

XXVIII IFSO World Congress

9-12 September 2025 | Santiago, Chile



An update: MASH & Surgery
Carlos Zerrweck. FACS, FASMBS



IFSO 2025 Santiago

Combined Therapies, The Dawn of a New Era

ifso2025.org

Disclosure Slide



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No, nothing to disclose



No More NAFLD

**The NAFLD nomenclature
is changing.**



Endorsements – more than 70 societies



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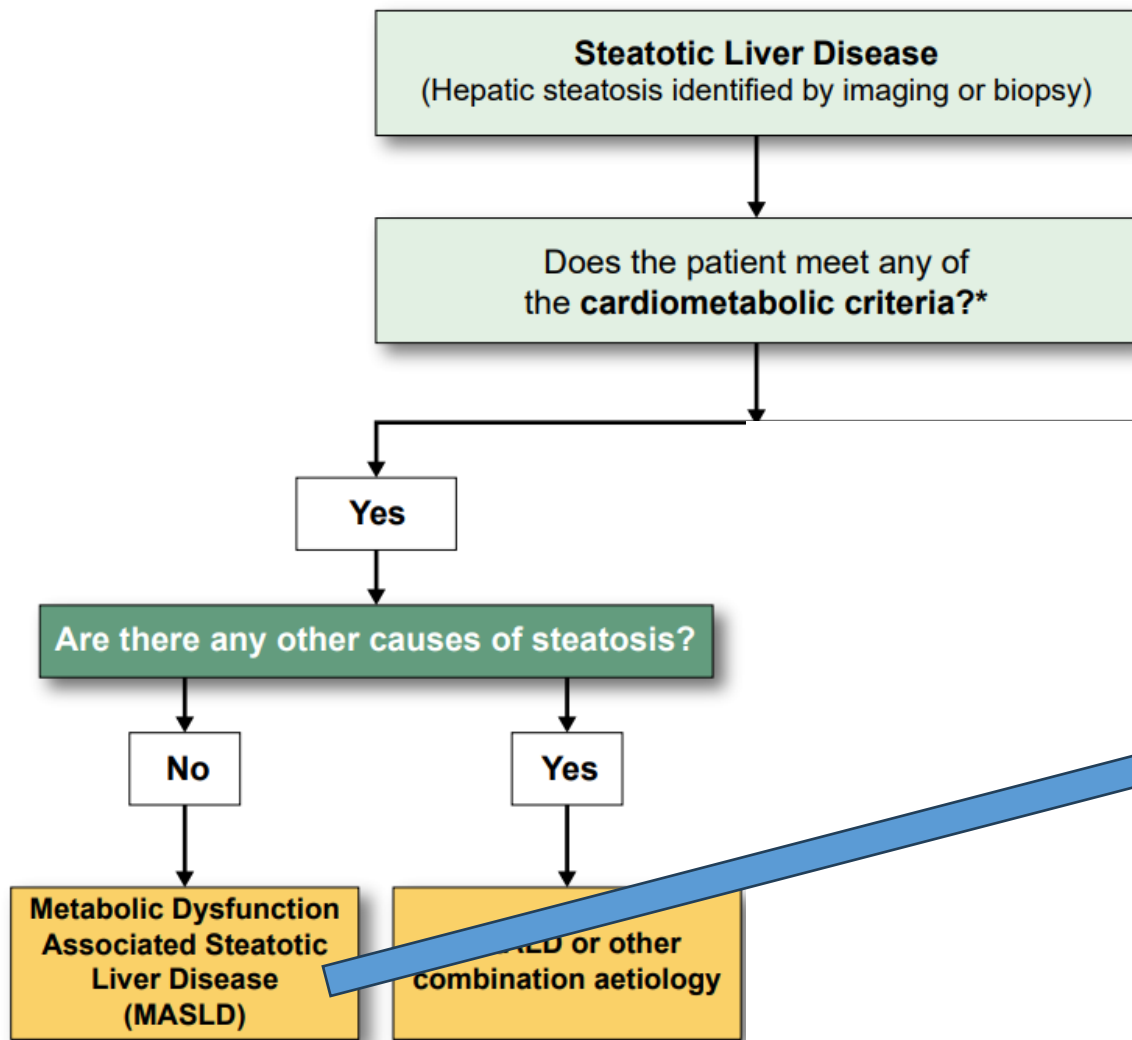


