ALTIMMUNE, INC. CORPORATE PRESENTATION

Q2 2022

altimmune | NASDAQ: ALT

Forward-looking statements

Safe-Harbor Statement

This presentation has been prepared by Altimmune, Inc. ("we," "us," "our," "Altimmune" or the "Company") and includes certain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding the timing of clinical development and funding milestones for our clinical assets as well as statements relating to future financial or business performance, conditions, plans, prospects, trends, or strategies and other financial and business matters, and the prospects for commercializing or selling any product or drug candidates. In addition, when or if used in this presentation, the words “may,” “could,” “should,” “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan,” “predict” and similar expressions and their variants, as they relate to the Company may identify forward-looking statements. The Company cautions that these forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Important factors that may cause actual results to differ materially from the results discussed in the forward looking statements or historical experience include risks and uncertainties, including risks relating to: potential impacts due to the COVID-19 pandemic such as delays in regulatory review, manufacturing and supply chain interruptions, adverse effects on healthcare systems and disruption of the global economy, the timing and reliability of the results of the studies relating to human safety and possible adverse effects resulting from the administration of the Company’s product candidates; our lack of financial resources and access to capital; clinical trials and the commercialization of proposed product candidates (such as marketing, regulatory, product liability, supply, competition, dependence on third parties and other risks); the timing of regulatory applications and the regulatory approval process; dependence on intellectual property. Further information on the factors and risks that could affect the Company's business, financial conditions and results of operations are contained in the Company’s filings with the U.S. Securities and Exchange Commission, including under the heading “Risk Factors” in the Company’s annual reports on Form 10-K and quarterly reports on Form 10-Q filed with the SEC, which are available at www.sec.gov. The statements made herein speak only as of the date stated herein, and any forward-looking statements contained herein are based on assumptions that the Company believes to be reasonable as of this date. The Company undertakes no obligation to update these statements as result of new information or future events.

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ALTIMMUNE HIGHLIGHTS

Developing next generation peptide therapeutics for obesity and liver diseases

Multiple near-term value-driving catalysts in both obesity and NASH

$180M cash and investments on hand to support development

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STRONG EXECUTIVE MANAGEMENT TEAM

Vipin K. Garg, PhD
President & CEO

Richard Eisenstadt, MBA
Chief Financial Officer

Scott Harris, MD
Chief Medical Officer

Scot Roberts, PhD
Chief Scientific Officer

Bertrand Georges, PhD
Chief Technology Officer

José Ochoa, JD
Chief Business Officer

IDT
tranzyme pharma
NEOS Therapeutics
emergent biosolutions
ImQuest BioSciences
Institut Pasteur
Lyric Pharmaceuticals
ocera
SEPRACOR
Rheem The new degree of comfort.
Wellstat Group of Companies
IMMUNE TARGETING SYSTEMS
Aytu BIOPHARMA
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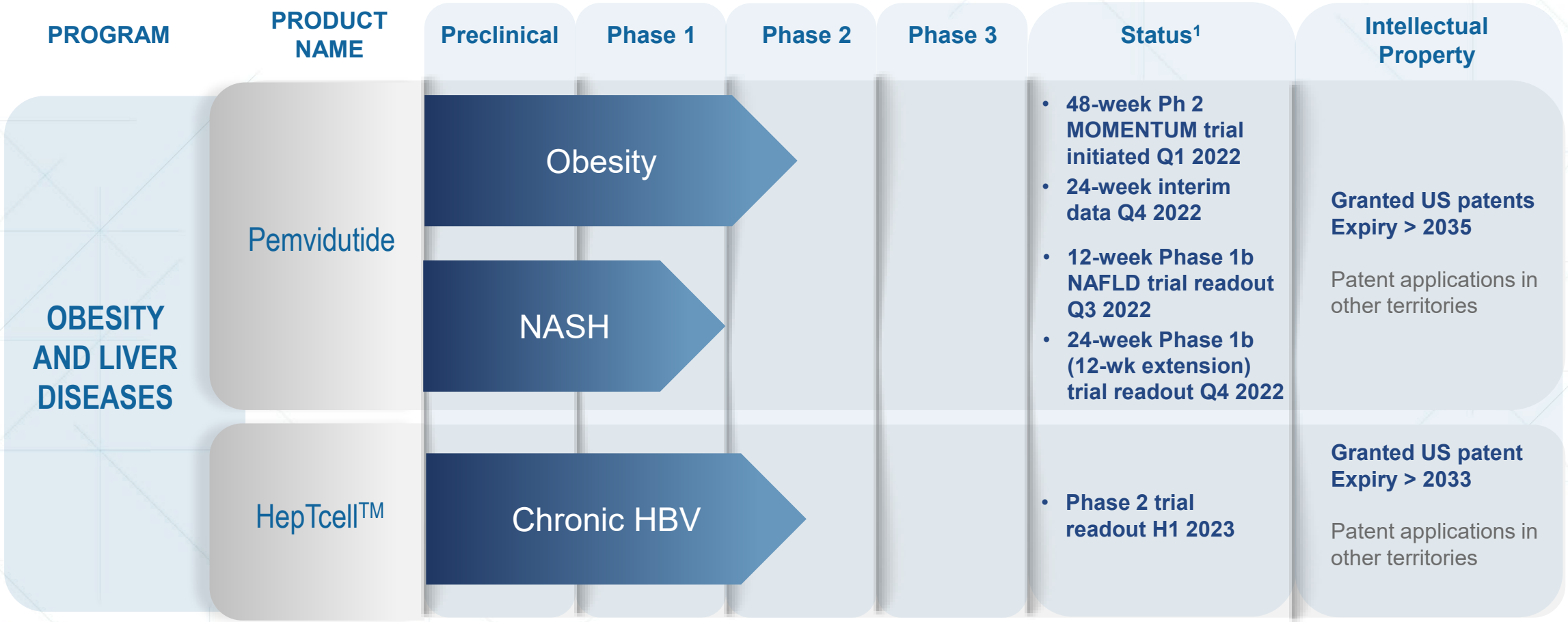
FOCUSED DEVELOPMENT PIPELINE



[1] *expected dates*

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Pemvidutide: Obesity and NASH

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OBESITY: SIGNIFICANT BURDEN TO HEALTHCARE SYSTEM

OPPORTUNITY TO ADDRESS MANY COMORBIDITIES THROUGH THE TREATMENT OF OBESITY

IMPACT OF OBESITY

- Obesity is implicated in **two thirds of the leading causes of death** from non-communicable diseases worldwide[3]
- Total obesity related medical care in the U.S. estimated to be **$147 billion** per CDC[2]
- Global market size for medical weight loss alone was **$8.36 billion** in 2020, and is estimated to reach **$27.1 billion** by 2028[1]

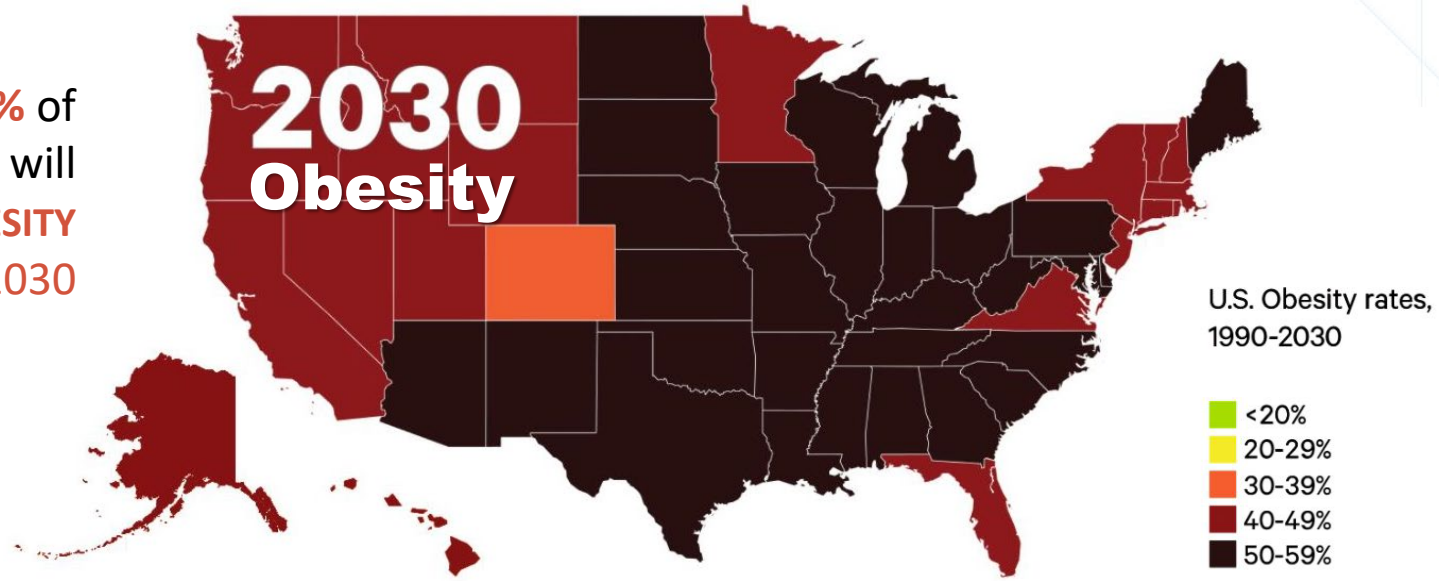
CO-MORBIDITIES

- High blood pressure
- High cholesterol
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease
- Osteoarthritis
- Sleep apnea and breathing problems
- Certain cancers
- NASH

