Instructor in Medicine at Harvard Medical School. "Among the 79 comorbidities we observed in these patients, 12 were significantly and independently associated with an increased risk of death."

The 12 comorbidities with the strongest association with an increased risk for death were lung cancer, pancreatic cancer, esophageal cancer, [breast cancer](#), [pulmonary fibrosis](#), atrial fibrillation/flutter, [congestive heart failure](#), [coronary artery disease](#), gastric/duodenal ulcers, [liver cirrhosis](#), diabetes with neuropathy and anxiety.

"We used these 12 comorbidities to develop a new comorbidity risk index (the COPD specific CO-morbidity Test, or COTE)," Dr. Divo said. "After adjustment for age, gender, race, and BODE ([Body Mass Index](#); FEV1; Dyspnea and Exercise capacity) index, an increased COTE index was a significant predictor of death in our cohort of COPD patients."

The findings were published online ahead of print publication in the American Thoracic Society's *American Journal of Respiratory and Critical Care Medicine*.

The average number of comorbidities per subject in the cohort overall was 6.0 (± 3.5), and the average number of comorbidities was significantly higher among non-survivors (6.5 ± 3.8) compared with survivors (5.8 ± 3.3).

"These easily identifiable comorbidities could be screened by health care providers caring for COPD patients, as there may be effective interventions that may help decrease the risk of death," Dr. Divo said.

The study had some limitations. The proportion of women included in the study (11 percent) was low. Some patients were excluded at baseline because of comorbidities that might cause early death, including a recent myocardial infarction, severe congestive heart failure, and untreated cancer. Finally, patients were recruited from specialty clinics, and so might not represent all COPD patients.

"In this study we have confirmed earlier observations that patients with COPD frequently suffer from comorbidities, and have shown that 12 specific comorbidities are associated with an increased mortality risk in these patients," Dr. Divo concluded. "The simple comorbidity risk index we developed based on these 12 comorbidities complements the BODE index and can be used to help predict an increased risk of death in COPD patients in both clinical and research settings."

Provided by American Thoracic Society

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