

ALTIMMUNE, INC. CORPORATE PRESENTATION

Q2 2022

Forward-looking statements

Safe-Harbor Statement

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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

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



tranzyme
pharma



emergent
biosolutions*



Institut Pasteur



ocera



The new degree of comfort.*



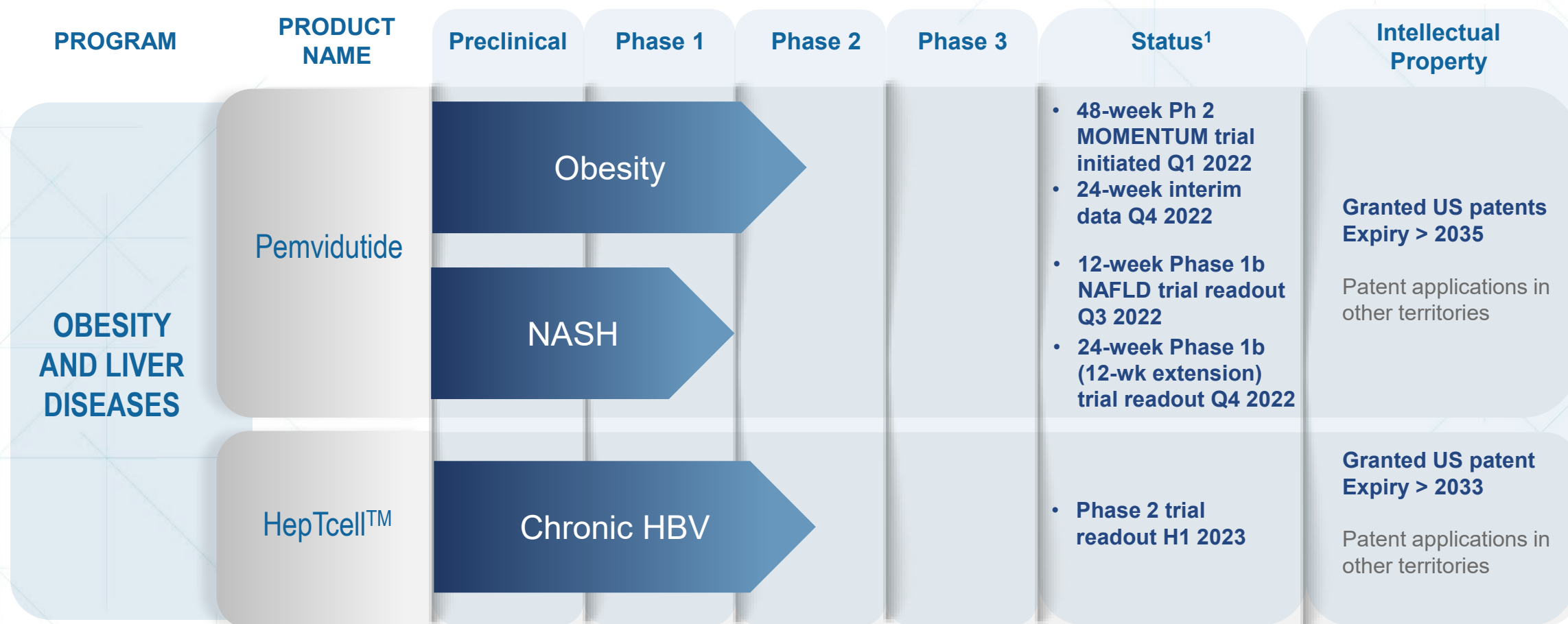
Wellstat Group of Companies



IMMUNE TARGETING SYSTEMS



FOCUSED DEVELOPMENT PIPELINE



¹ expected dates



Pemvidutide: Obesity and NASH

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 worldwide³
- Total obesity related medical care in the U.S. estimated to be **\$147 billion** per CDC²
- Global market size for medical weight loss alone was **\$8.36 billion** in 2020, and is estimated to reach **\$27.1 billion** by 2028¹

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/>

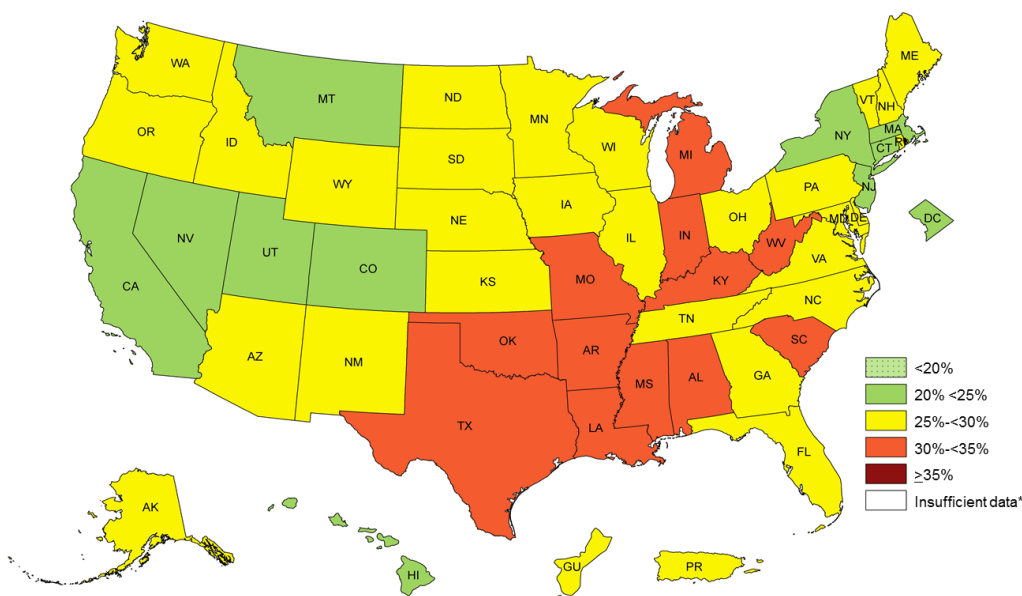
2 - <https://www.cdc.gov/obesity/adult/causes.html>