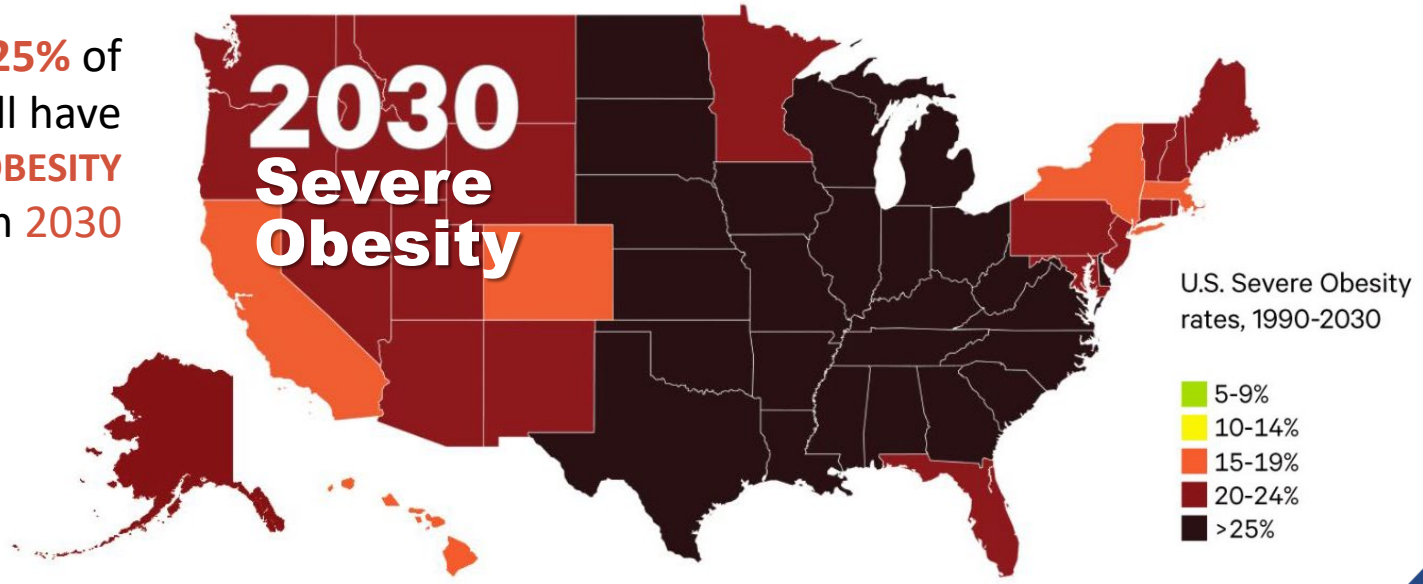
1 - https://www.biospace.com/article/obesity-treatment-market-size-to-reach-usd-27-10-billion-in-2028/
2 - https://www.cdc.gov/obesity/adult/causes.html
3 - https://www.sciencedaily.com/releases/2019/10/191024143218.htm

Projected U.S. State-Level Prevalence of Adult Obesity and Severe Obesity

Nearly **50%** of Americans will have **OBESITY** in 2030



Nearly **25%** of Americans will have **SEVERE OBESITY** in 2030



[1]Ward ZJ, et al. N Engl J Med. 2019 Dec 19;381(25):2440-2450.

Severe obesity is defined as BMI ≥35

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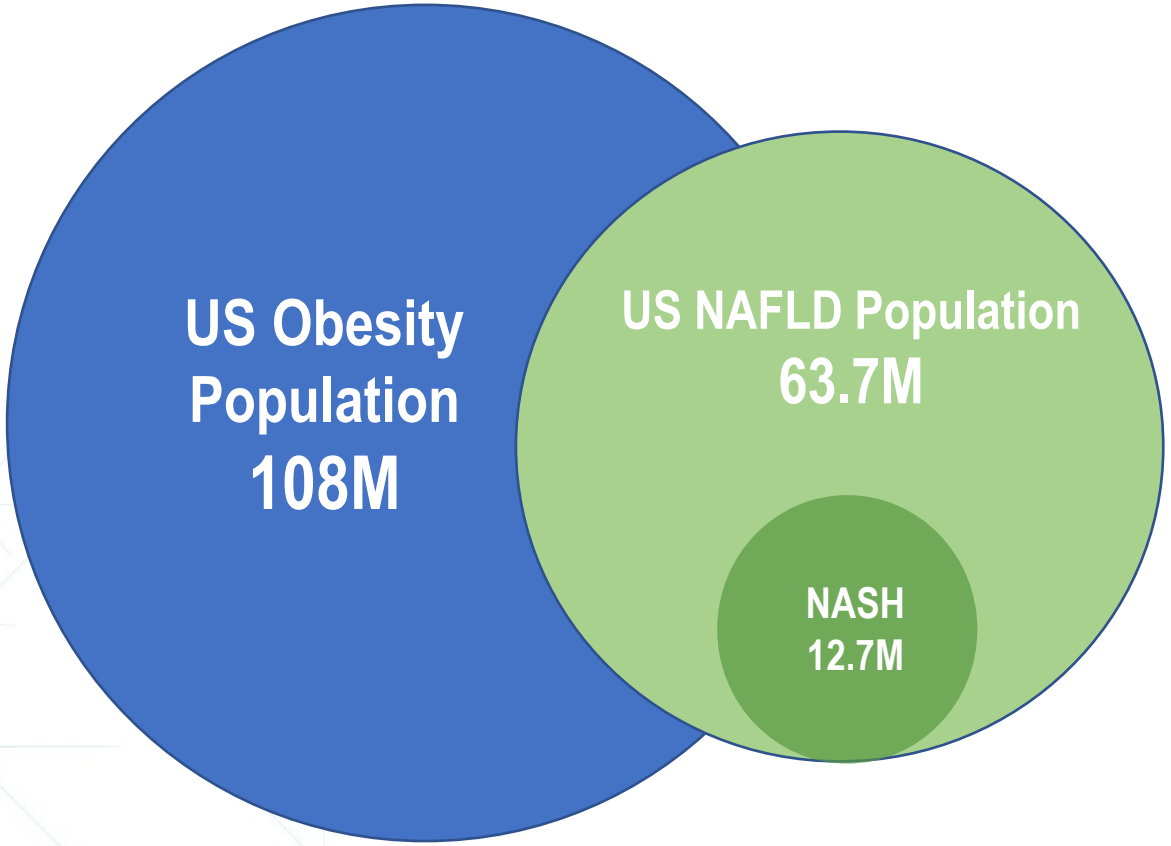
OBESITY AND FATTY LIVER DISEASE

DISEASES WITH UNMET NEED APPROACHING EPIDEMIC PROPORTION



- Previous approaches to the treatment of obesity have been associated with safety concerns limiting success
- The recent successes of Wegovy® and Mounjaro™ have created a regulatory pathway for other incretin-based approaches
- The treatment of obesity is the cornerstone of treating NASH and the principal morbidities of NASH[1,2]

