PRO-C22 - a novel serological biomarker of tissue damage is associated with disease severity, disease activity, and systemic inflammation in patients with hidradenitis suppurativa

P018

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BACKGROUND

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease that has a substantial diagnostic delay, in part due to diagnostic challenges with lesions mimicking abscesses. Robust serological biomarkers may facilitate earlier diagnosis and monitor disease severity. Type XXII collagen is a fibrillar collagen, located at the border between the anagen hair follicle and dermis in the skin.

We aimed to evaluate a novel serological biomarker reflecting type XXII collagen turnover, in patients with HS to test its association with disease severity, disease activity, and systemic inflammation.

PATIENT CHARACTERISTICS

Female 67.4%
Male 32.6%

Age mean (SD) 39.6 years (14.3)

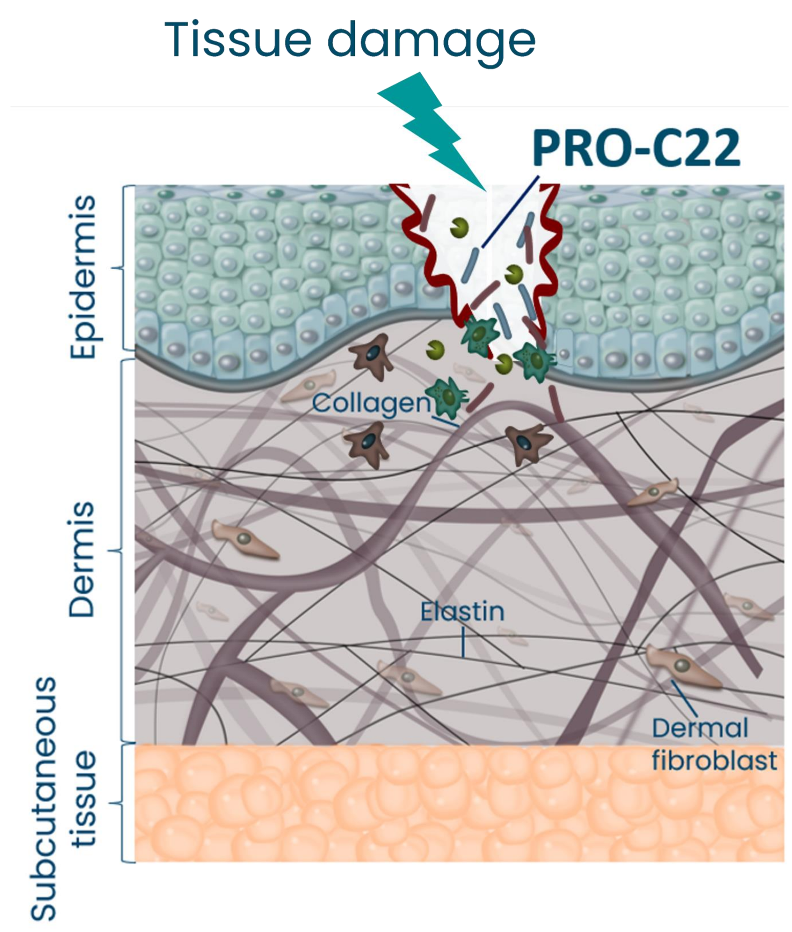
Smoking Status
Never 24%
Former 21%
Active 55%

BMI mean, SD 29.2 kg/m² (14.3)

METHODS

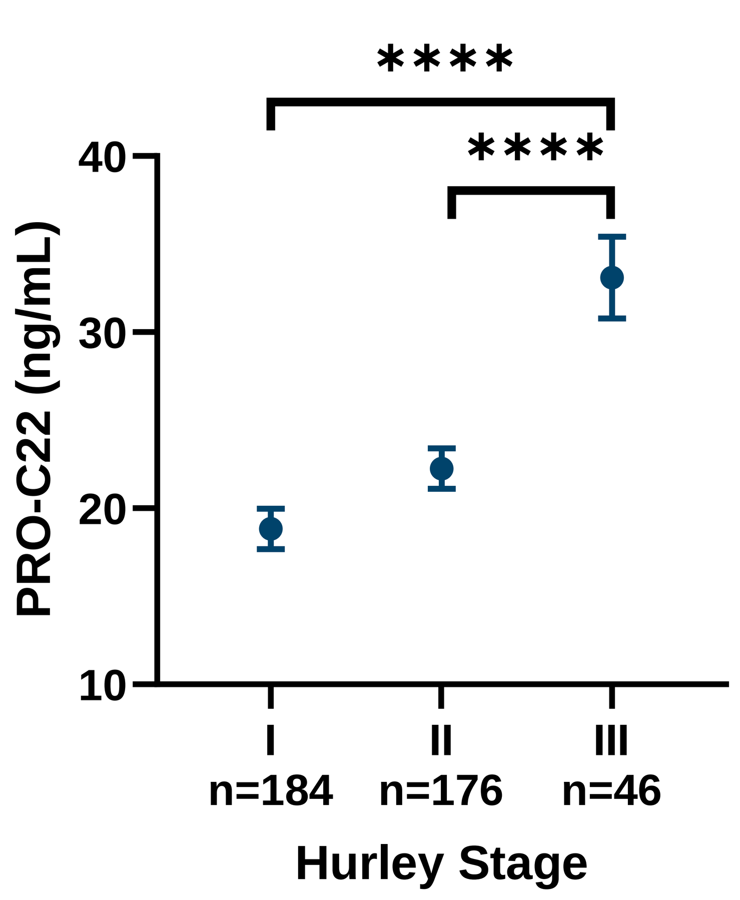
The biomarker, PRO-C22, was developed and validated according to FDA guidelines for bioanalytical method validation., and measured in serum from 406 HS patients from the Copenhagen Hidradenitis Suppurativa Cohort.

