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# Efruxifermin improves fibrosis in participants with compensated cirrhosis due to MASH: results of a 96-week, randomized, double-blind, placebo-controlled, phase 2b trial (SYMMETRY)

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## Disclosures

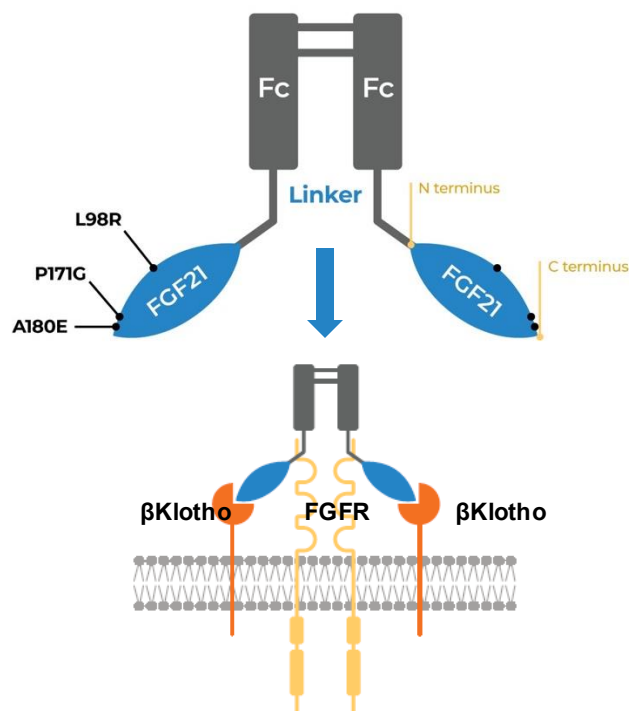
**Advisory Board/Consulting:** Akero, Altimune, Alligos, AstraZeneca, BI, Boston Pharma, Cytodyn, GSK, Lilly, Madrigal, Merck, Novo Nordisk, Sagimet, Terns and Takeda.

**Principal Investigator for a Drug Study:** Allergan, Altimune, Akero, BI, BMS, Boston Pharma, Conatus, Corcept, Gilead, Galectin, Genfit, GSK, Kowa, Enanta, Madrigal, Lilly, Merck, Novartis, Novo Nordisk, Rivus, Shire, Takeda, Terns, Viking and Zydus.

**Stockholder:** Rivus Pharma, Cytodyn, Akero and ChronWell.

**Speaking bureau:** Madrigal.

## » Efruxifermin (EFX) is an Engineered, Bivalent Fc-FGF21 Analog



Akero proprietary  
Fc-FGF21,  
Point mutations



Increases half-life  
from **< 2 hours**  
to **~3 days**



**High affinity** for  
β-Klotho



Better translation  
to **human**  
pharmacology



**Balanced potency**  
at FGFR1c, 2c, 3c



**Inactive**  
at FGFR4



# Comprehensive Phase 3 SYNCHRONY Program in ~3500 participants with MASH



*Builds on two biopsy-based Phase 2b studies (N ~300) in corresponding patient populations treated for 96 weeks*



Fibrosis Stage	F2-F3	F2-F3	F4, Compensated	F4, Compensated
Phase	2b	3	2b	3
N	128	1650	182	1150
Weeks	96	240	96	~260



*Phase 3 study evaluating safety & tolerability in ~700 clinically-diagnosed participants (F1 to F4, compensated) for 52 weeks  
Recruitment Complete*

<sup>1</sup> Harrison (2023) *Lancet Gastroenterol Hepatol*; <sup>2</sup> Harrison (2024) *Clin Gastroenterol Hepatol*; <sup>3</sup> Nouredin (2025) *N Engl J Med*.

# Phase 2b SYMMETRY Trial Design: Compensated Cirrhosis (F4) Due to MASH with Liver Histology at 36 and 96 Weeks

## Key Inclusion Criteria<sup>1</sup>

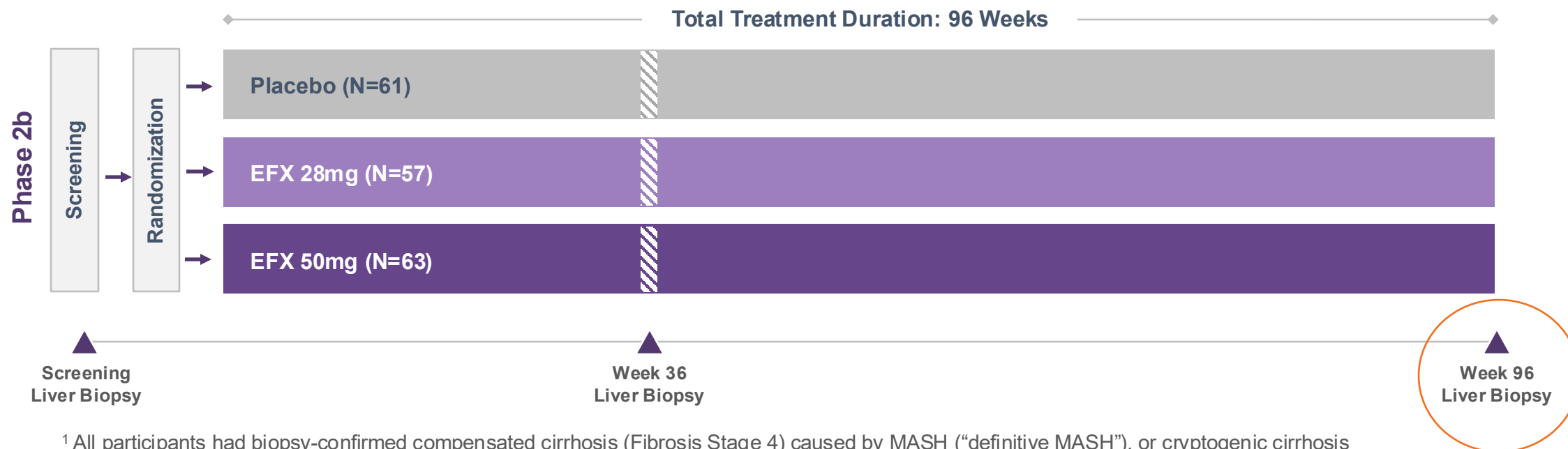
- F4 MASH, Child-Pugh A
- T2D or 2 of 4 components of metabolic syndrome<sup>3</sup>
- Alternative causes of liver disease excluded
- NAS  $\geq 3$ <sup>2</sup>
- LSM  $\geq 15$  kPa or ELF  $> 9.8$  if no historical liver biopsy
- Platelet count  $\geq 100 \times 10^9/L$

