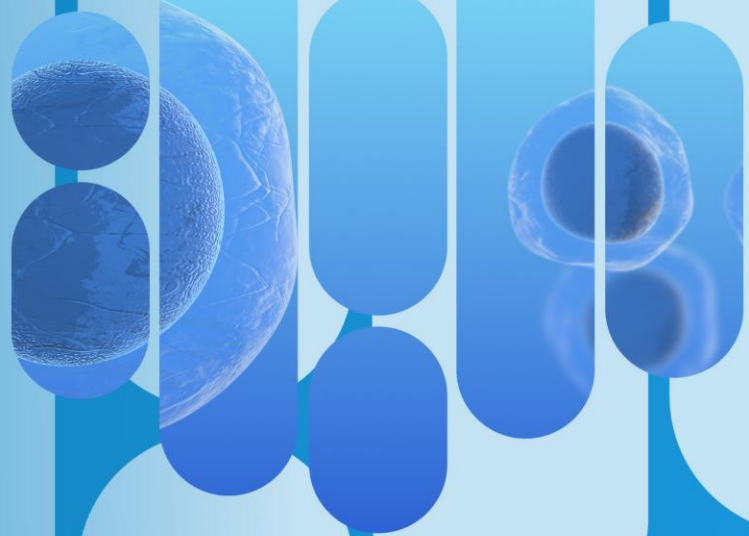


The logo for 89bio, featuring the number '89' in a bold, sans-serif font followed by the word 'bio' in a lowercase, sans-serif font, all in white.

**Pegozafermin (BIO89-100)
Phase 1b/2a NASH Histology Cohort
Topline Results**

Nasdaq: ETNB

January 24, 2022




Disclaimer

This presentation contains “forward-looking statements” within the meaning of the federal securities laws, which statements are subject to substantial risks and uncertainties and are based on estimates and assumptions. Other than statements of historical facts, all statements included in this presentation are forward-looking statements, including statements concerning our plans, objectives, goals, strategies, future events, plans or intentions relating to product candidates, the potential clinical benefit, effect on histology and safety and tolerability profile of pegozafermin (formerly BIO89-100), the clinical potential of pegozafermin, potential indications for pegozafermin, the association of clinical data with potential clinical benefit in other indications, the anticipated timing, design, endpoints, and conduct of our ongoing clinical trials for pegozafermin, the timing of anticipated milestones, the timing and likelihood of success, plans and objectives of management for future operations and future results of anticipated product development efforts and our liquidity and capital resources. In some cases, you can identify forward-looking statements by terms such as “may,” “might,” “will,” “objective,” “intend,” “should,” “could,” “can,” “would,” “expect,” “believe,” “design,” “estimate,” “predict,” “potential,” “plan” or the negative of these terms, and similar expressions intended to identify forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that could cause our actual results to differ materially from the forward-looking statements expressed or implied in this presentation including those described more fully our most recent Form 10-K and Form 10-Q under the caption “Risk Factors” and elsewhere in such report and in other subsequent disclosure documents filed with the SEC.

We cannot assure you that we will realize the results, benefits or developments that we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our business in the way expected. Forward-looking statements are not historical facts, and reflect our current views with respect to future events. Given the significant uncertainties, you should evaluate all forward-looking statements made in this presentation in the context of these risks and uncertainties and not place undue reliance on these forward-looking statements as predictions of future events. All forward-looking statements in this presentation apply only as of the date made and are expressly qualified in their entirety by the cautionary statements included in this presentation. We disclaim any intent to publicly update or revise any forward-looking statements to reflect subsequent events or circumstances, except as required by law.

We obtained the industry, market and competitive position data used throughout this presentation from our own internal estimates and research, as well as from industry and general publications, and research, surveys and studies conducted by third parties. Internal estimates are derived from publicly available information released by industry analysts and third-party sources, our internal research and our industry experience, and are based on assumptions made by us based on such data and our knowledge of the industry and market, which we believe to be reasonable. In addition, while we believe the industry, market and competitive position data included in this presentation is reliable and based on reasonable assumptions, we have not independently verified any third-party information, and all such data involve risks and uncertainties and are subject to change based on various factors.

Pegozafermin – Growing Evidence of Strong Profile in Non-Alcoholic Steatohepatitis (NASH)



✓ Previously reported data from the phase 1b/2a study results showed:

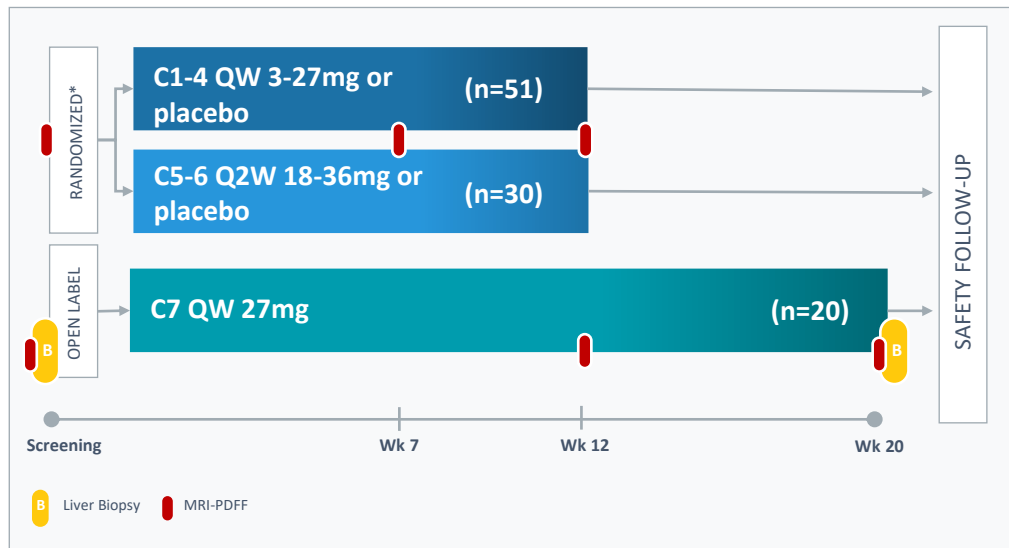
- Significant effect on liver and cardio-metabolic parameters
- Low incidence of treatment-related adverse events (AEs)
- Potential for every two-week dosing

