

# NGM Biopharmaceuticals, Inc. Corporate Overview

Novel Biology. Powerful Medicines. Transformative Impact.



Next Generation Medicines

# Safe Harbor Statement

This presentation contains forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995, as amended. These forward-looking statements involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this presentation, including statements regarding our future financial condition, results of operations, business strategy and plans, expected near-term milestones, and objectives of management for future operations, as well as statements regarding industry trends, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potentially” “predict,” “should,” “will” or the negative of these terms or other similar expressions. These statements include those related to NGM’s advancement of its clinical and preclinical pipeline; the timing, enrollment and results of NGM’s clinical trials, including the continued enrollment and announcement of preliminary results of the Phase 2 clinical study of aldafermin (NGM282) in patients with NASH; NGM’s option to participate in the economic return of NGM313 or ability to receive milestone payments or royalties from NGM313; the safety, tolerability and efficacy of NGM’s product candidates; NGM’s ability to fund its clinical programs and NGM’s financial outlook. Because such statements deal with future events and are based on NGM’s current expectations, they are subject to various risks and uncertainties and actual results, performance or achievements of NGM could differ materially from those described in or implied by the statements in this press release. These forward-looking statements are subject to risks and uncertainties, including those discussed in the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in quarterly report on Form 10-Q for the quarter ended June 30, 2019 and other filings that we make from time to time with the Securities and Exchange Commission. Except as required by law, NGM assumes no obligation to update these forward-looking statements after the date of this presentation, or to update the reasons if actual results differ materially from those anticipated in the forward-looking statements.

# Company Highlights



## NGM282 (aldafermin)

Wholly-owned, Phase 2b product candidate for treatment of **NASH** (non-alcoholic steatohepatitis)

## NGM313

Insulin sensitizer for treatment of **NASH** and type 2 diabetes; Completed Ph1b and **licensed by Merck in 4Q18**



Pipeline of **five additional product candidates** in cardio-metabolic, oncologic and ophthalmic diseases



Strategic collaboration with Merck providing robust R&D support and **NGM option on future Merck late-stage programs**



Experienced team with highly productive R&D engine generating **~1 development candidate/year** to date



Multiple **key milestones** and potential **value driving catalysts** in the next 18 months

# Highly Experienced Team with Proven First-in-Class Drug Development Track Record



## MANAGEMENT

**William J. Rieflin**  
Executive Chairman

**David J. Woodhouse, Ph.D.**  
Chief Executive Officer and  
Acting Chief Financial Officer

**Aetna Wun Trombley, Ph.D.**  
President and Chief Operating Officer

**Jin-Long Chen, Ph.D.**  
Founder  
Chief Scientific Officer

**Alex DePaoli, M.D.**  
Senior Vice President  
Chief Translational Officer

**Hsiao D. Lieu, M.D.**  
Senior Vice President  
Chief Medical Officer

**Wenyan (David) Shen, Ph.D.**  
Senior Vice President, Biologics

**Hui Tian, Ph.D.**  
Senior Vice President, Research

## EXTENSIVE PRIOR EXPERIENCE



Key Roles in Prior Drug Approvals

## BOARD OF DIRECTORS

**William J. Rieflin**  
Executive Chairman, NGM Bio

**David V. Goeddel, Ph.D.**  
Lead Independent Director  
Managing Partner, The Column Group

**Jin-Long Chen, Ph.D.**  
Founder, CSO NGM Bio

**Suzanne Sawochka Hooper**  
Former Exec. VP and GC, Jazz  
Pharmaceuticals

**Mark Leschly**  
Managing Partner, Rho Capital Partners

**David Schnell, M.D.**  
Managing Director, Prospect Venture Partners

**Peter Svenilson**  
Managing Partner, The Column Group

**McHenry (Mac) T. Tichenor, Jr**  
Managing Partner, Tichenor Ventures, LLC

**David J. Woodhouse, Ph.D.**  
CEO and Acting CFO, NGM Bio

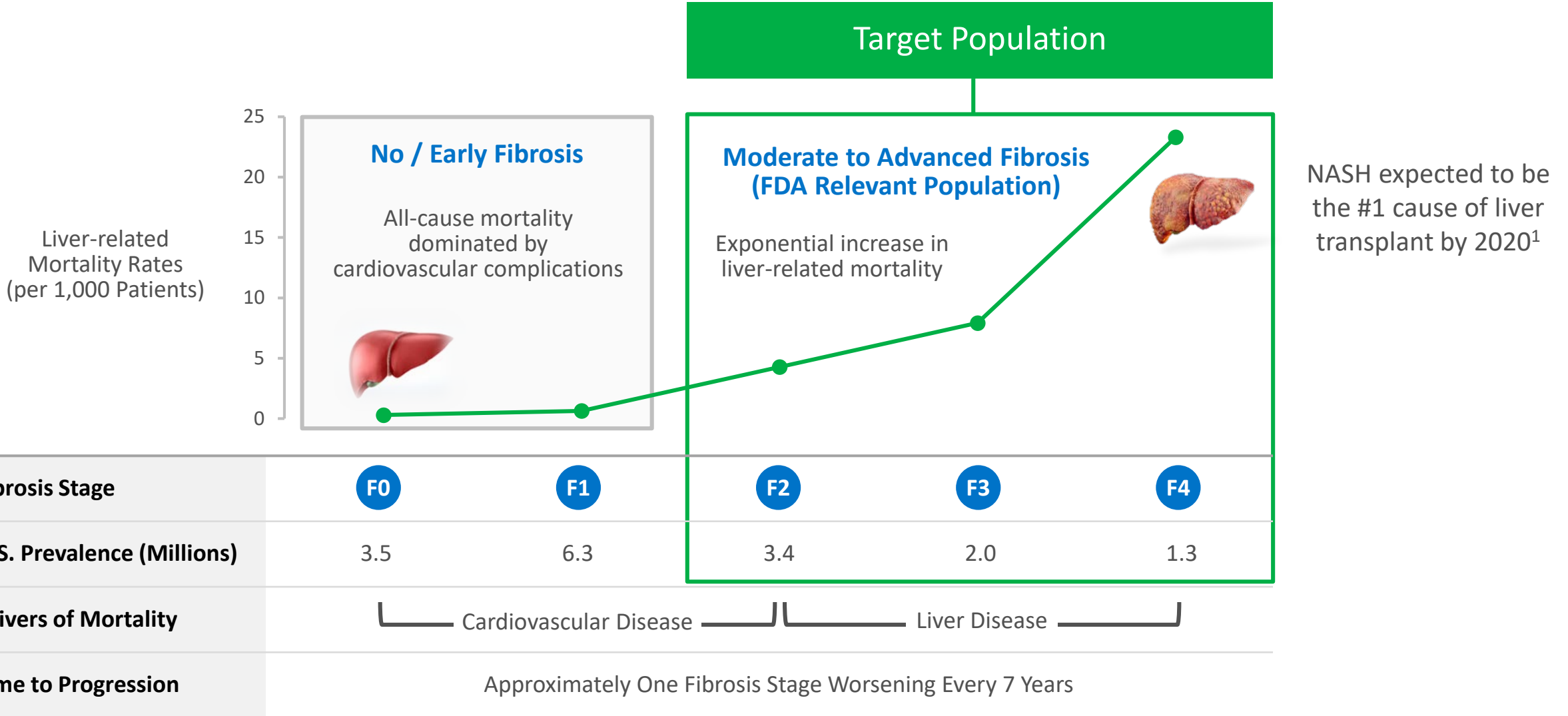
# Our Expansive Pipeline

7  
Development  
Programs

PRODUCT CANDIDATE	PRODUCT DESCRIPTION (DOSING FREQUENCY)	POTENTIAL INDICATIONS	STAGE OF DEVELOPMENT	WORLDWIDE COMMERCIAL RIGHTS	
<b>Aldafermin (NGM282)</b>	FGF19 Analog (Once Daily)	NASH	Phase 2b		Wholly-Owned
<b>NGM313 (MK-3655)</b>	FGFR1c/KLB Agonistic Antibody (Once Monthly)	NASH, Type 2 Diabetes	Phase 1b	Licensed	
<b>NGM120</b>	GFRAL Antagonistic Antibody (Long Acting)	Cancer Anorexia/Cachexia Syndrome (CACS)	Phase 1		Option
<b>NGM217</b>	Undisclosed (Long Acting)	Diabetes	Phase 1		Option
<b>NGM621</b>	Undisclosed (Long Acting)	Dry Age-Related Macular Degeneration (AMD)	Phase 1		Option
<b>NGM386</b>	GDF15 Analog (Once Daily)	Metabolic	Phase 1		Wholly-Owned
<b>NGM395</b>	GDF15 Analog (Long Acting)	Metabolic	Preclinical		Wholly-Owned