Decision Support Tool

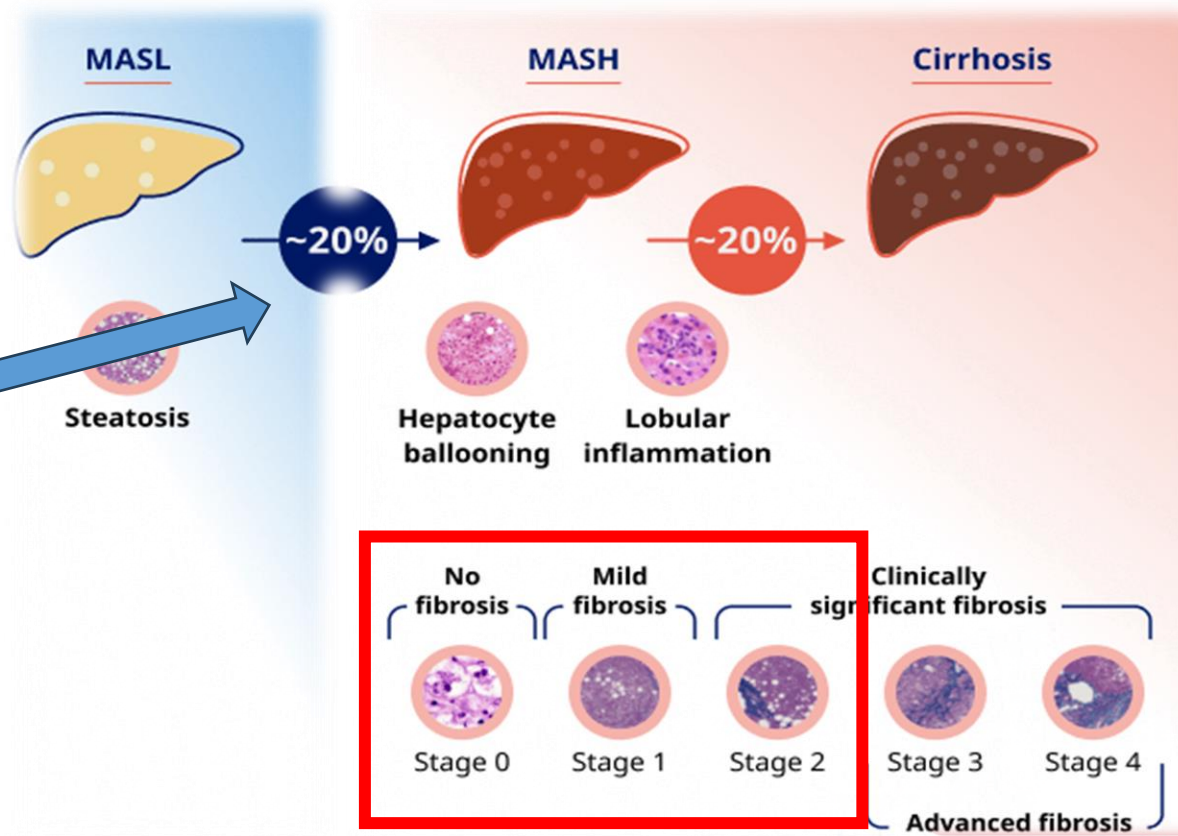


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Overweight / Obesity
T2DM or "prediabetes"
Hypertension
Dyslipidemia
Low HDL



REVIEW

The current findings on the gut-liver axis and the molecular basis of NAFLD/NASH associated with gut microbiome dysbiosis