[1]*Glass LM, Fed Pract 2019;* [2]*Perazzo H, Liver Int 2017*

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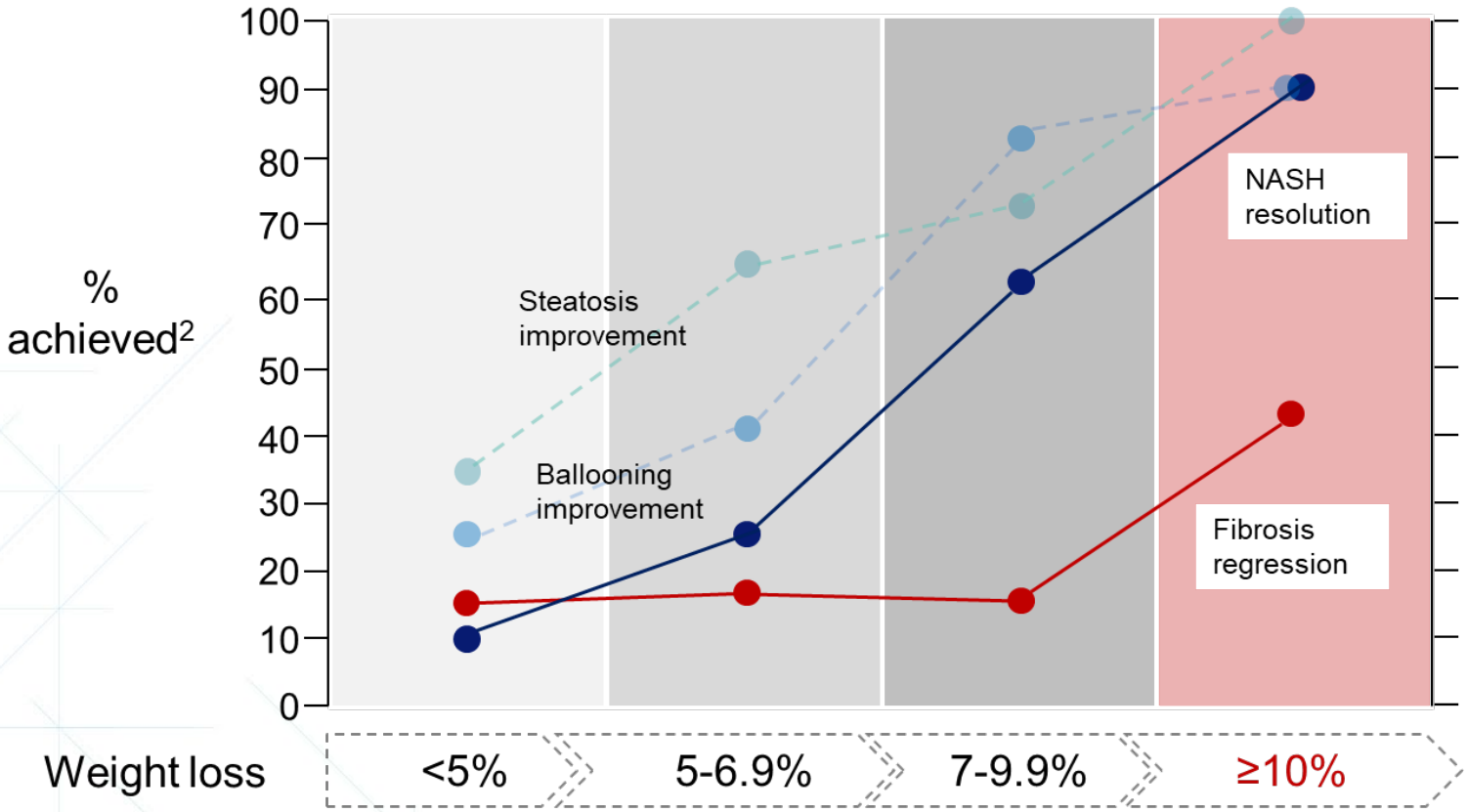
TREATING OBESITY IS THE CORNERSTONE OF NASH THERAPY

10% OR MORE WEIGHT LOSS MUST BE ACHIEVED[1]



- The **treatment of obesity** remains the cornerstone of NASH therapy
- **Meaningful weight loss** is rarely achieved without medical intervention
- **Current drugs have failed** to deliver the weight loss achieved by bariatric surgery

[1] *Promrat et al Hepatology 2010; Glass et al Dig Dis Sci 2015; Vilar-Gomez et al Gastroenterology 2015; Marchesini et al Hepatology 2016; Koutowkidis et al JAMA Intern Med 2019*

[2] *Adapted from Harrison, EASL 2019, Traber, Discovery on Target: Targeting NASH 2019, and Vilar-Gomez, Gastroenterology 2015*

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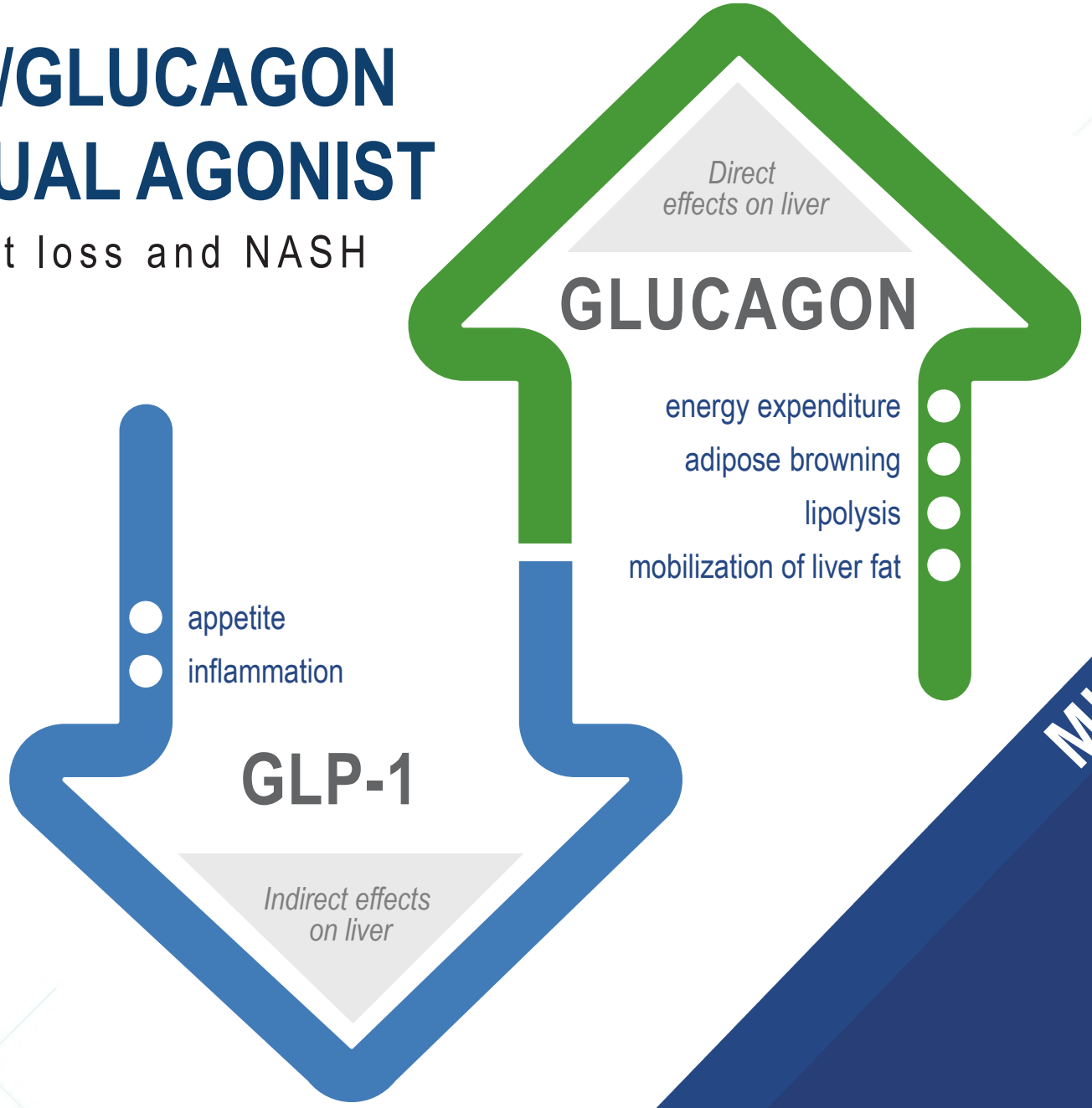
PEMVI: GLP-1/GLUCAGON RECEPTOR DUAL AGONIST

