

Prospective analysis of alpha-1-antitrypsin levels and investigation of genetic variation of the alpha-1-antitrypsin gene in patients with Peyronie's disease



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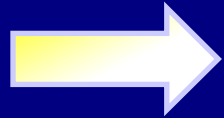
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Peyronie's disease

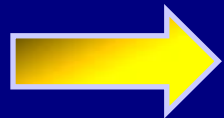
Unclear etiopathology



traumatic



inflammatory



genetic



de LaPeyronie (1678-1747)

α -1-Antitrypsin

Major proteinase inhibitor

Most common hereditary disorder

→ **adults: lung emphysema**

→ **children: hepatic disease**

90 genetic determined variants

→ **association with different levels**

α -1-Antitrypsin

Previous studies have described decreased alpha-1-Antitrypsin levels in patients with Peyronie's disease

n= 11-26

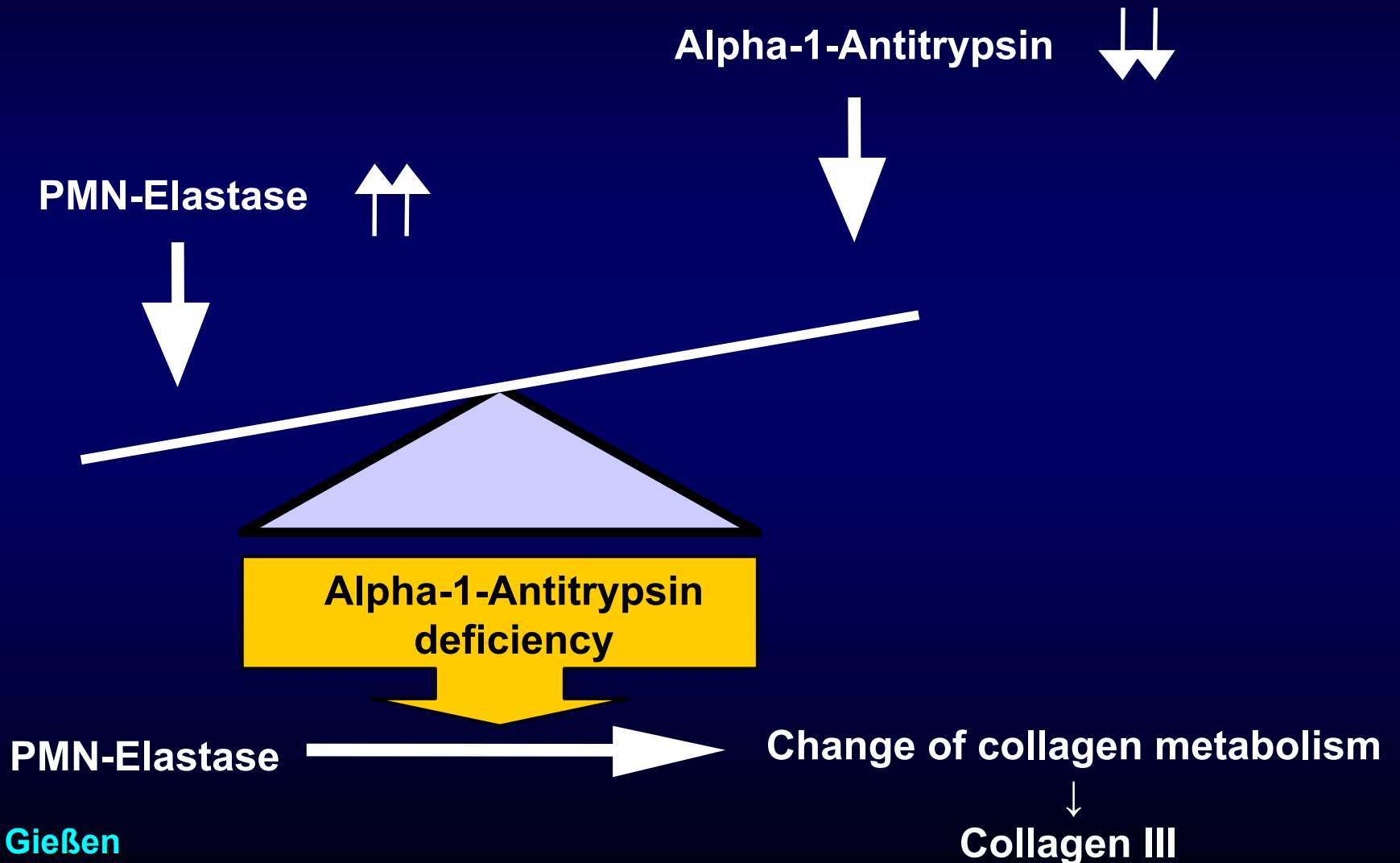
Hypothesis → Change of collagen metabolism

Bichler, Lahme et al.: Urologe A 1998

Lahme, Bichler et al.: Aktuel Urol 2001

Lahme, Bichler et al.: AUA Abstract 2001

α -1-Antitrypsin



Purpose

To investigate

- prospectively**
- the levels of α -1-Antitrypsin**
- and the genetic variation in the coding gene**
- in a representative series**

of patients with Peyronie's disease.