Seema Sharma¹ · Nishant Tiwari² · Sampat Singh Tanwar¹

Received: 13 January 2025 / Accepted: 17 March 2025

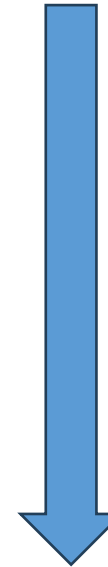
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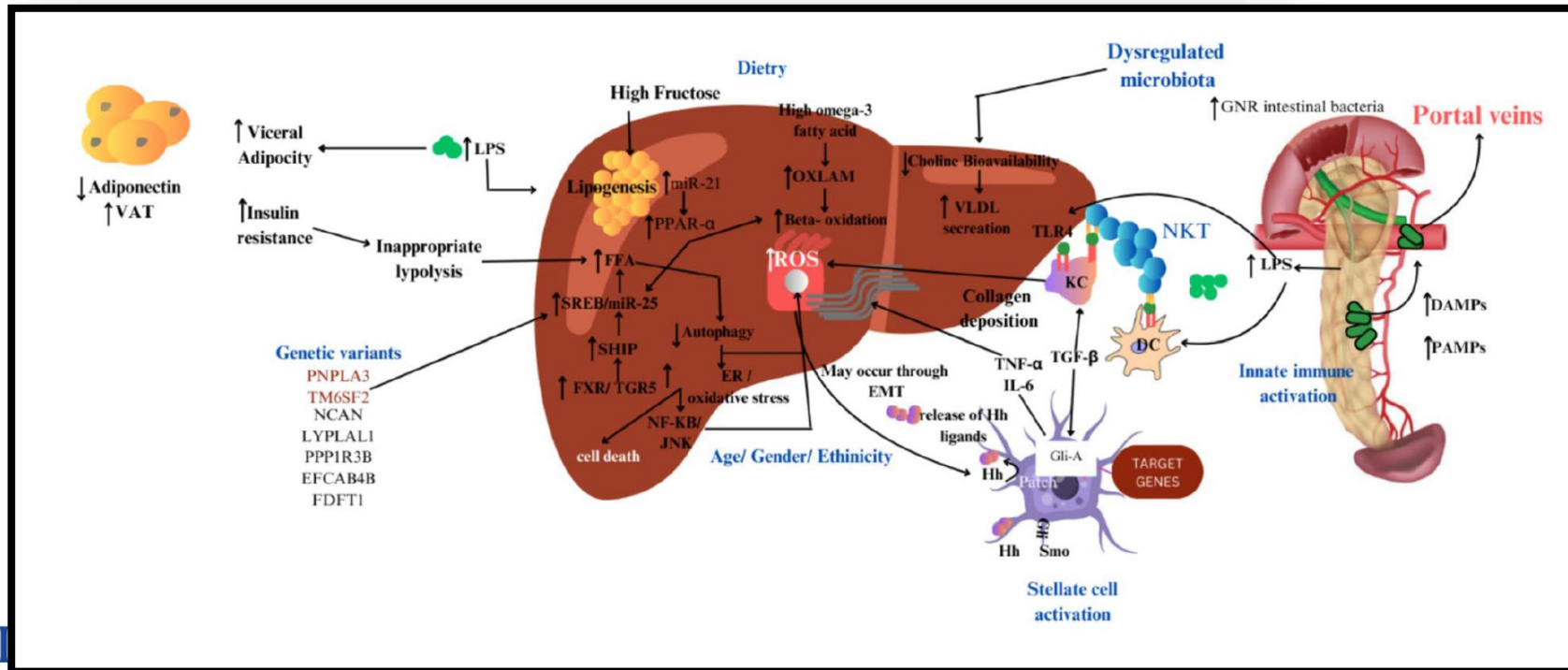
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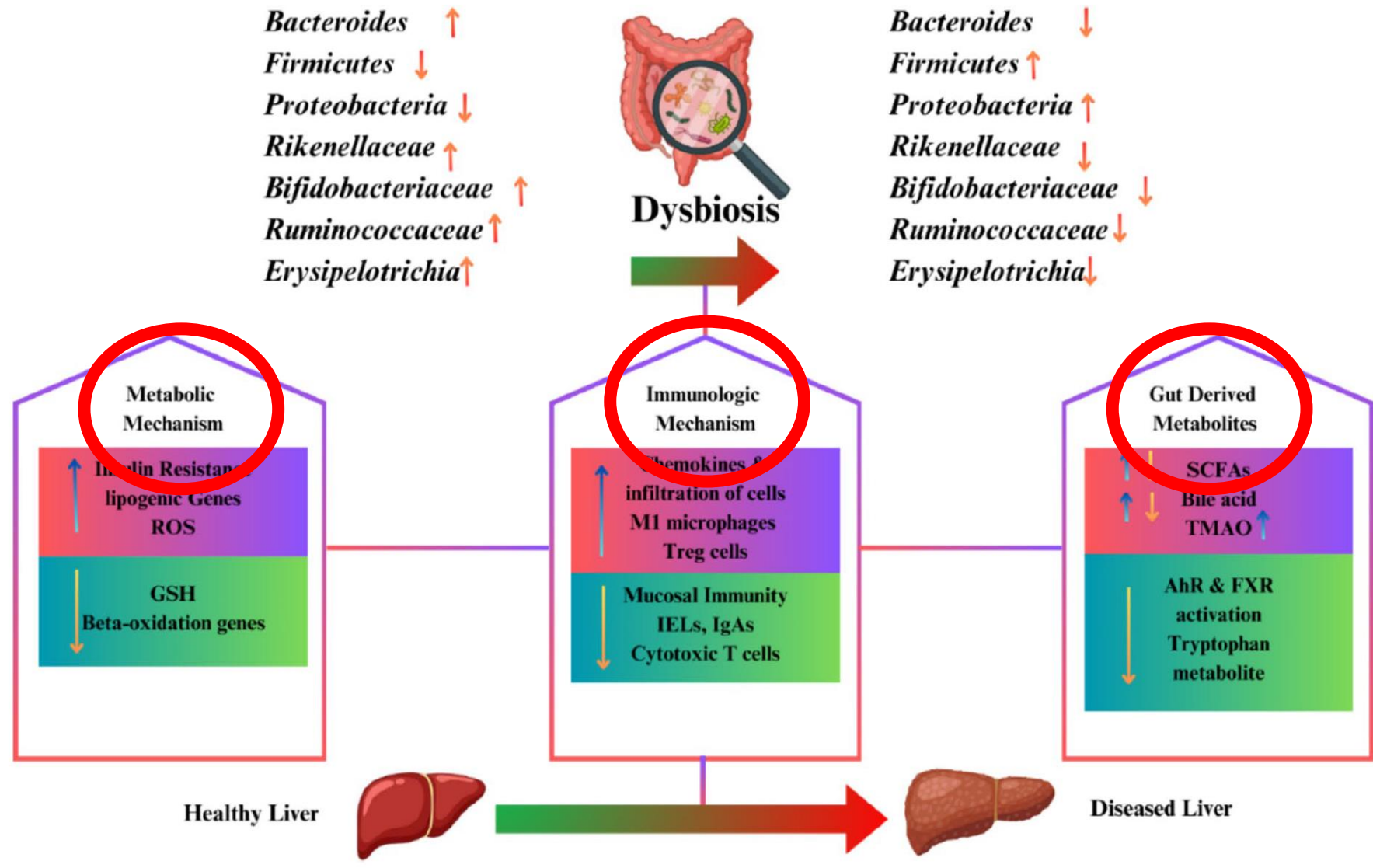
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MALFD