## Phase 2b Primary Endpoint

- $\geq 1$  Stage Fibrosis Improvement with no Worsening of MASH at **Week 36**

## Secondary Endpoints

- $\geq 1$  Stage Fibrosis Improvement with no Worsening of MASH at **Week 96**
- MASH Resolution
- Fibrosis Markers
- Liver Injury Markers



<sup>1</sup> All participants had biopsy-confirmed compensated cirrhosis (Fibrosis Stage 4) caused by MASH (“definitive MASH”), or cryptogenic cirrhosis attributed to MASH. Participants with cryptogenic cirrhosis attributed to MASH were limited to approximately 20% of the total study population.

<sup>2</sup> Except those with cryptogenic cirrhosis attributed to MASH.

<sup>3</sup> Obesity, dyslipidemia, elevated blood pressure, and elevated fasting glucose.

	N	Description
<b>Full Analysis Set (FAS) / Safety Set</b> Placebo (N=61)   EFX 28mg (N=57)   EFX 50mg (N=63)	181	All randomized participants who received at least one dose of study drug
<b>Week 36 Liver Biopsy Analysis Set (LBAS)</b> Placebo (N=57)   EFX 28mg (N=46)   EFX 28mg (N=51)	154	All participants with baseline and Week 36 biopsy results
<b>Week 96 LBAS</b> Placebo (N=47)   EFX 28mg (N=41)   EFX 28mg (N=46)	134	All participants with baseline and Week 96 biopsy results

**ITT Analyses** are based on FAS, where missing biopsy = non-response

**Completers Analyses** are based on LBAS (Week 36 or Week 96)

## » Baseline Demographics

Parameter (Mean)	Placebo (N=61)	EFX 28mg (N=57)	EFX 50mg (N=63)
Age (Years)	61	62	59
Sex (% Female)	62	68	70
BMI (kg/m <sup>2</sup> )	36.7	36.1	34.5
<b>Cryptogenic cirrhosis<sup>1</sup> (%)</b>	<b>26</b>	<b>21</b>	<b>17</b>
Enhanced Liver Fibrosis (ELF) Score	10.4	10.6	10.5
<b>Liver Stiffness by VCTE (FibroScan) (kPa)</b>	<b>24.7</b>	<b>24.1</b>	<b>24.5</b>
Alanine Aminotransferase (ALT) (U/L)	40.3	40.1	38.4
Aspartate Aminotransferase (AST) (U/L)	35.5	37.1	37.5
Total Bilirubin (mg/dL)	0.7	0.7	0.7
Platelet count (x10 <sup>9</sup> /L)	181	183	185
Prothrombin Time International Normalized Ratio (INR)	1.1	1.1	1.1
Albumin (g/dL)	4.3	4.2	4.3
Type 2 Diabetes (%)	82	81	78
HbA1c (%)	6.8	6.8	6.6
Triglycerides (mg/dL)	143	148	159
<b>GLP-1 Receptor Agonist Use (%)</b>	<b>26</b>	<b>19</b>	<b>33</b>
<b>Statin Use (%)</b>	<b>53</b>	<b>46</b>	<b>43</b>