FGF19: fibroblast growth factor 19; FGFR1c/KLB: fibroblast growth factor receptor 1c/beta-klotho; GDF15: growth differentiation factor 15; GFRAL: glial-cell-derived neurotrophic factor receptor alpha-like

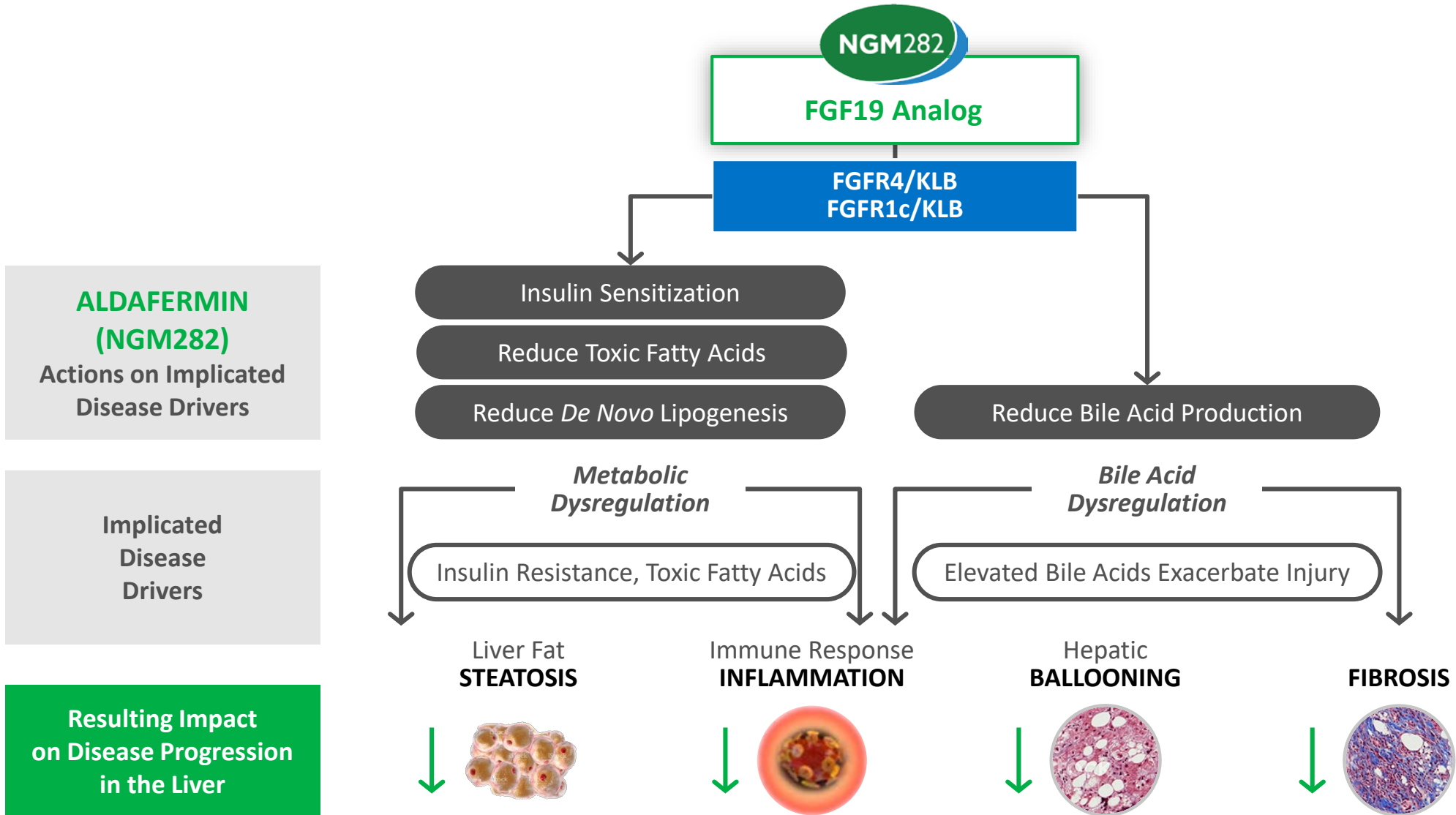
# Improving Fibrosis Leads to Better Outcomes for NASH Patients



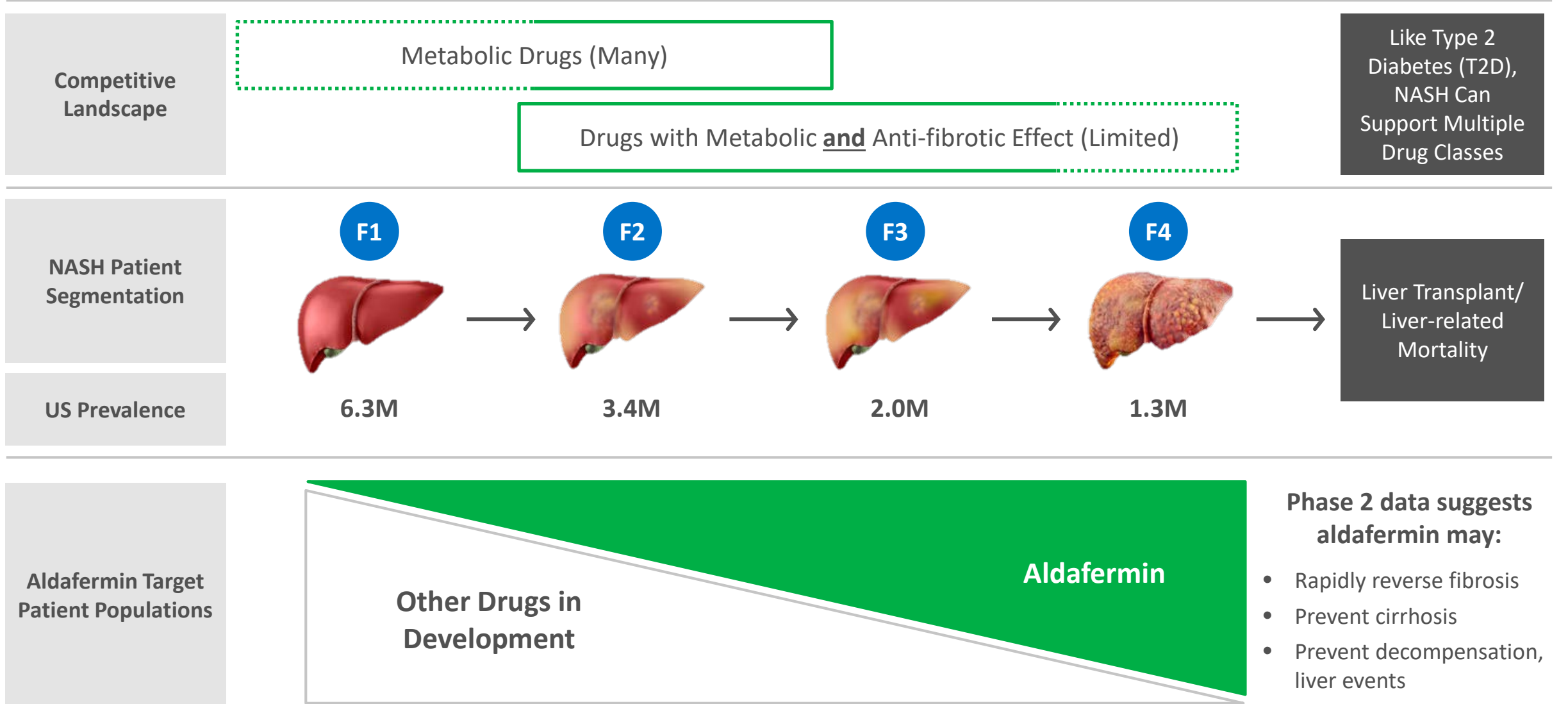
Sources: Dulai et al, Hepatology 2017, 65(5):1557-1565; Singh et al, Clin Gastroenterol Hepatol. 2015, 13(4): 643-654; Estes et al, Hepatology 2018, 67(1): 123-133.

