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Longitudinal prediction of outcome in idiopathic pulmonary fibrosis using automated CT analysis

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Change in the vessel-related structures, a computer-derived CT variable, is a strong predictor of outcome in idiopathic pulmonary fibrosis and can increase power in future drug trials when used as a co-endpoint alongside forced vital capacity change http://bit.ly/2M7DfKS

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To the Editor:

The advent of antifibrotic agents [1, 2] as standard of care in idiopathic pulmonary fibrosis (IPF) requires that new non-inferiority IPF drug trials will need to identify smaller declines of forced vital capacity (FVC). Marginal annualised FVC declines (between 5.00 and 9.99%) are particularly challenging to interpret as they might reflect measurement variation or genuine clinical deterioration [3]. Following on from previous baseline-only computed tomography (CT) analyses [4], the current study examined whether changes in computer features (CALIPER) across serial CT examinations could be considered as a trial co-endpoint, particularly with regard to adjudicating marginal FVC declines, and therefore improve the sensitivity of IPF drug trials.