✓ Robust data from histology cohort (cohort 7) consistent with previous findings and validate pegozafermin's effect on histology

- Meaningful changes on key histology endpoints – NAS >2pt., NASH Resolution, & Fibrosis
- Significant changes on non-invasive tests (NITs), glycemic control (HbA1c), lipid markers and body weight
- Favorable safety and tolerability profile

Results from phase 2b ENLIVEN study in >200 NASH F2/F3 patients expected in 1st half 2023

Phase 1b/2a NASH Trial Design – Randomized and Open-Label Cohorts



Cohort 7: 19/20 (95%) patients completed treatment and had end-of-treatment biopsies; 1 patient discontinued treatment due to withdrawal of consent

Biopsies were centrally read at baseline and end of treatment by a single pathologist

MRI dataset: 18 patients with Week 20 MRI; PD data: 19 subjects with Week 20 data

RANDOMIZED* COHORTS 1-6

KEY INCLUSION CRITERIA

- Biopsy confirmed or phenotypic NASH
- PDFF \geq 10%

KEY ENDPOINTS

- Safety, PK
- Relative changes in liver fat
- Serum lipids, liver and metabolic markers

OPEN-LABEL COHORT 7

KEY INCLUSION CRITERIA

- F2-F3 NASH; NAS \geq 4
- MRI-PDFF \geq 8%

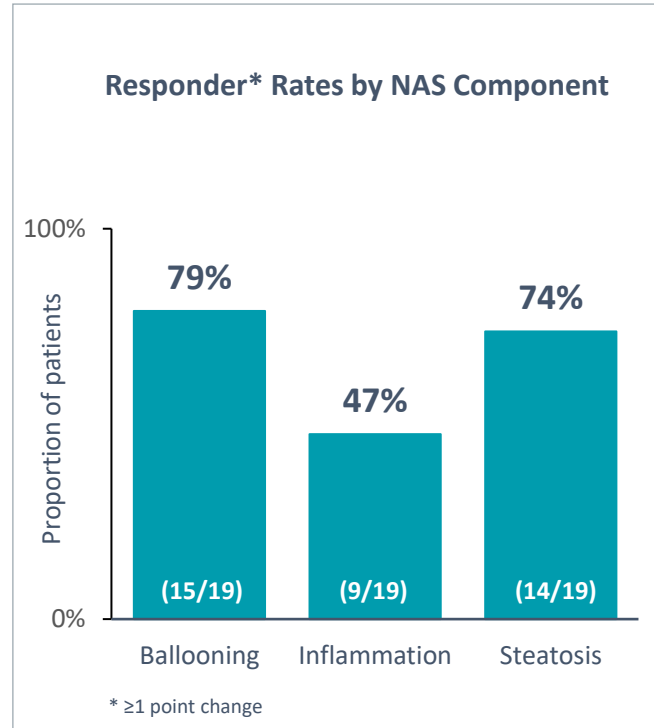
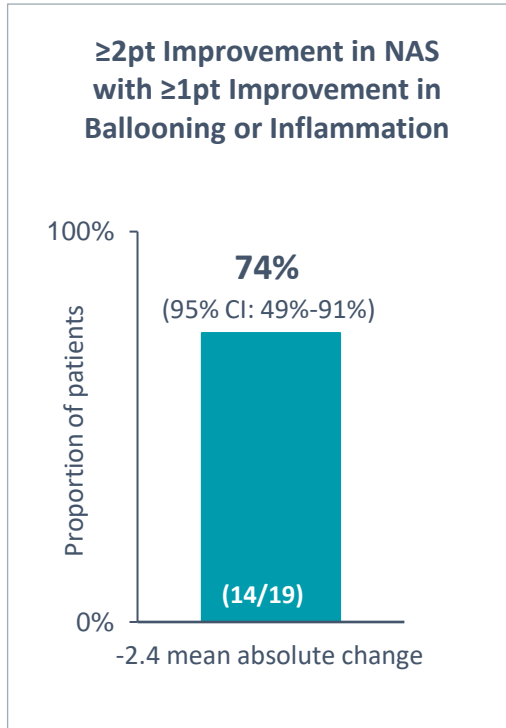
KEY ENDPOINTS

- \geq 2 point improvement in NAS
- NASH Resolution
- Fibrosis Improvement
- Safety/tolerability

Baseline Characteristics

Parameter Mean or %	Cohort 7 (n=20)	Cohorts 1-6 (n=81)
Age (years)	58.4	51.9
Female	75.0%	61.7%
Weight (kg)	104.6	93.6
BMI (kg/m ²)	37.0	34.6
Type 2 Diabetes	85.0%	45.7%
% F2 / % F3	35% / 65%	NA
NAS	5.3	NA
MRI-PDFF (%)	21.1	21.3
ALT (U/L)	47.1	41.5
AST (U/L)	36.1	31.0
Pro-C3 (ng/mL)	19.3	11.9
VCTE (kPA)	14.3	7.3
Triglycerides (mg/dL)	170.0	174.3