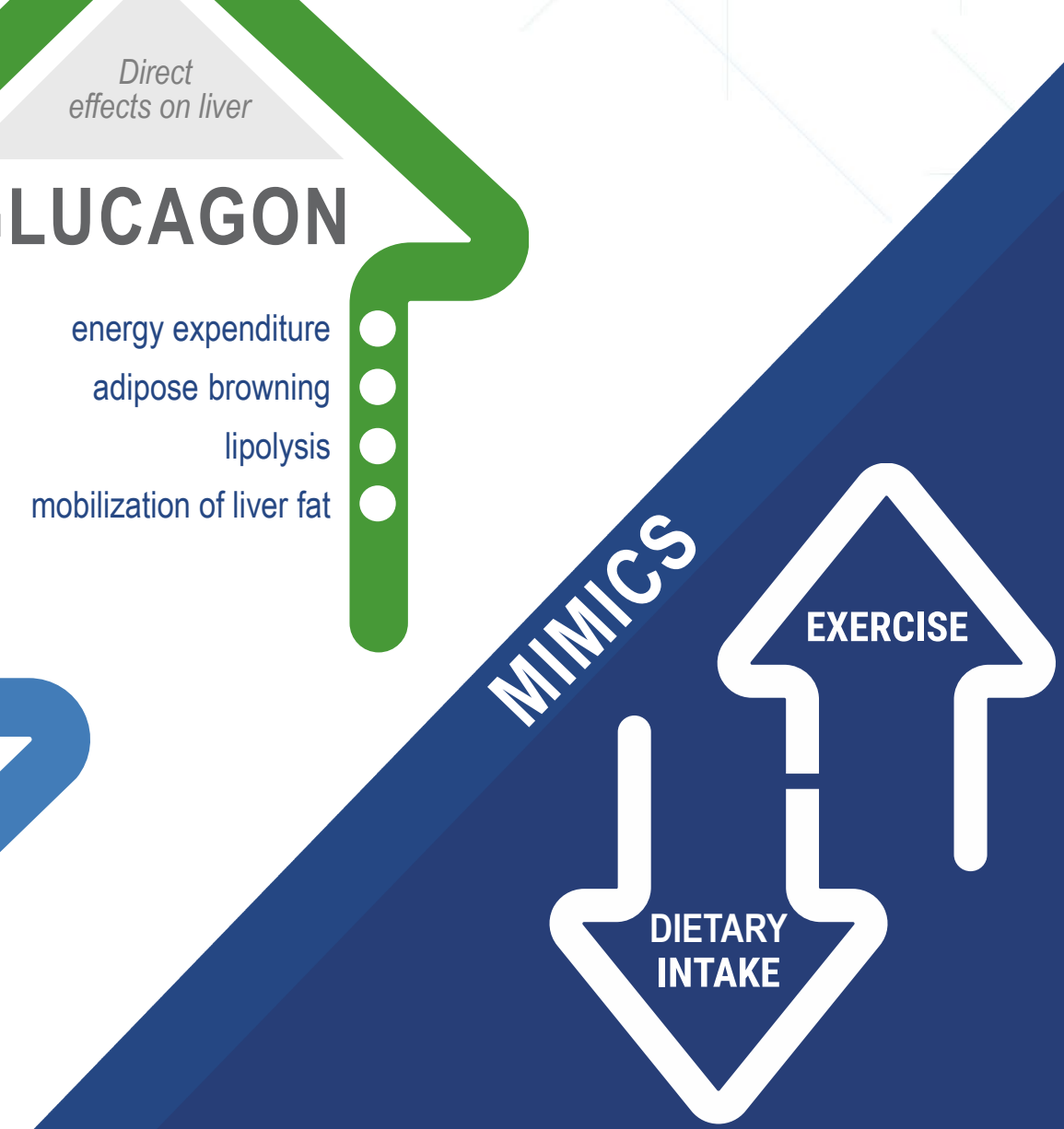
Optimized for weight loss and NASH

Designed for significant reductions in:

BODY WEIGHT

LIVER FAT, INFLAMMATION, & RESULTING FIBROSIS

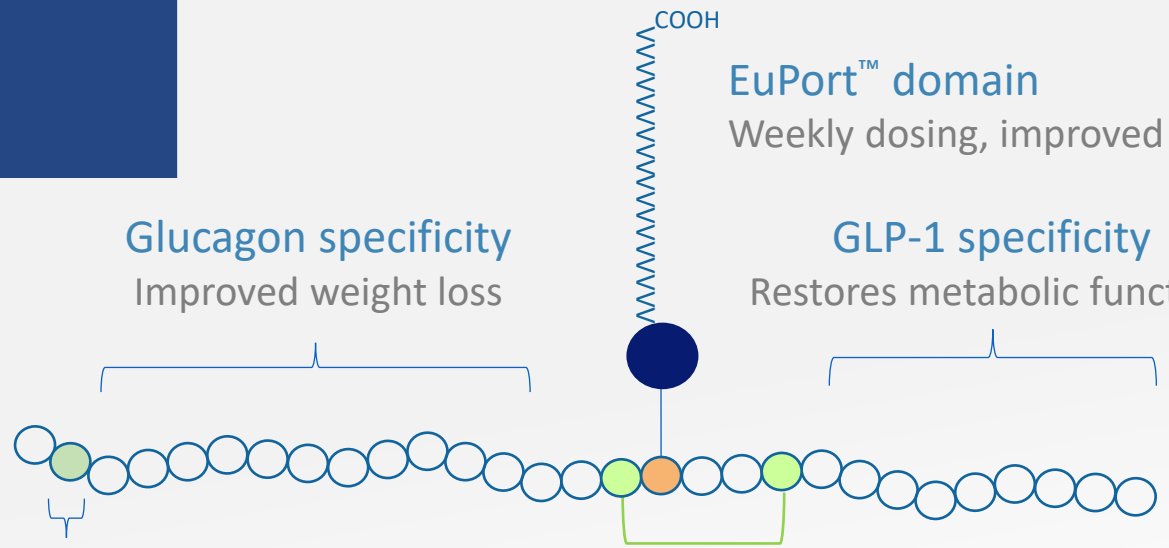




PEMVI: RATIONALLY DESIGNED AND HIGHLY DIFFERENTIATED

EUPORT™ DOMAIN PROVIDES PROLONGED SERUM HALF-LIFE AND DELAYED TIME TO PEAK CONCENTRATION

Balanced GLP-1: Glucagon Agonism



[1]Guarracino DA et al, Chem Rev. 2019 Sep 11;119(17):9915-49; [2]Nestor JJ et al, Peptide Science. 2021;113:e24221

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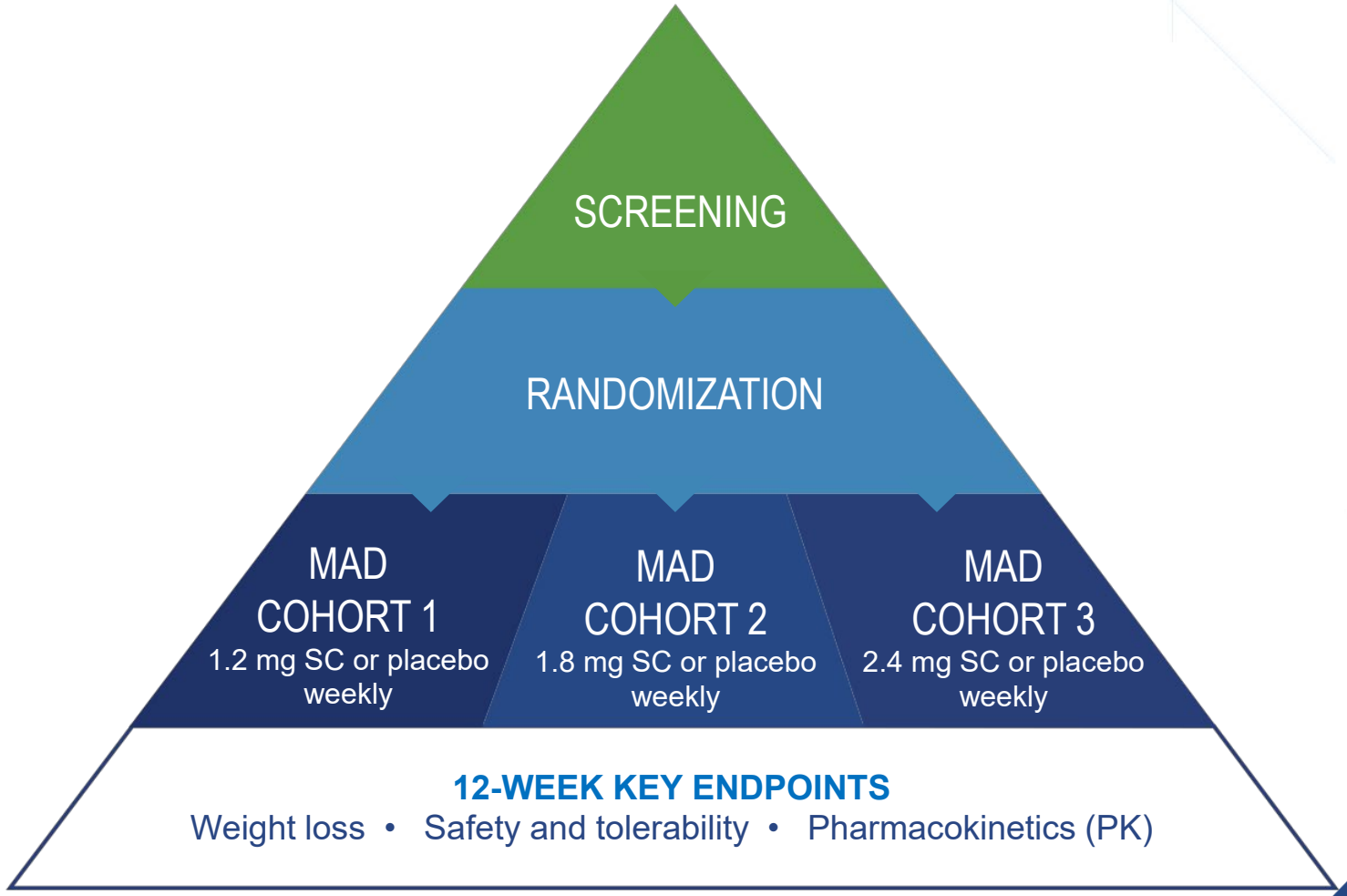
PEMVIDUTIDE PHASE 1 – MAD TRIAL DESIGN

- Phase 1, first-in-human, placebo-controlled, multiple ascending dose (MAD) study in healthy overweight and obese volunteers
- Within MAD cohorts, patients were randomized 4:1 to pemvidutide or placebo, with placebos pooled across cohorts
- No dose titration
- No caloric restriction or behavioral weight loss programs