3 - <https://www.sciencedaily.com/releases/2019/10/191024143218.htm>

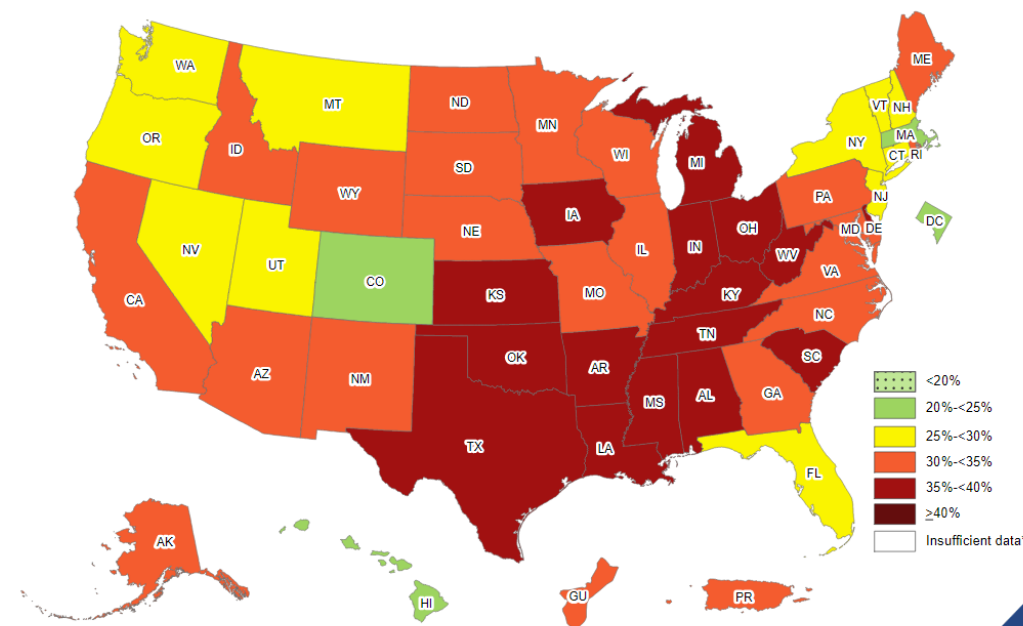
CDC: OBESITY IN U.S. DRAMATICALLY INCREASING

PREVALENCE OF SELF-REPORTED OBESITY AMONG U.S. ADULTS BY STATE AND TERRITORY¹

2011



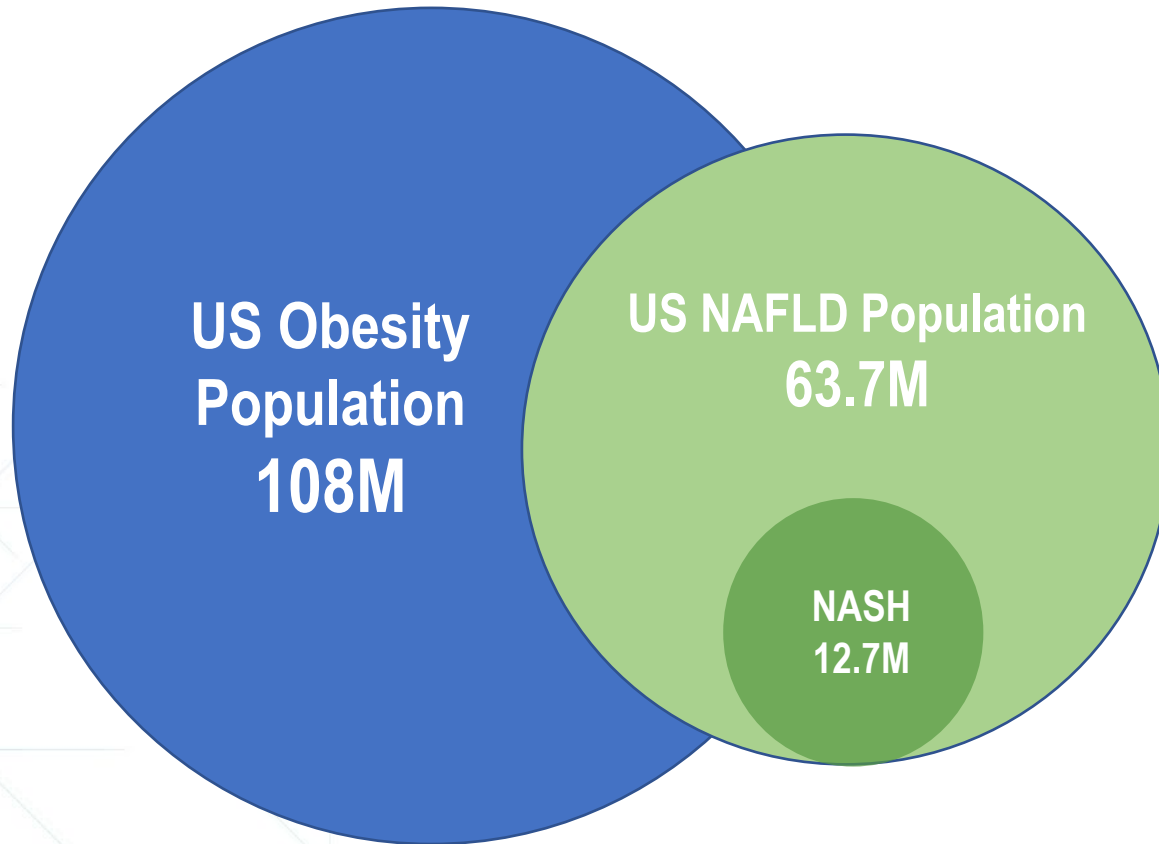
2020



1 - <https://www.cdc.gov/obesity/data/prevalence-maps.html#race>

OBESITY AND FATTY LIVER DISEASE

DISEASES WITH UNMET NEED APPROACHING EPIDEMIC PROPORTION

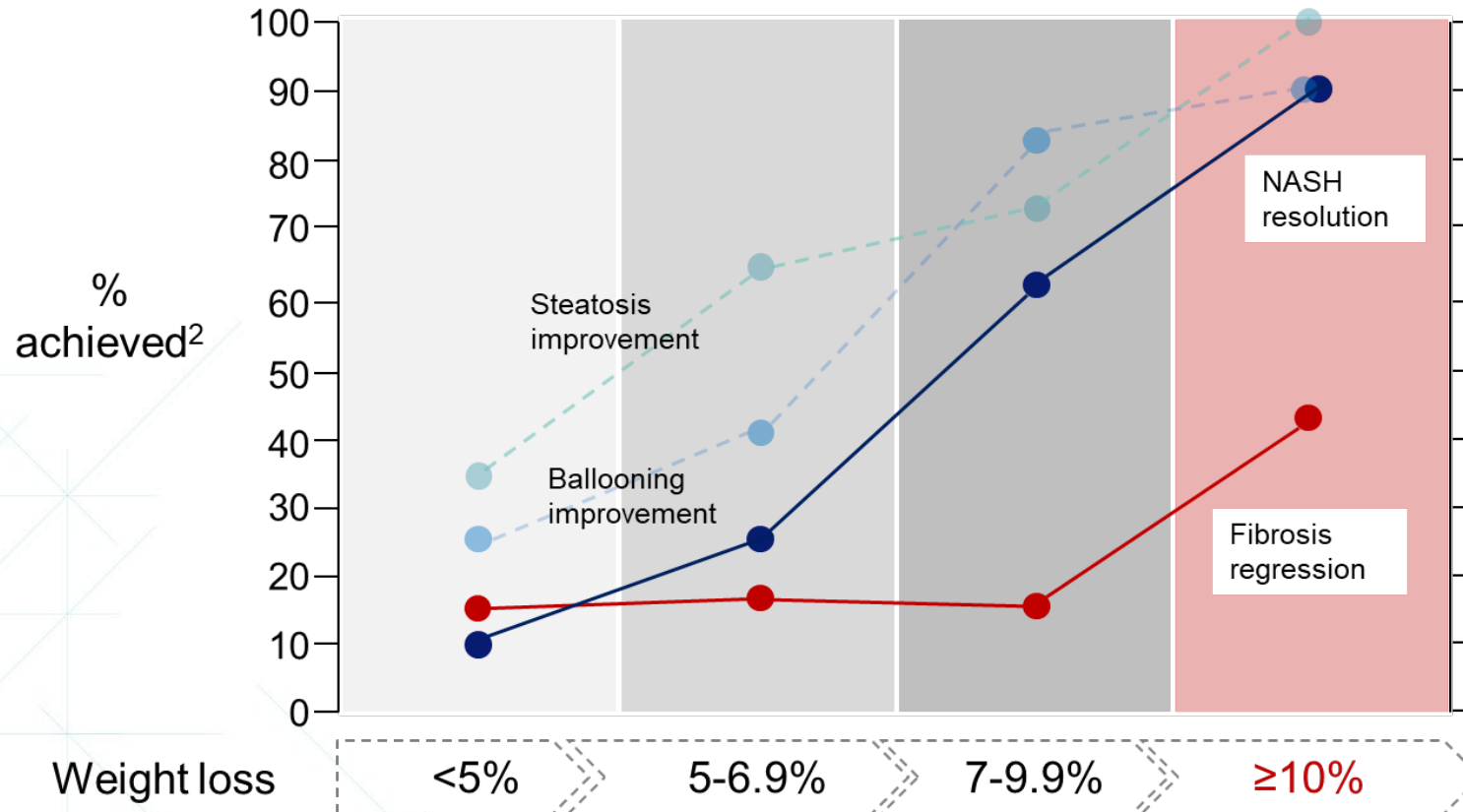


- ▶ Previous approaches to the treatment of obesity have been associated with safety concerns limiting success
- ▶ The recent success of (Wegovy®) has created a regulatory pathway for other incretin-based approaches
- ▶ The treatment of obesity is the cornerstone of treating NASH and the principal morbidities of NASH^{1,2}