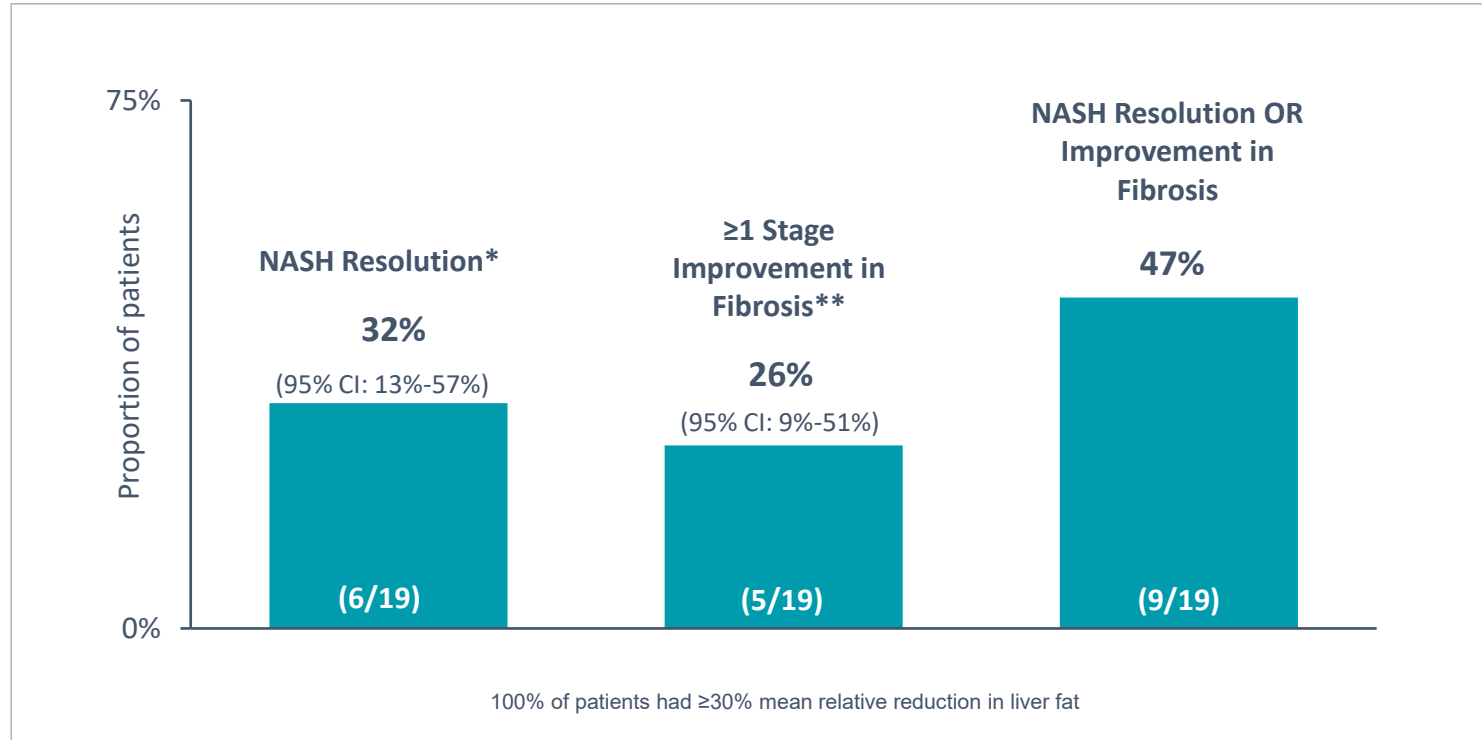
Pegozafermin Robustly Improved NAFLD Activity Score (NAS) and All Components of NAS



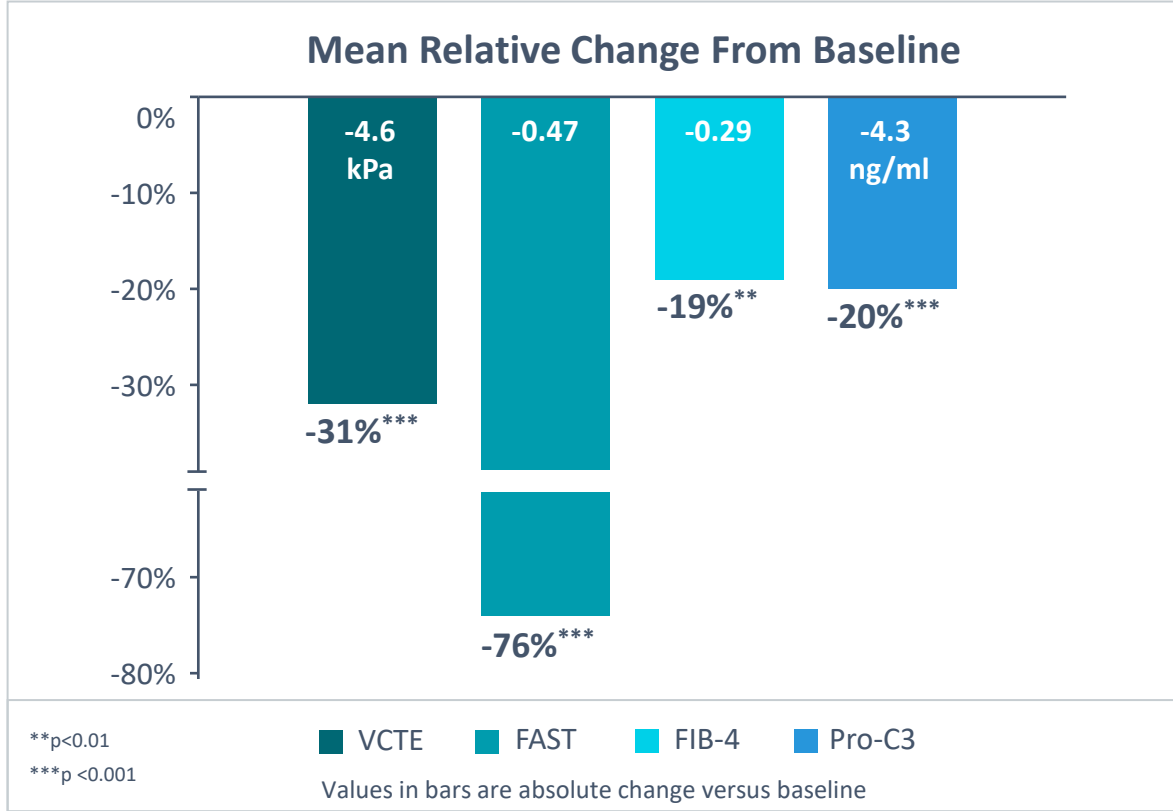
- **63%** of patients had ≥2point improvement in NAS and no worsening of fibrosis* (primary endpoint)
- **100%** of patients had improvement or no change in ballooning and inflammation

* with ≥1 point improvement in ballooning or inflammation

Pegozafermin Demonstrated Clinically Meaningful Changes on Key Histological Efficacy Endpoints



