

Type III and VI Collagen remodeling biomarkers have the potential to distinguish between IPF and HP

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Background & Aim

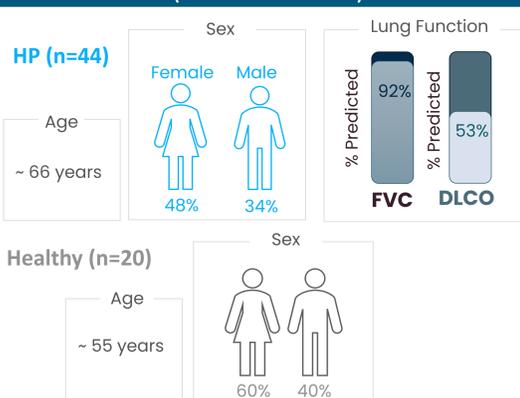
IPF and HP are two ILDs with similar clinical phenotype but distinct management, making their precise separation critical. Serological biomarkers may assist in this distinction. Extracellular matrix (ECM) remodeling is a hallmark of fibrosis. Collagen formation and degradation processes release peptide fragments into the blood that can be quantified by the PRO-C3 and PRO-C6 (type III and VI collagen formation), or the C3M and C6M (type III and VI collagen degradation) assays.



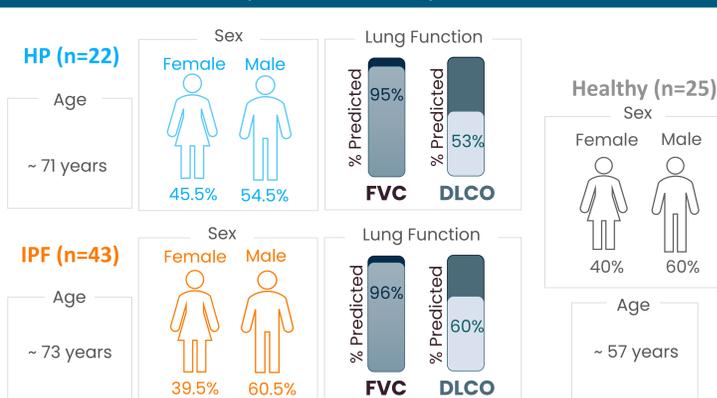
We assessed the clinical value of Type III and VI collagen remodeling biomarkers and their potential to act as a tool to distinguish between HP and IPF in two separate, independent cohorts

Cohorts and Methods

PFBIO-HP, Gentofte, Denmark (NCT05549635)



AUH-ILD, Aarhus, Denmark (NCT05311345)



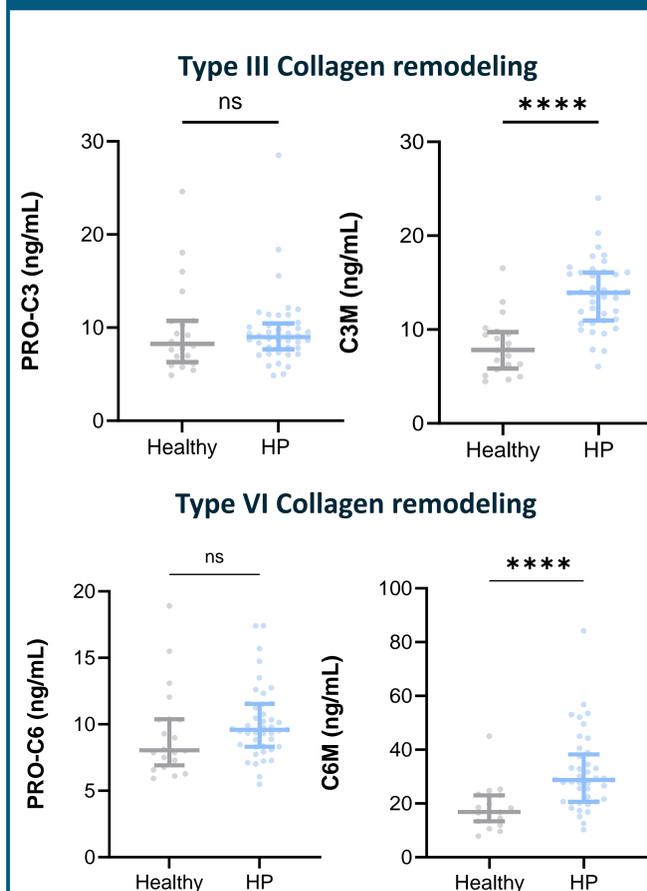
Biomarkers of Type III and VI collagen remodeling were assessed by ELISA in the serum of HP and IPF patients as well as healthy controls