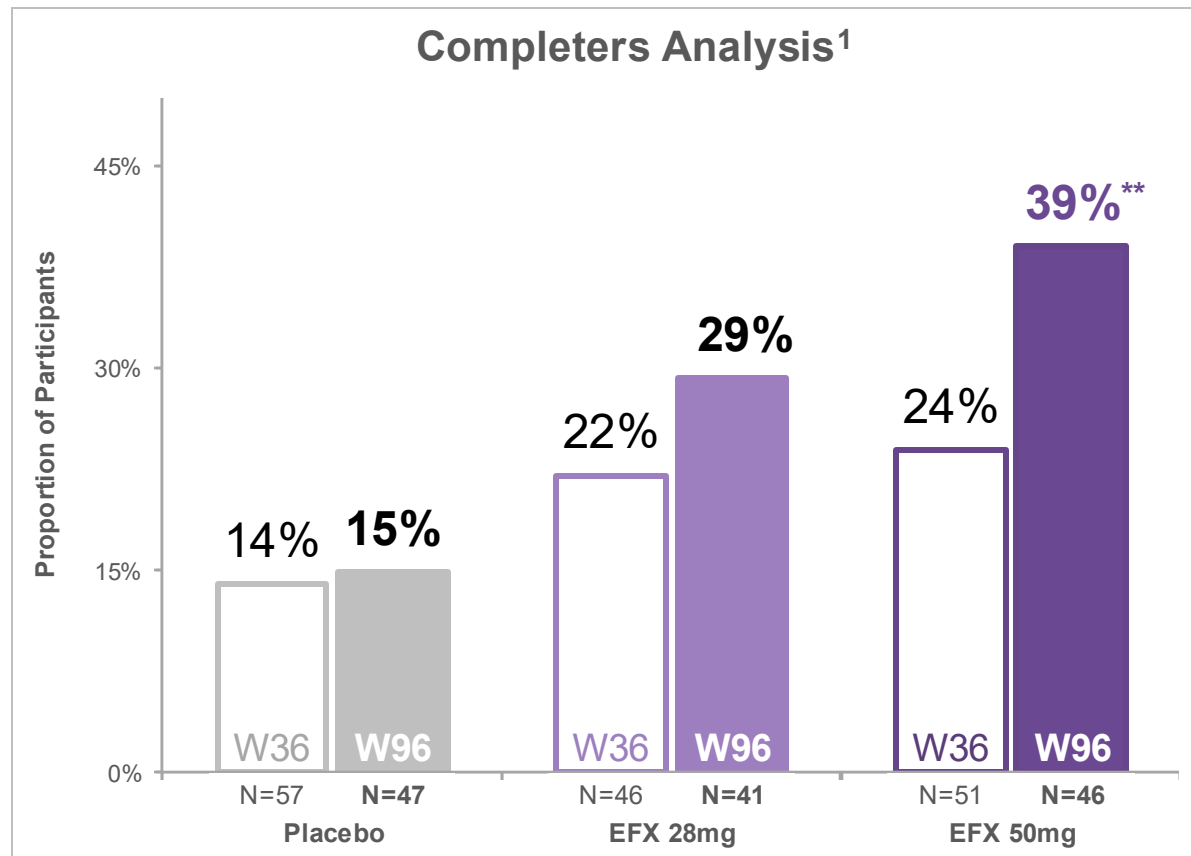
<sup>1</sup>Biopsy-confirmed cryptogenic cirrhosis attributed to MASH





# Significant Improvement in Fibrosis $\geq 1$ Stage with No Worsening of MASH Observed with EFX 50mg at Week 96

## Fibrosis Improvement $\geq 1$ Stage & No Worsening of MASH at Weeks 36 and 96<sup>1</sup>



<sup>1</sup> All participants with baseline and Week 36 or 96 biopsies

\*\* p<0.01, versus placebo (CMH test<sup>1</sup>)

## ITT Analysis (Week 96)<sup>2</sup>

Placebo (N=61)	EFX 28mg (N=57)	EFX 50mg (N=63)
11%	21%	29%*

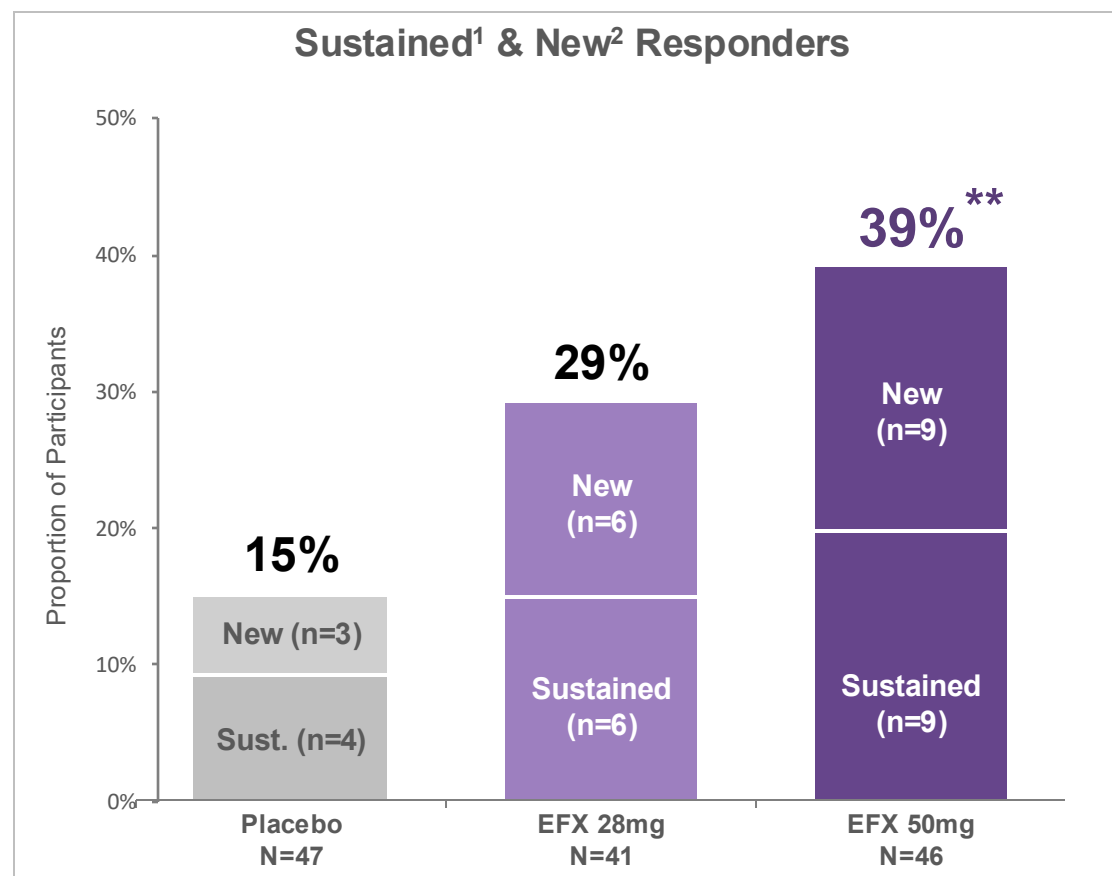
<sup>2</sup> Missing biopsy = non-responder