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

TREATING OBESITY IS THE CORNERSTONE OF NASH THERAPY

10% OR MORE WEIGHT LOSS MUST BE ACHIEVED¹



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; Koutoukidis et al JAMA Intern Med 2019

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

PEMVI: GLP-1/GLUCAGON RECEPTOR DUAL AGONIST

Optimized for weight loss and NASH

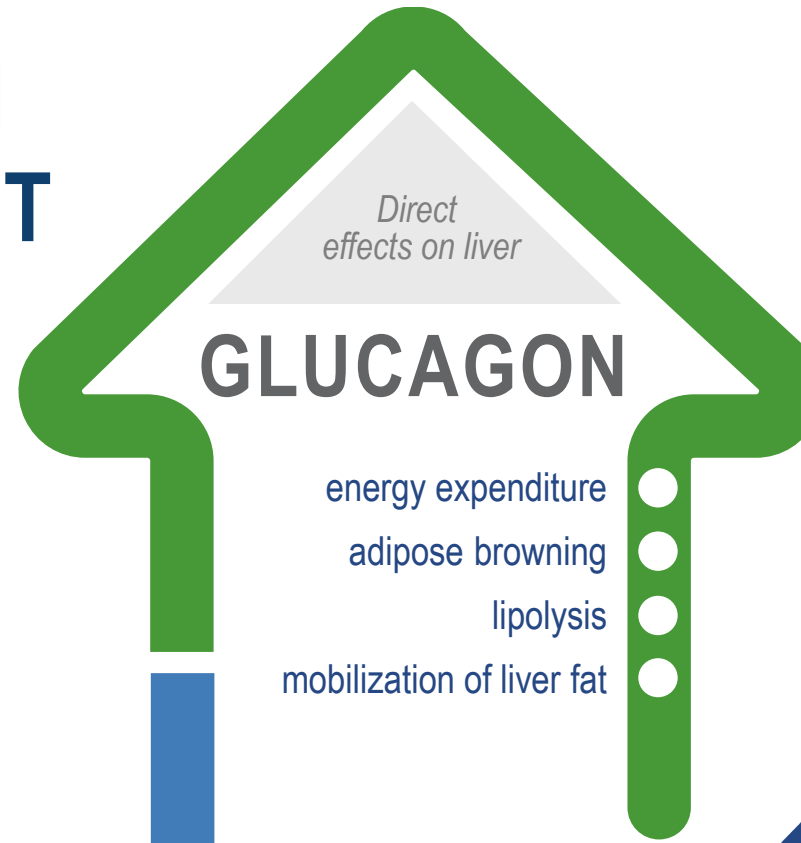
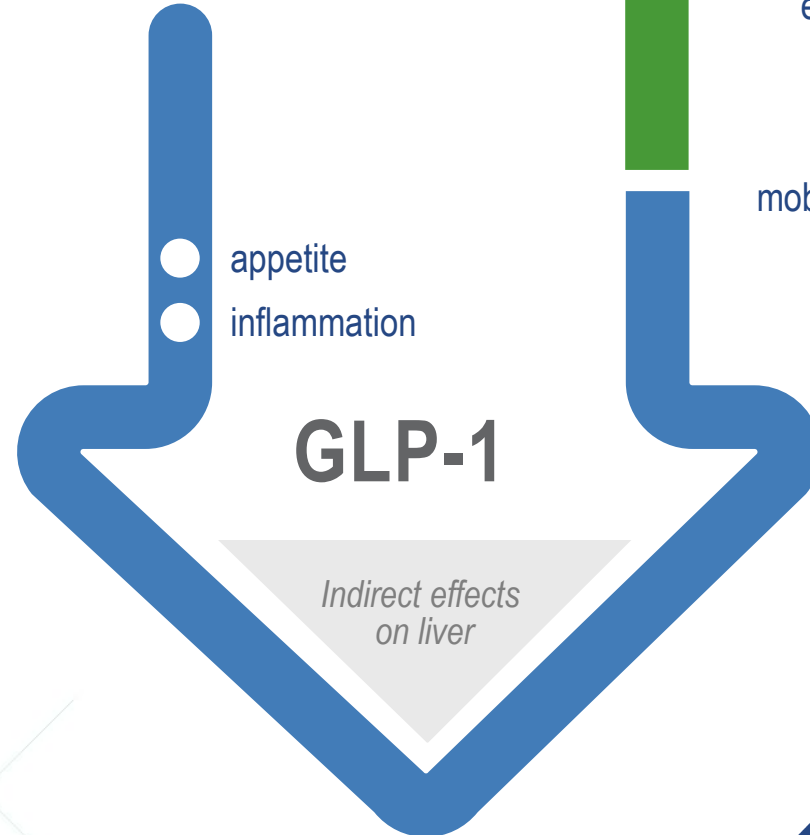
Designed for significant reductions in:



**BODY
WEIGHT**



**LIVER FAT,
INFLAMMATION,
& RESULTING
FIBROSIS**



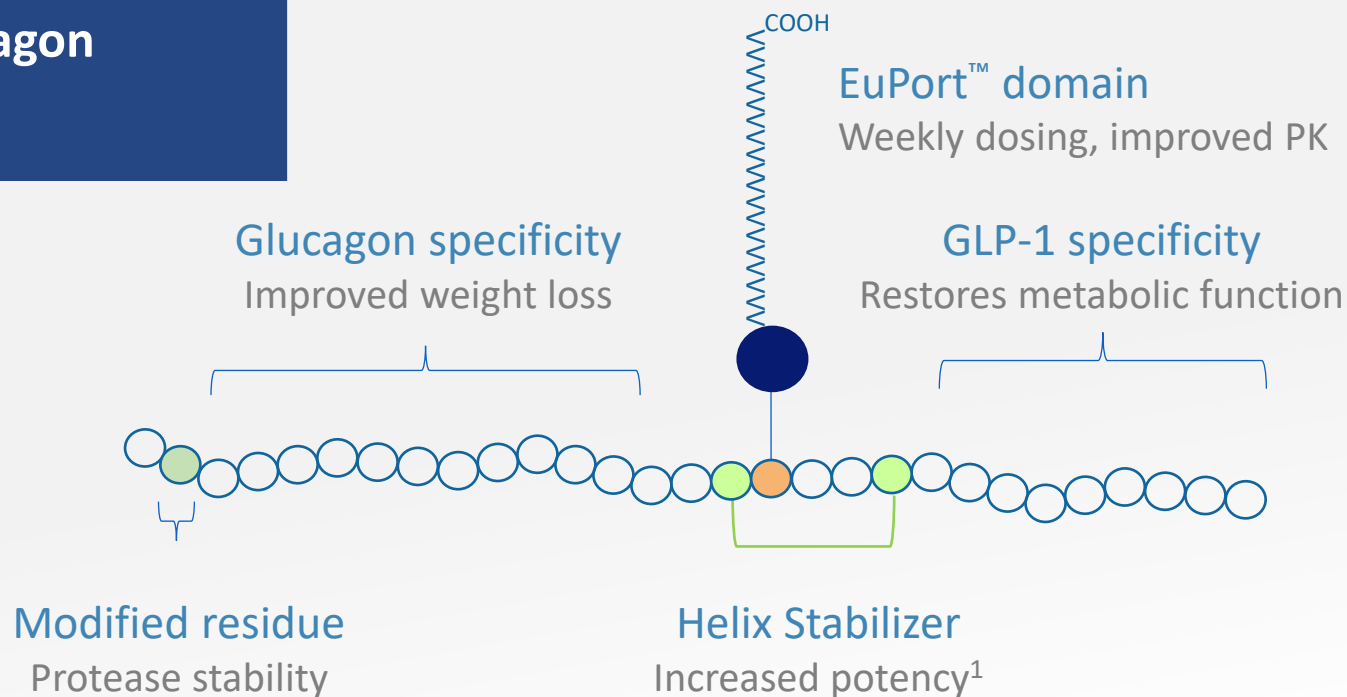
MIMICS



PEMVI: RATIONALLY DESIGNED AND HIGHLY DIFFERENTIATED

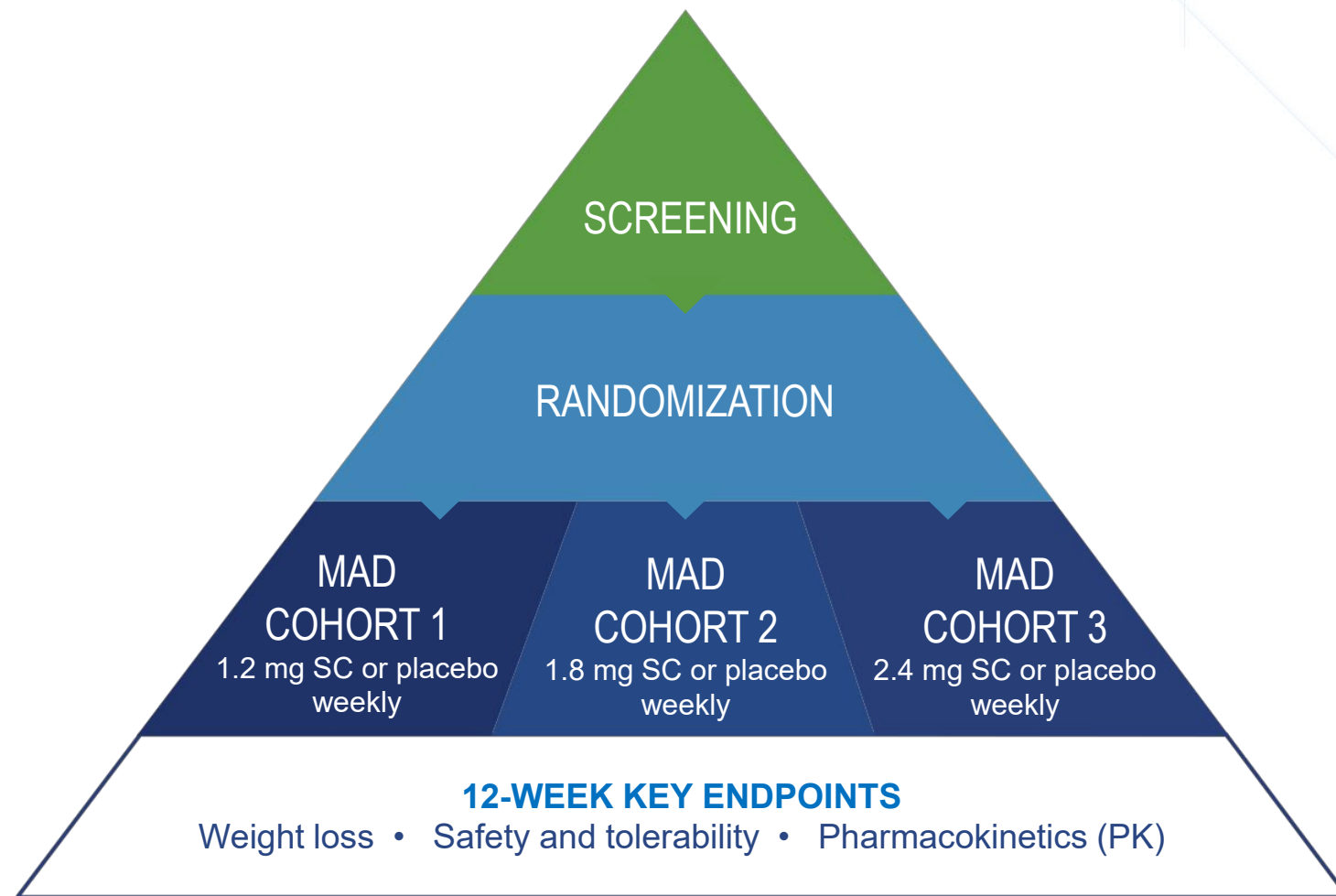
EUPORT™ DOMAIN PROVIDES PROLONGED SERUM HALF-LIFE AND DELAYED TIME TO PEAK CONCENTRATION