Patients

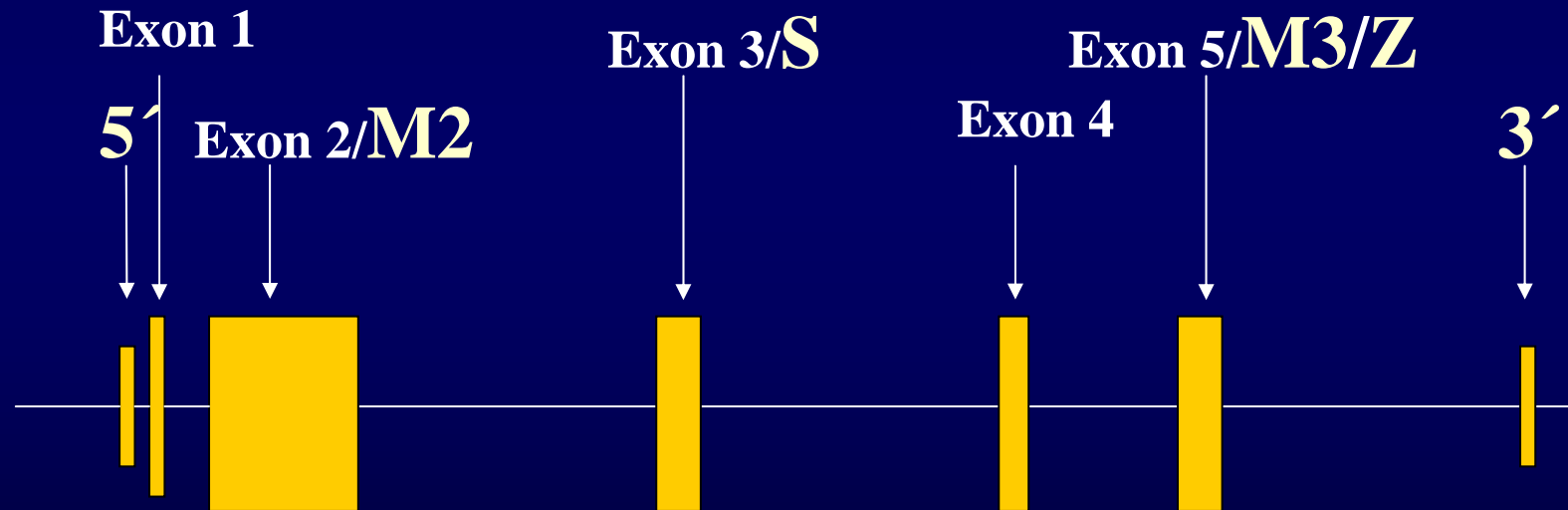
α -1-Antitrypsin levels:

- 94 Peyronie's disease patients
- 134 Blood donors as controls

Genetic variation:

- 141 Peyronie's disease patients
- 100 Blood donors as controls

Genetic variations



Methods

α -1-Antitrypsin levels:

→ **Immunonephelometrie**

Genetic variation:

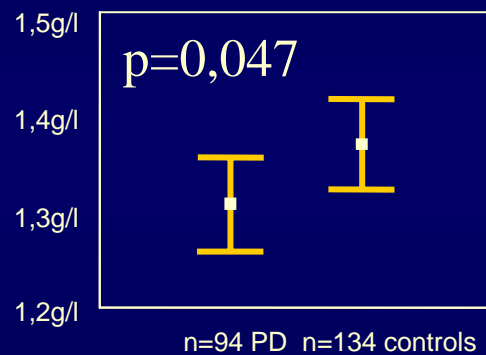
→ **Peripheral blood**

→ **DNA isolation**

→ **Standard PCR-Techniques**

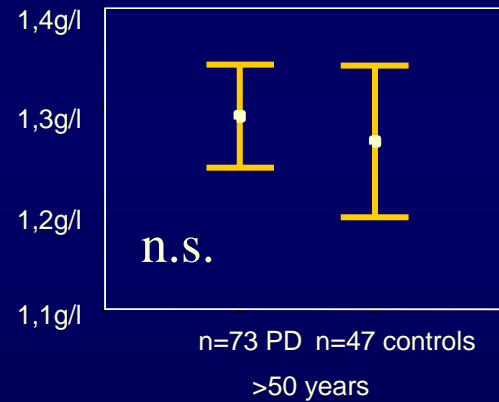
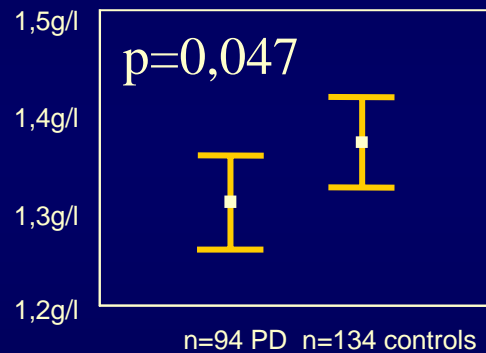
Results