\* p<0.05, versus placebo (CMH test)



# Sustained and Expanded Fibrosis Improvement Observed with Longer Treatment

## Fibrosis Improvement $\geq 1$ Stage & No Worsening of MASH at Week 96



<sup>1</sup> Responder at Weeks 36 & 96; <sup>2</sup> Responder at Week 96

\*\* p<0.01, versus placebo (CMH test)

## Sustained Response

Proportion of Week 36 Responders with Sustained Response at Week 96<sup>3</sup>

Placebo (N=8)	EFX 28mg (N=9)	EFX 50mg (N=12)
4 (50%)	6 (67%)	9 (75%)

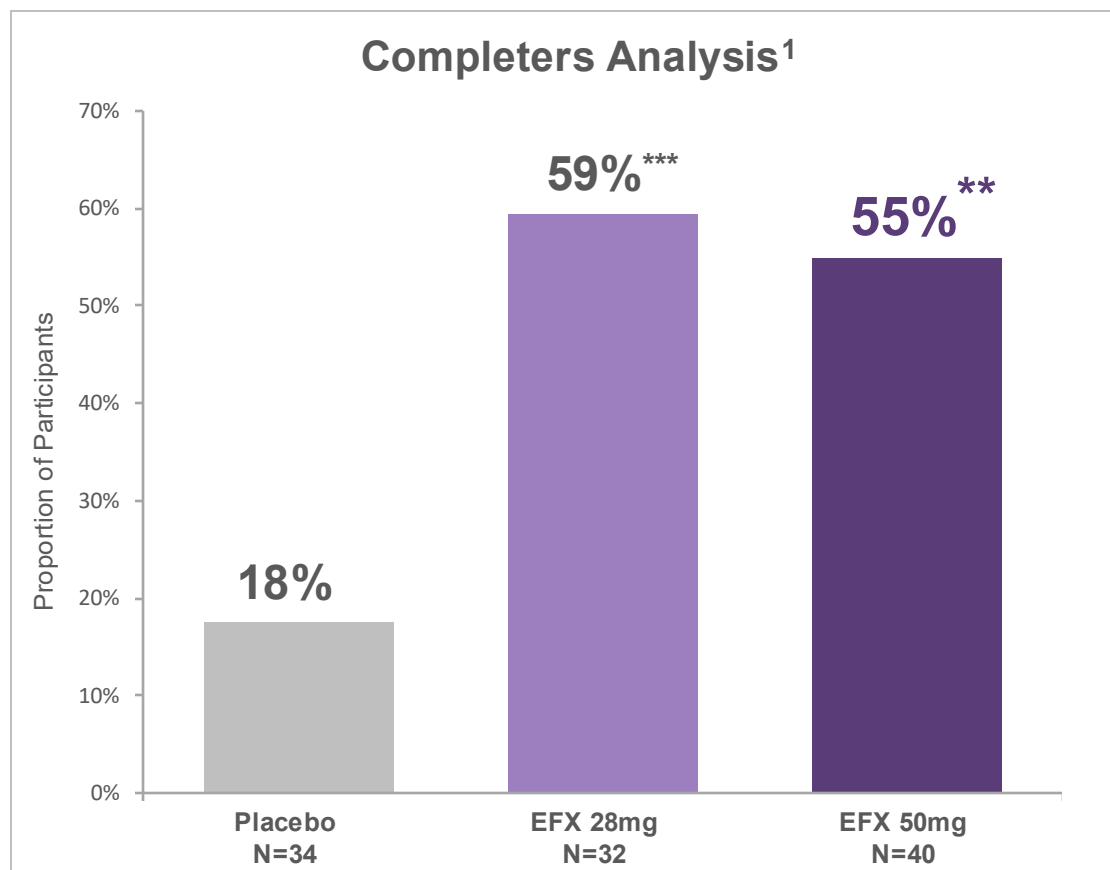
## Expanded Response

Proportion of Week 36 Non-Responders with New Response at Week 96<sup>3</sup>

Placebo (N=39)	EFX 28mg (N=32)	EFX 50mg (N=34)
3 (8%)	6 (19%)	9 (26%)

<sup>3</sup> Not analyzed for statistical significance

## MASH Resolution



<sup>1</sup> All participants with baseline and Week 96 biopsies who had biopsy-confirmed compensated cirrhosis caused by MASH ("definitive MASH") at baseline

\*\* p<0.01, \*\*\* p<0.001, versus placebo (CMH test)