MASH





Type 2 diabetes, obesity+one or more cardiometabolic risk factors,
or MASLD with elevated serum liver-enzyme levels

Determine FIB-4 index score

<1.30

1.30–2.67

>2.67

Low risk of liver fibrosis
(approx. 50–70% of patients tested)

Indeterminate risk of liver fibrosis
(approx. 20–40% of patients tested)

High risk of liver fibrosis
(approx. 5–10% of patients tested)

Perform VCTE assessment of liver stiffness or alternative
noninvasive test for liver fibrosis (e.g., ELF score)
Intensified management of coexisting cardiometabolic conditions
Lifestyle intervention
Use of GLP-1RAs or incretin-based polyagonists
Bariatric surgery procedures in selected patients with morbid
obesity



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Obesity Facts

Guidelines

Obes Facts 2024;17:374-443
DOI: 10.1159/000539371

EASL-EASD-EASO Clinical Practice Guidelines on the Management of Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD)

Treatment of MASLD: **Non-pharmacological therapy**

In adults with MASLD, dietary and behavioural therapy-induced weight loss should be recommended to improve liver injury, as assessed histologically or non-invasively (LoE 1, strong recommendation). 100%

In adults with MASLD and overweight, dietary and behavioural therapy-induced weight loss should aim at a sustained reduction of $\geq 5\%$ to reduce liver fat, 7-10% to improve liver inflammation, and $\geq 10\%$ to improve fibrosis (LoE 2, strong recommendation). 100%

Further follow-up studies are needed to determine the long-term effectiveness of dietary and behavioural therapy- 100%

Treatment of MASLD: **Surgical and endoscopic therapy**

In adults with non-cirrhotic MASLD who have an approved indication, bariatric surgery should be considered because it can induce long-term beneficial effects on the liver and is associated with remission of type 2 diabetes and improvement of cardiometabolic risk factors (LoE 3, strong recommendation). 98%

In adults with MASLD-related compensated advanced chronic liver disease/compensated cirrhosis who have an approved indication, bariatric surgery can be considered but careful evaluation (indication, type of surgery, presence of clinically significant portal hypertension) by a multidisciplinary team with experience in bariatric surgery in this particular population is required (LoE 4, weak recommendation). 100%

Metabolic/bariatric endoscopic procedures require further validation as MASH-targeted therapy and cannot currently be recommended (LoE 4, weak recommendation). 100%

Bariatric Surgery Provides Long-term Resolution of Nonalcoholic Steatohepatitis and Regression of Fibrosis



Guillaume Lassailly,^{1,2} Robert Caiazzo,^{3,4} Line-Carolle Ntandja-Wandji,¹ Viviane Gnemmi,⁵ Gregory Baud,^{3,4} Helene Verkindt,³ Massih Ningarhari,^{1,2} Alexandre Louvet,^{1,2} Emmanuelle Leteurtre,⁵ Violeta Raverdy,^{3,4} Sébastien Dharancy,^{1,2} François Pattou,^{3,4} and Philippe Mathurin^{1,2}

Gastroenterology 2020;159:1290–1301

➤ [Clin Gastroenterol Hepatol.](#) 2025 Aug;23(9):1567-1576.e9. doi: 10.1016/j.cgh.2024.10.025.
Epub 2024 Dec 19.