<sup>1</sup> Canbay et al, Visc Med 2016, 32: 234-238.

# Aldafermin Impacts the Key Drivers of NASH Pathogenesis



# Unlike Many Other Drugs in Development, Aldafermin Targets Fibrosis Reversal and Cirrhosis Prevention in Advanced NASH Patients






# Aldafermin: Single Agent with Metabolic and Anti-Fibrotic Efficacy



- Only FGF19 agonist in clinical development for NASH → **potent activity on FGFR1c and FGFR4**
- Significant reduction **across all non-invasive measures at 12W**: MRI-PDFF, ALT/AST, fibrosis biomarkers (ELF, PRO-C3) and bile acid synthesis (C4; Phase 2, Cohorts 1-3)
- Rapid reversal of fibrosis** ( $\geq 1$  stage) **in 42% of patients at 12W** (3 mg dose)
- Improvements across all other histological measures of NASH at 12W** (% of patients with  $\geq 1$  stage; 3 mg dose): steatosis (74%), inflammation (42%) and ballooning (53%)
- Durability of effect on non-invasive measures at 24W (Interim analysis, 2H19)
- Confirmation of effect on fibrosis/NASH histology at 24W in placebo-controlled trial (early 2020)

# NASH Phase 2 Program Provides Foundation for Late Stage Development of Aldafermin



 Clinical Data in Presentation

  
**COHORT 1**

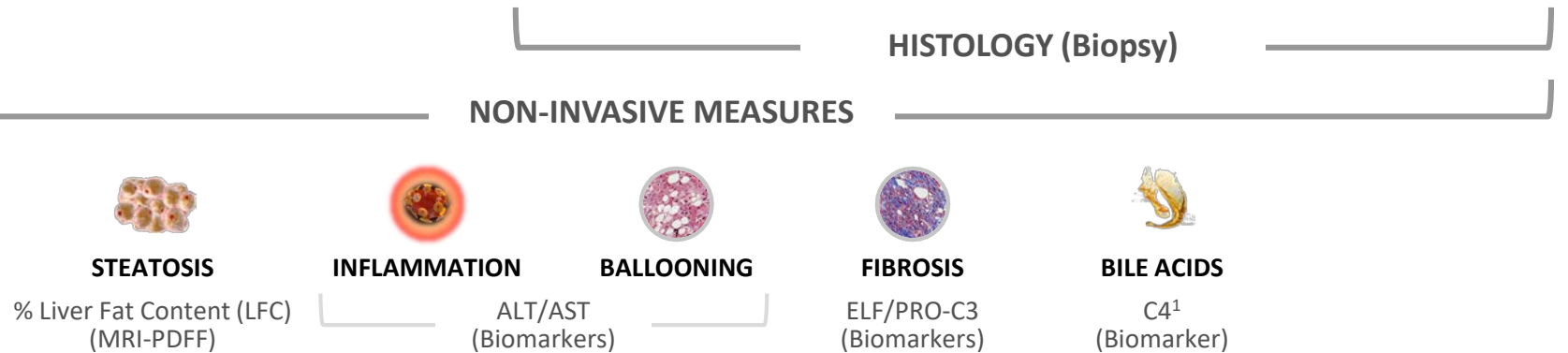
  
**COHORT 2**

  
**COHORT 3**

  
**COHORT 4**

<b>Status</b>	<b>Completed</b> (Published, <i>The Lancet</i> 2018)	<b>Completed</b> (Presented, EASL 2018)	<b>Completed</b> (Presented, AASLD 2018)	<b>Ongoing</b> (Anticipated interim data 2H19)
<b>Duration</b>	← 12 Weeks →			24 Weeks
<b>Aldafermin Dose (# Patients)</b>	<div style="background-color: #808080; color: white; padding: 5px; text-align: center;">Placebo (27)</div> <div style="display: flex; justify-content: space-around;"> <div style="background-color: #90EE90; padding: 5px; text-align: center;">3 mg (27)</div> <div style="background-color: #90EE90; padding: 5px; text-align: center;">6 mg (28)</div> </div>	<div style="background-color: #90EE90; padding: 5px; text-align: center;">0.3 mg (23)</div> <div style="background-color: #90EE90; padding: 5px; text-align: center;">1 mg (21)</div>	<div style="background-color: #90EE90; padding: 5px; text-align: center;">3 mg (22)</div> <div style="background-color: #90EE90; padding: 5px; text-align: center;">1 mg (28)</div>	<div style="background-color: #808080; color: white; padding: 5px; text-align: center;">Placebo (~25)</div> <div style="background-color: #90EE90; padding: 5px; text-align: center;">1 mg (~50)</div>

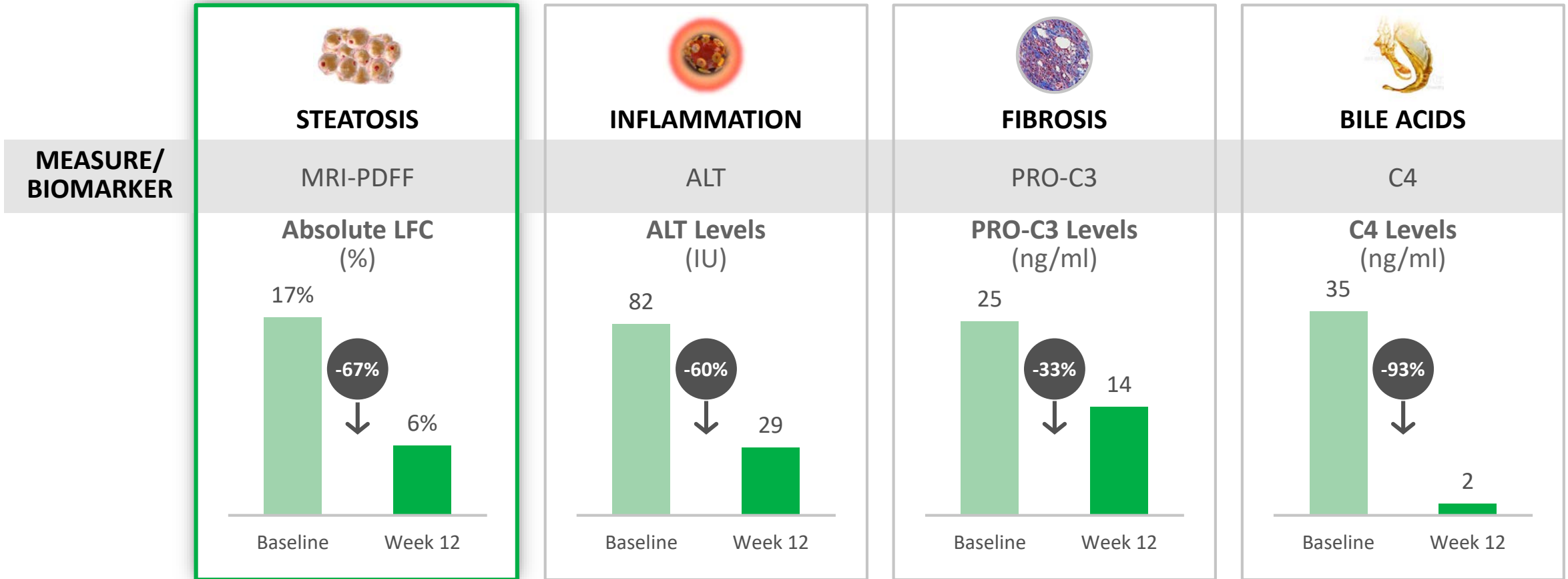
**KEY ENDPOINTS/  
Assessment  
Measures<sup>1</sup>**