## ITT Analysis<sup>2</sup>

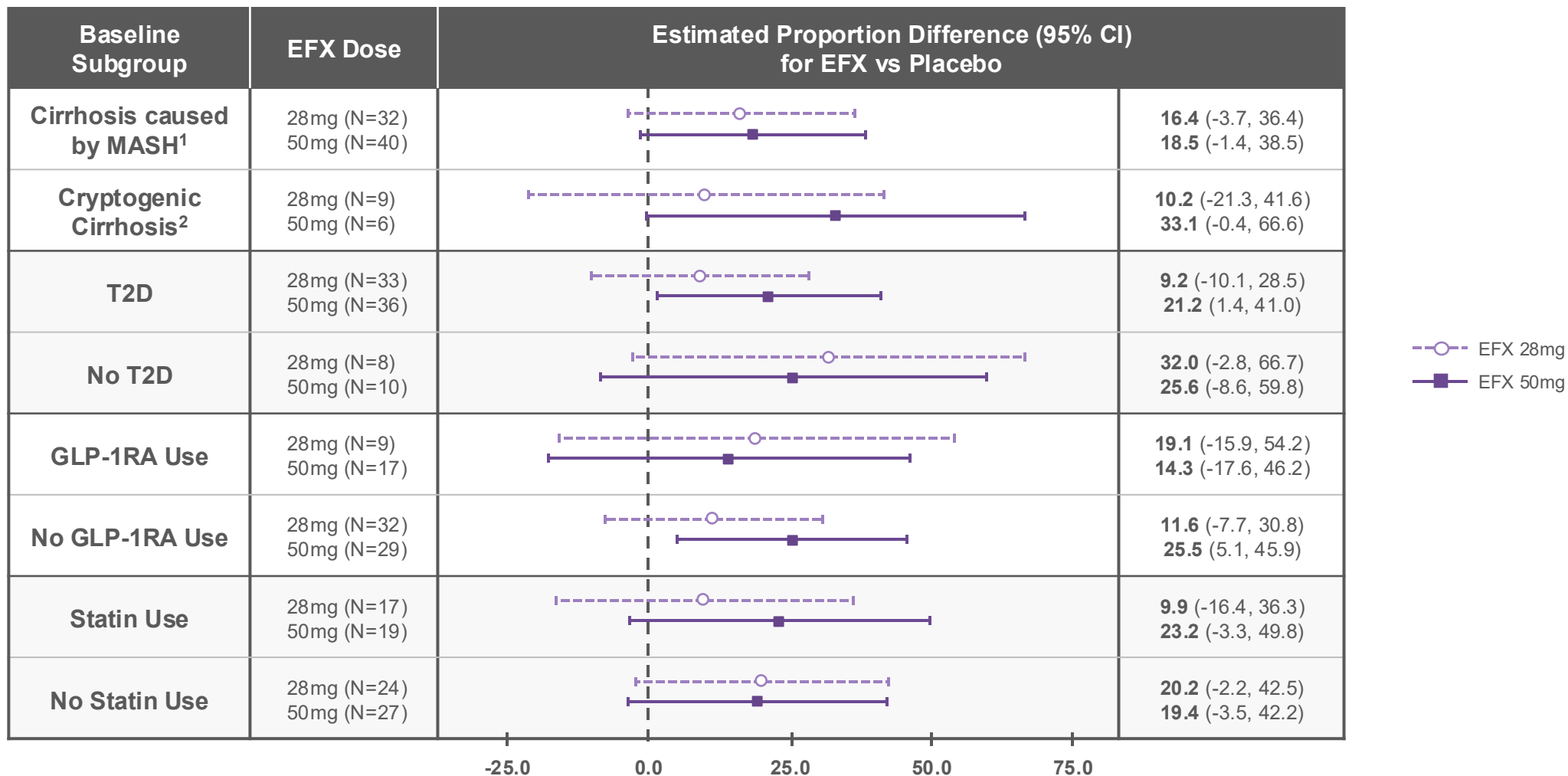
Placebo (N=45)	EFX 28mg (N=45)	EFX 50mg (N=52)
13%	42%**	42%**

<sup>2</sup> Missing biopsy = non-responder

\*\* p<0.01, versus placebo (CMH test)



# Consistent Response across Multiple Baseline Subgroups for Primary Histological Endpoint at Week 96

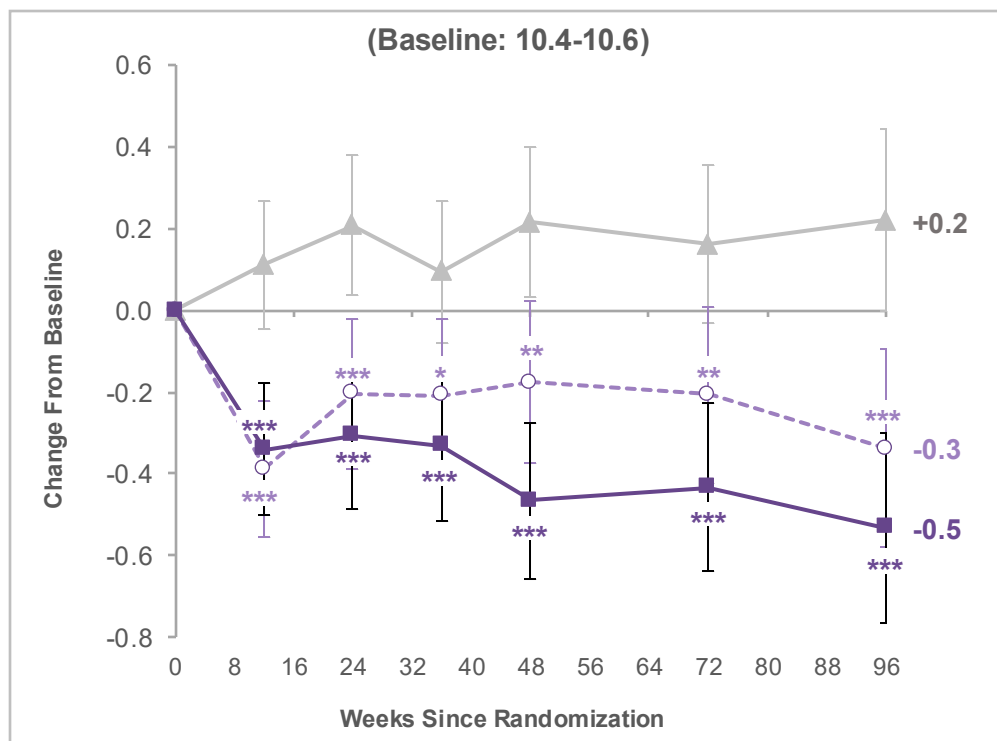


<sup>1</sup> Biopsy-confirmed compensated cirrhosis caused by MASH ("definitive MASH") <sup>2</sup> Biopsy-confirmed cryptogenic cirrhosis attributed to MASH