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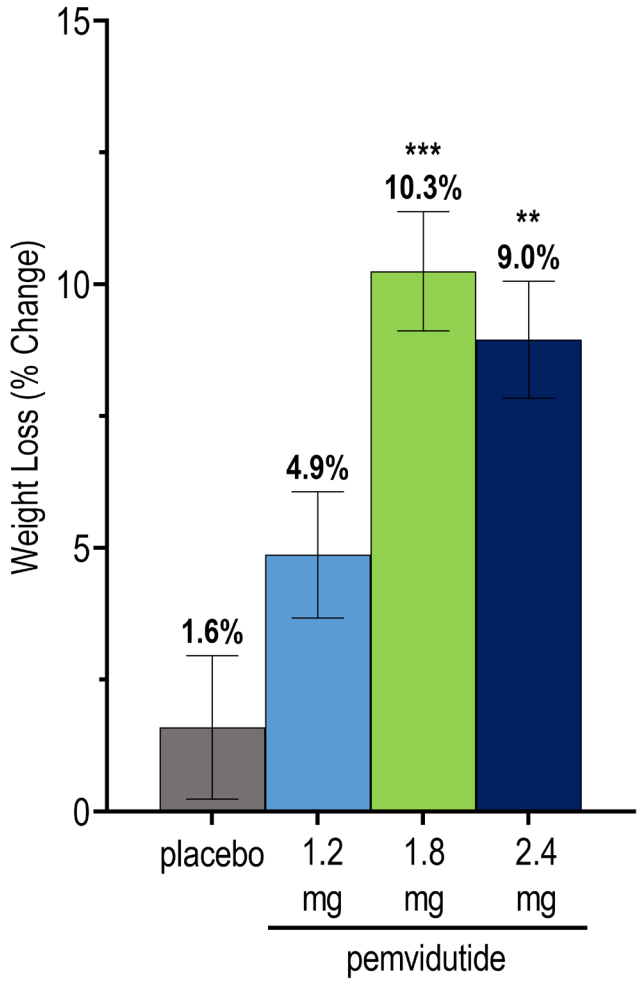
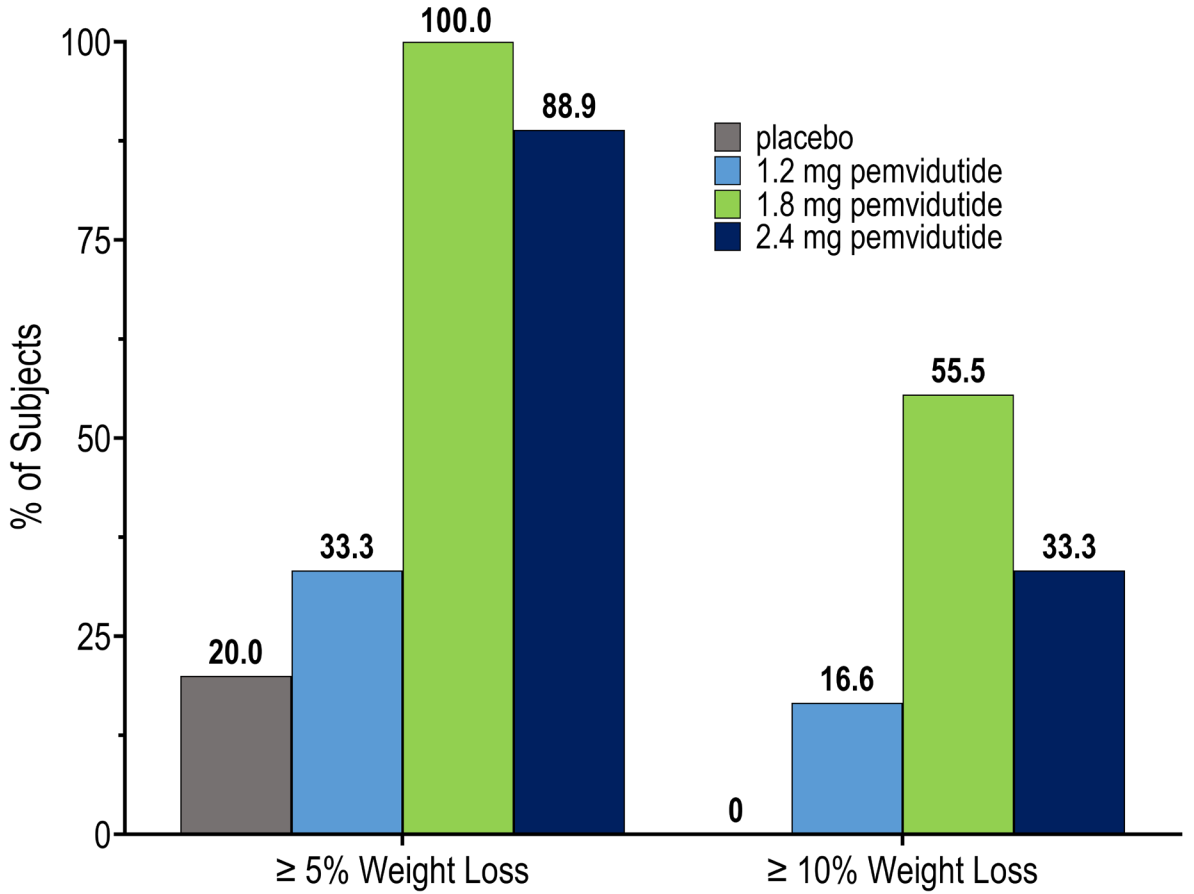
SUBSTANTIAL WEIGHT LOSS AT WEEK 12

10.3% MEAN WEIGHT LOSS ACHIEVED AT 1.8 MG DOSE





Mean ± SEM

** p < 0.01, *** p < 0.001 vs. placebo

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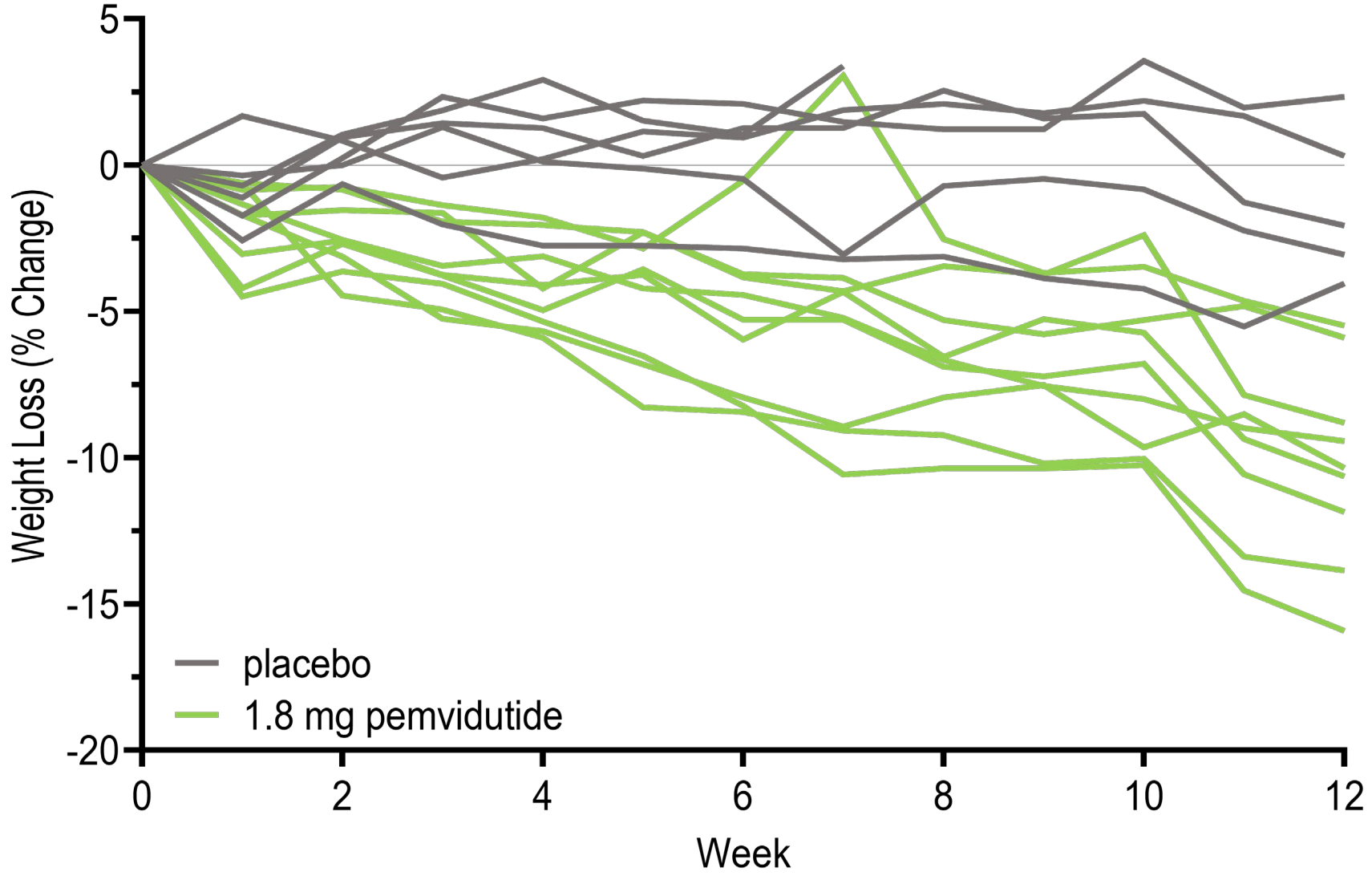
WEIGHT LOSS OVER 12 WEEKS