Table 1: Targets and biological functions of the measured biomarkers

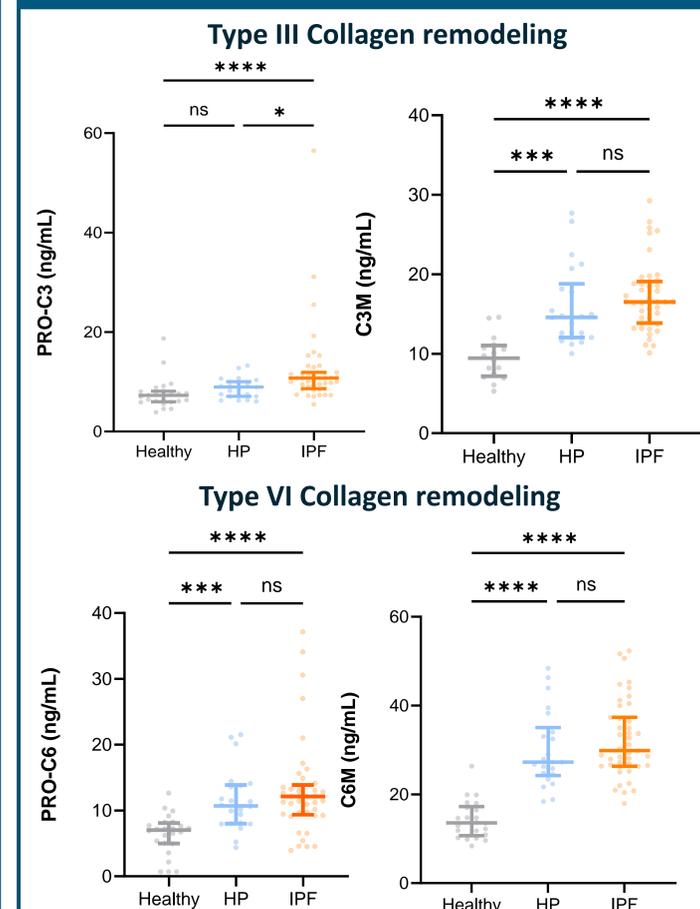
Marker	Function	Target
nordicPRO-C3™	Type III Collagen formation	Type III Collagen pro-peptide
nordicC3M™	MMP-Mediated Type III Collagen degradation	Type III Collagen fragment released by MMP
nordicPRO-C6™	Type VI Collagen formation	Type III Collagen C-terminal/Endotrophin
nordicC6M™	MMP-Mediated Type VI Collagen degradation	Type VI Collagen fragment released by MMP

Results

Collagen degradation but not collagen formation is elevated in HP compared to healthy in PFBIO-HP



PRO-C3 could distinguish between HP and IPF in AUH-ILD



Conclusion

- PRO-C3 could distinguish between HP and IPF in the AUH-ILD cohort
- Distinct collagen remodeling takes place in each disease

These findings suggest that ECM remodeling biomarkers could act as potential tools to distinguish between HP and IPF

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*Patient cohorts were obtained from Herlev and Gentofte Hospital and Aarhus University Hospital. Biomarker measurements were carried out at Nordic Bioscience