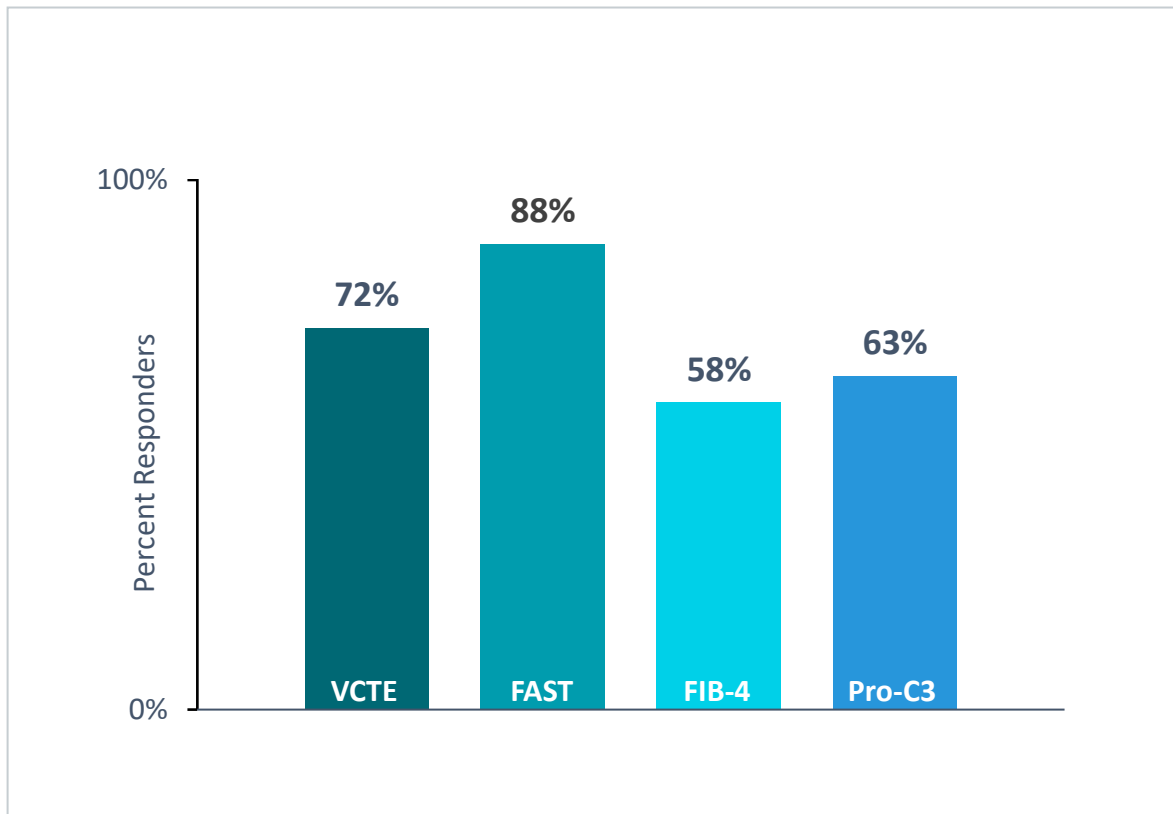
Pegozafermin Substantially Improved Scores Across Non-Invasive Tests (NITs) Correlated with Advanced Fibrosis



NIT DESCRIPTIONS

- VCTE: FibroScan® liver stiffness measure
- FAST score: FibroScan (VCTE and CAP) plus AST; 0-1 scale
- FIB-4 score: Composite serum marker/age measure
- Pro-C3: Collagen deposition serum biomarker

Pegozafermin had High Percentages of Responders Based on Clinically Relevant Thresholds for NITs



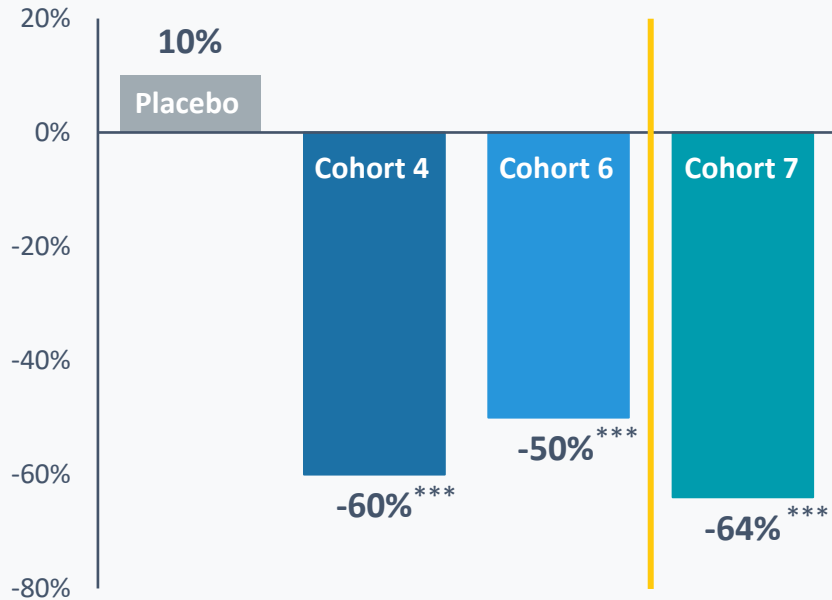
CLINICALLY RELEVANT THRESHOLDS

- VCTE: >20% reduction correlates with fibrosis improvement
- FAST score: Score ≤ 0.35 predicts Fibrosis Stage F0/F1 and NAS < 4
- FIB-4 score: Score < 1.3 predicts Fibrosis Stage F0/F1
- Pro-C3: >15% reduction correlates with fibrosis improvement

Taper EB, *Am J Gastroenterol*, 2016
Newsome PN, *Lancet Gastroenterol Hepatol*, 2020
Kanwal F, *Gastroenterology*, 2021
Luo Y, *Scientific Reports*, 2018

Pegozafermin: Robust Liver Fat Reduction with High Responder Rates Consistent with Prior Cohorts

