LiverSTAT (Fibronostics, Florida, US) is an AI-based blood test conceived for MASLD risk stratification:
- Combines common biochemistry - liver enzymes, lipid panel, bilirubin and glucose - adjusted on anthropometrics: weight, height, age and gender
- Constructed and validated against liver biopsy to have high performance for advanced fibrosis [AUROC between 0.81 and 0.76]
- Outperforms FIB-4: no indeterminate zone, no drawbacks related to age or type 2 diabetes
- Provides presumed MASLD class and quantitative fibrosis score (0.00 to 1.00)

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## METHODS

### Population & collected data
Retrospective data collected in 5 hepatology tertiary centers (US, Malaysia, France) on MASLD adult patients that underwent LB (NASH-CRN histopathology scoring)
- LSM by Fibroscan (Echosens, Paris, France), [IQR <30% median LSM, ≥60% SR included]
- FIB-4 and LiverSTAT biomarkers and patients’ anthropometrics

### Statistics assessed the efficiency of the combination of tests using:
- Absolute number of identified F3F4 LB and F2-F4 LB and concordance rates with LB of both biomarkers
- Number needed to screen (NNS) to identify one subject with F3F4 LB

## RESULTS

### LIVERSTAT is highly effective to identify F3F4 in combination with Fibroscan

- LiverSTAT and Fibroscan (LSM) agree for F0 (LiverSTAT 0/LSM 0) and F4 (LiverSTAT 4/LSM 4)
- LiverSTAT and Fibroscan (LSM) agree for F1 and F2 (LiverSTAT 1/LSM 1, 2, 3 and 4 in combination with LSM 1, 2, 3 and 4)

- The number needed to screen (NNS) for one additional patient to be confirmed as F3F4 decreased from 1.6 to 1.4

### Low performance for identifying F3F4 of the actual standard-of-care tests, FIB-4 in combination with Fibroscan

- LiverSTAT and FIB-4 agree for F0 and F1 (LiverSTAT 0, 1 and FIB-4 0, 1, 2, 3)
- LiverSTAT and FIB-4 agree for F2 and F3 (LiverSTAT 2, 3, 4 and FIB-4 2, 3, 4)

- The number needed to screen (NNS) for one additional patient to be confirmed as F3F4 decreased from 1.4 to 1.6

### LiverSTAT along with LSM can help in the identification of F3F4 among FIB-4 scores ≤2.67

- LiverSTAT and LSM agree for F0, F1, F2, F3 and F4 (LiverSTAT 0-4, LSM 0-75 kPa)
- LiverSTAT and LSM agree for F0, F1, F2 and F3 (LiverSTAT 0-3, LSM 0-75 kPa)
- LiverSTAT and LSM agree for F0, F1, F2 and F3 (LiverSTAT 0-3, LSM 0-75 kPa)

- The number needed to screen (NNS) for one additional patient to be confirmed as F3F4 decreased from 1.6 to 1.4

## CONCLUSIONS

- The study demonstrated the one-step assessment of MASLD-related fibrosis using the combination LiverSTAT and Fibroscan:
  - Correctly identified twice as many F3F4 patients than the combination of FIB-4 and Fibroscan
  - Does not miss F3F4 patients because of a "grey zone"

- Moreover, can help to detect 41% of F3F4 missed cases by FIB-4 "grey zone"

- Had a high concordance rate to rule in/out advanced fibrosis and, therefore, can work as an upfront screening for F3F4 before referral to more complex assessments

## CONTACT INFORMATION

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