Balanced GLP-1: Glucagon Agonism



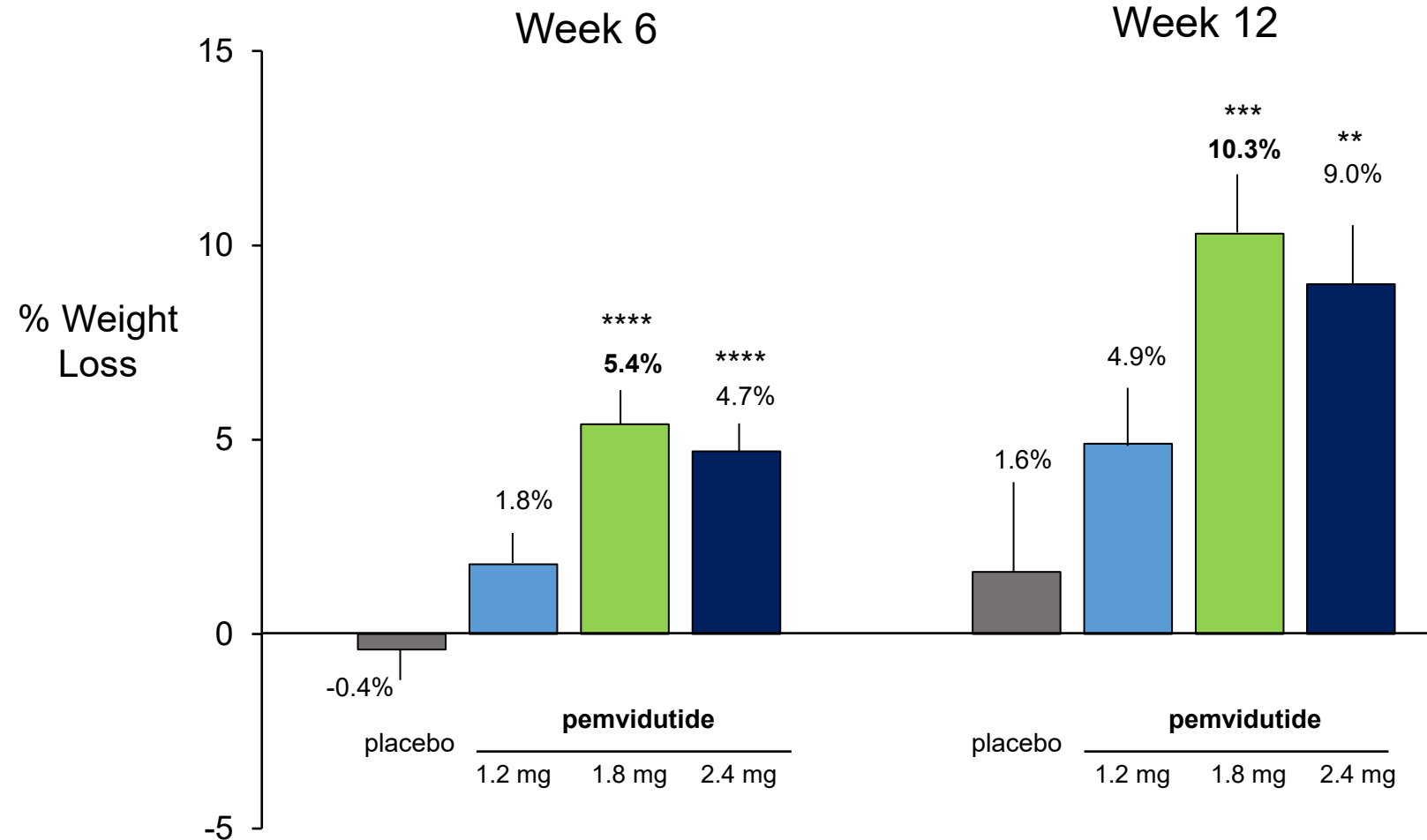
PEMVIDUTIDE PHASE 1 – MAD TRIAL DESIGN

- ▶ 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



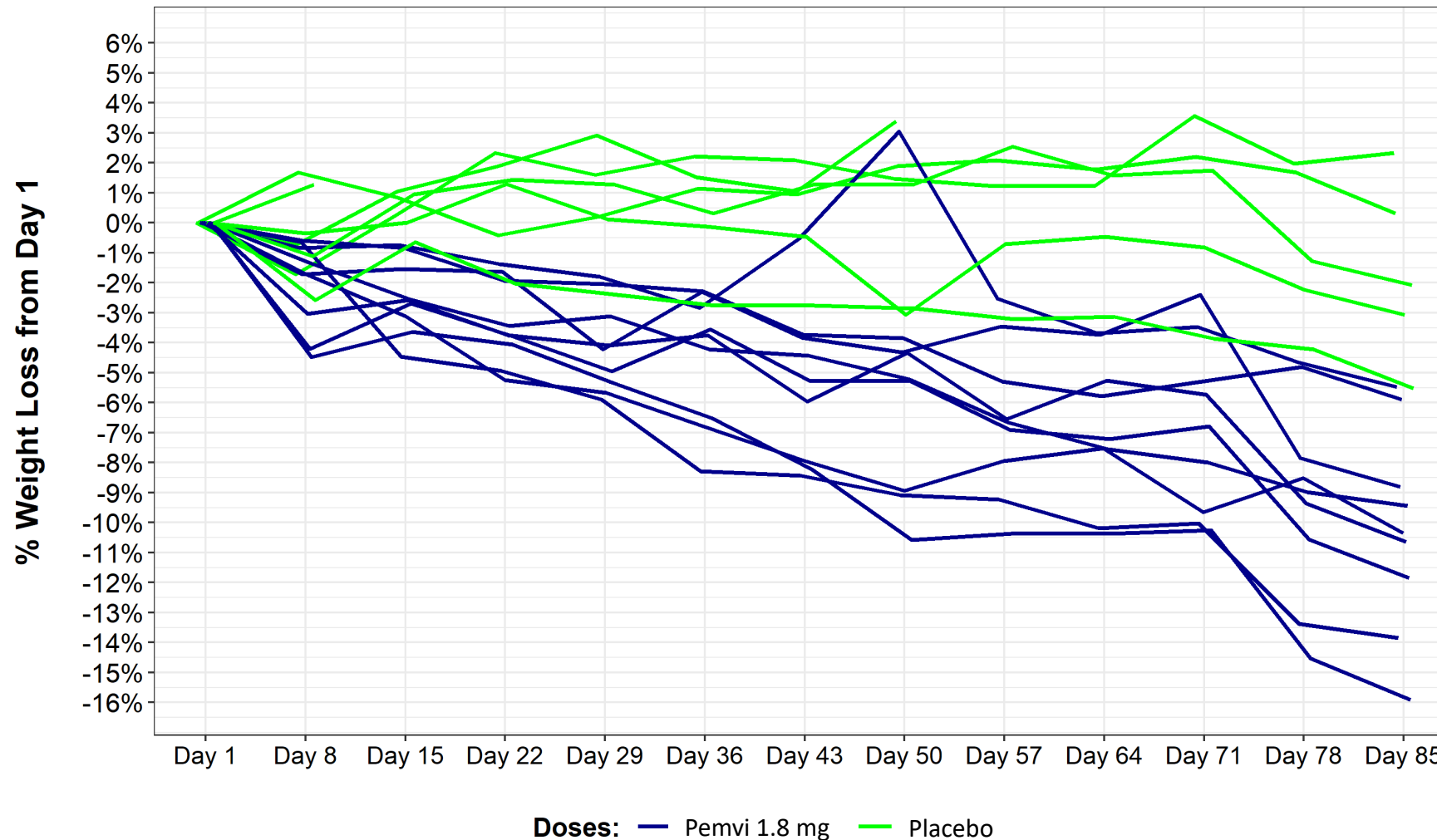
SUBSTANTIAL WEIGHT LOSS AT WEEK 12

10.3% MEAN WEIGHT LOSS ACHIEVED AT 1.8 MG DOSE



** $p < .01$, *** $p < .005$, **** $p < .001$; compared to placebo

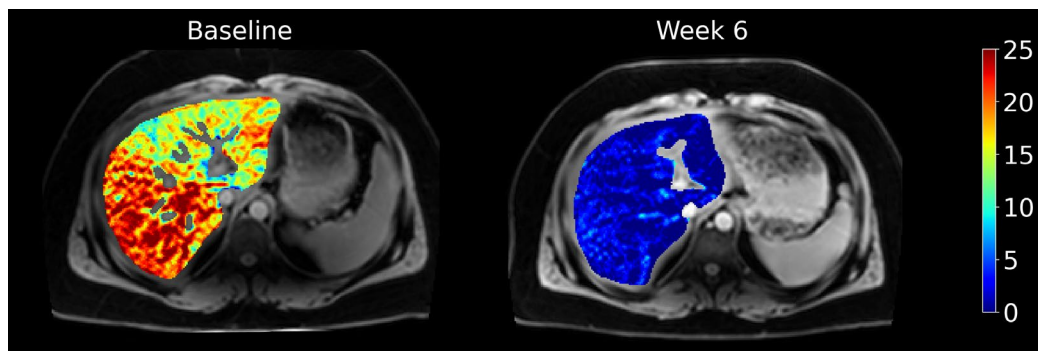
MAJORITY OF SUBJECTS AT 1.8 MG DOSE ACHIEVED 10% OR MORE WEIGHT LOSS AT WEEK 12



- 55% of subjects achieved 10% or more weight loss by Week 12
- 100% of subjects achieved 5% or more weight loss by Week 12

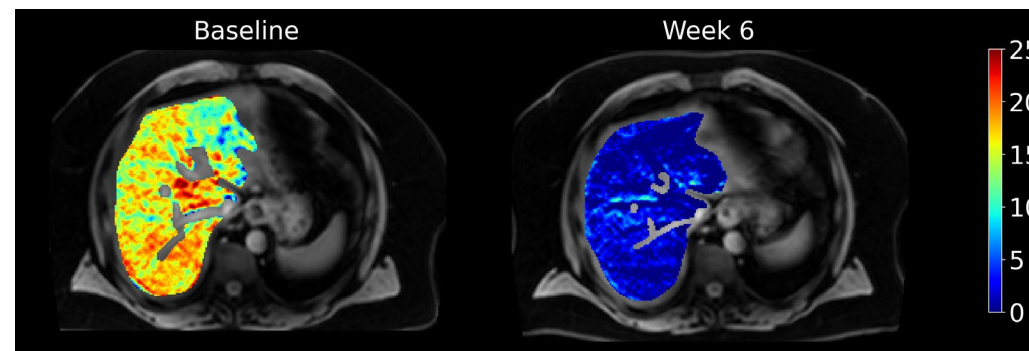
GREATER THAN 90% REDUCTION IN LIVER FAT BY MRI-PDFF IN 6 WEEKS

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



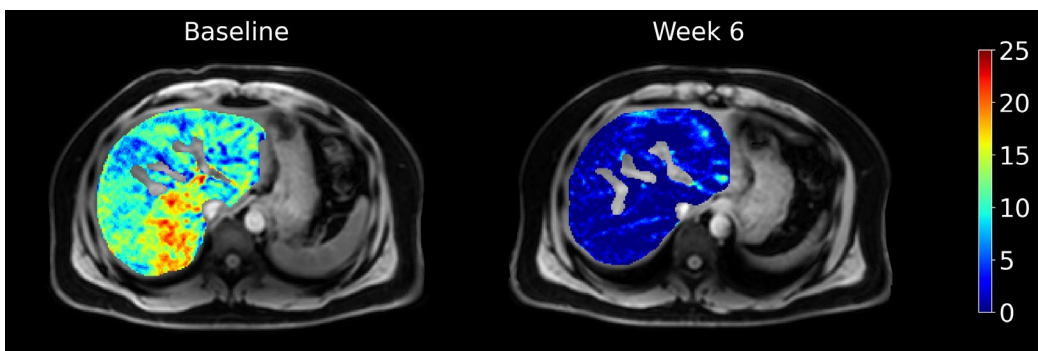
19.5%

Below LOD



17.0%

Below LOD



12.5%

Below LOD

Exploratory analysis of subjects with baseline LFC $\geq 5\%$

- 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

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%)