Mean Relative Reduction in Liver Fat vs Baseline

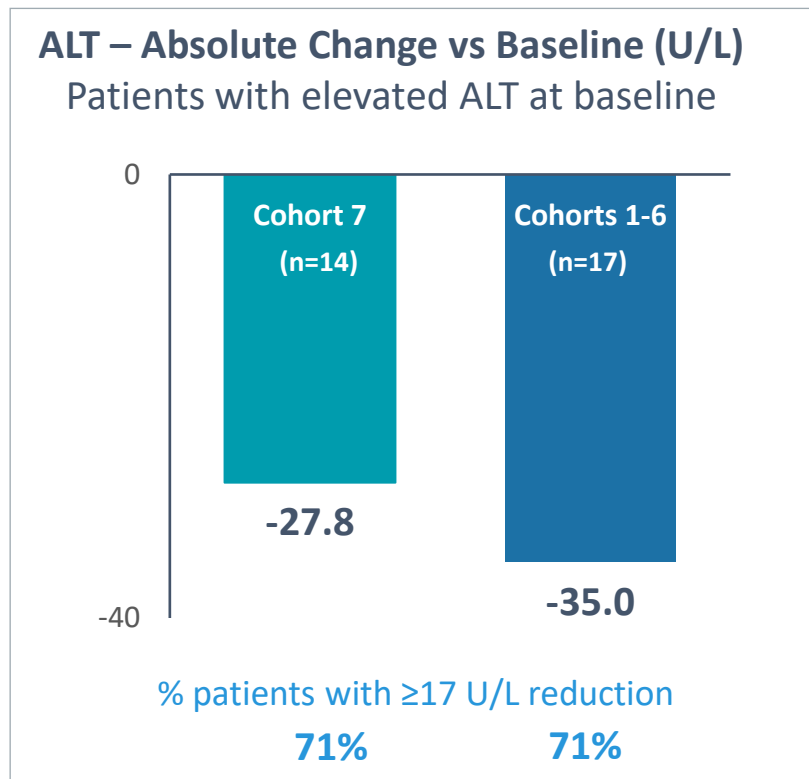
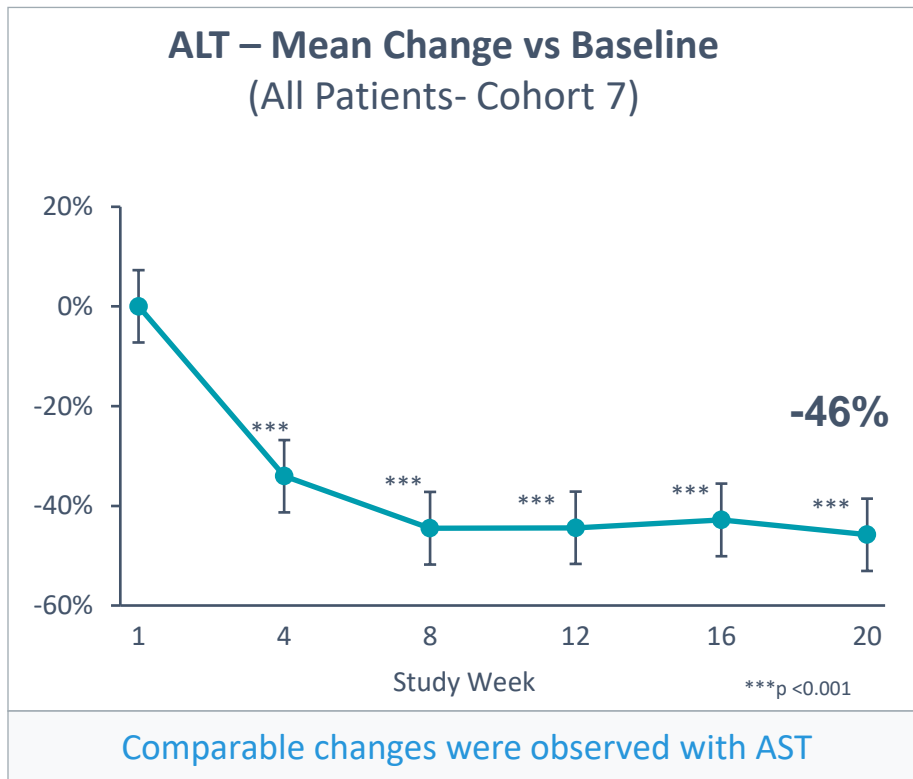


***p <0.001

	≥30% Relative Reduction in Liver Fat	≥50% Relative Reduction in Liver Fat
Cohort 7	100%	78%
Cohort 4	86%	71%
Cohort 6	88%	50%