<sup>1</sup> C4: 7 $\alpha$ -hydroxyl-4-cholesten-3-one

# Key Primary and Secondary Endpoints Achieved by Week 12

← ACROSS MULTIPLE MEASURES OF NASH ACTIVITY →

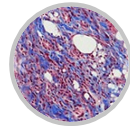


All Subjects Achieved Primary Phase 2 Endpoint (≥ 5% Absolute LFC Reduction by Week 12)

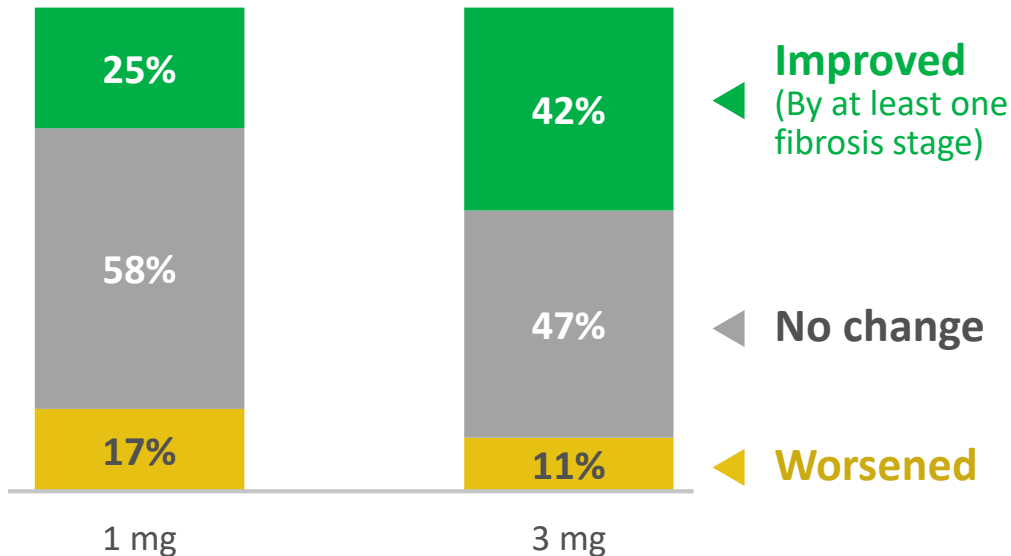
# Rapid Regression of Fibrosis at Week 12 in Patients Treated with Aldafermin



**Fibrosis Histological Response at Week 12<sup>1</sup>**  
(% of Patients; n=19 in 3 mg dose of Cohort 2, n=24 in 1 mg Cohort 3)



## FIBROSIS



Mean change at week 12 (SD)	-0.1 (0.7)	-0.5 (0.9)
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### Improvements

- All of the patients experiencing improvements were F2 or worse at baseline
- Across the two cohorts, four subjects had a 2-stage fibrosis improvement

### Patient Population

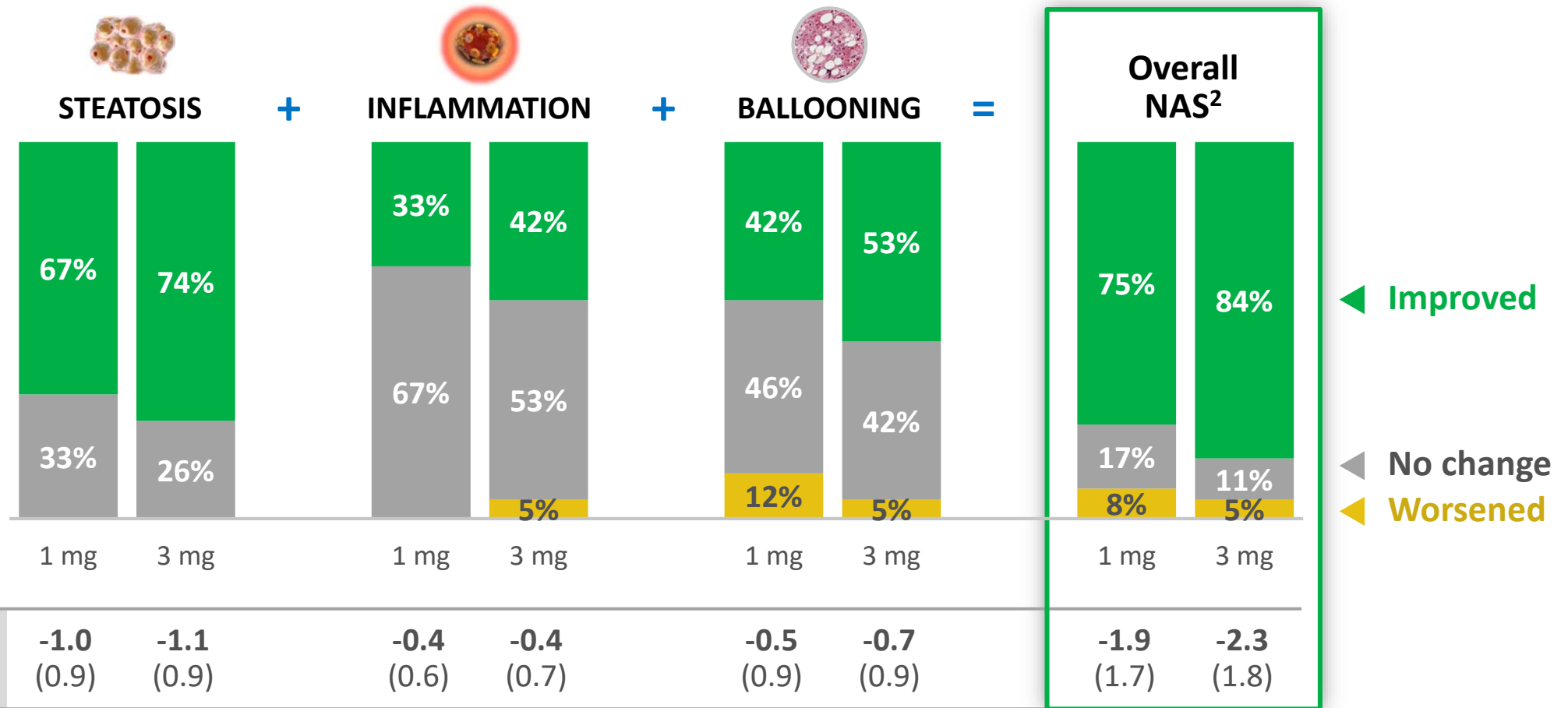
- Over 80% of patients in 3 mg Cohort 2 and Cohort 3 had F2/F3 fibrosis at baseline

