



e-Lung Biomarkers Are Associated With Future Progressive Pulmonary Fibrosis Independent of UIP Status on CT

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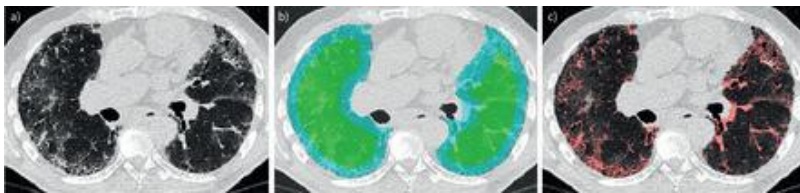
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Rationale

- A UIP pattern on CT has been considered the strongest prognostic indicator in interstitial lung disease
- Data emerging that UIP may be less prognostic than disease extent
- e-Lung is an AI powered CT tool which accurately quantifies the extent of fibrosis on CT
- The weighted reticulovascular score (WRVS) quantifies fibrosis in the peripheral lung
- We evaluated the prognostic potential for WRVS compared with UIP and visual extent of disease in patients with non-IPF fibrotic ILD

Methods and Demographics

- 302 consecutive patients with non-IPF fibrotic ILD
- UIP status assessed by expert thoracic ILD radiologist (AD)
 - Definite and Probable UIP = UIP
 - Indeterminate and alternative diagnosis = non-UIP
- Visual disease extent scored by two experienced thoracic radiologists
- Evaluated relationships between WRVS, visual disease extent, UIP pattern on CT and outcomes

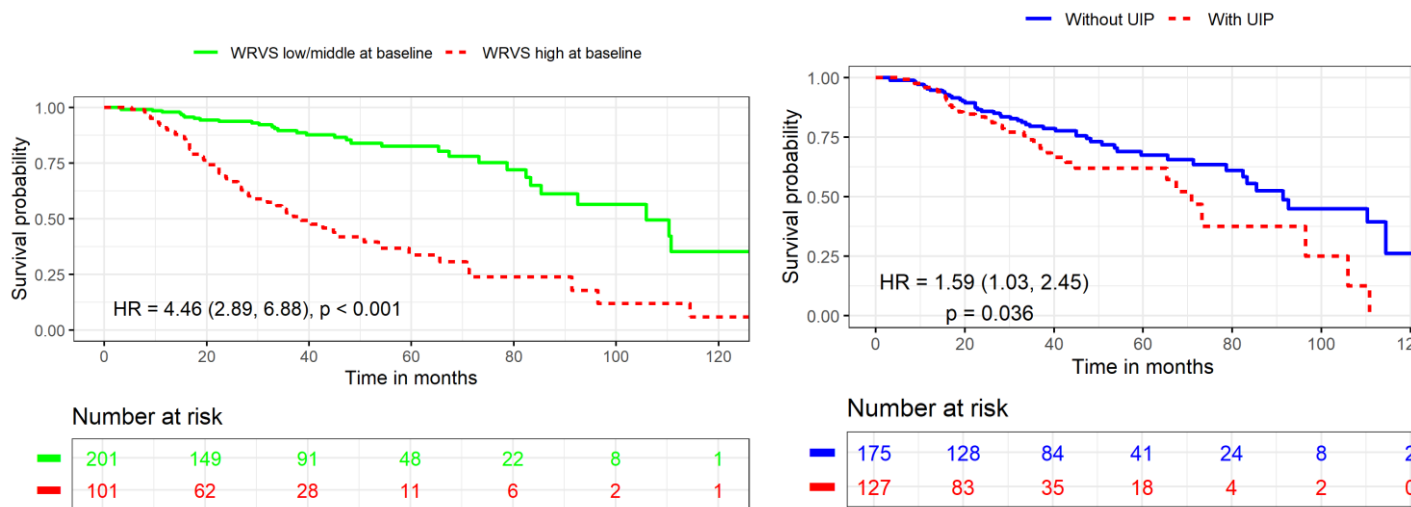


- Mean visual extent of fibrosis 21.6%
- Mean FVC 83%, Mean age 65, f=114 (44%)

Results

- WRVS more strongly associated with mortality and FVC decline than visual extent of disease or UIP**

	WRVS	Visual Fibrosis extent	UIP
C-Index for mortality	0.75	0.72	0.54
C-Index for 10% FVC decline	0.73	0.67	0.55



Conclusions

- In patients with non-IPF ILD, the e-Lung WRVS CT biomarker is associated with mortality independent of UIP status
- While both UIP and WRVS are associated with mortality, WRVS is a stronger prognostic factor
- WRVS and not UIP is associated with future FVC decline regardless of imaging subtype
- In early disease where extent of disease is challenging to quantify *visually*, UIP status may be more important – e-Lung adds prognostic accuracy