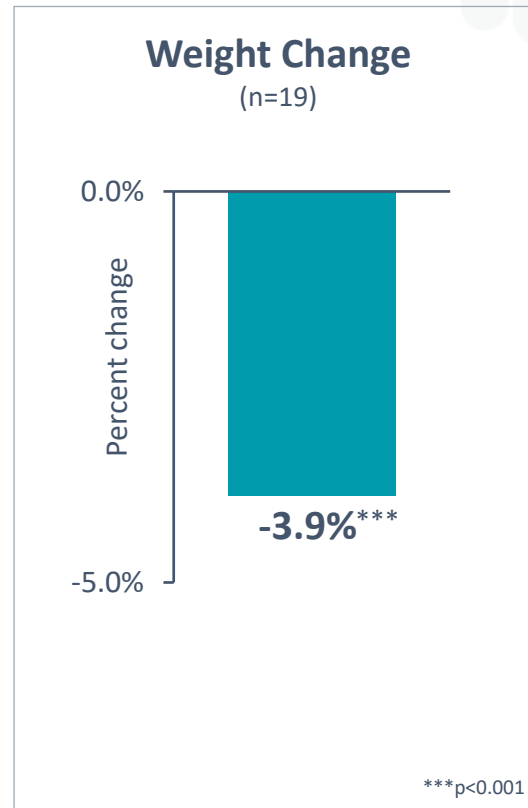
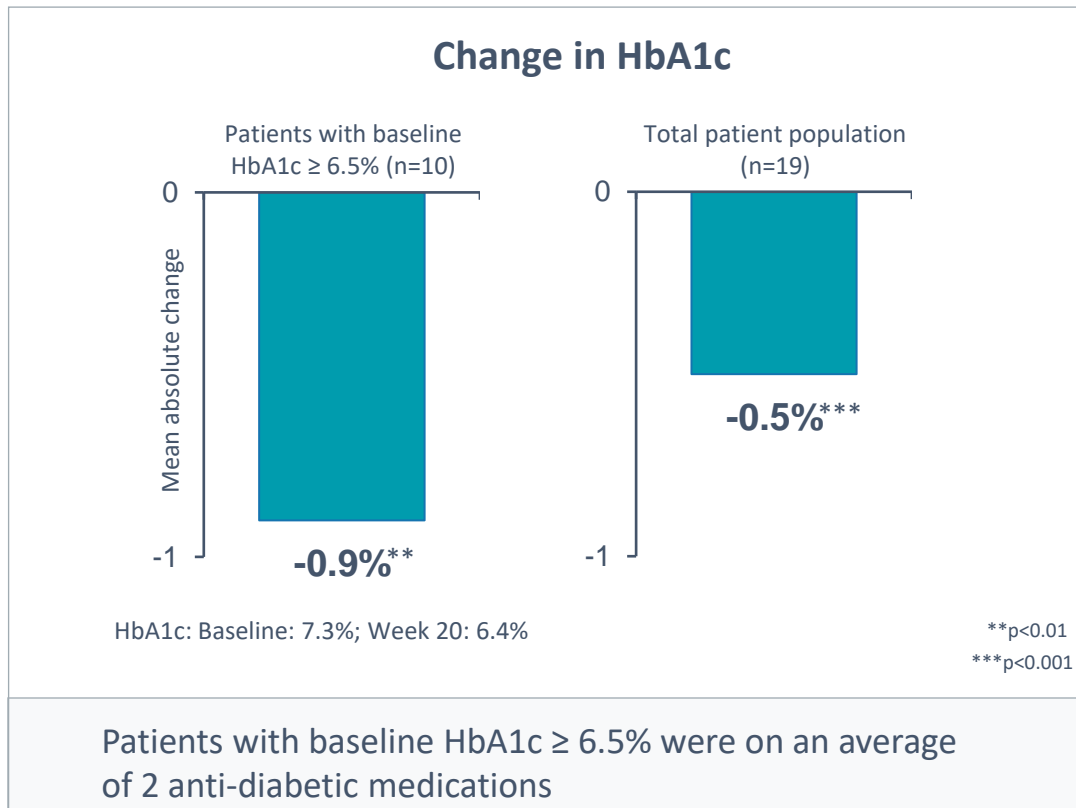
Cohort 7: 27mg QW data at 20 weeks, Cohort 4: 27mg QW data at 13 weeks, Cohort 6: 36mg Q2W at 13 weeks

Pegozafermin: Clinically Significant Reduction in ALT Consistent with Prior Cohorts

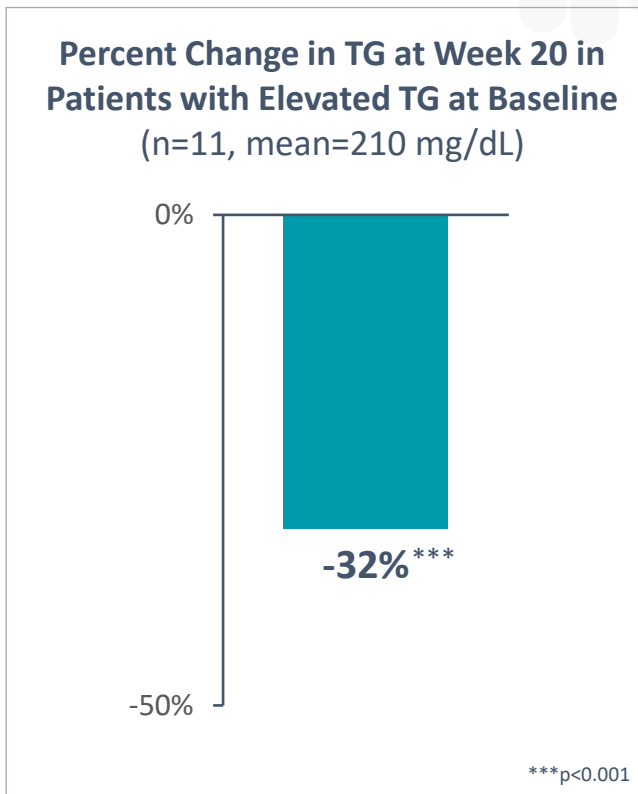
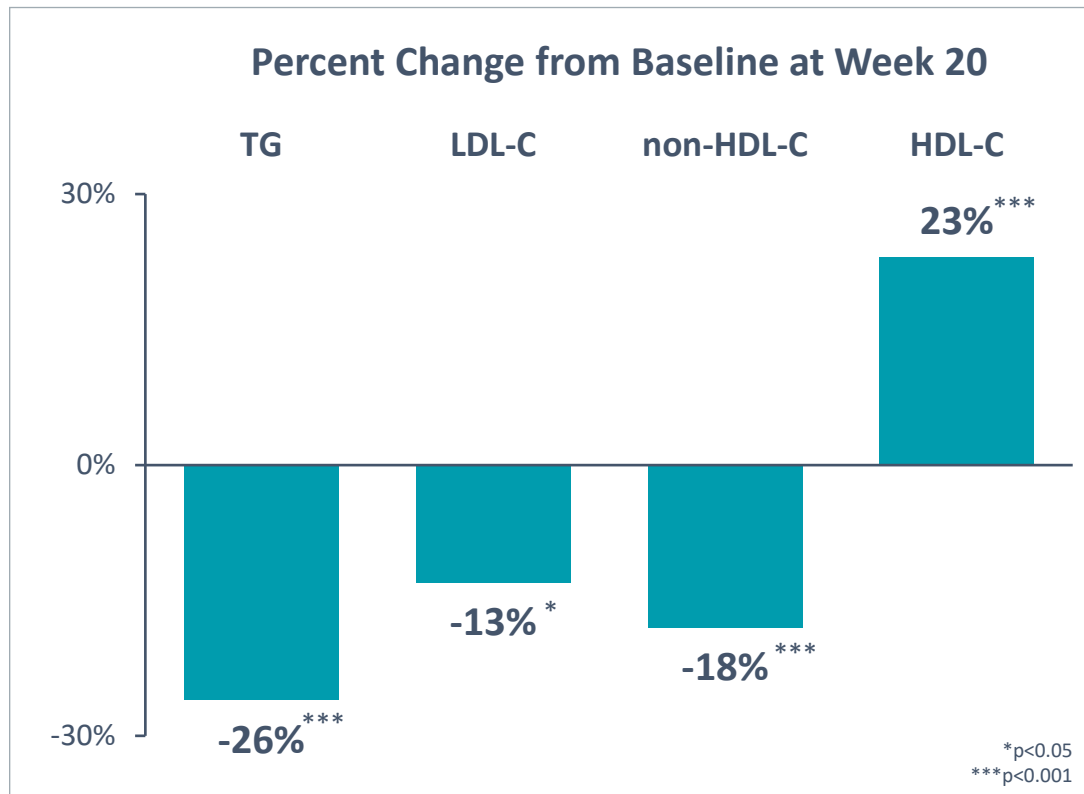