<sup>1</sup> Preliminary data

# Exploratory Endpoints Achieved: All NASH Histological Parameters Improved at Week 12



**NAS Histological Response at Week 12<sup>1,2</sup>**  
(% of Patients; n=19 in 3 mg dose of Cohort 2, n=24 in 1 mg Cohort 3)



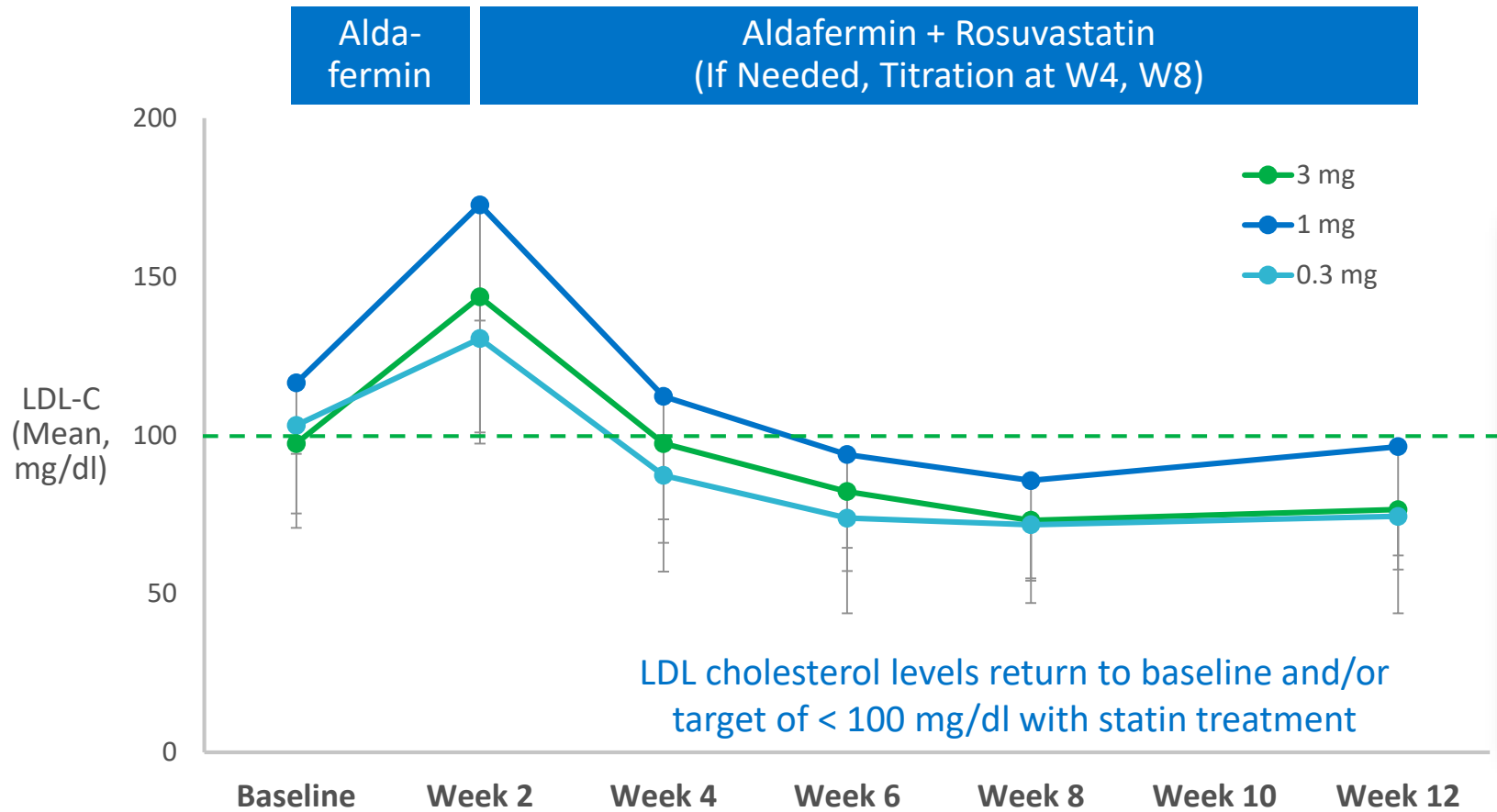
Mean change at week 12 (SD)	1 mg	3 mg	1 mg	3 mg	1 mg	3 mg	1 mg	3 mg
	-1.0	-1.1	-0.4	-0.4	-0.5	-0.7	-1.9	-2.3
	(0.9)	(0.9)	(0.6)	(0.7)	(0.9)	(0.9)	(1.7)	(1.8)

<sup>1</sup> Preliminary data  
<sup>2</sup> NAS: NAFLD Activity Score

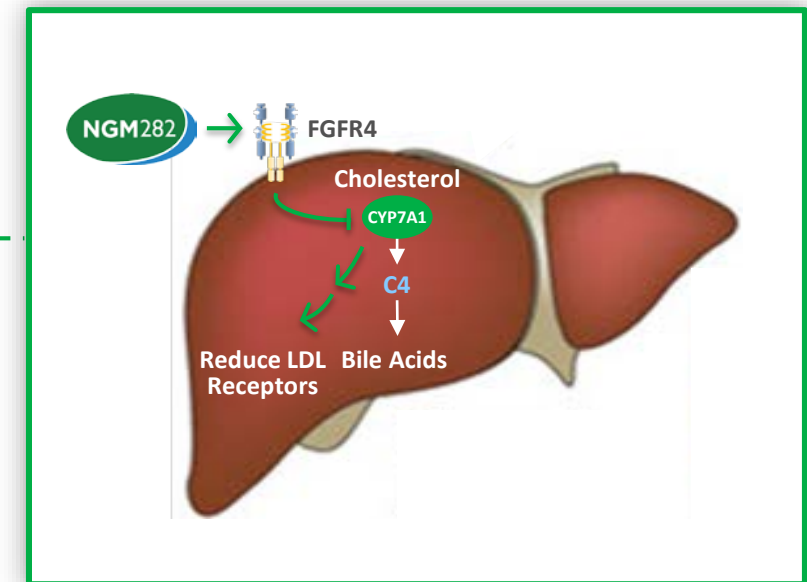
## Favorable Tolerability Profile

- Over 400 subjects have been dosed with aldafermin and the drug was well-tolerated
- Preliminary data indicates that there were no tolerability signals identified in the NASH population
- Preliminary safety data from the Phase 2 NASH study:
  - Cohort 1: a single serious adverse event (SAE) of acute pancreatitis was reported and assessed as possibly related to study drug
  - Cohort 2: seven SAEs (none of which were considered related to study drug) were reported in five subjects
  - Cohort 3: a single SAE (kidney mass) was reported, which was not considered related to study drug
- The most common adverse events in cohorts 1, 2 and 3 were increased stool frequency, loose stools, nausea and injection site erythema, with the majority being mild

# Cholesterol Changes Effectively Managed with Statin Therapy



LDL-C elevation is a direct effect of FGF19's potent inhibition of the classical bile acid synthesis pathway