Resolution of Metabolic Dysfunction-associated Steatohepatitis With No Worsening of Fibrosis After Bariatric Surgery Improves 15-year Survival: A Prospective Cohort Study


Guillaume Lassailly¹, Robert Caiazzo², Armelle Goemans¹, Mikael Chetboun², Viviane Gnemmi³, Julien Labreuche⁴, Gregory Baud², Helene Verkindt², Camille Marciniak⁵, Naima Oukhouya-Daoud², Line-Carolle Ntandja-Wandji¹, Massih Ningarhari¹, Emmanuelle Leteurtre³, Violeta Raverdy², Sébastien Dharancy¹, Alexandre Louvet¹, François Pattou⁶, Philippe Mathurin⁷



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Bariatric Surgery Improves Nonalcoholic Fatty Liver Disease: Systematic Review and Meta-Analysis

Hui Zhou¹ · Ping Luo¹ · Pengzhou Li¹ · Guohui wang¹ · Xianhao Yi¹ · Zhibing Fu¹ · Xulong Sun¹ · Beibei Cui¹ · Liyong Zhu¹  · Shaihong Zhu¹

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Complete resolution: steatosis (56%)
ballooning (49%)
inflammation (45%)
fibrosis (25%)

shown). Therefore, we further performed subgroup analyses based on different bariatric procedures and different countries. In different bariatric procedures, RYGB achieved the most obvious improvements in steatosis, and SG attained the most notable ameliorations in fibrosis. Based on this, when patients have obvious steatosis before the operation, RYGB could be the best choice, and when patients have obvious

37 studies
3,751 pt

Primary outcomes were
biopsy-confirmed remission of NAFLD
and NAFLD activity scores



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Alliance of Randomized Trials of Medicine vs Metabolic Surgery in Type 2 Diabetes (ARMMS-T2D) consortium

Long-term outcomes of metabolic surgery versus medical/lifestyle therapy on metabolic dysfunction-associated fatty liver disease in adults with obesity and type 2 diabetes

Michelle D. Lundholm
 Ali Aminian MD³
 David E. Cummings MD
 Philip R. Schauer MD
 John P. Kirwan PhD¹¹

TABLE 1 Comparison of baseline patient characteristics between the treatment groups

Feature	Total (N = 209)	Surgical (N = 131)	Medical (N = 78)	P value
HSI score ^a	49.5 ± 4.6	49.5 ± 4.6	49.5 ± 4.6	.90
HSI category ^a				.99
Steatosis probable (≥ 36)	185 (100.0)	121 (100.0)	64 (100.0)	
FIB-4 score ^a	0.90 (0.70, 1.1)	0.86 (0.70, 1.1)	0.97 (0.68, 1.3)	.32
FIB-4 category ^a				.12
Advanced fibrosis excluded	139 (76.4)	92 (77.3)	47 (74.6)	
Indeterminate	34 (18.7)	20 (16.8)	14 (22.2)	
Advanced fibrosis probable	1 (0.55)	0	1 (1.6)	
Use alternative assessment (age < 36)	8 (4.4)	7 (5.9)	1 (1.6)	
APRI ^a	0.22 (0.17, 0.36)	0.22 (0.17, 0.37)	0.23 (0.16, 0.35)	.96
APRI category ^a				.42
Negative (< 0.7)	173 (95.1)	112 (94.1)	61 (96.8)	
Significant fibrosis (0.7-1.0)	7 (3.8)	5 (4.2)	2 (3.2)	
Severe fibrosis (> 1.0)	2 (1.1)	2 (1.7)	0	

^aBaseline HSI score data were available for 195 patients (N = 131 surgical and N = 64 medical/lifestyle) and baseline FIB-4 and APRI score data were available for 195 patients (N = 131 surgical and N = 64 medical/lifestyle).



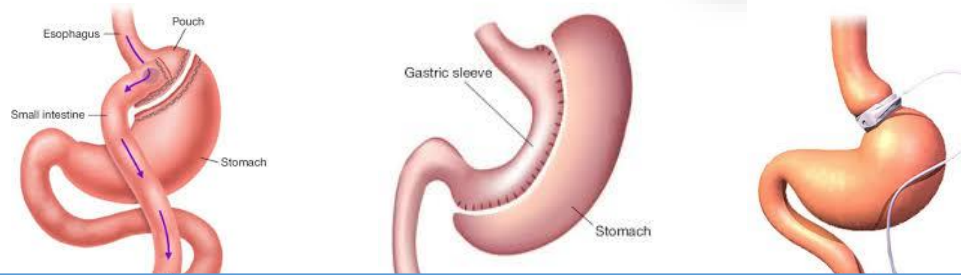
10 YEARS LATER..