Loomba R, *Hepatology*, 2020

Pegozafermin Demonstrated Clinically Meaningful Improvement on HbA1c and Notable Body Weight Reduction



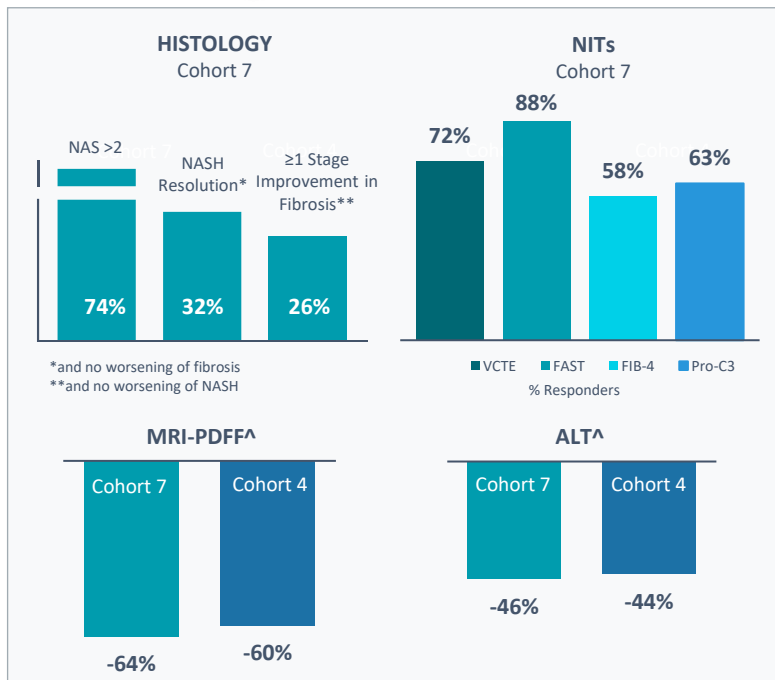
Pegozafermin Demonstrated Clinically Meaningful Improvements in Lipid Parameters



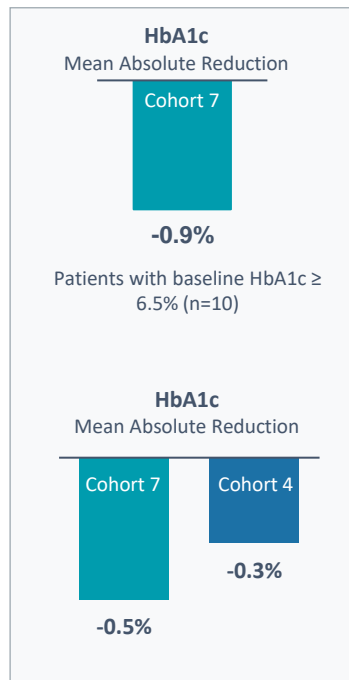
Pegozafermin Improves Many Markers of Liver Health and Co-Morbidities Associated with NASH



