

Editorial Comment: Report Extent of Consolidation and Pulmonary Artery Diameter in Patients With Interstitial Lung Disease Who Are Undergoing an Initial Evaluation of Lung Cancer

This study helps radiologists, surgeons, and oncologists better stratify the risk of an acute exacerbation of a patient's pre-existing interstitial lung disease (ILD) following lung cancer surgery. This work is of particular interest because patients with ILD are at increased risk both for lung malignancy and for morbidity and mortality following thoracic surgery: patients with idiopathic pulmonary fibrosis (IPF) have a 7 to 14-fold increased risk of lung malignancy compared to patients without IPF (1); patients with ILD have a 9% risk of an ILD acute exacerbation following thoracic surgery, with 44% of these acute exacerbations resulting in death (2). These statistics impact the risk-benefit calculation of whether patients with potentially resectable lung cancer should undergo surgery.

This study adds to the existing body of knowledge about which patient characteristics and imaging findings place patients at risk for ILD acute exacerbation following lung cancer surgery. Specifically, extent of consolidation (OR=9.4), pulmonary trunk diameter (OR=4.2), and extent of groundglass opacity (OR=2.8) were associated with acute exacerbations. Radiologists should now specifically comment on these factors when staging newly diagnosed lung cancers in patients with ILD. The findings also reinforce conclusions from prior studies that showed the acute exacerbation risk in IPF is associated with IPF severity and with resection of larger amounts of lung tissue.

One limitation is that the matched cohort design precludes quantification of how the absolute risk of ILD acute exacerbation is impacted by pulmonary artery diameter and extent of consolidation and ground glass opacity (GGO). Further, practicing radiologists do not typically employ the study's semiquantitative grading system to measure the amount of consolidation and GGO on CT.

Overall, this study contributes valuable new knowledge to our understanding of which factors place patients with ILD at greatest risk for potentially deadly acute exacerbations of ILD following lung cancer surgery.

References:

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2. Sato T, Teramukai S, Kondo H, et al. Impact and predictors of acute exacerbation of interstitial lung diseases after pulmonary resection for

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