groups showed improved HSI scores, with a median change of -13.9%. The surgical group had a greater improvement in hepatic steatosis score compared with the medical/lifestyle group (HSI -17.0% vs. -9.3%, $P < .001$; Table 2). Additionally, the surgical group had more patients improve in the HSI category (18.6% vs. 10.1%, $P = .024$). Other significant differences included a greater

At follow-up (median of 10 years, interquartile range 9-10 years), the prevalence of liver steatosis decreased to 85.9% by HSI score, and

prevalence of advanced liver fibrosis remained comparatively low (4.4% advanced fibrosis, 28.2% indeterminate; APRI: 2.5% normal or significant fibrosis). Both the surgical and medical/lifestyle

the change in alanine aminotransferase/AST ratio ($r = 0.83$, $P < .001$; Figure S2). There was no difference in FIB-4 classification—and no significant worsening—in either group, as the majority were unchanged at follow-up (94.3%). There was no difference in percentage change in APRI score between surgical and medical/lifestyle groups (-1.1% vs. -6.8%, $P = .18$).



VS. MEDICAL TREATMENT
-18.5% VS -9.3%

Change weight:	-22%	-18.4%	-14.4%
Change HSI:	-19.1%	-17.7%	-12.4%



Future..



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Obesity Surgery (2024) 34:4393–4404
<https://doi.org/10.1007/s11695-024-07548-z>