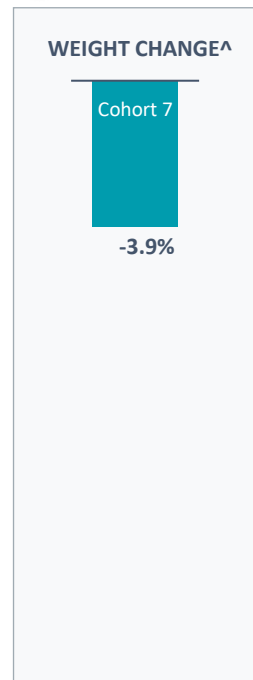
LIVER HEALTH



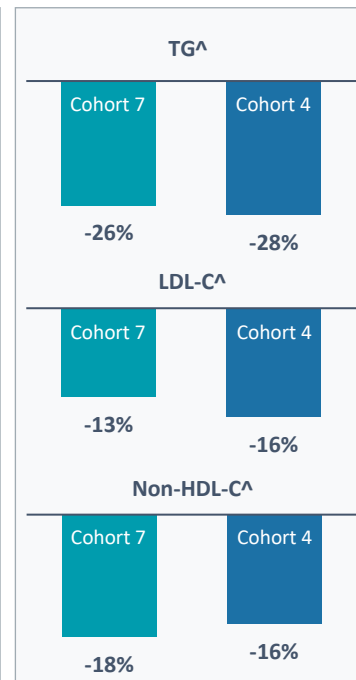
INSULIN RESISTANCE



OBESITY



DYSLIPIDEMA



Pegozafermin Was Well Tolerated Across Doses

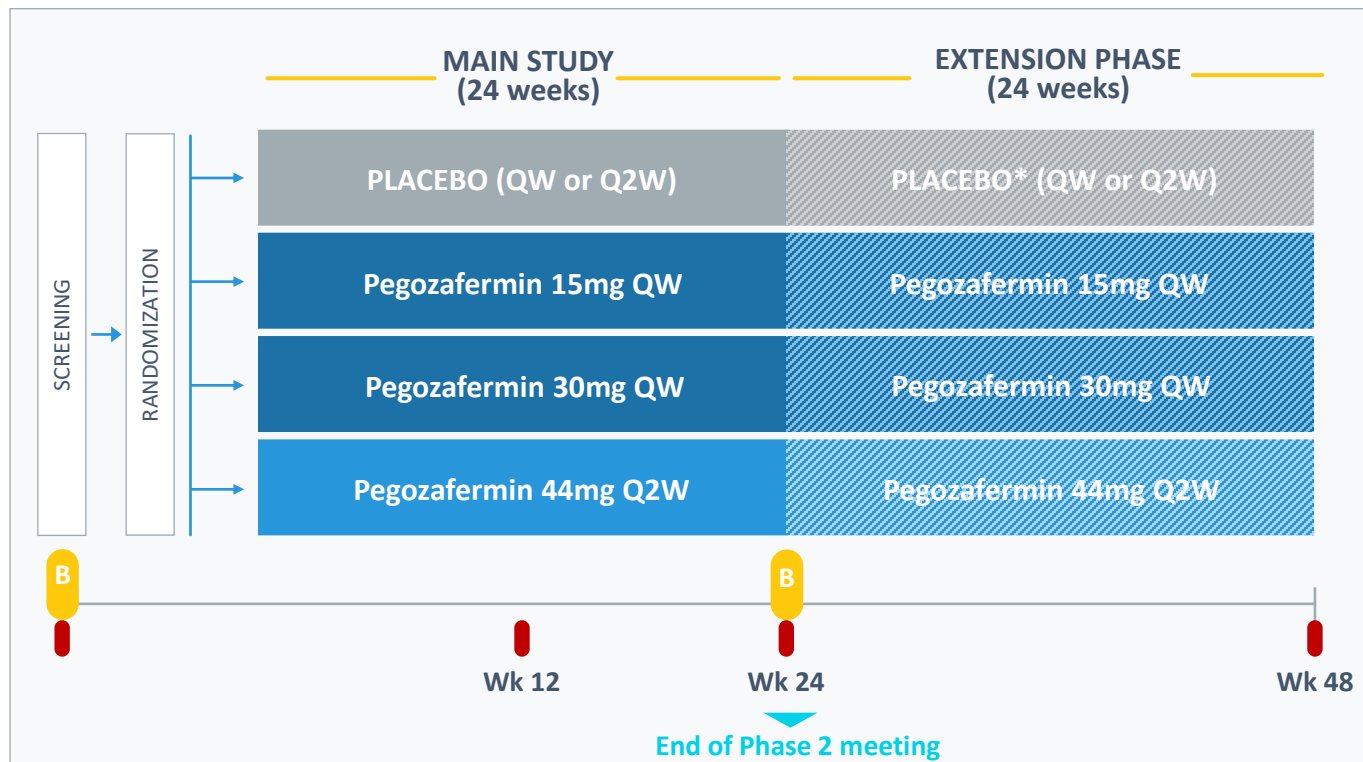
Low Incidence of Treatment-Related AEs in $\geq 10\%$ of Pooled Pegozafermin Group



Preferred Term n (%)	Placebo (n=18)	Cohort 1 3mg QW (n=7)	Cohort 2 9mg QW (n=12)	Cohort 3 18mg QW (n=11)	Cohort 4 27mg QW (n=10)	Cohort 5 18mg Q2W (n=14)	Cohort 6 36mg Q2W (n=9)	Cohort 7 27mg QW (n=20)	Pooled pegoza (n=83)
Increased Appetite	0%	57%	17%	0%	20%	14%	0%	5%	13%
Diarrhea	11%	0%	8%	0%	20%	7%	22%	25%	13%
Nausea	11%	0%	0%	9%	0%	14%	0%	35%	12%

- Pegozafermin shows favorable safety and tolerability profile with no treatment related serious adverse events
- No tremors or hypersensitivity AEs reported; few mild injection site reaction events reported
- In cohort 7, other treatment related AEs observed in $\geq 10\%$ of patients were vomiting (10%), injection site bruising (10%), injection site erythema (10%) and decreased appetite (10%); no events grade 3+ reported

Next Step: Phase 2b (ENLIVEN) NASH Trial Design



KEY INCLUSION CRITERIA

- F2-F3 NASH; NAS ≥ 4

PRIMARY ENDPOINTS

- Fibrosis Improvement
- NASH Resolution

SAMPLE SIZE

- N= 216 patients

B Liver Biopsy **■** MRI-PDFF

Cohort 7 Results Confirm and Extend the Growing Evidence of Pegzofermin's Potential in NASH



- ✓ **Robust effects across key histology endpoints**

- ✓ **Impressive results in non-invasive clinically relevant measures of overall liver health**

- ✓ **Significant changes in glycemic control, lipids and body weight address key underlying drivers of NASH**






- ✓ **Favorable safety and tolerability profile**

Phase 1b/2a Study Results Provide High Level of Confidence in Pegozafermin's Benefits in Severe Hypertriglyceridemia (SHTG)



KEY PARAMETERS OF INTEREST IN SHTG

PEGOZAFERMIN RESULTS

 Triglyceride reduction (TG) (primary endpoint)	✓
 LDL-c reduction	✓
 Non-HDL-c reduction	✓
 Liver fat reduction	✓
 Glycemic control (HbA1c)	✓

ENTRIGUE Study

- 8-week study of multiple doses of pegozafermin in patients with baseline TG \geq 500 mg/dL
- Primary endpoint is % change in TG from baseline; Key secondary endpoints include other lipid and metabolic parameters and liver fat (MRI-PDFF)
- Results expected 1H22



Rohit Loomba, MD, MHSc

Director, NAFLD Research Center

Professor of Medicine, Director of Hepatology

University of California at San Diego

Investment Highlights



Pegozafermin has potential to be a leading drug for liver and cardio-metabolic disorders

- Validated with compelling profile: strong efficacy including histology in NASH, favorable safety/tolerability, and potential best-in-class dosing

Pursuing two promising large indications with competitively differentiated profile

- NASH: Potential backbone treatment addressing multiple facets of NASH
- SHTG: Potential to treat TGs and metabolic dysregulation with quicker path to market

Program status/milestones

- SHTG: Phase 2 ENTRIGUE trial topline data in 1H22
- NASH: Phase 2b ENLIVEN trial topline data in 1H23

Strong capital position - \$150.7M* in pro-forma cash (DEC 31, 2021)

89bio

Q&A