Serum triglyceride levels decreased and HDL-C elevated with aldafermin treatment

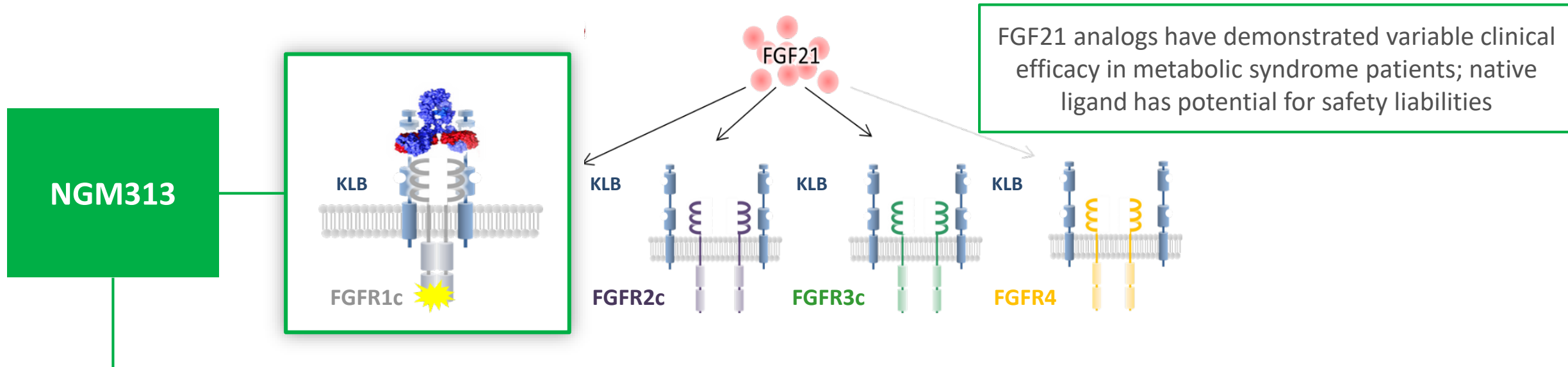
# Aldafermin Development Plan



	PHASE 2 – COHORT 4	PHASE 2b (ALPINE 2/3)	PHASE 2b – COMPENSATED CIRRHOTICS (ALPINE 4)	PHASE 3 PROGRAM
<b>Status</b>	Ongoing (Interim data of non-invasive measures anticipated 2H19)	Ongoing	To Initiate 2H19	To Initiate Planning with Phase 2 Cohort 4 Data
<b>Duration</b>	24 Weeks	24 Weeks	TBD	TBD
<b>Aldafermin Dose (# Patients)</b>	Placebo (~25)	Placebo (~40)	Placebo	Placebo
	1 mg (~50)	0.3 mg, 1 mg, 3 mg (~40 per dose level)	Dose Levels TBD	Single Dose Level TBD



# NGM313 (MK-3655) for the Treatment of NASH and Type 2 Diabetes



- Agonistic antibody that selectively activates FGFR1c / KLB to regulate energy metabolism
- Potential to be once-monthly injectable insulin sensitizer for treatment of NASH and T2D
- Completed Phase 1 SAD/MAD study in obese, insulin resistant subjects and Phase 1b study in subjects with NAFLD
- Single dose of NGM313 resulted in **significant reductions in liver fat content and improvement in metabolic markers** based on preliminary data from a Phase 1b study in obese, insulin resistant subjects with NAFLD **after five weeks**
- Well-tolerated across Phase 1 and Phase 1b studies
- **Merck exercised its option and licensed NGM313 and other FGFR1c/KLB agonists in 4Q18**

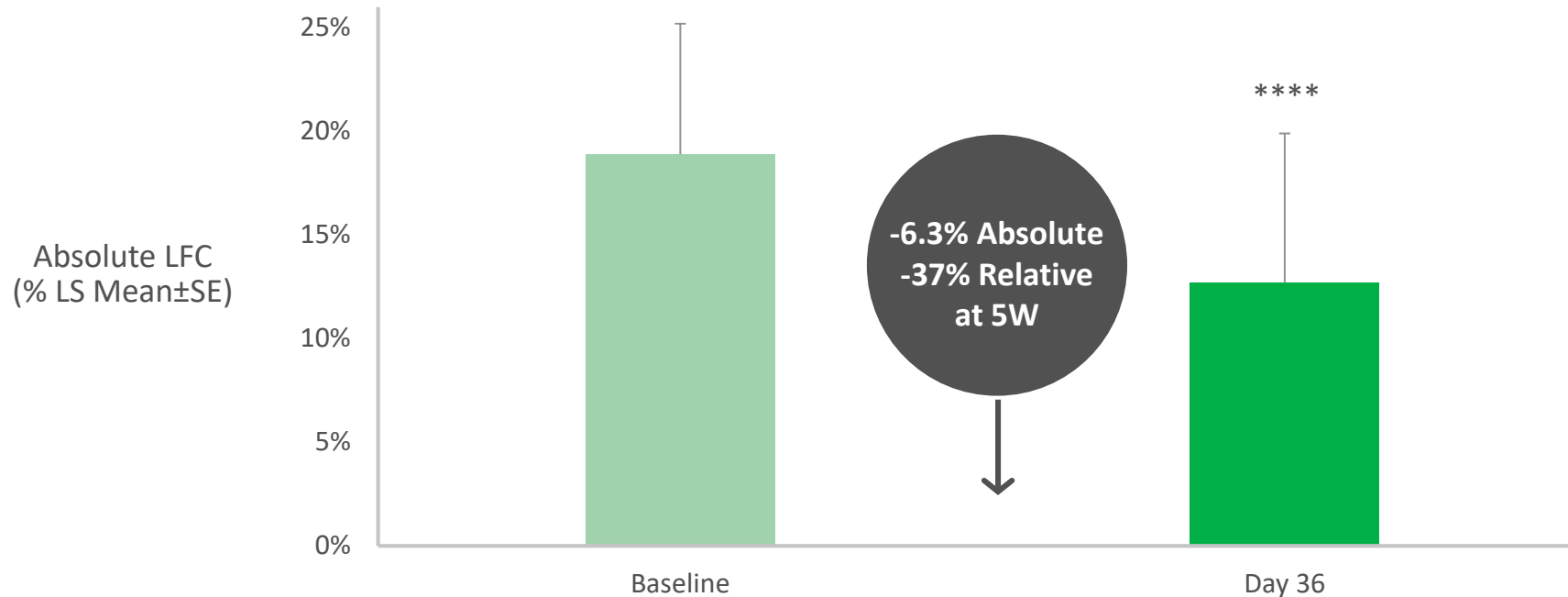
# Significant Reduction in LFC After 5 Weeks Following Single Dose of NGM313 (MK-3655)



## Phase 1b Study in Obese, Insulin Resistant Subjects with NAFLD



Absolute LFC  
MRI-PDF



### Pioglitazone 45 mg

(Positive Control)

- 4.0% absolute (25% relative) LFC reduction at 5W

### NGM313

Statistically Significant Improvements In:

- ALT and AST
- Triglycerides
- HDL-C, LDL-C
- PRO-C3

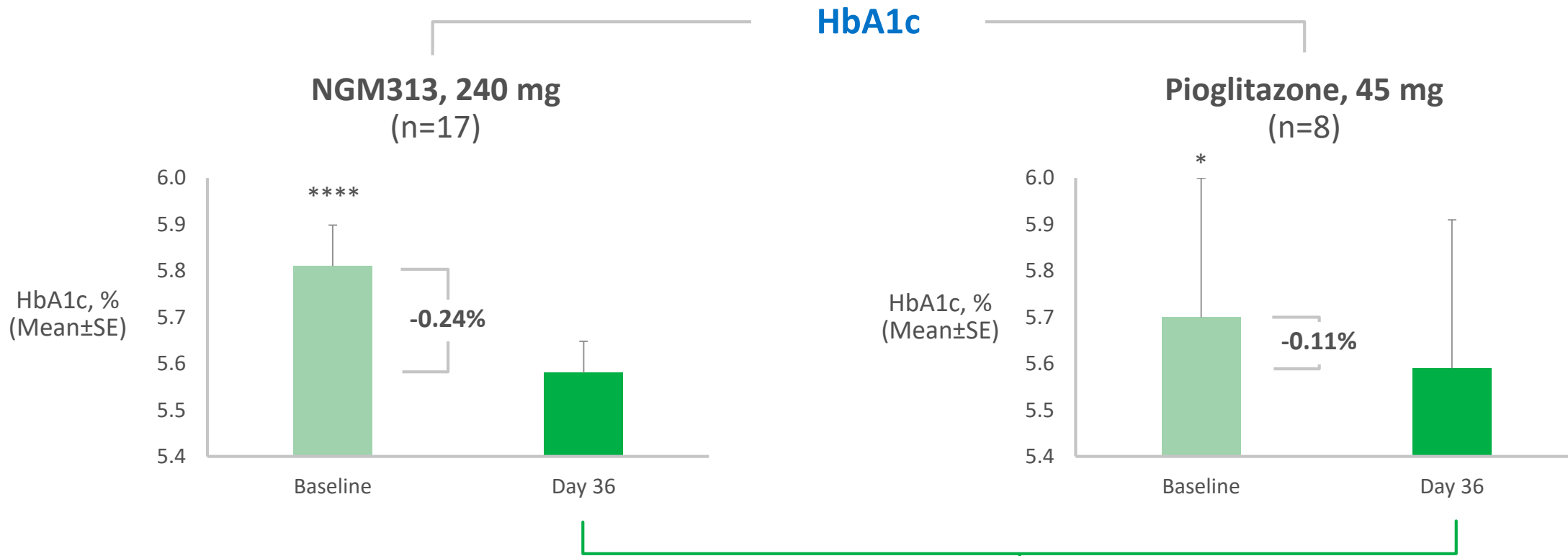
\*\*\*\* $p < 0.0001$

Source: Preliminary data

# Rapid Reduction in HbA1c Without Hypoglycemia After Single Dose of NGM313 (MK-3655)



## Phase 1b Study in Obese, Insulin Resistant Subjects with NAFLD

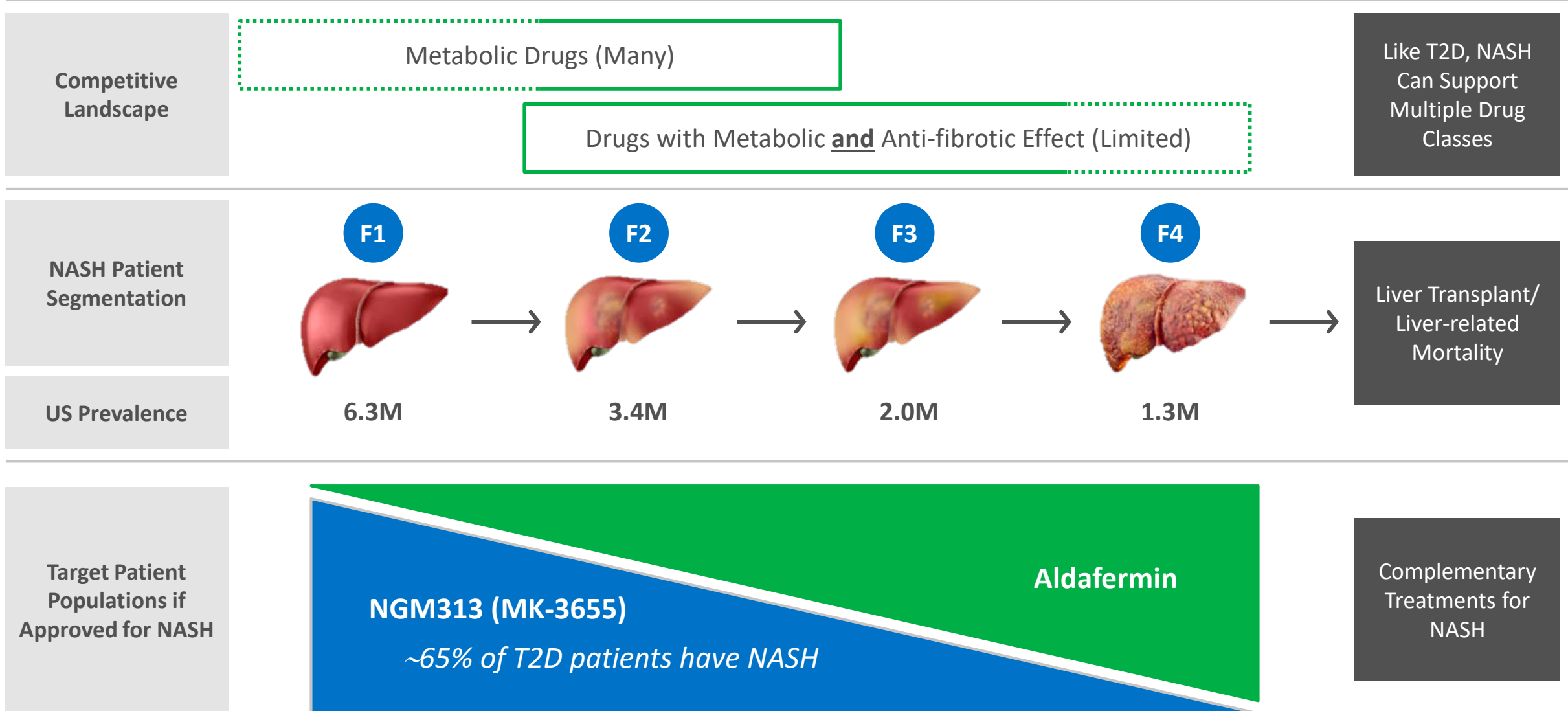


Reduction in HbA1c observed in insulin-resistant, non-diabetic patients supports promise of NGM313 to potentially improve glucose control in patients with T2D

NGM313 increases body weight by 1.6 kg vs. 2.4 kg increase with pioglitazone at day 36

\* p<0.05; \*\*\*\*p<0.0001

# NGM313 (MK-3655) has Potential to Complement Aldafermin by Targeting NASH Population with T2D



# NGM313 (MK-3655) Next Steps

## PHASE 1b

### Completed

Presented preliminary data at AASLD 2018, EASL 2019 and ADA 2019

- Merck exercised its option to license the program in 4Q18
- NGM received a \$20M payment in connection with the option exercise

## PHASE 2b

### Merck To Initiate in 2020

Ph2b study to evaluate the effect of MK-3655 on liver histology and glucose control in NASH F2/F3 patients with or without diabetes