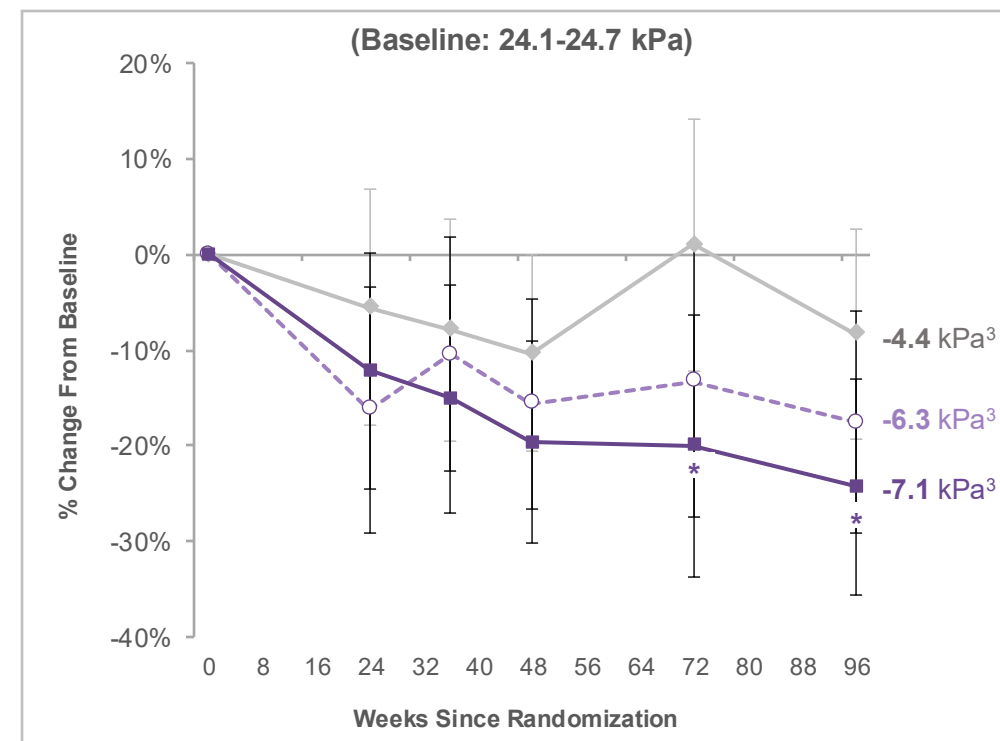
# Temporal Pattern for Non-Invasive Tests (NITs) of Fibrosis Corroborates Histological Improvement in Cirrhosis

ELF Score<sup>1</sup>



\* p<0.05, \*\* p<0.01, \*\*\* p<0.001, versus placebo (MMRM)

Liver Stiffness Measurement (kPa)<sup>1,2</sup>



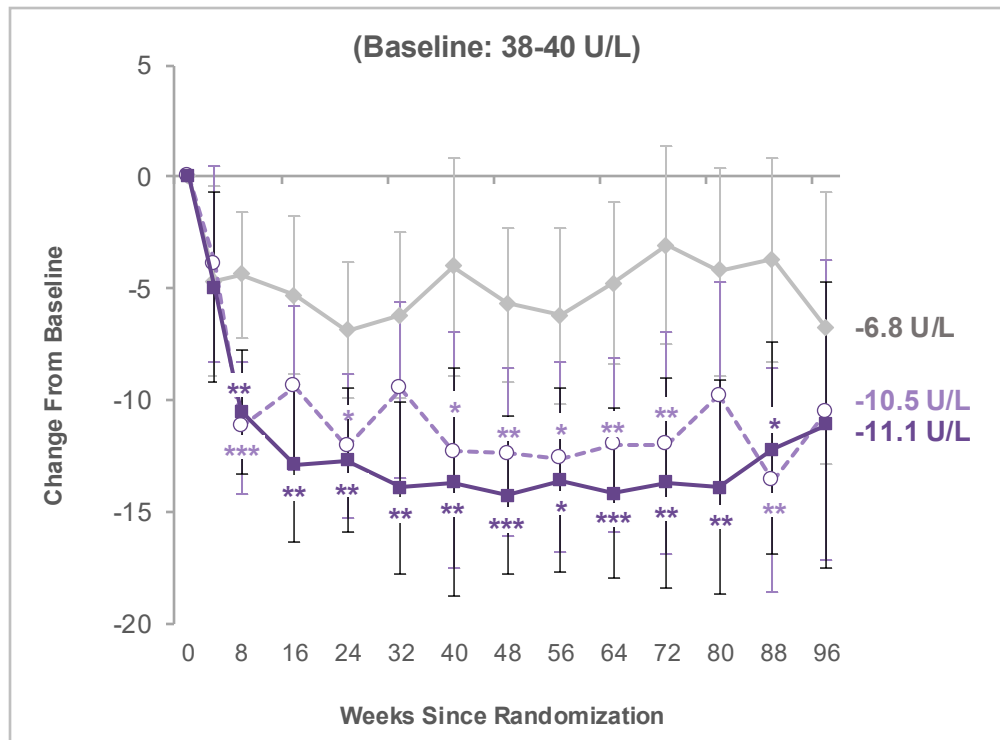
\* p<0.05, versus placebo (MMRM)

