



**EIGER**  
BIOPHARMACEUTICALS

**LEADER IN HDV**

*January 2020*

# FORWARD LOOKING STATEMENT

This presentation and the oral commentary may contain forward-looking statements that involve future events. These forward-looking statements include terminology such as “believe,” “will,” “may,” “estimate,” “continue,” “anticipate,” “contemplate,” “intend,” “target,” “project,” “should,” “plan,” “expect,” “predict,” “could,” “potentially” or the negative of these terms. All statements other than statements of historical facts contained in this presentation, including statements regarding our future financial condition, timing for and outcomes of clinical results, prospective products, preclinical and clinical pipelines, regulatory objectives, business strategy and plans and objectives for future operations, are forward looking statements. Such statements are predictions only and involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These risks and uncertainties include, among others, the costs, timing and results of preclinical studies and clinical trials and other development activities for lonafarnib, interferon lambda, and avexitide, and any of our future product candidates; our ability to achieve timelines and obtain approval without the need to conduct large Phase 3 clinical trials for our product candidates or additional exploratory or pivotal trials beyond what we anticipate; our ability to obtain funding for our operations, including funding necessary to complete all clinical trials that may potentially be required to file any NDA or MAA for our product candidates, and complete all clinical trials that may potentially be required to file for regulatory approval, for any of our product candidates; the uncertainties inherent in the initiation and enrollment of clinical trials; expectations of expanding on-going clinical trials; availability and timing of data from clinical trials; the unpredictability of the duration and results of regulatory review; the commercialization of our product candidates, if approved, including whether commercializing lonafarnib for use in the progeria and progeroid laminopathies indications would result in receipt of a priority review voucher or otherwise be cash flow positive as a program for us; our plans to research, develop and commercialize our product candidates; our ability to attract collaborators with development, regulatory and commercialization expertise; the size and growth potential of the markets for our product candidates, and our ability to serve those markets; our ability to obtain favorable reimbursement and pricing and the rate and degree of market acceptance of our product candidates; regulatory developments in the United States and foreign countries; the performance of our third-party suppliers and manufacturers; market acceptance for approved products and innovative therapeutic treatments; competition; the accuracy of our estimates regarding expenses, future revenues, capital requirements and needs for additional financing; our expectations regarding the period during which we qualify as an emerging growth company under the Jumpstart Our Business Startups Act of 2012, or the JOBS Act; the possible impairment of, inability to obtain and costs of obtaining intellectual property rights; and possible safety or efficacy concerns, general business, financial and accounting risks and litigation. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. More information concerning us and such risks and uncertainties is available on our website and in our press releases and in our public filings with the U.S. Securities and Exchange Commission. We are providing this information as of its date and do not undertake any obligation to update or revise it, whether as a result of new information, future events or circumstances or otherwise. Additional information may be available in press releases or other public announcements and public filings made after the date of this presentation.






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**FIRST-IN-CLASS  
PIPELINE  
TARGETING  
RARE  
AND  
ULTRA-RARE  
DISEASES**

**EIGER** is a late stage biopharmaceutical company developing and commercializing first-in-class, well-characterized drugs for serious rare and ultra-rare diseases for patients with high unmet medical needs and for which no approved therapies exist.






# FIRST-IN-CLASS THERAPIES FOR PATIENTS IN NEED

Targeted Indication	Drug
 Hepatitis Delta Virus	<b>Lonafarnib + Ritonavir</b>
 Hepatitis Delta Virus	<b>Peginterferon Lambda</b>
 Progeria and Progeroid Laminopathies	<b>Lonafarnib</b>
 Post-Bariatric Hypoglycemia	<b>Avexitide</b>
 Congenital Hyperinsulinism	<b>Avexitide</b>






# ORPHAN DESIGNATION

Targeted Indication	Drug	Orphan US / EU
 Hepatitis Delta Virus	<b>Lonafarnib + Ritonavir</b>	✓
 Hepatitis Delta Virus	<b>Peginterferon Lambda</b>	✓
 Progeria and Progeroid Laminopathies	<b>Lonafarnib</b>	✓
 Post-Bariatric Hypoglycemia	<b>Avexitide</b>	✓
 Congenital Hyperinsulinism	<b>Avexitide</b>	✓






# BREAKTHROUGH THERAPY DESIGNATION

Targeted Indication	Drug	Orphan US / EU	Breakthrough Therapy
 Hepatitis Delta Virus	<b>Lonafarnib + Ritonavir</b>	✓	✓
 Hepatitis Delta Virus	<b>Peginterferon Lambda</b>	✓	✓
 Progeria and Progeroid Laminopathies	<b>Lonafarnib</b>	✓	✓
 Post-Bariatric Hypoglycemia	<b>Avexitide</b>	✓	✓
 Congenital Hyperinsulinism	<b>Avexitide</b>	✓	

# RARE PEDIATRIC DISEASE DESIGNATION

Targeted Indication	Drug	Orphan US / EU	Breakthrough Therapy	Rare Pediatric Disease
 Hepatitis Delta Virus	<b>Lonafarnib + Ritonavir</b>	✓	✓	N/A
 Hepatitis Delta Virus	<b>Peginterferon Lambda</b>	✓	✓	N/A
 Progeria and Progeroid Laminopathies	<b>Lonafarnib</b>	✓	✓	✓ *
 Post-Bariatric Hypoglycemia	<b>Avexitide</b>	✓	✓	N/A
 Congenital Hyperinsulinism	<b>Avexitide</b>	✓		✓ *

# LATE STAGE PIPELINE: VALUE CREATING CATALYSTS

Targeted Indication	Drug	Orphan US / EU	Breakthrough Therapy	Rare Pediatric Disease	Status
 Hepatitis Delta Virus	Lonafarnib + Ritonavir	✓	✓	N/A	Phase 3
 Hepatitis Delta Virus	Peginterferon Lambda	✓	✓	N/A	Phase 2
 Progeria and Progeroid Laminopathies	Lonafarnib	✓	✓	✓*	Rolling NDA
 Post-Bariatric Hypoglycemia	Avexitide	✓	✓	N/A	Phase 3 Ready
 Congenital Hyperinsulinism	Avexitide	✓		✓*	Phase 2