TRAJECTORY SUGGESTS WEIGHT LOSS WILL CONTINUE BEYOND 12 WEEKS



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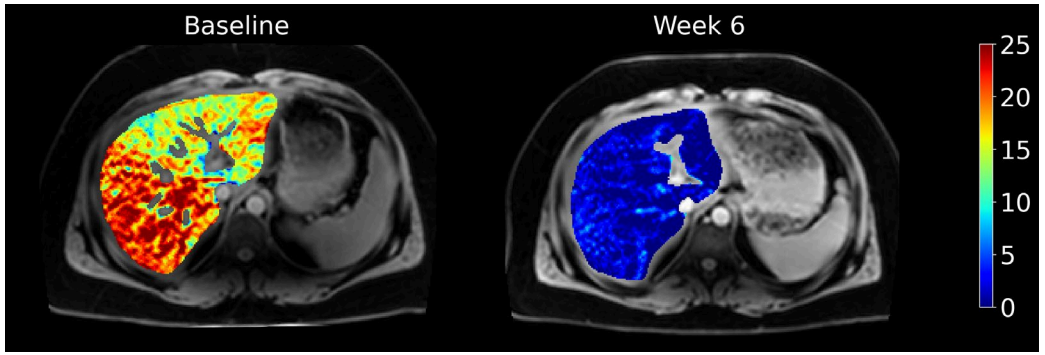
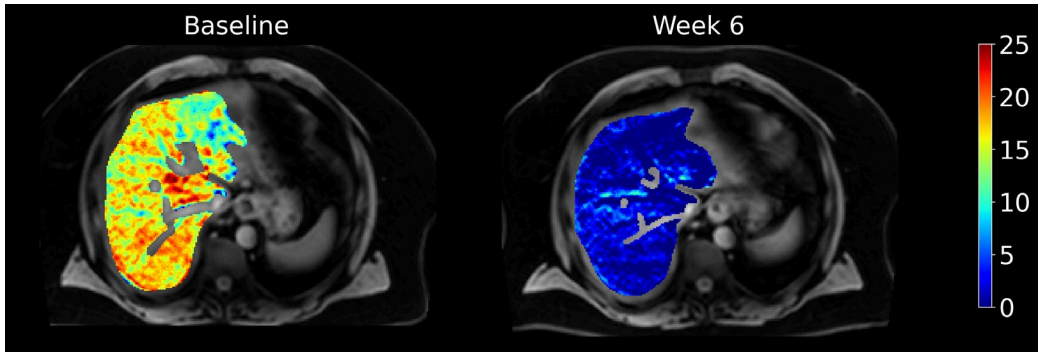
GREATER THAN 90% REDUCTION IN LIVER FAT BY MRI-PDFF IN 6 WEEKS

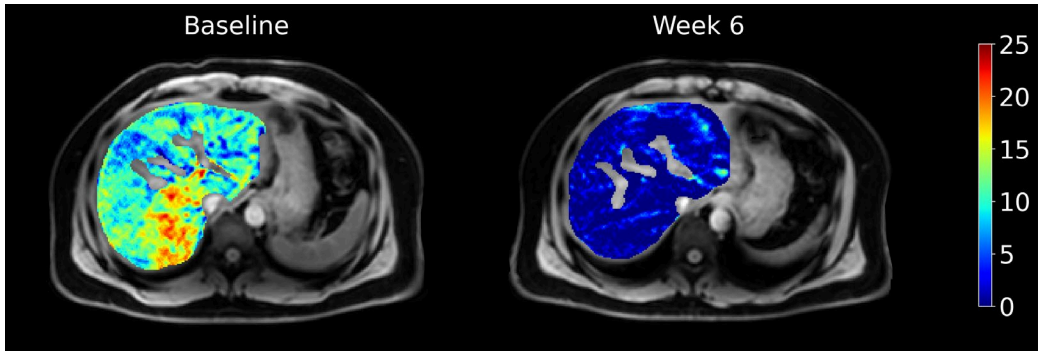
PEMVIDUTIDE DECREASED LFC TO UNDETECTABLE LEVELS AT THE 1.8 MG AND 2.4 MG DOSES



19.5% **Below LOD**



17.0% **Below LOD**



12.5% **Below LOD**

Exploratory analysis of subjects with baseline LFC ≥ 5%

- All subjects receiving pemvidutide 1.8 or 2.4 mg achieved undetectable levels of liver fat by MRI-PDFF at Week 6 – a greater than 90% reduction
- Potentially a new standard in NASH treatment for the speed and magnitude of liver fat effects

LFC, Liver Fat Content; LOD, Limit of Detection

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SAFETY OVERVIEW

NO STUDY DISCONTINUATIONS DUE TO ADVERSE EVENTS

Characteristic		Treatment			
		1.2 mg	1.8 mg	2.4 mg	Pooled placebo
AEs leading to discontinuation	**n (%)**	**0 (%)**	**0 (%)**	**0 (%)**	**0 (%)**
Serious or severe AEs	**n (%)**	**0 (%)**	**0 (%)**	**0 (%)**	**0 (%)**
Nausea					
Mild	n (%)	1 (14.3%)	5 (55.6%)	5 (45.5%)	1 (14.3%)
Moderate	n (%)	1 (14.3%)	1 (11.1%)	5 (45.5%)	0 (0.0%)
Vomiting					
Mild	n (%)	1 (14.3%)	1 (11.1%)	5 (45.5%)	1 (14.3%)
Moderate	n (%)	0 (0.0%)	1 (11.1%)	3 (27.3%)	0 (0.0%)
Diarrhea					
Mild	n (%)	0 (0.0%)	0 (0.0%)	2 (18.2%)	0 (0.0%)
Moderate	n (%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Constipation					
Mild	n (%)	0 (0.0%)	1 (11.1%)	2 (18.2%)	0 (0.0%)
Moderate	n (%)	0 (0.0%)	1 (11.1%)	1 (9.1%)	0 (0.0%)
Hyperglycemia	n (%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

One subject receiving pemvidutide 1.8 mg and one receiving placebo experienced 3-5x ALT elevations with subsequent resolution.

Gastrointestinal Adverse Events

- Most frequently mild at 1.8 mg dose with on-drug resolution and not requiring treatment
- No study discontinuations due to AEs

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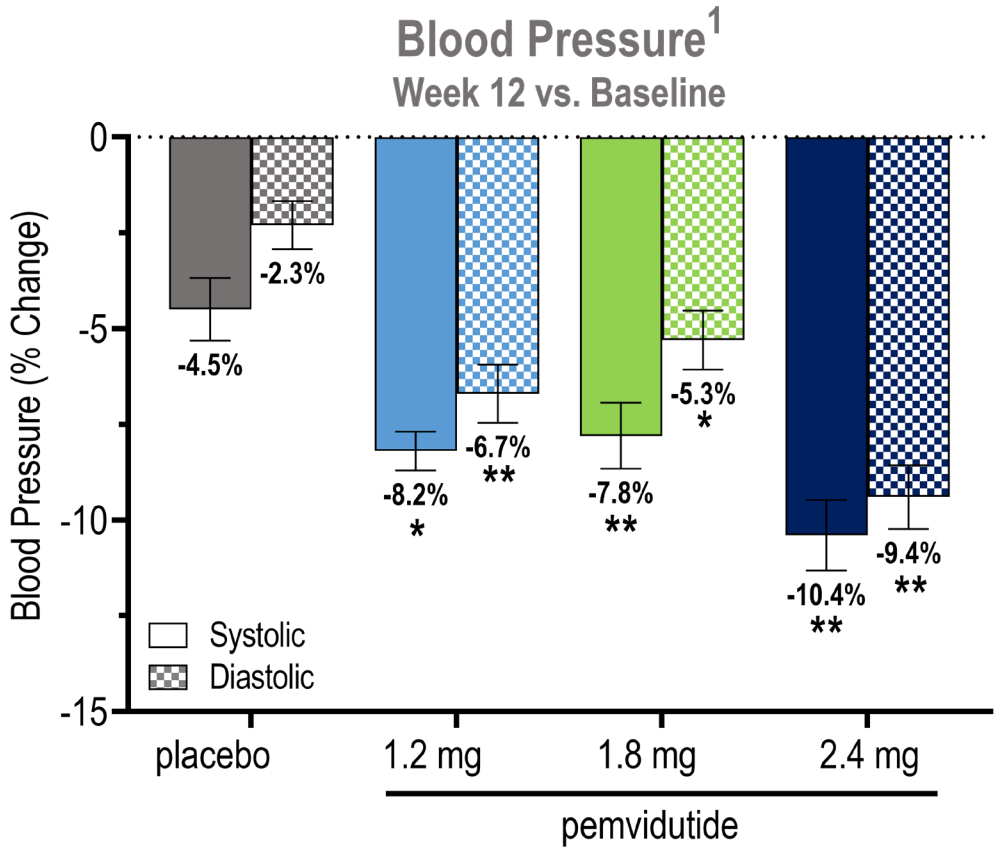
PEMVIDUTIDE PK PROFILE CONFIRMS WEEKLY DOSING