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

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

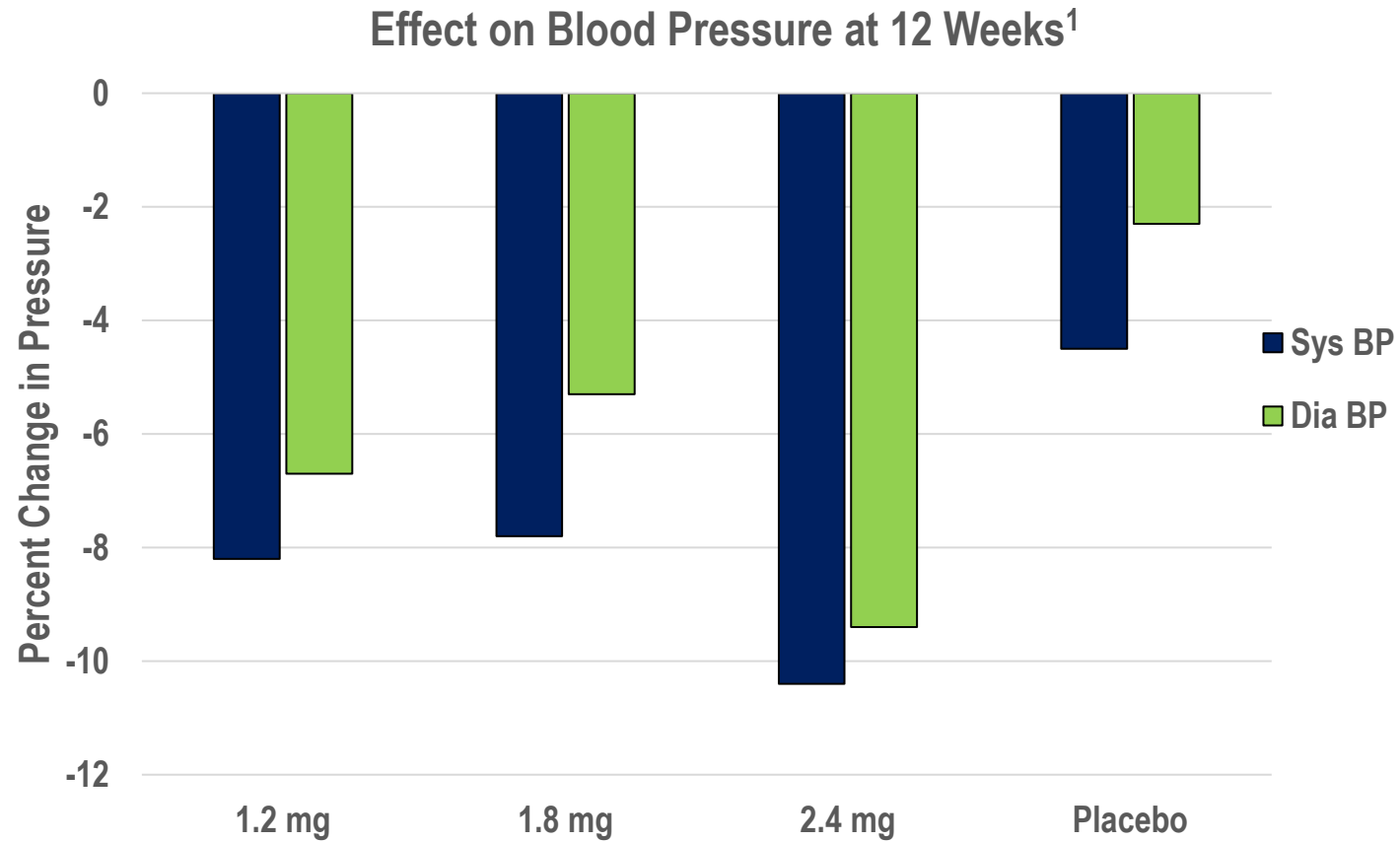
PEMVIDUTIDE PK PROFILE CONFIRMS WEEKLY DOSING

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) ₀₋₁₆₈	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