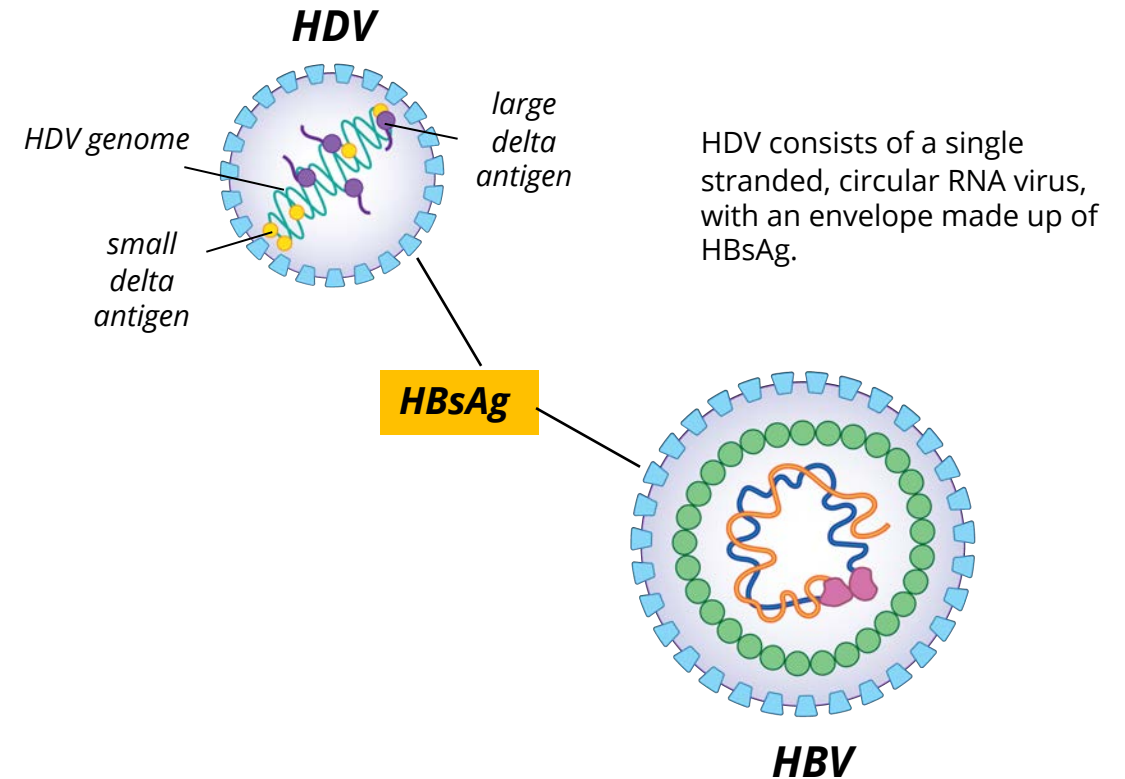




# HEPATITIS DELTA VIRUS (HDV)

## OVERVIEW

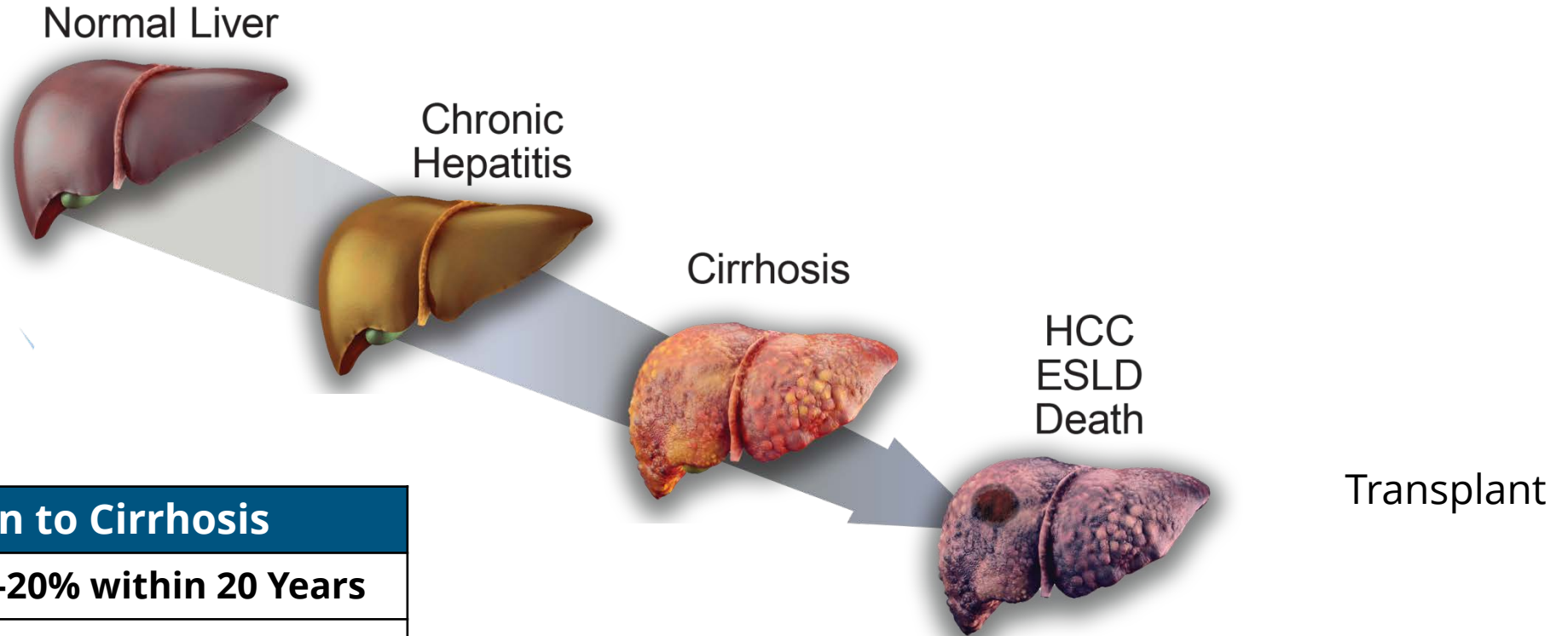
- HDV is the most severe form of human viral hepatitis
- HDV is always a co-infection with HBV
  - HBsAg acquired through protein prenylation
- 4-6% of HBV infected patients co-infected with HDV
- HDV causes more rapid disease progression
  - Compared to HBV mono-infection
- No FDA approved Rx
- 15-20 M HDV infected patients worldwide
  - > 100K HDV patients in US; > 200K HDV patients in EU
  - > 2 Million HDV patients in China



- HDV requires HBsAg to complete virus assembly
- HBsAg acquired through **PROTEIN PRENYLATION**

# HDV: MOST RAPID PROGRESSION OF VIRAL HEPATITIS

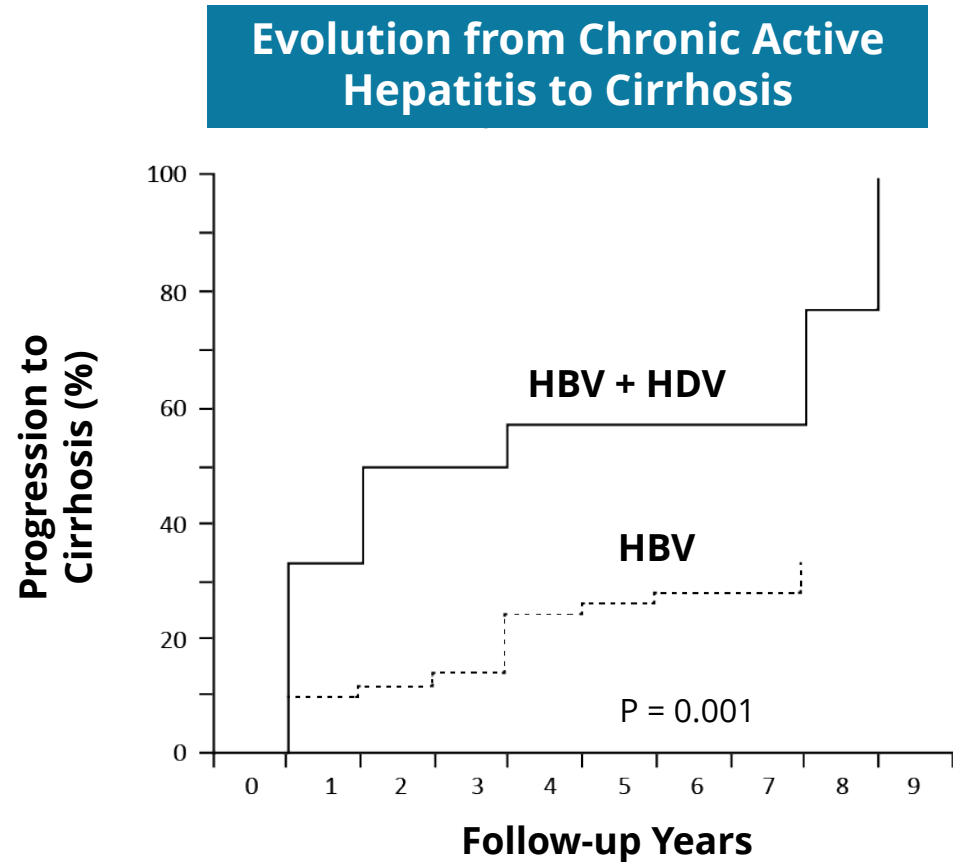
50% of HDV-Infected Patients are Cirrhotic at Diagnosis