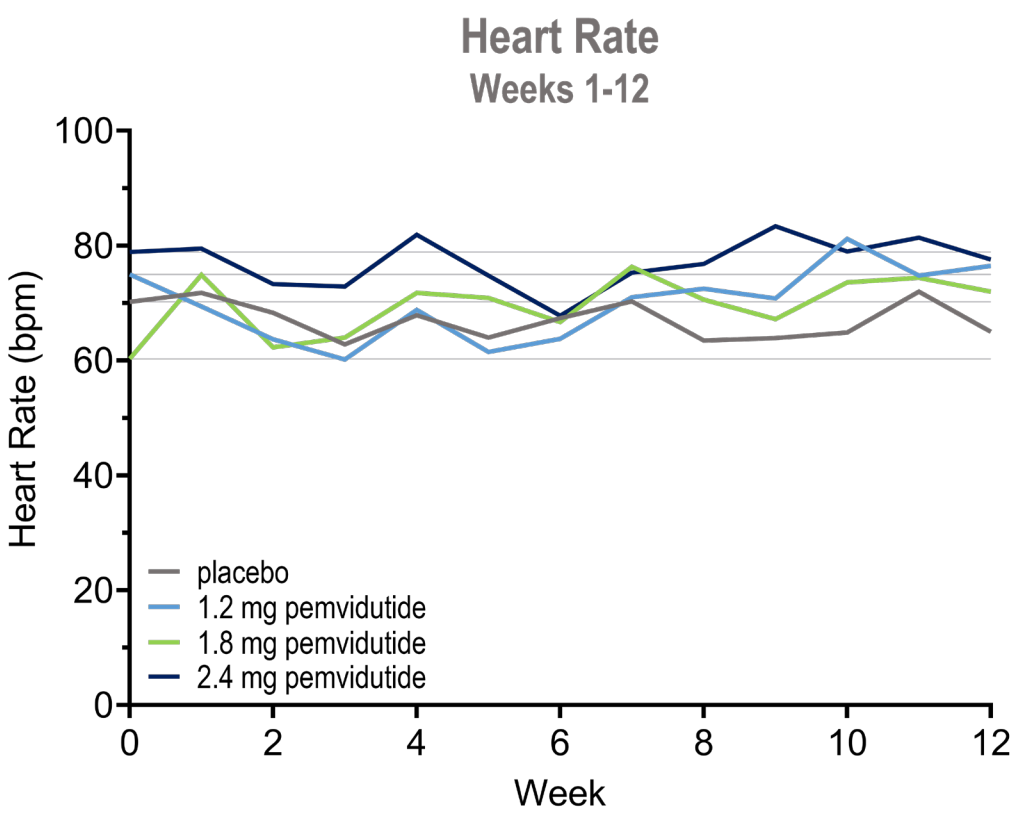
DELAYED T_{MAX} MAY RESULT IN BETTER TOLERABILITY

PK PARAMETER	ALT-801 1.8 mg SC
Peak concentration (C_{max})	27.1 nmol/L
Area under curve (AUC) $_{0\text{-}168}$	3400 nmol•hr
Half-life ($t_{1/2}$)	110 hrs
Time to peak concentration (T_{max})	70 hrs

IMPROVEMENTS IN BLOOD PRESSURE ACROSS ALL DOSE GROUPS

NO INCREASES IN HEART RATE OBSERVED ACROSS DOSES





Mean ± SEM

* $p < 0.001$, ** $p < 0.0001$ vs. placebo

[1] *means of weekly measurements, Weeks 1-12, compared to Baseline*

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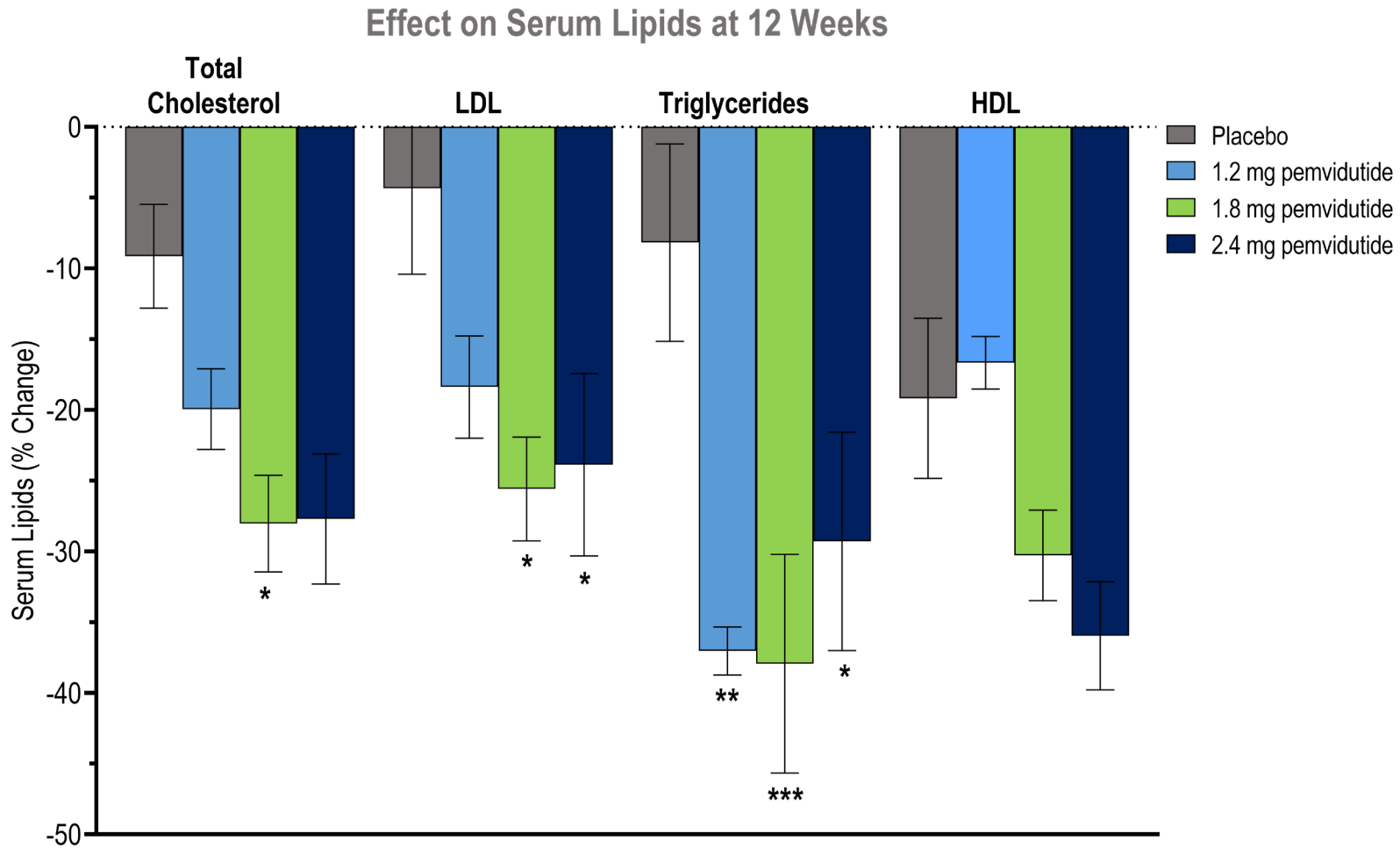
IMPROVEMENTS IN SERUM LIPIDS ACROSS ALL DOSE GROUPS

BIOMARKERS OF CARDIOVASCULAR RISK



Mean ± SEM

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ vs. placebo

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GLUCOSE HOMEOSTASIS MAINTAINED

Characteristic		Treatment			
		1.2 mg	1.8 mg	2.4 mg	Pooled placebo
Fasting Serum Glucose (FSG) [1]					
Change from Baseline	mg/dL (%)	3.0 (3.5%)	-0.4 (-0.5%)	-0.8 (-0.9%)	-0.2 (-0.2%)
HbA1c (%)					
Baseline	mean (SD)	5.3 (0.1)	5.5 (0.2)	5.3 (0.2)	5.3 (0.2)
Week 12	mean (SD)	5.4 (0.2)	5.4 (0.3)	5.3 (0.3)	5.3 (0.3)
HOMA-IR (insulin resistance)					
Baseline	mean (SD)	2.5 (1.2)	2.4 (2.5)	3.1 (1.8)	2.4 (1.7)
Week 12	mean (SD)	2.0 (1.4)	2.2 (2.5)	2.4 (1.2)	2.4 (1.2)

[1] *mean of weekly measurements, Weeks 1-12, compared to Baseline*

SUBSTANTIAL WEIGHT LOSS WITHOUT DOSE TITRATION

OVERVIEW OF PHASE 1 DATA

WEIGHT LOSS

- 10.3% mean weight loss achieved at 1.8 mg dose after only 12 weeks
- Linear rate of weight loss suggests these effects will be sustained

SAFETY & TOLERABILITY

- Dose titration not needed for tolerability
- No serious or severe AEs and no AE-related study discontinuations
- Glucose homeostasis maintained by FSG and HbA1c
- No changes in heart rate

SECONDARY MEASURES

- Liver fat fell to undetectable levels in all patients with steatosis at two highest dose levels
- Robust improvements in blood pressure and lipids
- Enhanced insulin sensitivity

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SUMMARY OF NEAR-TERM CATALYSTS

1. 48-week Phase 2 MOMENTUM obesity trial initiated in Q1 2022
2. 12-week Phase 1b NAFLD study weight loss and liver fat reduction data in Q3 2022
3. 24-week weight loss data from 12-week NAFLD extension study in Q4 2022
4. 24-week interim Phase 2 MOMENTUM obesity data in Q4 2022

