

## Introduction:

Pruritus is a recognised symptom of cholestasis. However, the prevalence and impact on quality of life (QoL) in metabolic dysfunction associated steatotic liver disease (MASLD) has not been evaluated. We conducted a prospective observational study across a UK tertiary centre to **(A)** quantify the prevalence of pruritus **(B)** determine factors associated with pruritus intensity and **(C)** determine the impact of pruritus on health related QoL in patients (pts) with MASLD.

## Methods:

Adults with MASLD were invited to complete specific itch severity and QoL questionnaires during routine outpatient visits; specifically, 5D-itch, itch numerical rating scale (NRS), chronic liver disease questionnaire (CLDQ) and EuroQol-5 Dimension 5 level (EQ-5D 5L). QoL assessments were undertaken at baseline and week 48, alongside paired clinical and laboratory data capture. Interim results pertaining to baseline readouts are presented herein. Autoimmune hepatitis, chronic hepatitis B and healthy volunteers served as control groups (each n=50).

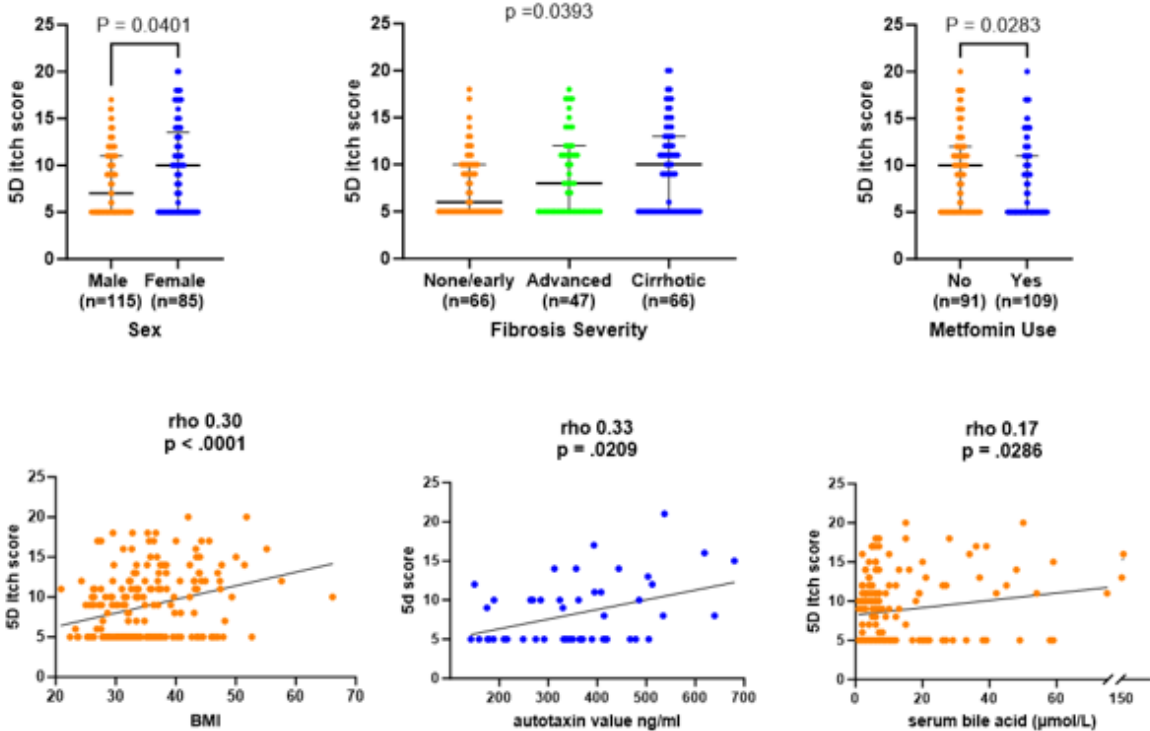
## Results:

Between Feb 2022 and Aug 2023, we recruited 200 pts with MASLD (115 men; 139 with diabetes mellitus; median age: 60y; median MELD score: 7; and median transient elastography score: 11.0kPa). Overall, 66 pts were stratified as having no/early fibrosis (elastography <8.0kPa and/or liver biopsy stage F0-F2), 47 with advanced fibrosis (biopsy F3), 66 with cirrhosis, and 21 as fibrosis unclassified. At baseline, 99 pts (49.5%) reported pruritus to any degree (median 5D-itch: 8.5 vs 5.0 in all control groups,  $p<0.001$ ), with 62 pts (31%) reporting moderate-severe pruritus ( $NRS\geq 4$ ). In the MASLD group, median 5D-itch scores were greater in women and those with more advanced disease. Conversely, individuals taking metformin had lower itch scores (**Fig 1a**). 5D-itch scores had moderate positive correlations with body mass index and serum autotaxin values, weak positive correlations with serum bile acid values, and negatively correlated with serum albumin (**Fig 1a**). No significant correlations were seen for 5D-itch and serum ALT, ALP, gGT or bilirubin. Pruritus severity associated with worse quality of life, with median CLDQ and EQ-5D-5L scores worsening with pruritus severity (**Fig 1b**).

## Conclusions:

One in 3 MASLD pts experience moderate to severe itch, with greater symptom severity in those with advanced fibrosis. Long-term follow-up capturing variability in itch over time, efficacy of anti-cholestatic agents, and factors influencing its persistence are ongoing.

**Figure 1a: Factors associated with pruritus severity**



**Figure 1b: CLDQ and EQ 5D-5L scores vs pruritus severity**