Progression to Cirrhosis	
HCV	10-20% within 20 Years
HBV	20% within 5 Years
<b>HDV</b>	<b>70% within 5-10 Years</b>

# HDV CAUSES MOST RAPID DISEASE PROGRESSION

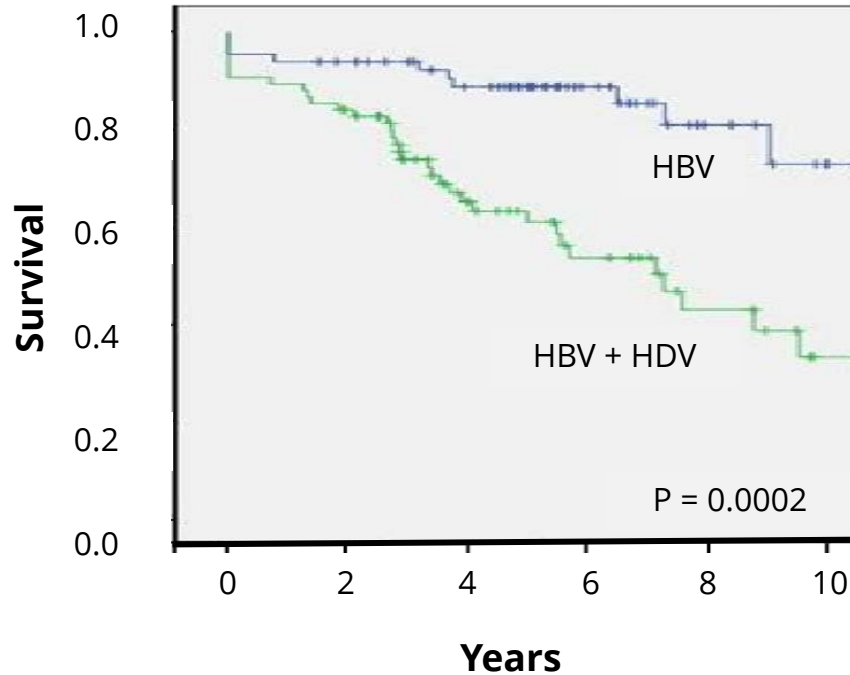
At Diagnosis, >50% of HDV Patients Are Cirrhotic



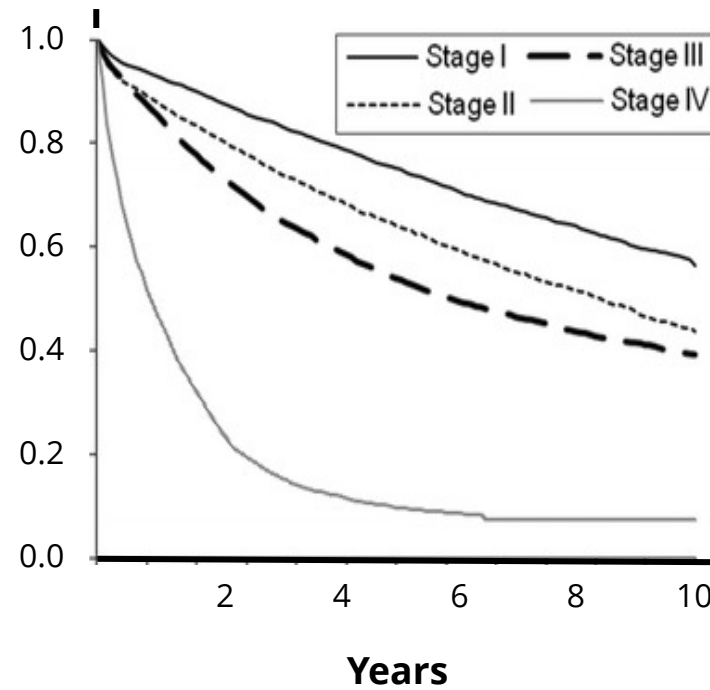
HBV Nucleoside Drugs:  
**No** Impact on HDV Infection

# SURVIVAL: HDV VS CANCER

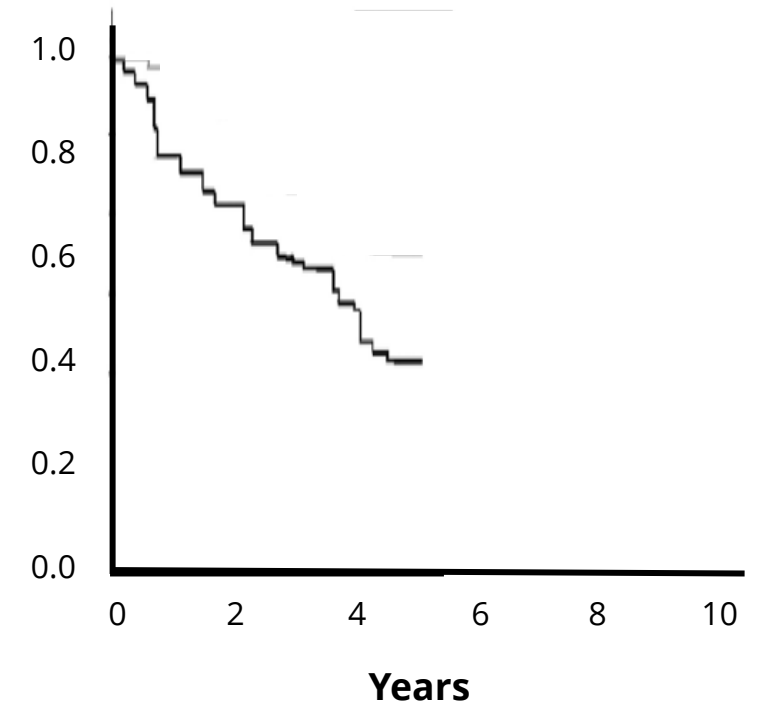
## HBV and HDV<sup>1</sup>



## Colorectal Cancer<sup>2</sup>



## Resected NSCLC<sup>3</sup>



<sup>1</sup>Serrano et al, EASL **2011**; <sup>2</sup>Cancer Causes Control, **2012**, 23:1421-1428; <sup>3</sup>Cerfolio et al, Ann Thorac Surg, **2007**, 84:182-90