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HepTcell: Chronic HBV

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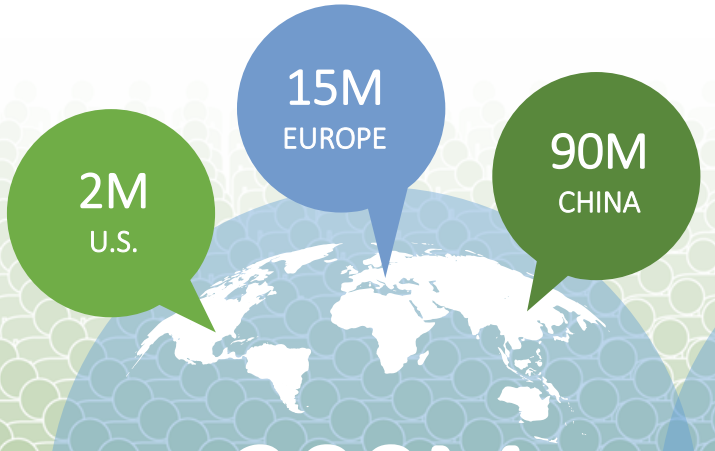
HepTcell: T CELL IMMUNOTHERAPEUTIC FOR CHRONIC HEPATITIS B

SIGNIFICANT OPPORTUNITY TO IMPROVE CURRENT HBV CURE RATES



~300M

People with chronic HBV infection worldwide

780,000+

deaths/year due to cirrhosis and liver cancer

~2.2M

Estimated prevalence of chronic HBV in USA

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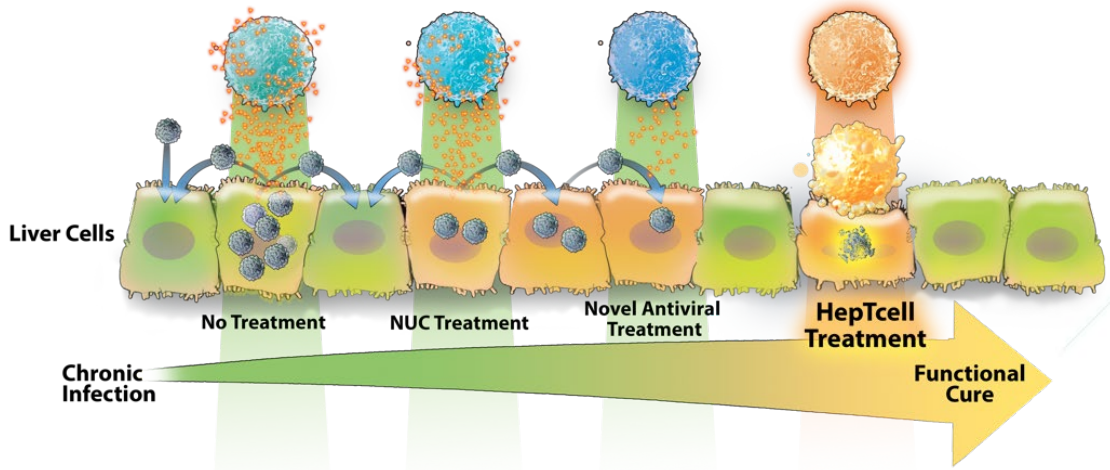
CURRENTLY APPROVED HBV THERAPEUTICS DO NOT LEAD TO A CURE

IMMUNE ACTIVATION WILL BE REQUIRED FOR SIGNIFICANT IMPACT

- Current antivirals prevent disease progression but **rarely clear chronic infection**
- **Breaking T cell immune tolerance is key** to functional cure
- Newer direct-acting antivirals **unlikely to result in immune reactivation alone**
- **HepTcell is designed to "wake up" dormant T-cells** to eliminate infection



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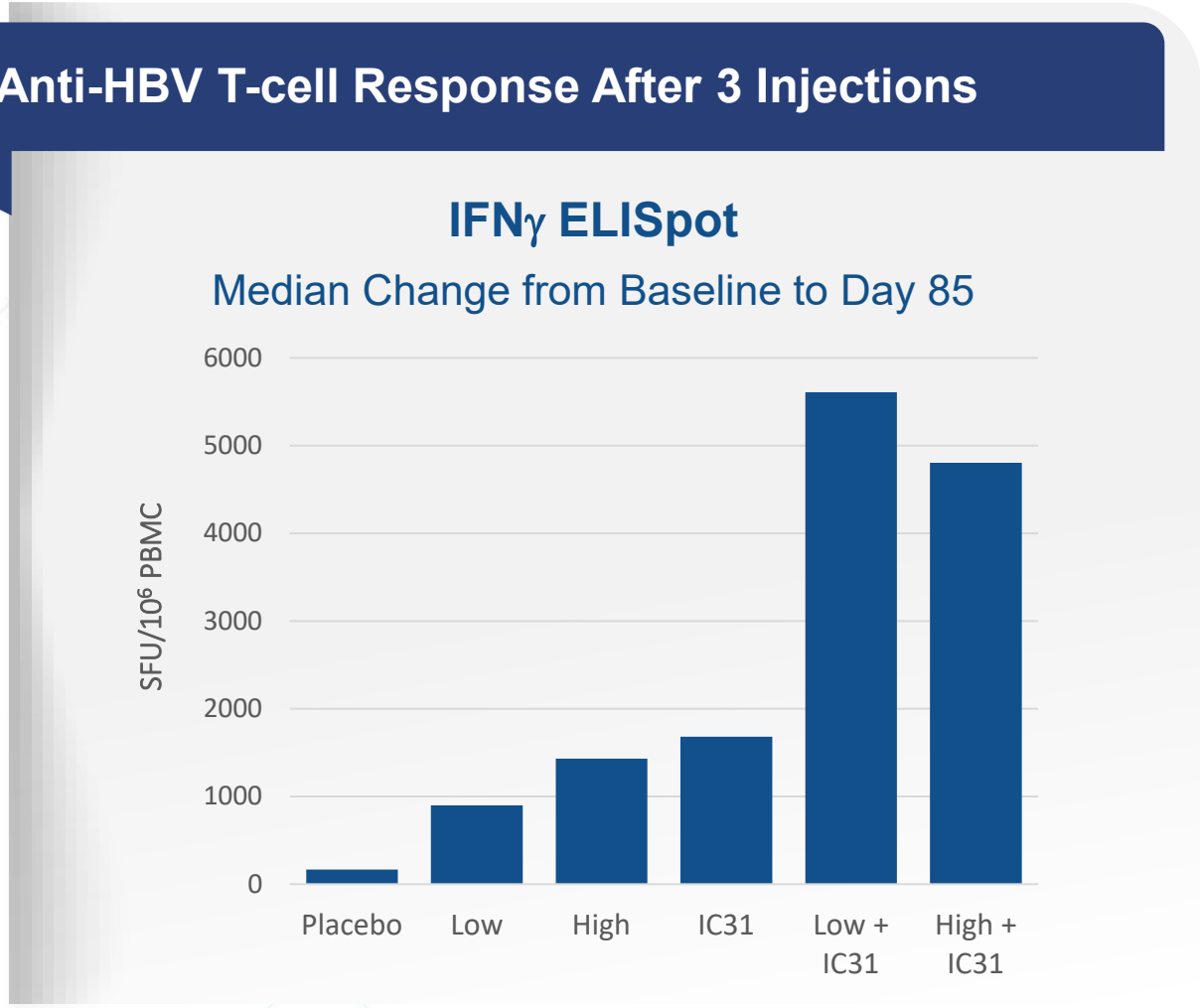
HepTcell: PHASE 1 SAFETY AND IMMUNOGENICITY STUDY

Anti-HBV T-cell Response After 3 Injections



HepTcell is designed to break immune tolerance in chronic hepatitis B patients

T cell responses strongest when combined with IC31™ adjuvant

HepTcell dose and use of adjuvant confirmed for Phase 2 studies

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HepTcell: PHASE 2 CLINICAL TRIAL

MULTINATIONAL, MULTICENTER TRIAL OF HEPTCELL IN INACTIVE CHRONIC HEPATITIS B (CHB)

- Trial designed to evaluate response in inactive CHB population and to model the response to HepTcell in combination therapy with direct acting agents in active CHB population
- 80 patients with HBeAg negative inactive chronic hepatitis B and HBsAg ≤ 100 IU/mL randomized 1:1 to HepTcell or placebo administered every 4 weeks for 24 weeks
- Efficacy endpoints
  - Primary endpoint: proportion of patients with 1.0-log reduction in HBsAg from baseline or HBsAg clearance at Week 24
  - Secondary endpoints: Changes from baseline in HBsAg, HBV DNA, HBcrAg, pg-RNA at Week 24
- Phase 2 data readout of primary endpoint expected H1 2023
- Follow-up phase will assess the safety and durability of response one year after completion of treatment

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SUMMARY

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ALTIMMUNE: INVESTMENT HIGHLIGHTS

1. **Developing portfolio with 3 multibillion-dollar indications**
   Obesity, NASH and Chronic Hepatitis B
2. **Impressive pemvidutide Phase 1 MAD trial data**
   >10% weight loss in 12 weeks using well-tolerated regimen without dose titration
3. **Multiple catalysts over the next 12 months**
   Data read-outs from multiple clinical programs
4. **Strong cash position to reach value-generating milestones**
   ~$180 million as of March 31, 2021

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THANK YOU

NASDAQ: ALT