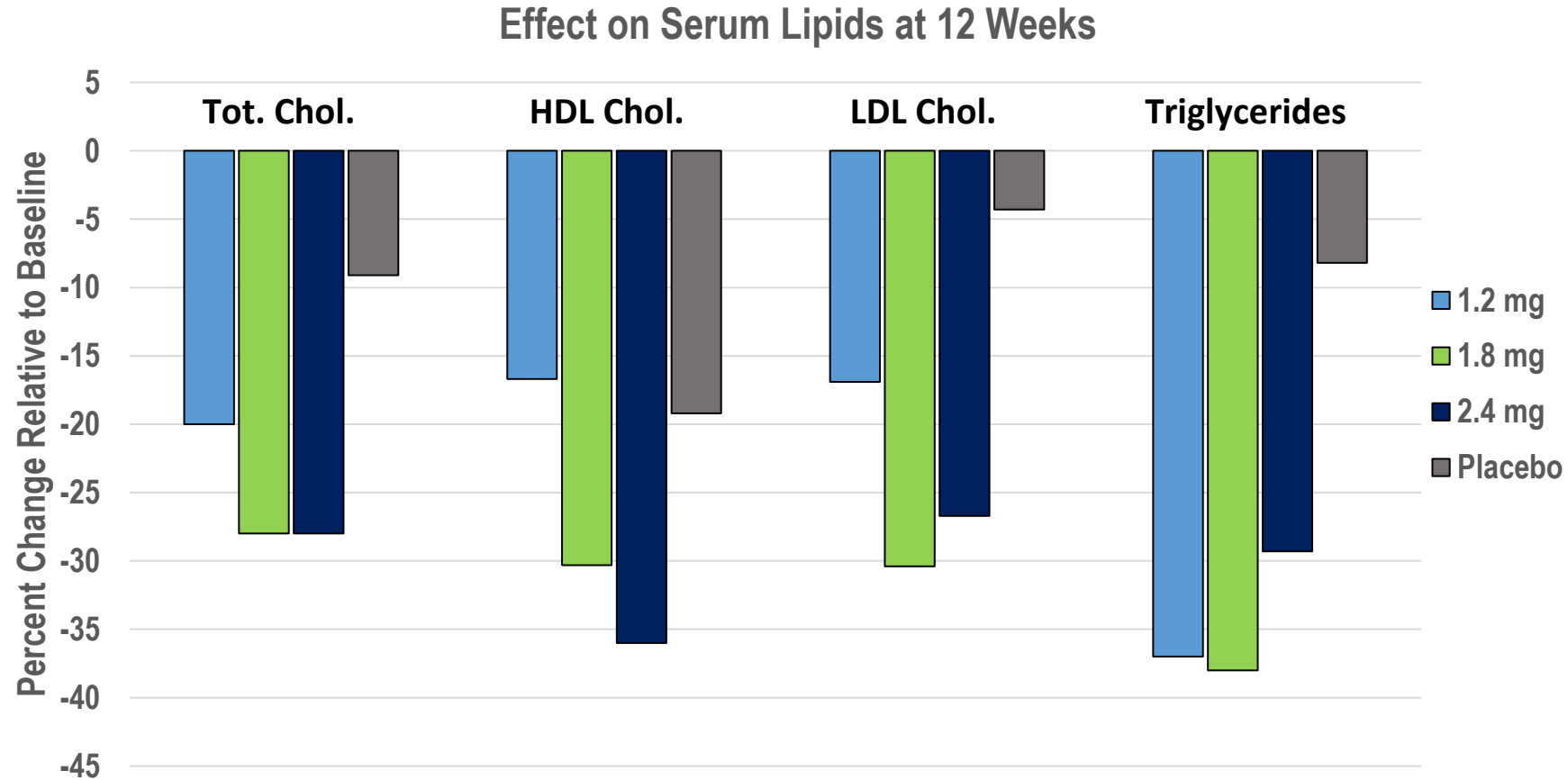
NO INCREASES IN HEART RATE OBSERVED ACROSS DOSES



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

IMPROVEMENTS IN SERUM LIPIDS ACROSS ALL DOSE GROUPS

BIOMARKERS OF CARDIOVASCULAR RISK



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

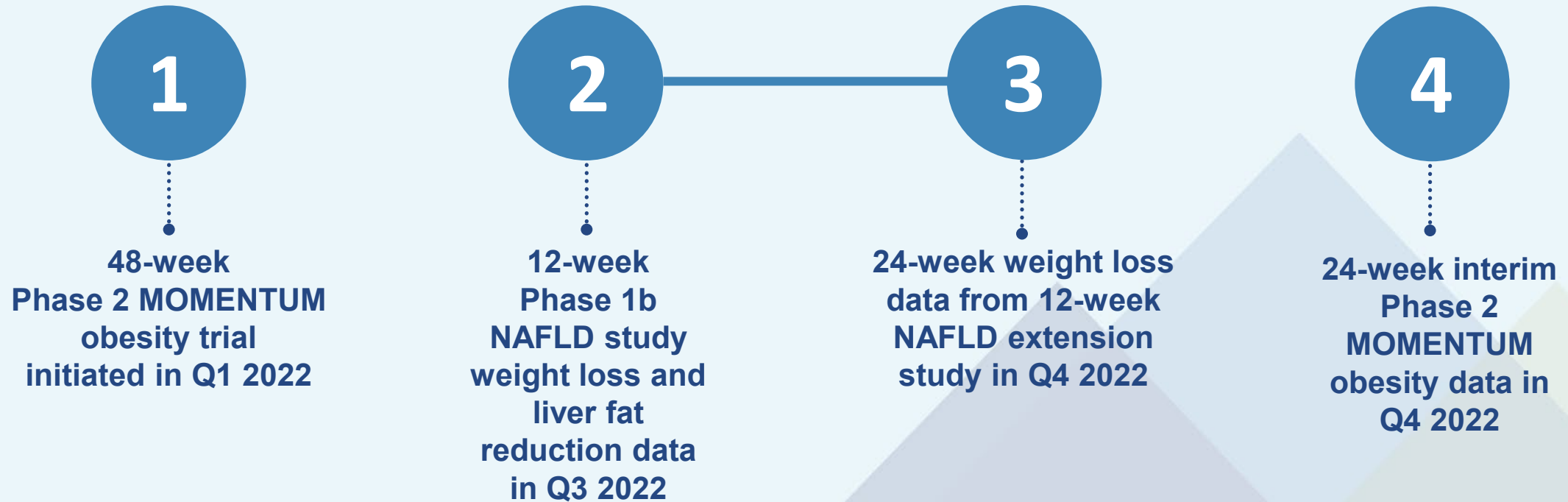


SECONDARY MEASURES

- 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



SUMMARY OF NEAR-TERM CATALYSTS

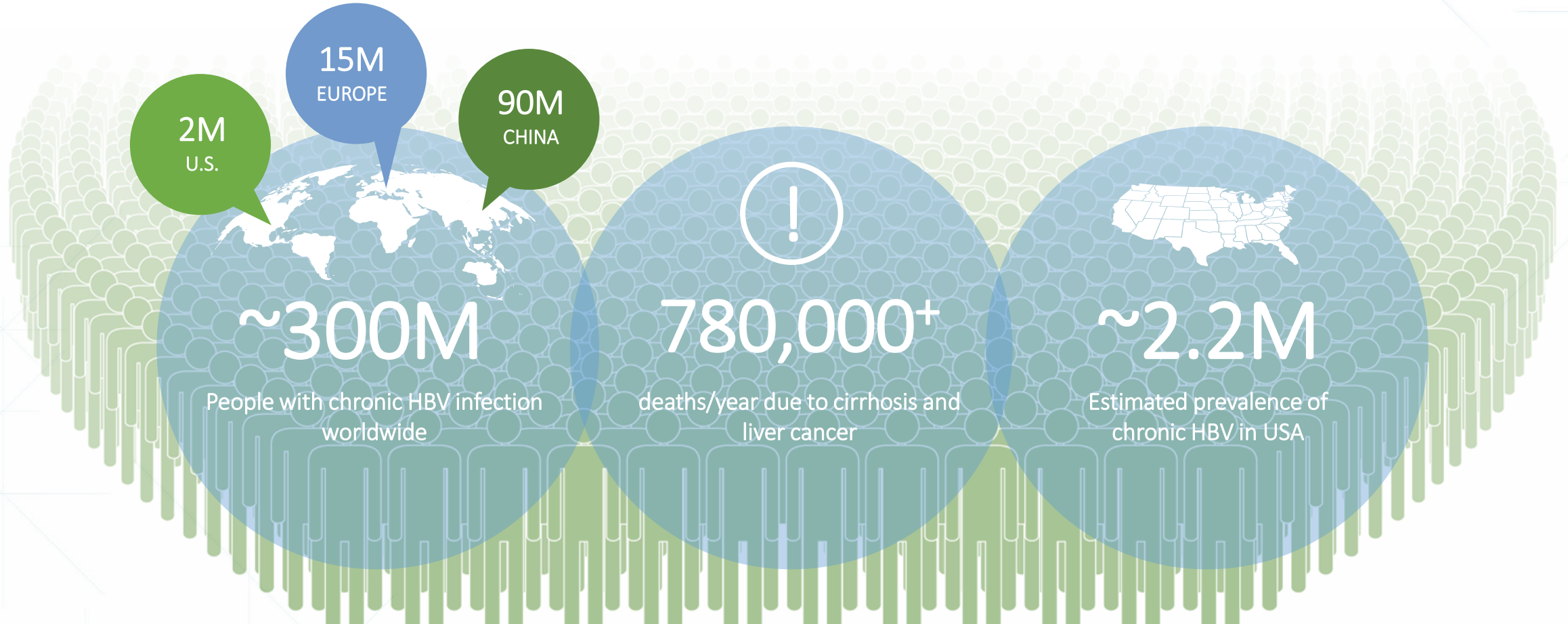




HepTcell: Chronic HBV

HepTcell: T CELL IMMUNOTHERAPEUTIC FOR CHRONIC HEPATITIS B

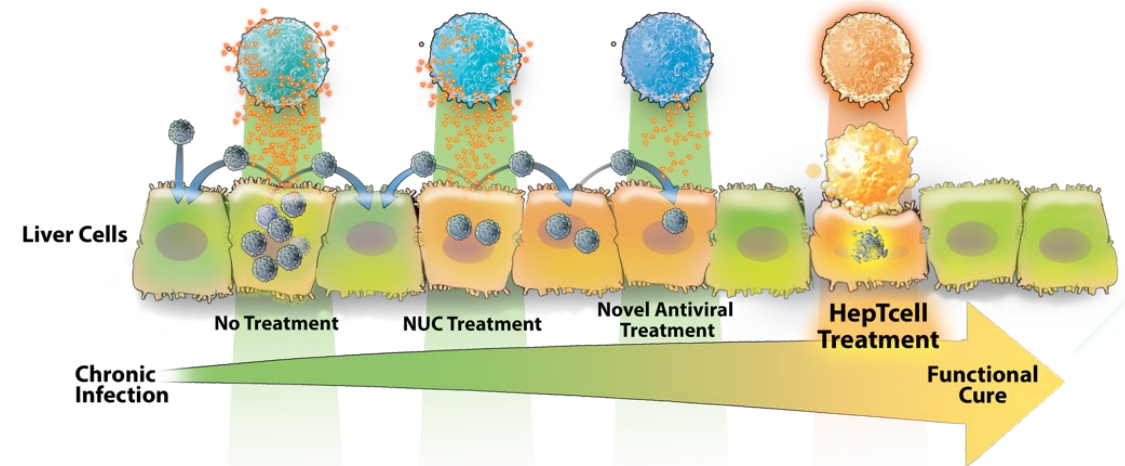