# HDV CLINICAL COURSE AND OUTCOMES

HDV: A Devastating Disease with No Approved Treatment

## HIGH DISEASE BURDEN

**~70% Cirrhotic<sup>1</sup>**

Within  
5-10 years



## LOW SURVIVAL RATE

**~60% Mortality<sup>2</sup>**

Within  
10 years



## HIGH COST TRANSPLANTS

**~\$575K Cost<sup>3</sup>**

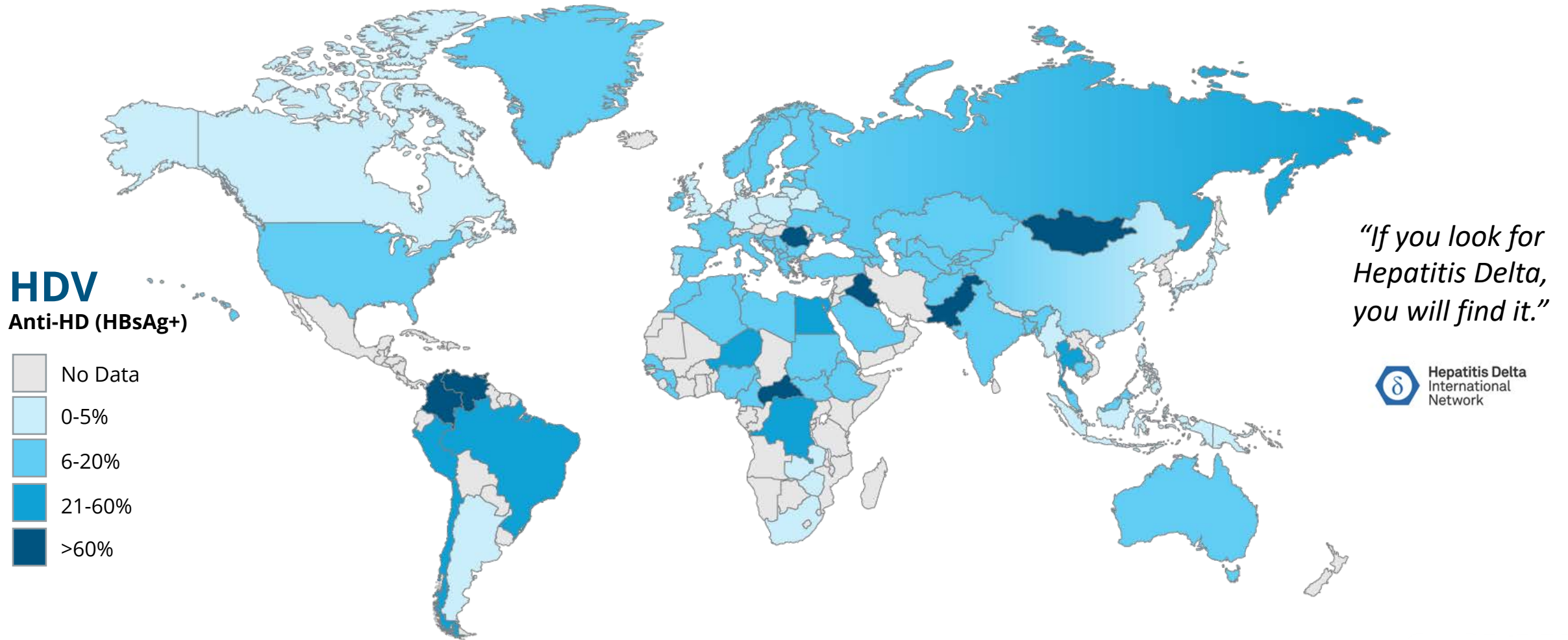
>14,000 Waiting List



**25% of People on Waiting List Die Each Year Before Receiving a Liver Transplant<sup>1</sup>**

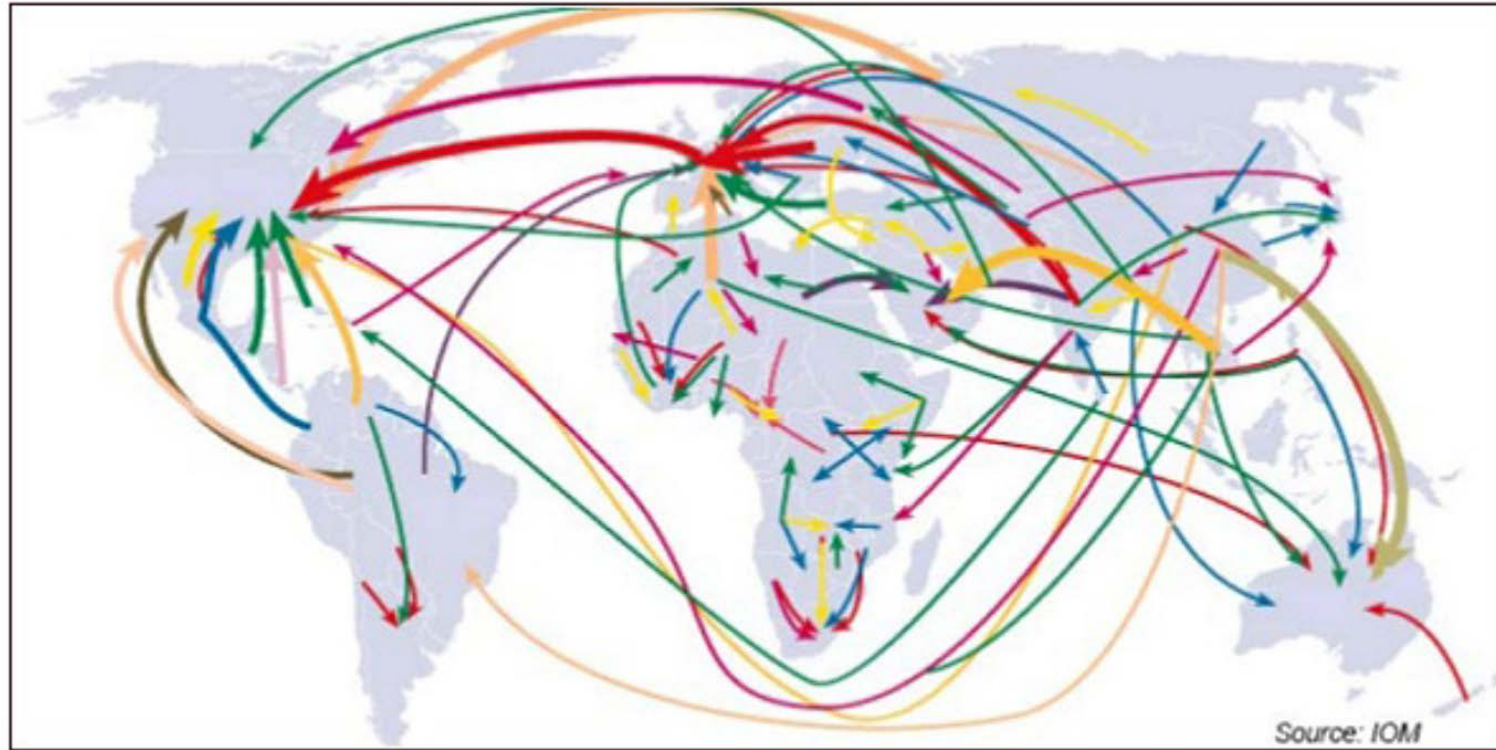
# HDV WORLDWIDE PREVALENCE: 15-20 MILLION