The HS patients are newly referred consecutive ourpatients fulfilling the modified Dessau criteria from Department of Dermato-Venereology and Wound Healing Centre, Bispebjerg Hospital, Denmark.



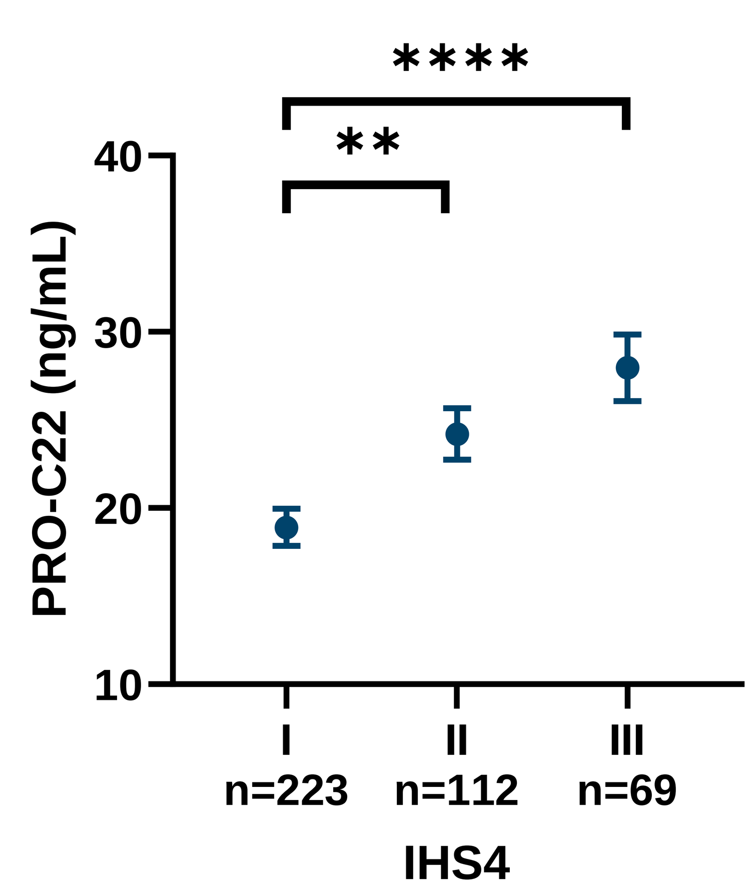
RESULTS

PRO-C22 is associated to disease severity by hurley staging



ANCOVA corrected for age and gender
Data is shown as Mean±SEM

PRO-C22 is associated to the International HS Severity Score System (IHS4)



ANCOVA corrected for age and gender
Data is shown as Mean±SEM

PRO-C22 is correlated to disease activity and systemic inflammation

	PRO-C22
HSS	r=0.241 p<0.0001
ESR	r=0.436 p<0.0001
NLR	r=0.286 p<0.0001
CRP	r=0.511 p<0.0001

1.0
-1.0

HSS: Hidradenitis Suppurativa Score
ESR: Erythrocyte sedimentation rate
NLR: Neutrophil leukocyte ratio
CRP: C-reactive protein

Person's correlations

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CONCLUSION

We developed and evaluated the novel biomarker PRO-C22 reflecting tissue damage, which was associated to **disease severity, activity** and **correlated with systemic inflammation** in patients with HS.

Such biomarker may be useful in early patient stratification and efficacy of treatment marker.