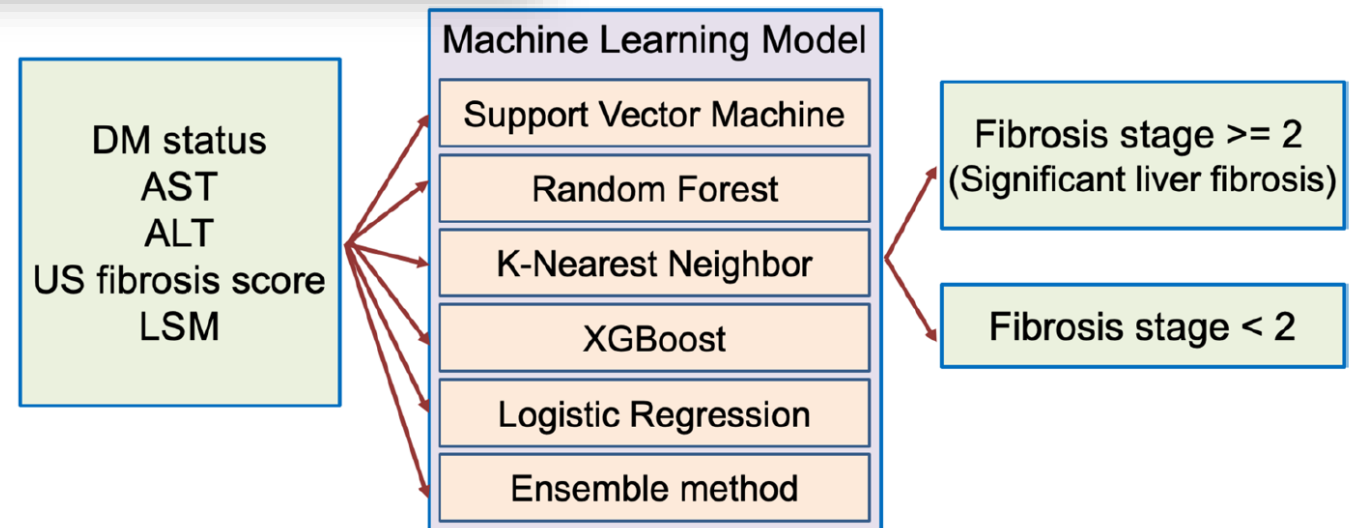
ORIGINAL CONTRIBUTIONS

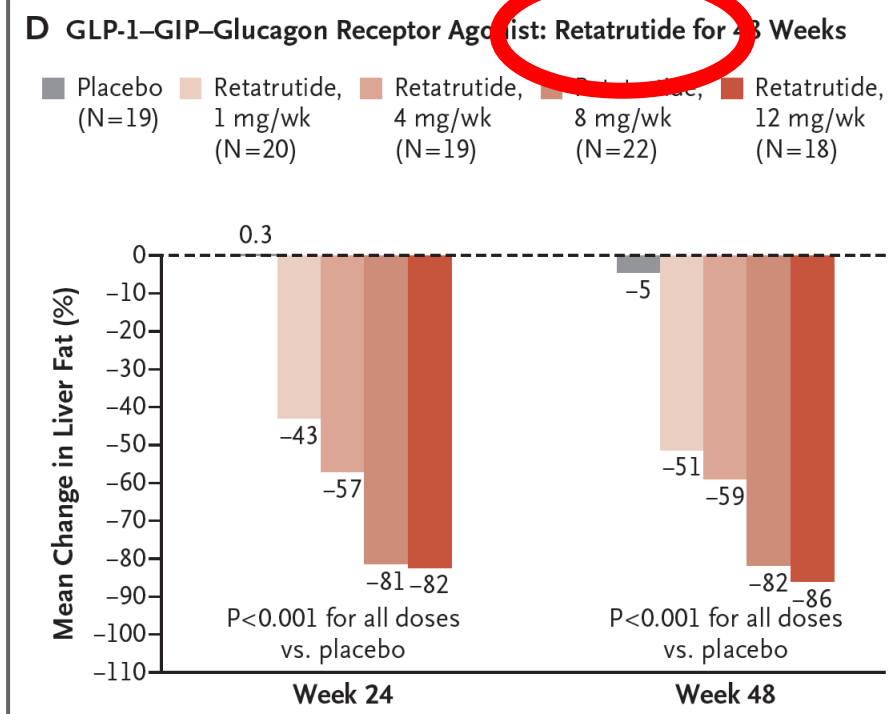
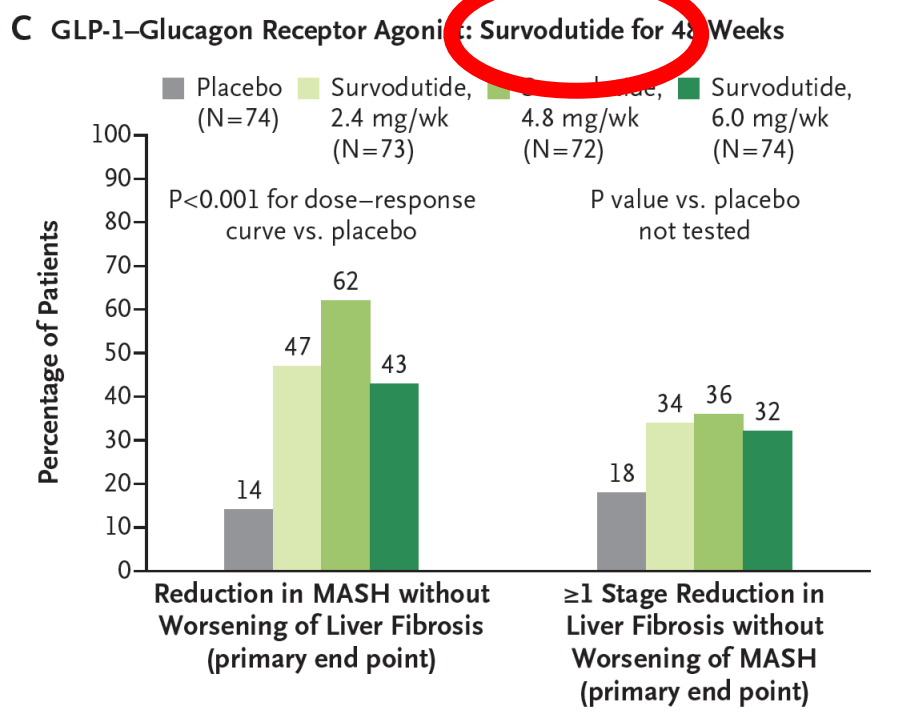
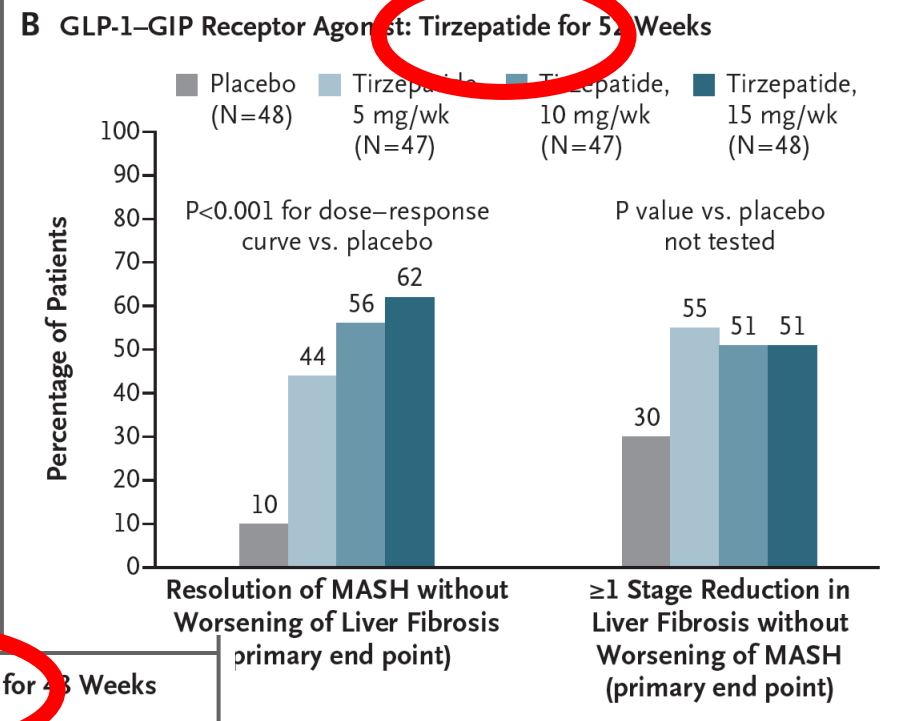
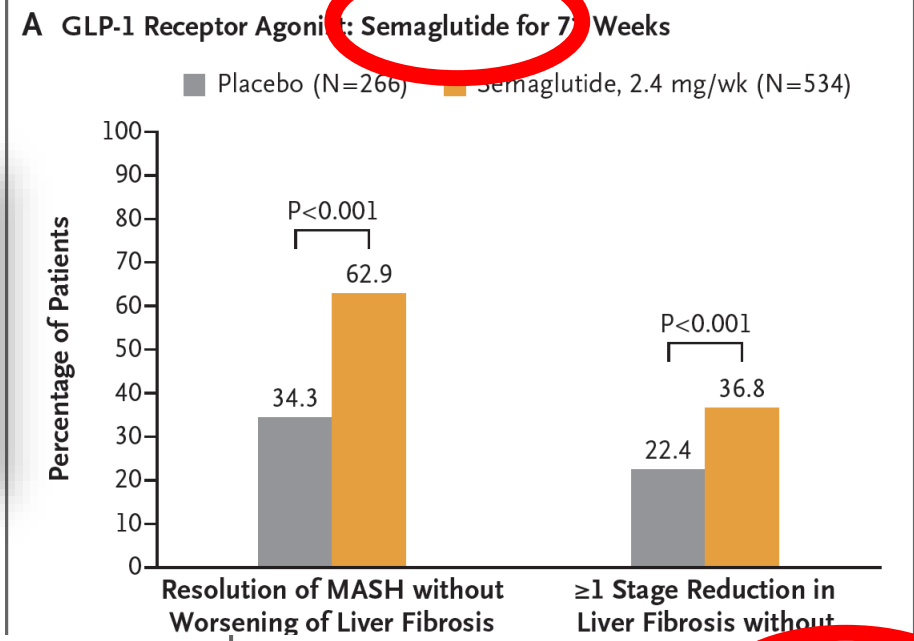