6% of HBV Population Co-Infected with HDV



# MIGRATION AND VIRAL HEPATITIS

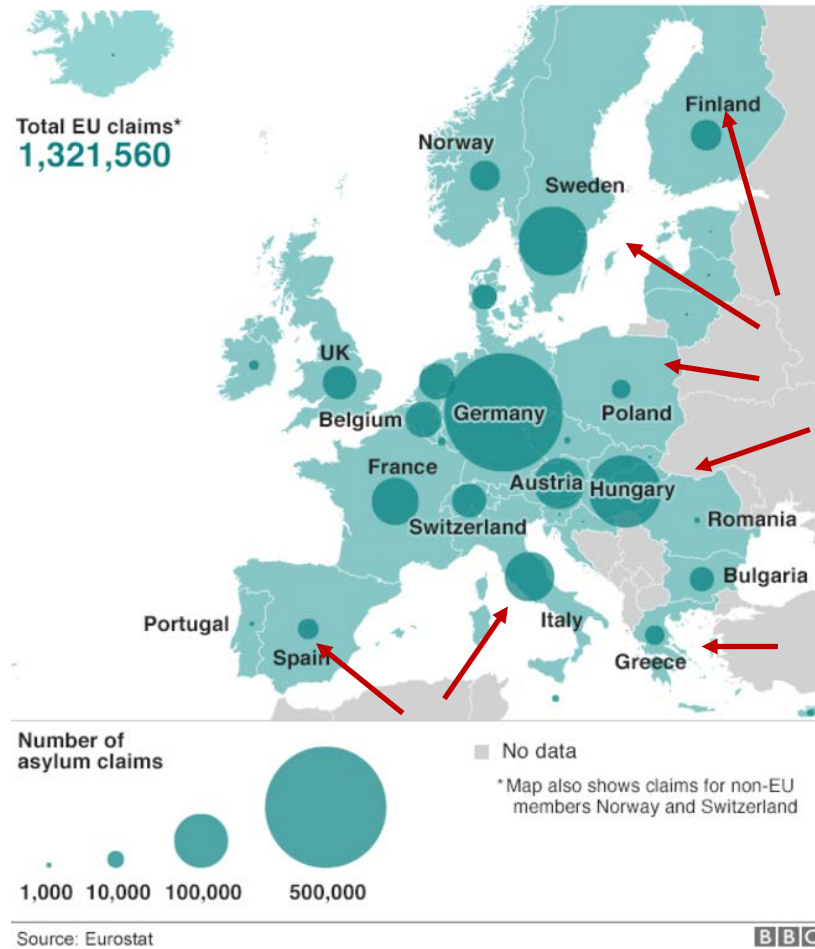
## Globalization of Disease



Foreign-born individuals now comprise majority of HDV population in North America and Western Europe

# MIGRATION INTO WESTERN EUROPE

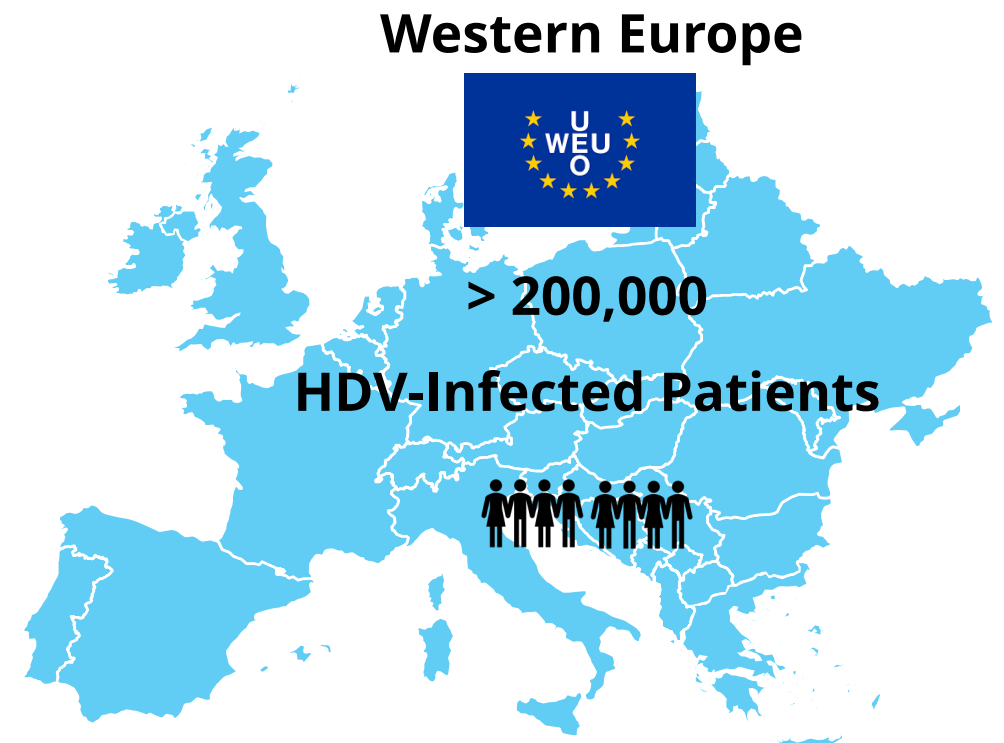
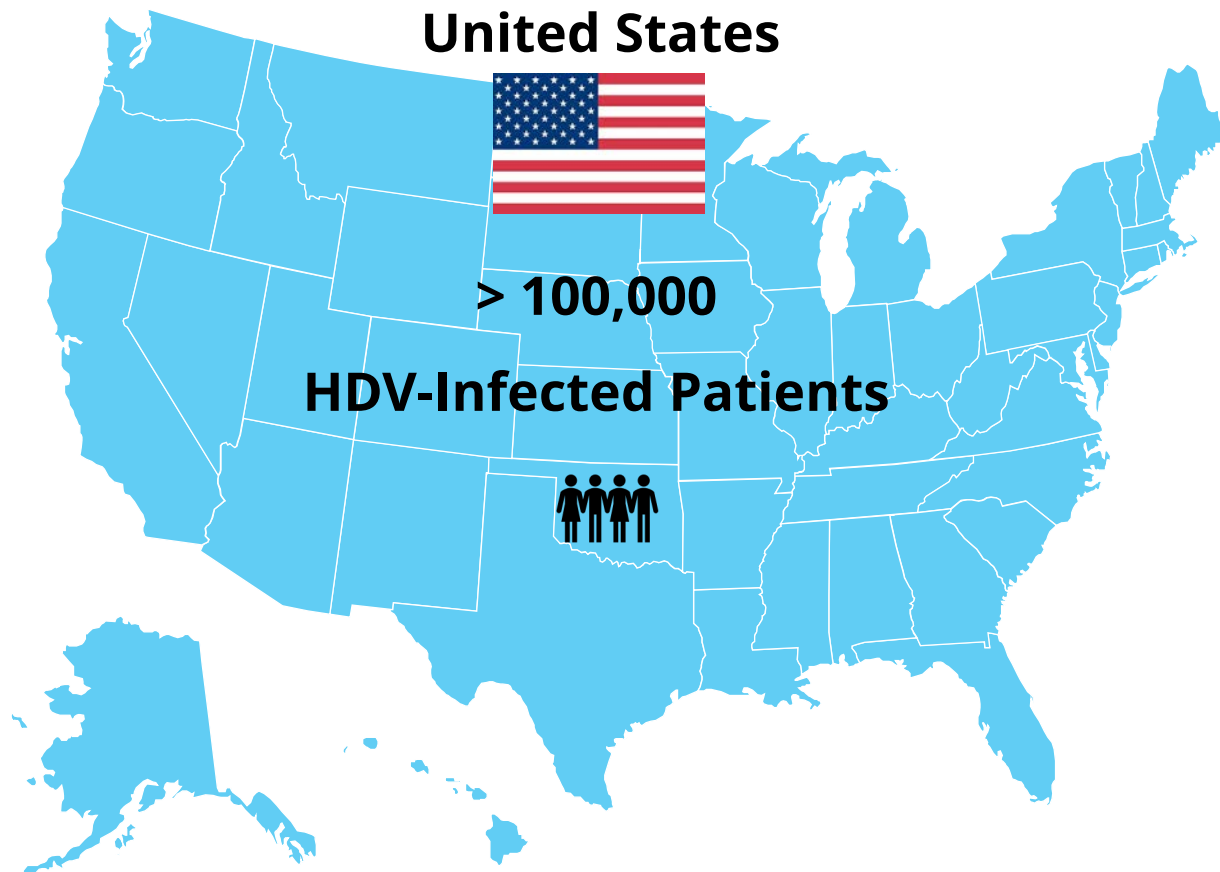
Known Claims for Asylum in 2015 > 1 Million