α -1-Antitrypsin levels



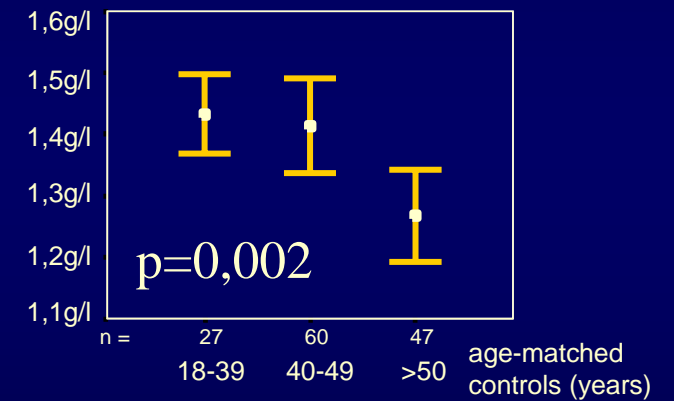
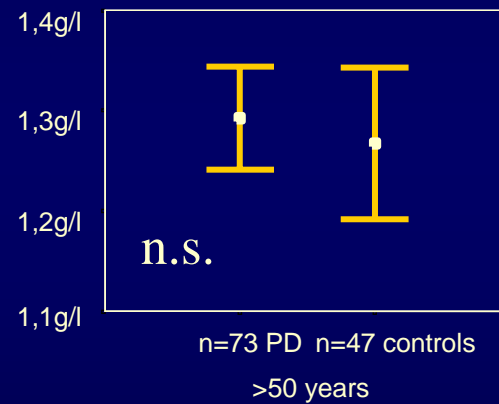
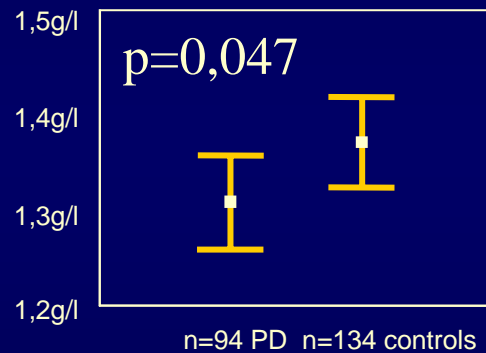
Results

α -1-Antitrypsin levels



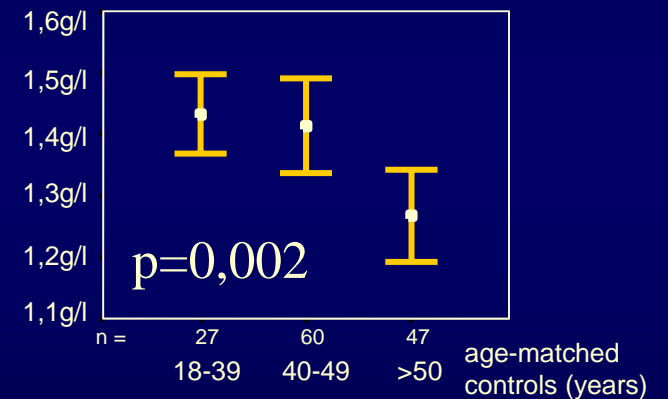
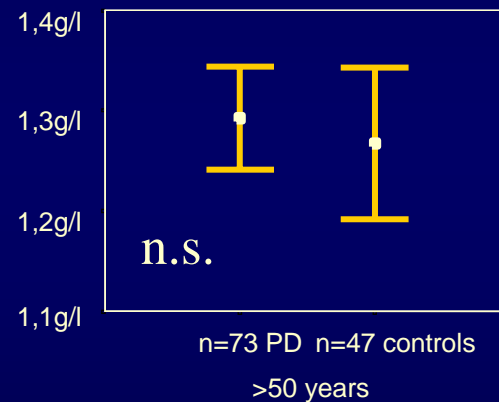
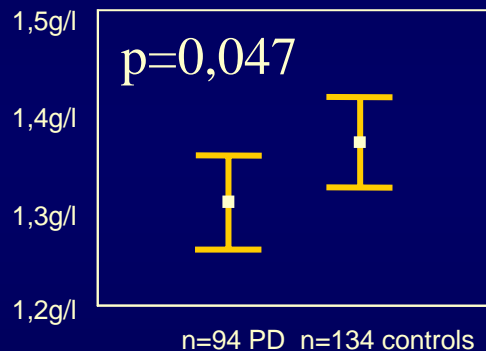
Results

α -1-Antitrypsin levels



Results

α -1-Antitrypsin levels



No significant association of decreased α -1-Antitrypsin levels and Peyronie's disease

Results

Genetic variation

No significant difference between patients with Peyronie's disease and controls

Conclusions

The results of this study do not indicate a significant association between Peyronie's disease and an α -1-Antitrypsin deficiency.

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The results of this study demonstrate how important - age-matched - control groups in this type of study are.