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## Background

- Multiple risks for liver fibrosis in the severe psoriasis population.
- Unclear which risk factors are most important.
- Currently only people taking methotrexate are screened for liver fibrosis using P3NP

## Aims

1. Identify the proportion of our cohort with liver fibrosis
2. Identify who within the cohort are 'at risk' (and should be screened)
3. Evaluate available non-invasive tests to diagnose liver fibrosis in this population compared to Fibroscan

## Methods

Prospective, single-centre, observational cohort study @ Guys & St Thomas', London.  
At enrolment visit a Fibroscan was performed as well as a questionnaire, fasting blood draw for metabolic parameters & a panel of bloods to assess liver function.  
Primary outcome measure: Liver Fibrosis (>7kPa on Fibroscan). Secondary: Advanced liver fibrosis (>8.7 kPa on Fibroscan).

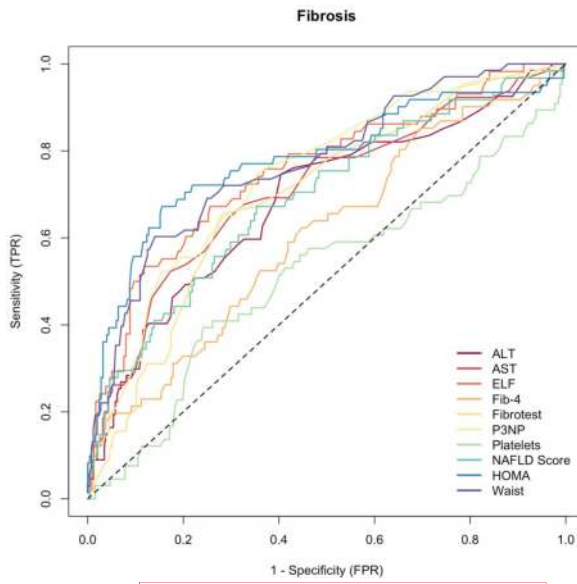
## Results

400 patients recruited. Mean enrolment parameters: age 50 years, BMI 29. 27% female.  
20% (68/333) had liver fibrosis on Fibroscan. 14% (47/333) had advanced liver fibrosis.  
Univariate: Metabolic parameters were most significant risks. Cumulative methotrexate exposure & alcohol did not show a significant association.

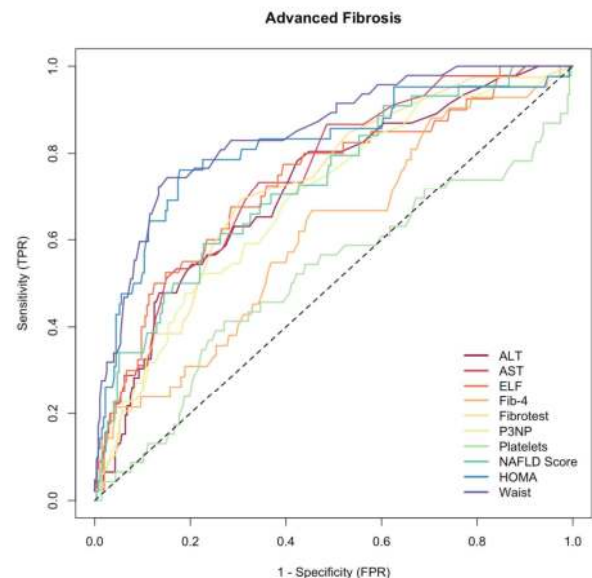
**HOMA= Homeostasis Model Assessment.**  
An algorithm of fasting insulin and glucose to assess insulin sensitivity

Any Fibrosis ( $\geq 7$ kpa) Results			
n=301 Variance $R^2=38\%$			
Variab le	P value	Odds ratio	95% CI
Waist	$\leq 0.01$	1.05	1.03-1.08
HOMA	$\leq 0.01$	1.26	1.11-1.46
AST	$\leq 0.01$	1.03	1.01-1.05

**The joint model of Waist, HOMA & AST was associated with an outcome of liver fibrosis in multivariate analysis**



Waist (0.77) and HOMA (AUC 0.78) showed the best diagnostic accuracy for a diagnosis of liver fibrosis



Waist (0.85) and HOMA (AUC 0.81) also showed the best diagnostic accuracy for a diagnosis of advanced liver fibrosis

## Conclusion

1. 20% of our psoriasis population have liver fibrosis
2. Screening for liver fibrosis should not be restricted to patients taking methotrexate: Abdominal obesity and insulin resistance are most important risks
3. Waist measurement and HOMA most accurate non-invasive tests for liver fibrosis

**Largest study to date to assess both the risks for liver fibrosis and the best test to diagnose fibrosis in the psoriasis population**