# HDV: A LARGE ORPHAN MARKET IN U.S. AND EUROPE

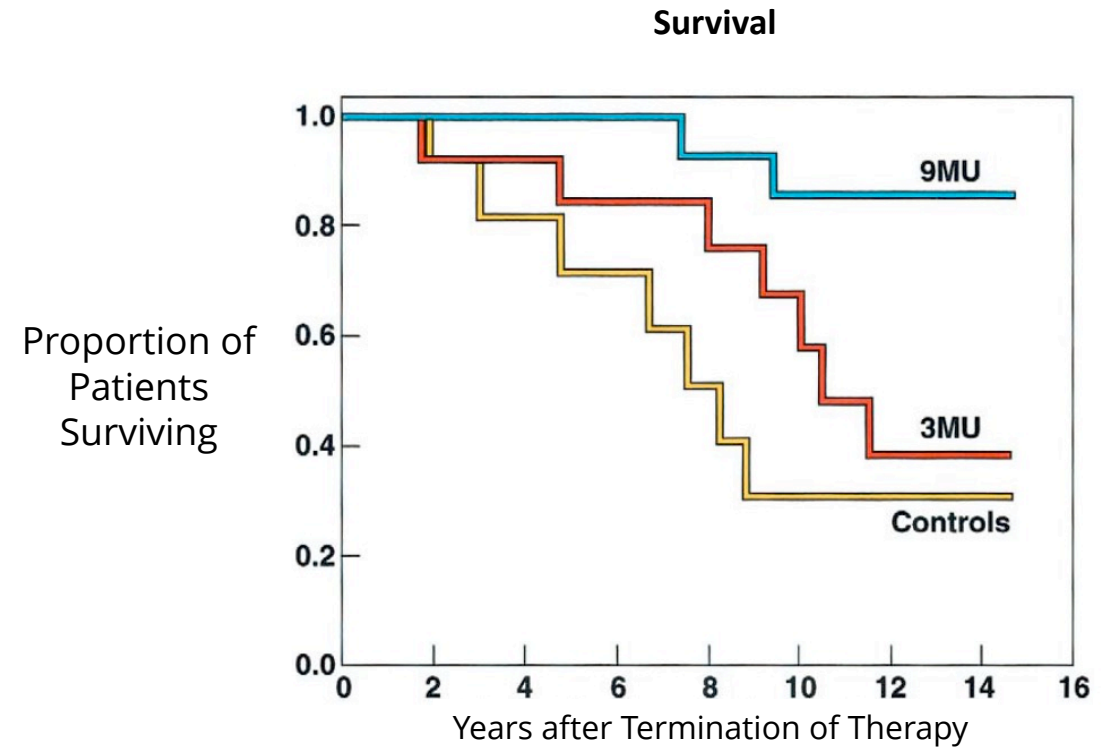
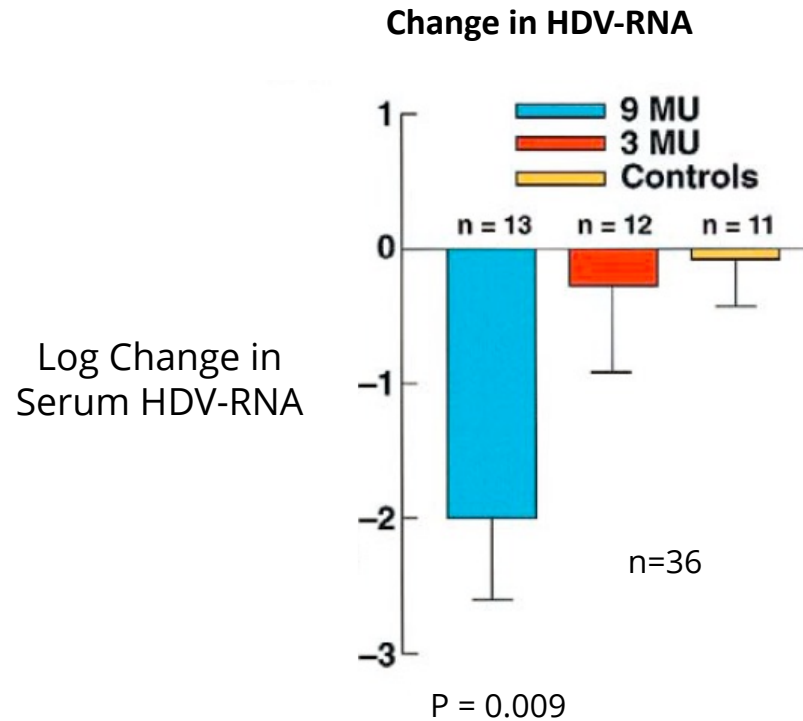
> 300,000 HDV-Infected Patients in U.S. and Europe



# REDUCING HDV-RNA WITH IFN $\alpha$ IMPROVES SURVIVAL

## HDV-RNA Suppression Improves Clinical Outcome

### Interferon- $\alpha$ for 48 weeks with 15 year Follow Up



Farci et al, *Gastroenterology* 2004: Long-Term Benefit of Interferon- $\alpha$  Therapy of Chronic HDV: Regression of Advanced Hepatic Fibrosis

# HBV Rx APPROVALS AND REGISTRATION ENDPOINTS

## Viral Load Reduction, Biochemical Response, Histologic Improvement

Brand (generic)	Approved	Primary Endpoint(s)	Secondary Endpoints(s)
Intron A <sup>®</sup> (interferon alfa-2b)	1991	• HBeAg + HBV DNA	• HBsAg + ALT + Histology
Epivir HBV <sup>®</sup> (lamivudine)	1998	• Histology* • HBeAg + HBV DNA	• ALT
Hepsera <sup>®</sup> (adefovir dipivoxil)	2002	• Histology*	• HBV DNA + ALT + HBeAg
Baraclude <sup>®</sup> (entecavir)	2005	• Histology*	• HBV DNA + ALT
Pegasys <sup>®</sup> (peginterferon alfa-2a)	2005	• HBeAg • HBV DNA • ALT	• Histology
Tyzeka <sup>®</sup> (telbivudine)	2006	• HBV DNA + HBeAg or ALT	• Histology + ALT
Viread <sup>®</sup> (tenofovir disoproxil fumarate)	2008	• HBV DNA + Histology	• ALT
Vemlidy <sup>®</sup> (tenofovir alafenamide)	2016	• HBV DNA	• ALT + HBsAg + HBeAg

# HDV TREATMENTS ARE NEEDED

## HBV Therapies in Development Do Not Eradicate HDV

- HDV is the most severe form of hepatitis
- HDV requires only small amounts of HBsAg to complete viral packaging
- Theoretically, sterilizing HBV cure is the only way to obviate a need for an HDV cure
- **Sterilizing HBV cure**: Nowhere in sight
- **Functional HBV cure**: Not yet; will combinations be identified, developed in our lifetime?

**HDV treatments:**

**In Phase 3 and on track to be approved within the next 2-3 years!**



**THE FORUM**  
For Collaborative Research<sup>SM</sup>

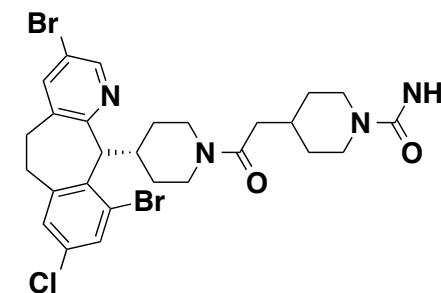
FRONTIERS IN DRUG DEVELOPMENT FOR HEPATOLOGY  
**HEP DART 2019**  
KAUAI, HAWAII, USA • 8-12 DECEMBER 2019



# LONAFARNIB FOR HDV




## First and Only ORAL Agent in Development for HDV

- Small molecule, first-in-class, oral, prenylation inhibitor
- Well-characterized in patients
  - > 2,000 patients dosed in oncology program by Merck (Schering)
  - > 90 children dosed in Progeria program by Boston Children's Hospital
  - > 170 patients dosed in HDV program
  - Longest duration of dosing > 10 years
- Most common experienced AEs are GI related (class effect)
- Issued patent covering broad range of lonafarnib + ritonavir doses and durations
  - US, Europe, Japan, China and South Korea