<sup>2</sup>Valid measurements only; <sup>3</sup>LSMean absolute change from baseline



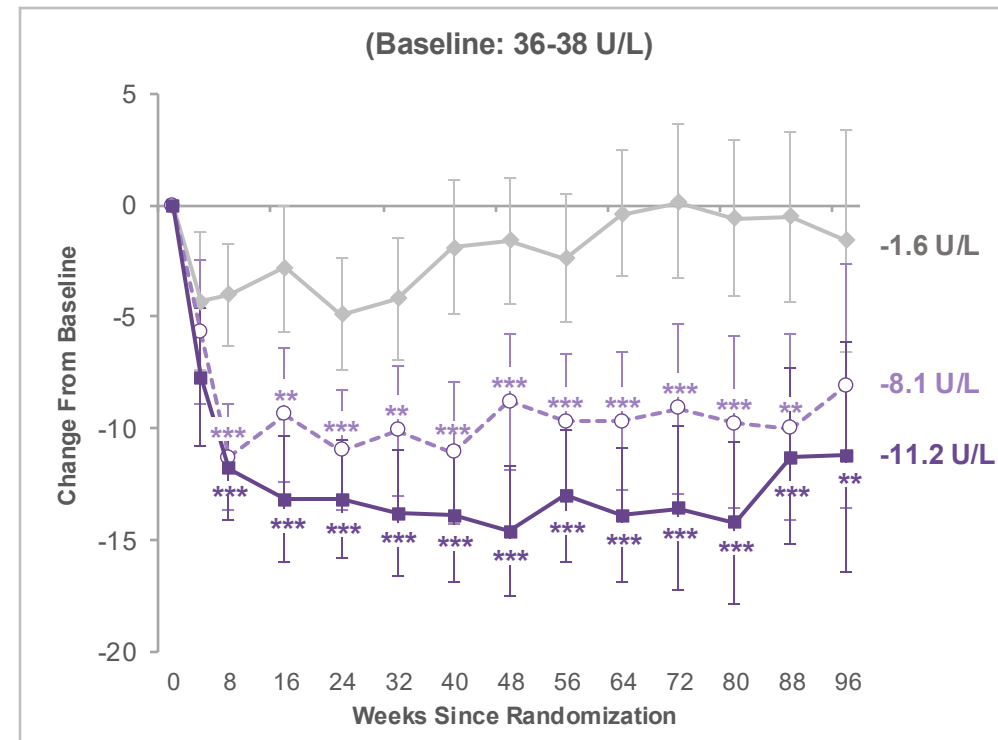
# Rapid and Sustained Reductions in Markers of Liver Injury through Week 96

## ALT (U/L)<sup>1</sup>



\* p<0.05, \*\* p<0.01, \*\*\* p<0.001, versus placebo (MMRM)