SIGNIFICANT OPPORTUNITY TO IMPROVE CURRENT HBV CURE RATES



CURRENTLY APPROVED HBV THERAPEUTICS DO NOT LEAD TO A CURE

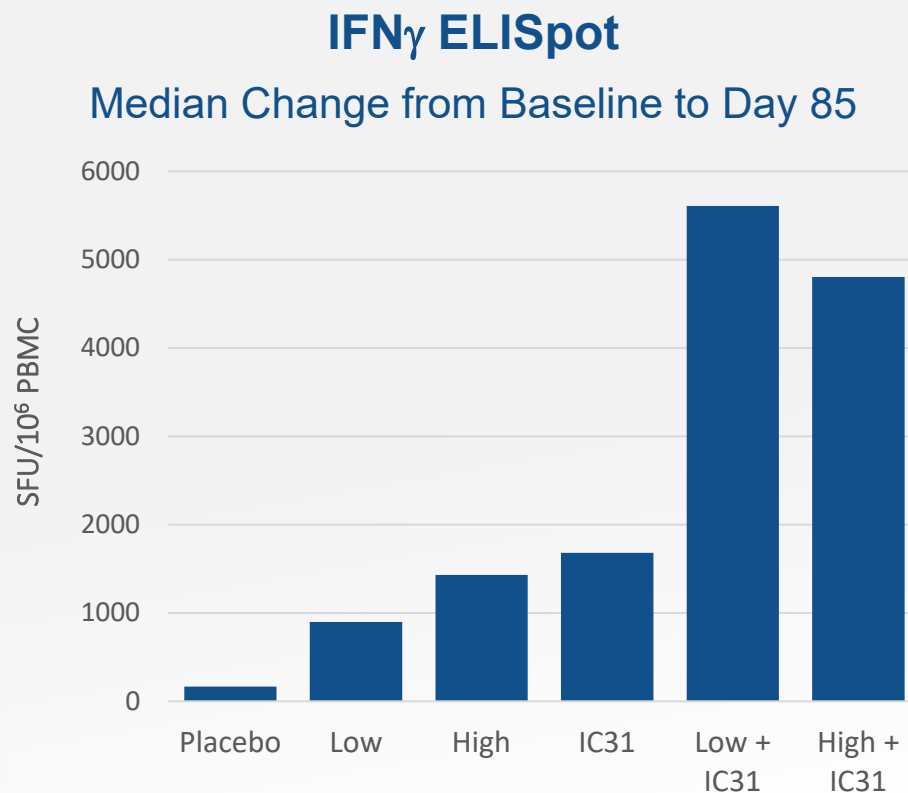
IMMUNE ACTIVATION WILL BE REQUIRED FOR SIGNIFICANT IMPACT

- ▶ 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



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

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



SUMMARY

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

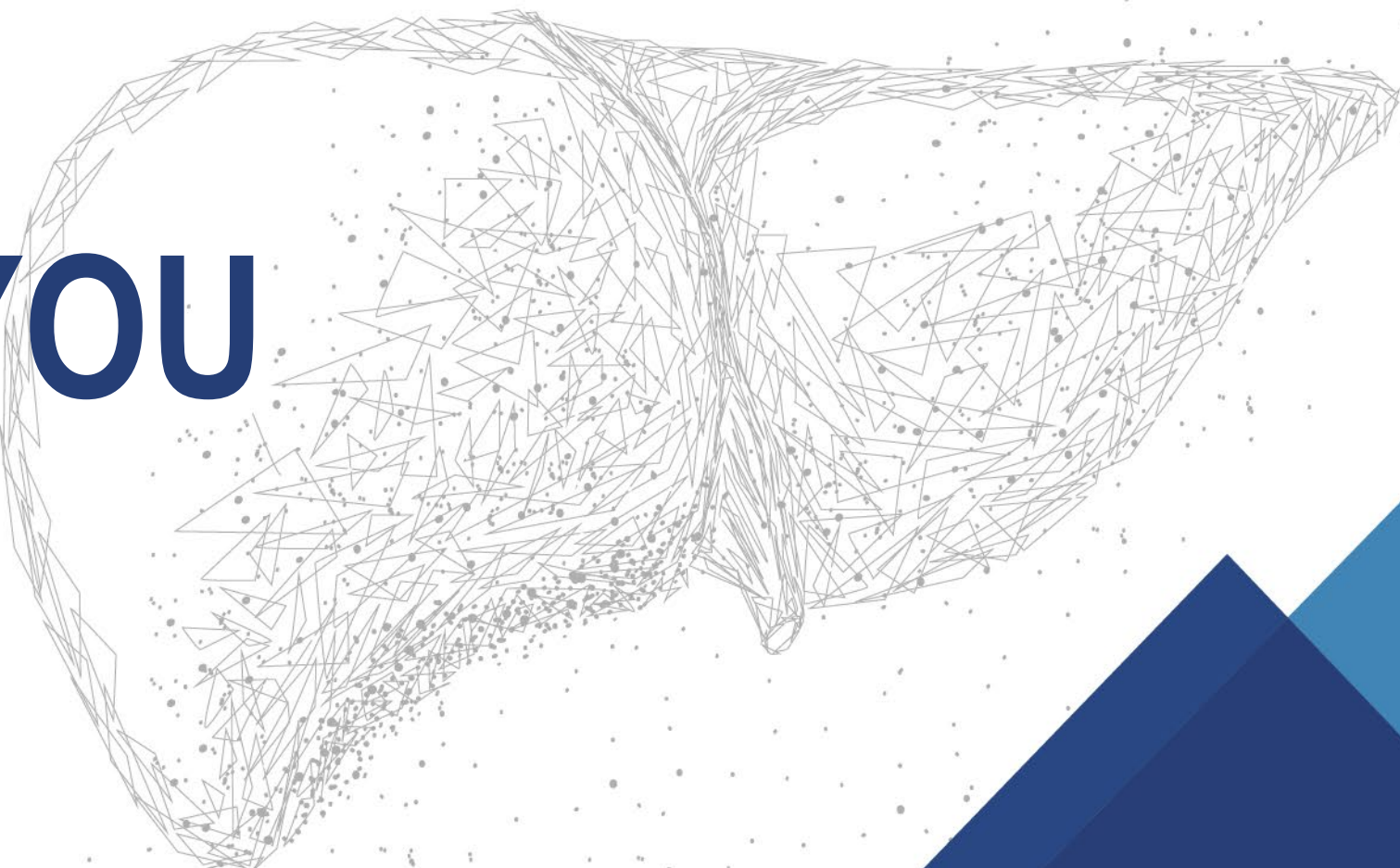
Data read-outs from multiple clinical programs

4

Strong cash position to reach value-generating milestones

~\$180 million as of March 31, 2021

THANK YOU



NASDAQ: ALT

