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Title: A prothrombotic state is associated with increased mortality in idiopathic pulmonary fibrosis

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Body: Background: Studies have suggested that the clotting cascade is activated in fibrotic lungs. It is unclear if a prothrombotic state alters survival in people with idiopathic pulmonary fibrosis (IPF). Objectives: To investigate if a prothrombotic alters the prognosis in terms of survival amongst people with IPF. Methods: We recruited incident cases of IPF from 5 teaching hospitals and 8 district general hospitals in England and Wales. Participants had a venous blood sample taken to test for inherited and acquired clotting defects. We also collected high resolution computed tomography (HRCT) scans which were reviewed by two thoracic radiologists to confirm the diagnosis of IPF. We used Kaplan-Meir methods and Cox regression modelling for our survival analysis. Results: We had 211 individuals with definite or probable IPF in who were followed up for a median time of 1.1 years. There were 56 deaths, and 52 (92.9%) of those individuals had at least one inherited or acquired clotting defect. People with IPF and at least one clotting defect were associated with an almost 3.5 fold increase in mortality (Hazard Ratio 3.50, 95% Confidence Interval: 1.09-9.75; p< 0.0001) after adjusting for age, sex, smoking habit, highly sensitive C Reactive Protein (hsCRP), baseline Forced Vital Capacity and Diffusion Capacity.

Conclusion: A prothrombotic stated is strongly associated with increased mortality amongst people with IPF.