# LONAFARNIB PHASE 2 PROGRAM

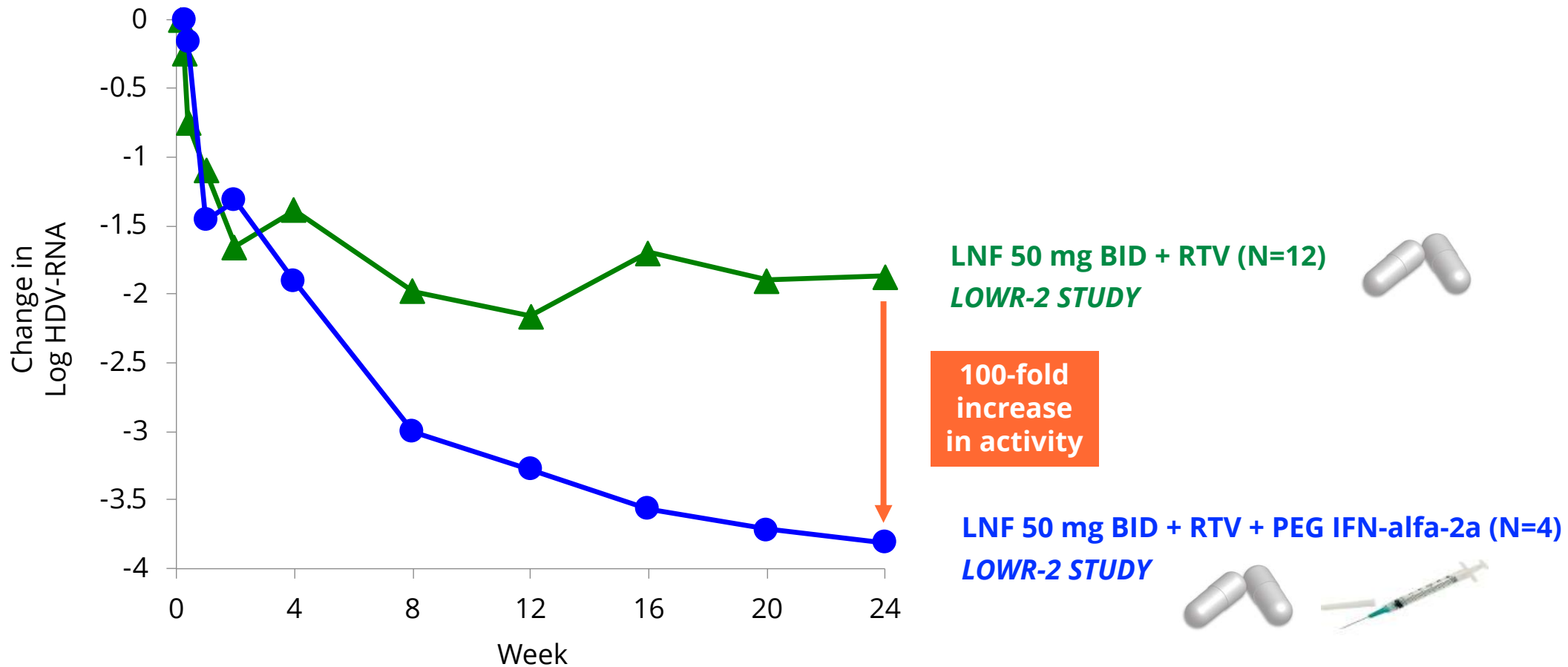
## Identifying Dose and Regimen for Registration N=129

• <b>Proof of Concept</b>			
- Monotherapy	N = 14		
• <b>LOWR HDV – 1</b>			
- ± RTV or PEG IFN $\alpha$	N = 21		
• <b>LOWR HDV – 2</b>			
- Dose Finding ± PEG IFN $\alpha$	N = 58		
• <b>LOWR HDV – 3</b>			
- QD Dose	N = 21		
• <b>LOWR HDV – 4</b>			
- Dose-Escalation	N = 15	MHH Hannover Medical School	

LOWR HDV = LOnafarnib With Ritonavir in HDV

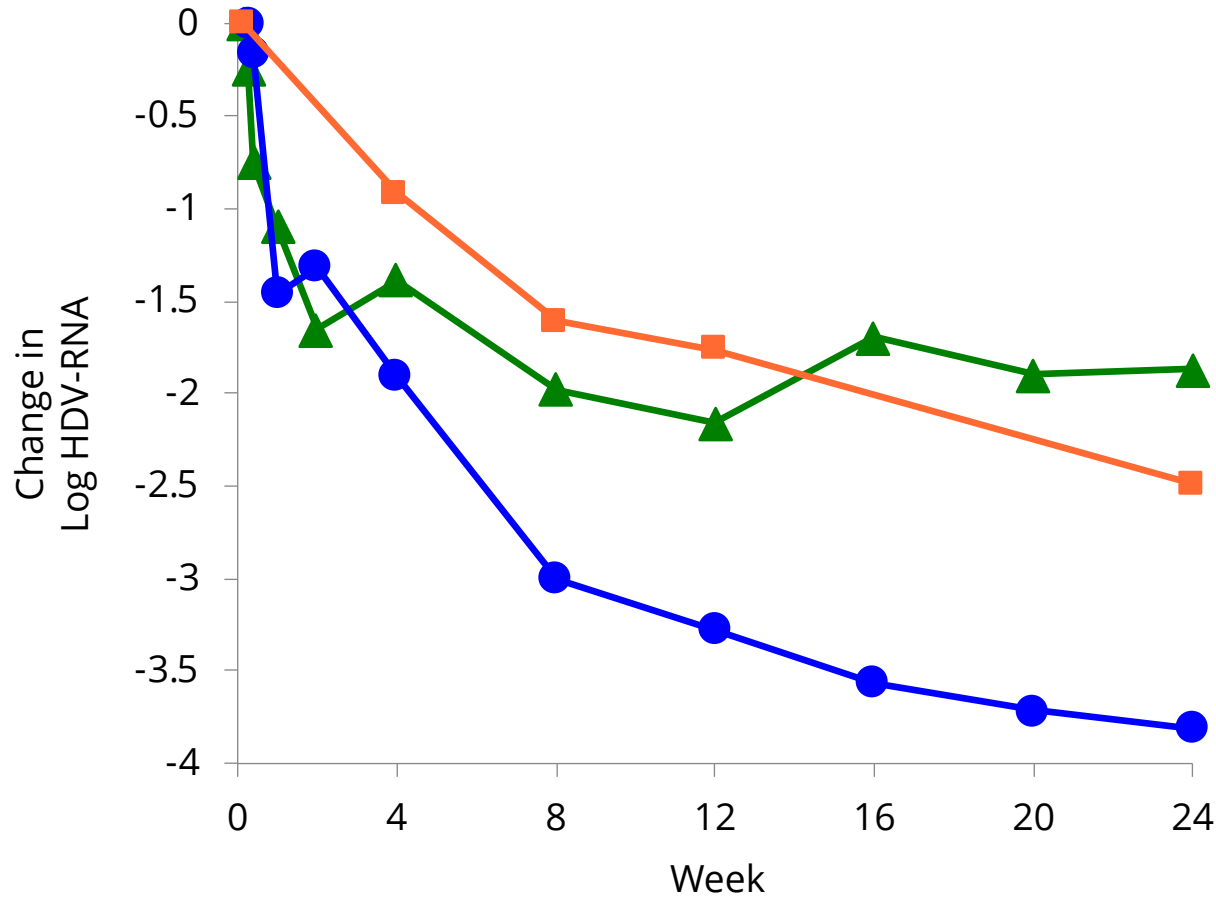
# LONAFARNIB PHASE 2 DATA

## Two Lonafarnib-based Regimens Identified for Registration



# LONAFARNIB PHASE 2 DATA

Compared to PEG-IFN-alfa-2a Alone



**LNF 50 mg BID + RTV (N=12)**  
*LOWR-2 STUDY*



**PEG IFN-alfa-2a ± tenofovir (N=91)**  
*HIDIT-1 STUDY*



**LNF 50 mg BID + RTV + PEG IFN-alfa-2a (N=4)**  
*LOWR-2 STUDY*





# LONAFARNIB PHASE 2 HDV PROGRAM

Composite Endpoint:  $\geq 2$  Log Decline HDV RNA + ALT Normalization

- All-oral:

