LIVERFASt GP+ (LIVERSTAT), first-line screening tool in at-risk MAFLD patients outperformed standard of-care (SOC) FIB-4

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INTRODUCTION

- LIVERFASt GP+ (LIVERSTAT, GP+) (Fibronostics, Florida, US) is an AI-based proprietary technology conceived for the fast and easy triage of subjects with metabolic risk and suspected MAFLD.
- GP+ combines common blood biomarkers (lipid panel, liver enzymes, glucose and bilirubin) with patient's anthropometrics.
- Recent study validated GP+ (LIVERSTAT) along with Fibroscan with 100% confirmation rate with liver biopsy whenever they had agreement for presumed F3F4 fibrosis staging regardless FIB-4.

AIMS

The primary aim was to construct and validate a new MAFLD screening test, GP+, noninferior to the SOC reference, FIB-4, for advanced fibrosis (F3F4 stages), and with less drawbacks related to age cutoffs.

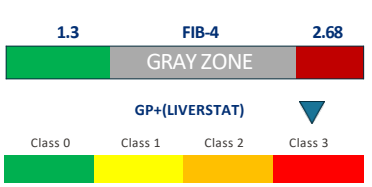
METHODS

N=580 MAFLD Patients with prospectively collected GP+ (LIVERSTAT) have been included from included in a tertiary hepatology center with liver biopsy and concomitant FIB-4

Patients have been randomly assigned into two subsets.

An AI-based algorithm, GP+, has been trained and validated against histopathological classification to identify the presumed MAFLD clinical classes:

Class 0	No presumed fibrosis/steatosis
Class 1	Presumed steatosis only
Class 3	Presumed fibrosis, not advanced
Class 4	Presumed advanced fibrosis

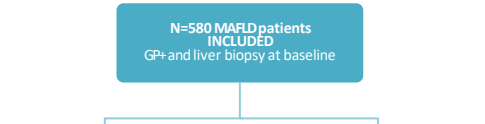


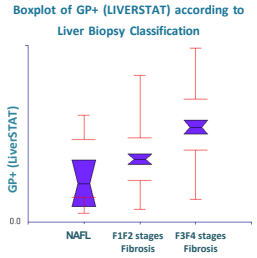
GP+ (LIVERSTAT)	FIB-4	
Biomarkers	AST, ALT, Chol, Trigly GGT, bilirubin Glucose Age, Gender, BMI	AST, ALT, Platelets
Assays	Calibrated assays Fasting not mandatory	Platelets non-calibrated, Variability
AUROC F3F4 stages	excellent	excellent
Grey zone	NO	YES
Drawbacks in Type2 Diabetes, Age over 65 years	NO	YES
Result	Class	Score
Informative about early NAFLD stages	YES	NO

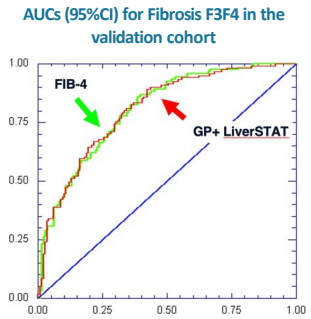
RESULTS

CHARACTERISTICS OF INCLUDED PATIENTS

Epidemiological Characteristics	Prevalences , median (SE or range)
Male Gender	56,4%
Age	59.5 (18-85)yrs
BMI	31.5 (20.1-54.0) Kg/m2
Biopsy length	25 (11-95)mm
Biopsy number of fragments	3 (1-25)
SAF Steatosis % (n)	
S0 (<5%)	3.5%
S1 (5-33%)	25.8%
S2 (33-66%)	37.0%
S3 (>66%)	33.7%
SAF Fibrosis score % (n)	
F0	6.7%
F1	22.1%
F2	26.1%
F3	28.3%
F4	16.8%
NAS	
0-2	8%
3-4	33.3%
5-8	58.7%







F3F4 stages (Prevalence 45%)	Training cohort N=270	Validation cohort N=310
GP+	0.806 (0.737-0.841)	**0.759** (0.701-0.808)
FIB-4	0.807 (0.630-0.756)	**0.757** (0.698-0.805)
P value	NS	NS

CONCLUSIONS

GP+ (LIVERSTAT),

- **Outperformed FIB-4 and had advantages to identify MAFLD from steatosis to advanced fibrosis without grey zone and no drawbacks related to age and male gender.**
- **GP+ (LIVERSTAT) correlates with NAFLD clinical stages and, therefore, can be used for the triage of metabolic risk subjects to identify presumed advanced fibrosis.**

REFERENCES

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DISCLOSURES

RQ, JL, JMP, MM - Fibronostics