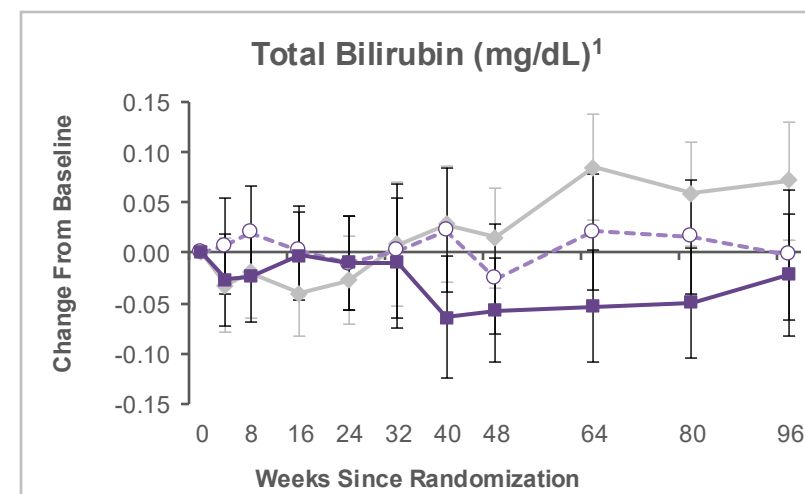
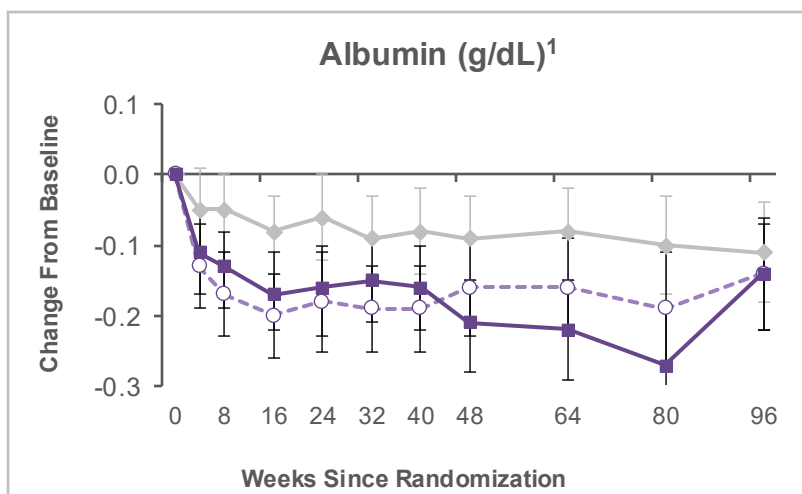
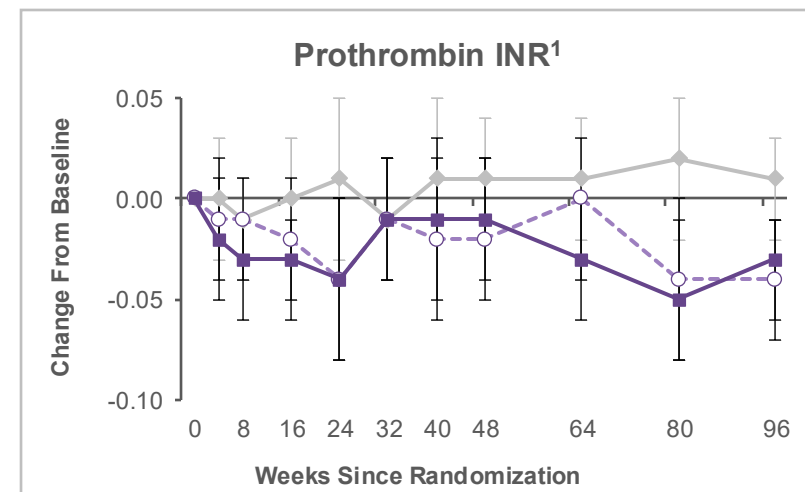
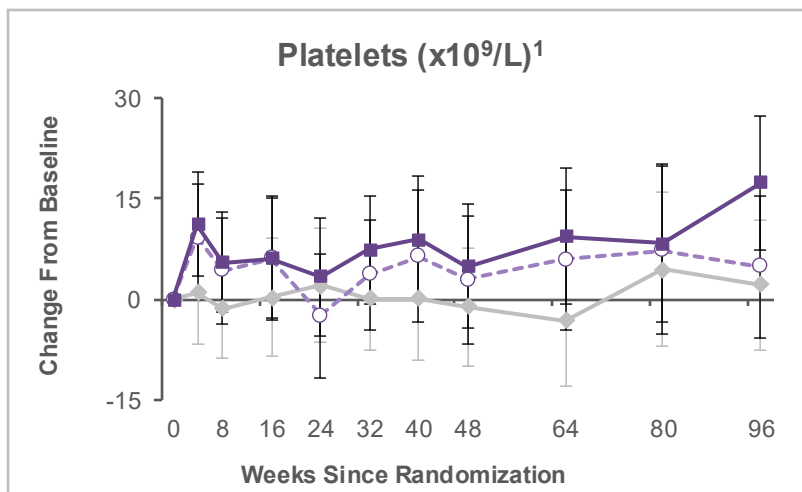
## AST (U/L)<sup>1</sup>



\*\* p<0.01, \*\*\* p<0.001, versus placebo (MMRM)



# Markers of Liver Function Maintained or Slightly Improved through Week 96





# Adverse Events: Cumulative from Baseline through Week 96

Number of Participants, n (%)	Placebo (N=61)	EFX 28mg (N=57)	EFX 50mg (N=63)
<b>Serious Adverse Events (SAEs)<sup>a</sup></b>	11 (18%)	15 (26%)	15 (24%)
AEs Leading to Death	1 (2%) <sup>b</sup>	0	0
<b>AEs Leading to Discontinuation of Treatment</b>	2 (3%)	6 (11%)	11 (17%)
Prior to Week 36	2 (3%)	5 (9%)	9 (14%)
After Week 36 and prior to Week 96	0	<sup>b</sup> 1 (2%)	2 (3%)
Most Frequent (≥15%) Drug-Related AEs	Placebo (N=61)	EFX 28mg (N=57)	EFX 50mg (N=63)
Diarrhea	10 (16%)	11 (19%)	19 (30%)
Nausea	8 (13%)	11 (19%)	18 (29%)
Increased Appetite	3 (5%)	7 (12%)	18 (29%)
Injection Site Erythema	5 (8%)	10 (18%)	14 (22%)

<sup>a</sup> None of the SAEs considered related to study drug; <sup>b</sup> Pneumonia (prior to week 36)



- Poor bone health is a common complication of cirrhosis.<sup>1,2</sup>
  - Across all treatment groups, 43% of participants had osteopenia<sup>3</sup> at baseline, but only 4% were treated with bisphosphonates.
- Placebo-adjusted, significant relative reductions in bone mineral density (~5%) for spine and hip were observed for both EFX groups at Week 96, or about 2-3% per year.
- Number of participants experiencing fractures was equal across all treatment groups.

- Unprecedented improvement in fibrosis observed in participants with compensated cirrhosis due to MASH after 96 weeks of treatment with EFX 50mg.
- Improvement in histologic fibrosis corroborated by non-invasive tests of liver fibrosis.
- Overall picture of liver injury and function suggest liver health is maintained or slightly improved by EFX compared to placebo.
- Acceptable safety & tolerability profile, with AEs predominantly gastrointestinal and transient.
- Based on a greater response across multiple parameters, EFX 50mg dose selected for confirmatory Phase 3 study in participants with compensated cirrhosis
  - Currently enrolling [[NCT06528314](#)]; includes assessment of liver-related outcomes and all-cause mortality.

ORIGINAL ARTICLE

## Efruxifermin in Compensated Liver Cirrhosis Caused by MASH

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