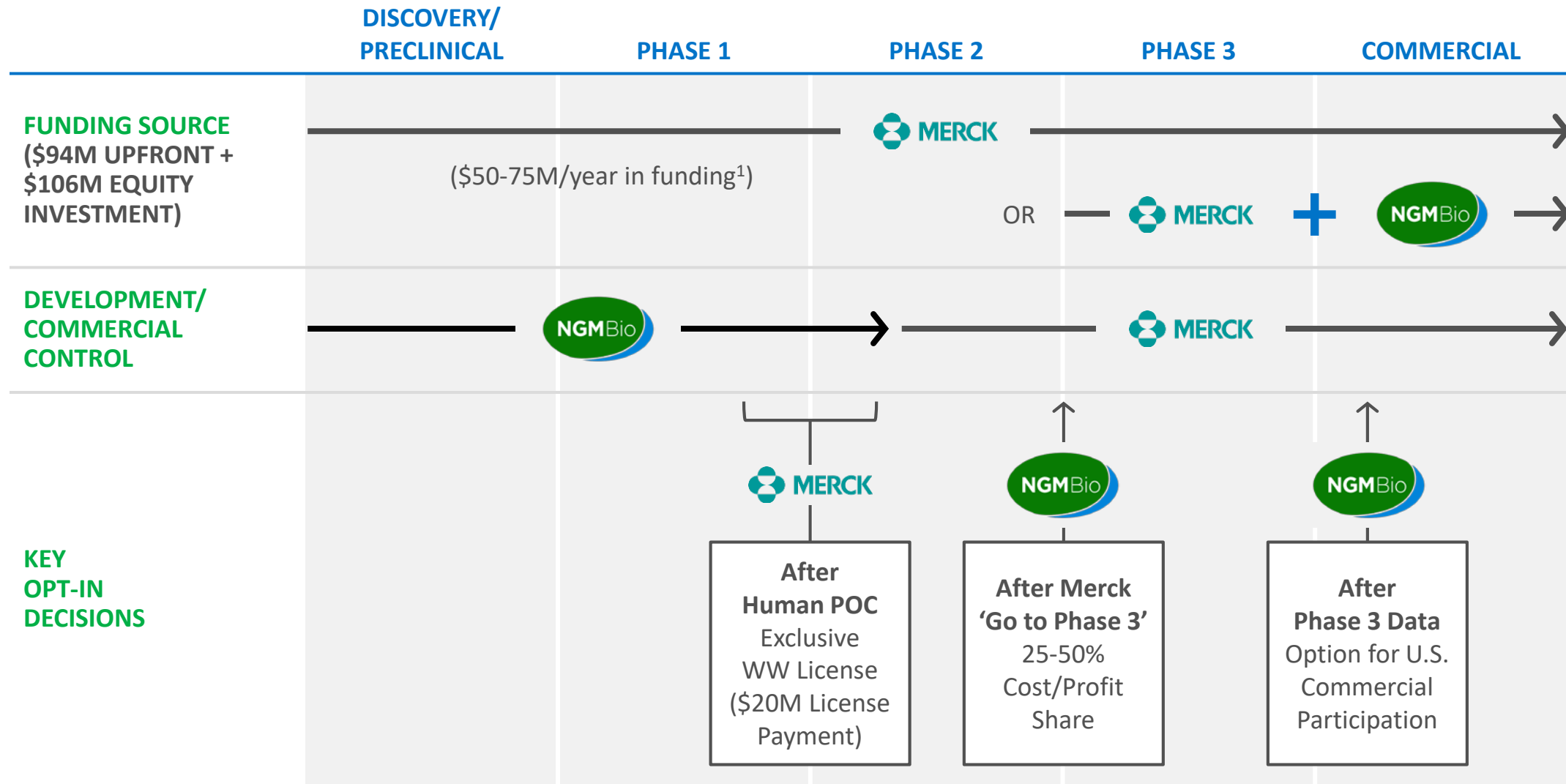
- Merck to fund all Phase 2 development costs
- NGM retains an option, when program has advanced to Phase 3, to participate in up to 50% of the economic return of the program
- If NGM does not exercise its option, NGM is eligible for development and commercial milestone payments and tiered royalties ranging from low double digit to mid-teen percentage rates on product sales

# Beyond NASH, an Expansive Pipeline in Other Indications

7 Development Programs	PRODUCT CANDIDATE	PRODUCT DESCRIPTION (DOSING FREQUENCY)	POTENTIAL INDICATIONS	STAGE OF DEVELOPMENT	WORLDWIDE COMMERCIAL RIGHTS	
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	<b>NGM217</b>	Undisclosed (Long Acting)	Diabetes	Phase 1		Option
	<b>NGM621</b>	Undisclosed (Long Acting)	Dry Age-Related Macular Degeneration (AMD)	Phase 1		Option
	<b>NGM386</b>	GDF15 Analog (Once Daily)	Metabolic	Phase 1		Wholly-Owned
<b>NGM395</b>	GDF15 Analog (Long Acting)	Metabolic	Preclinical		Wholly-Owned	

FGF19: fibroblast growth factor 19; FGFR1c/KLB: fibroblast growth factor receptor 1c/beta-klotho; GDF15: growth differentiation factor 15; GFRAL: glial-cell-derived neurotrophic factor receptor alpha-like

# Our Merck Collaboration: Growth-Accelerating Partnership

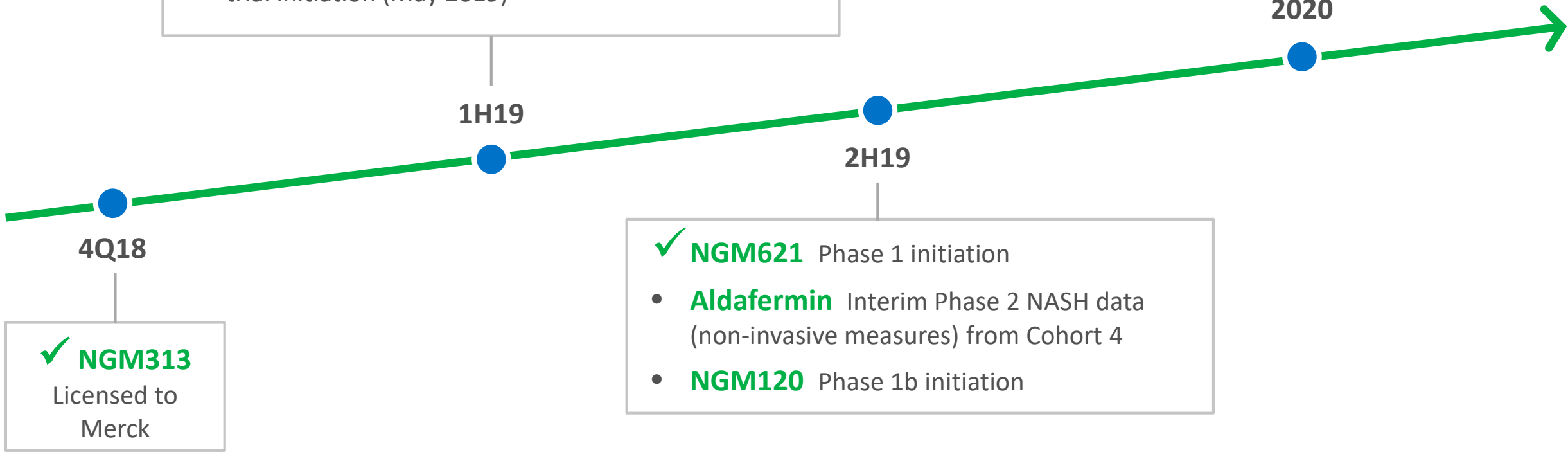


<sup>1</sup> Merck has committed to provide R&D reimbursement of up to \$50 million per year. If our R&D expenses exceed \$50 million in a given year, Merck can either reimburse up to an additional \$25 million for use in funding IND-enabling or later-staged activities or to provide us with the equivalent value in in-kind services for such activities.

# Momentum with Potential Value-Driving Catalysts

- ✓ **MERCK** Extended collaboration to March 2022 at same levels of R&D funding + up to \$20M in 2021-22<sup>1</sup>
- ✓ **Aldafermin** Phase 2b NASH (F2/F3) – ALPINE 2/3 trial initiation (May 2019)

- **Aldafermin** Phase 2 Cohort 4 topline biopsy data
- **NGM313** Phase 2b NASH (F2/F3) initiation
- **Aldafermin** ALPINE 2/3 data
- **NGM217** Phase 1b/2a initiation



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Next Generation Medicines