Machine Learning Models for Predicting Significant Liver Fibrosis in Patients with Severe Obesity and Nonalcoholic Fatty Liver Disease

Chien-Hung Lu¹ · Weu Wang^{2,3} · Yu-Chuan Jack Li^{4,5,6} · I-Wei Chang^{7,8,9} · Chi-Long Chen^{7,8} · Chien-Wei Su^{10,11,12,13} ·
Chun-Chao Chang^{1,14,15} · Wei-Yu Kao^{1,14,15,16,17}

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Other procedures / therapies



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Clinical Gastroenterology and Hepatology 2025;23:1556–1566

HEPATOLOGY

Endoscopic Sleeve Gastroplasty Plus Lifestyle Intervention in Patients With Metabolic Dysfunction-associated Steatohepatitis: A Multicenter, Sham-controlled, Randomized Trial



Javier Abad,¹ Elba Llop,¹ María Teresa Arias-Loste,² Diego Burgos-Santamaría,³ José Luis Martínez Porras,¹ Paula Iruzubieta,² Javier Graus,³ Belén Ruiz-Antorán,⁴ María Rosario Sánchez Yuste,⁵ Manuel Romero-Gómez,⁶ Agustin Albillos,³ Javier Crespo,^{2,§} and José Luis Calleja^{1,§}

ESG is an effective and safe method to promote weight reduction associated with significant improvement in patients with MASH and obesity.

ClinicalTrials.gov, Number: NCT03426111

Hospital Angeles
PEDREGAL

DE CIRUGÍA PARA LA OBESIDAD Y
ENFERMEDADES METABÓLICAS, A.C.

CONGRESO INTERMEDIO CMCOEM
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Y PRIMER CONSENSO
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