- Lonafarnib boosted with Ritonavir
- **Composite endpoint: 29%**



- Combination:

- Lonafarnib boosted with Ritonavir + PEG IFN-alfa-2a
- **Composite endpoint: 63%**

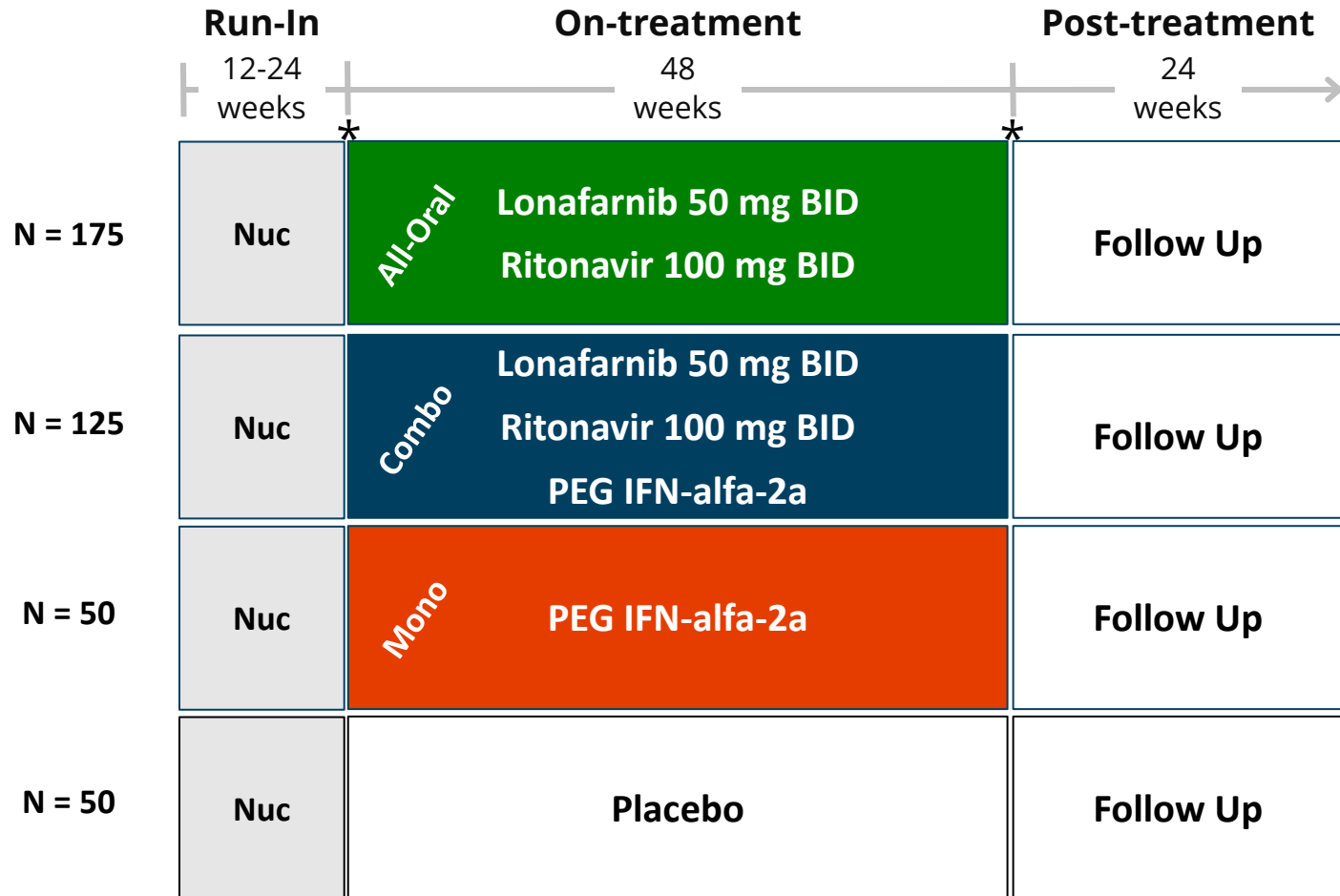


- Predominant AEs were GI-related (mild / moderate)

# D-LIVR : PHASE 3 GLOBAL STUDY



## Delta-Liver Improvement and Virologic Response in HDV



### Primary Endpoint at Week 48

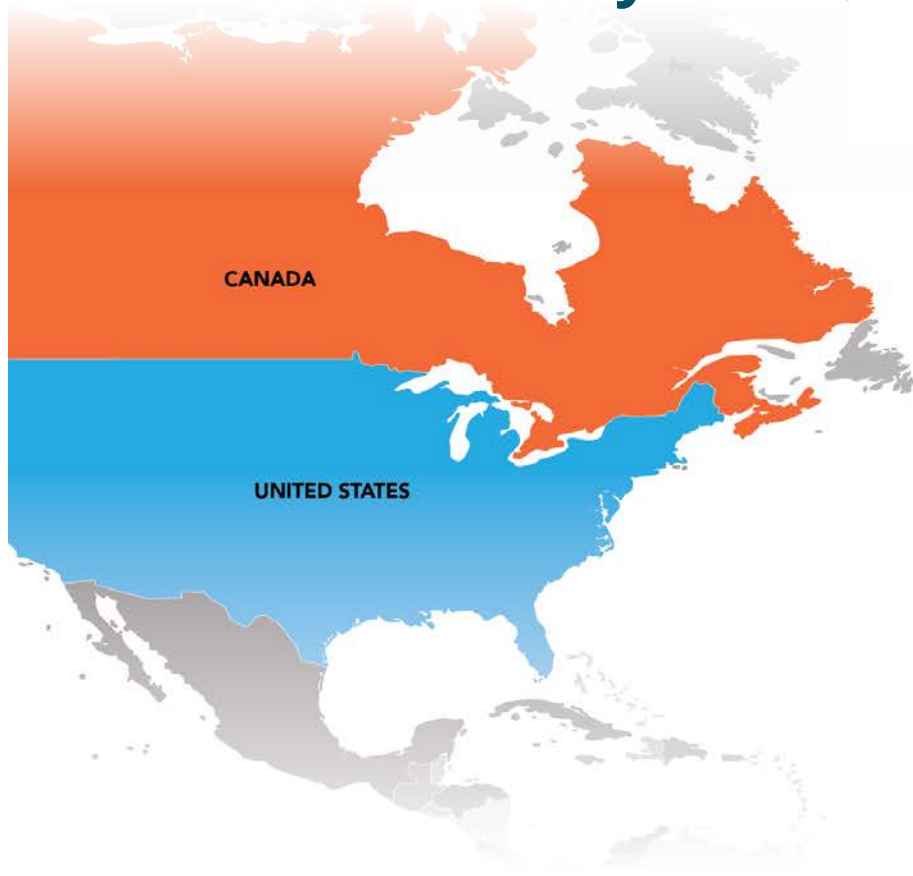
- $\geq 2$  log decline in HDV RNA  
+  
Normalization of ALT

### Secondary Endpoint at Week 48

- Histologic improvement
  - $> 2$ -point improvement in HAI inflammatory score
  - No progression in fibrosis
- Improvement of fibrosis

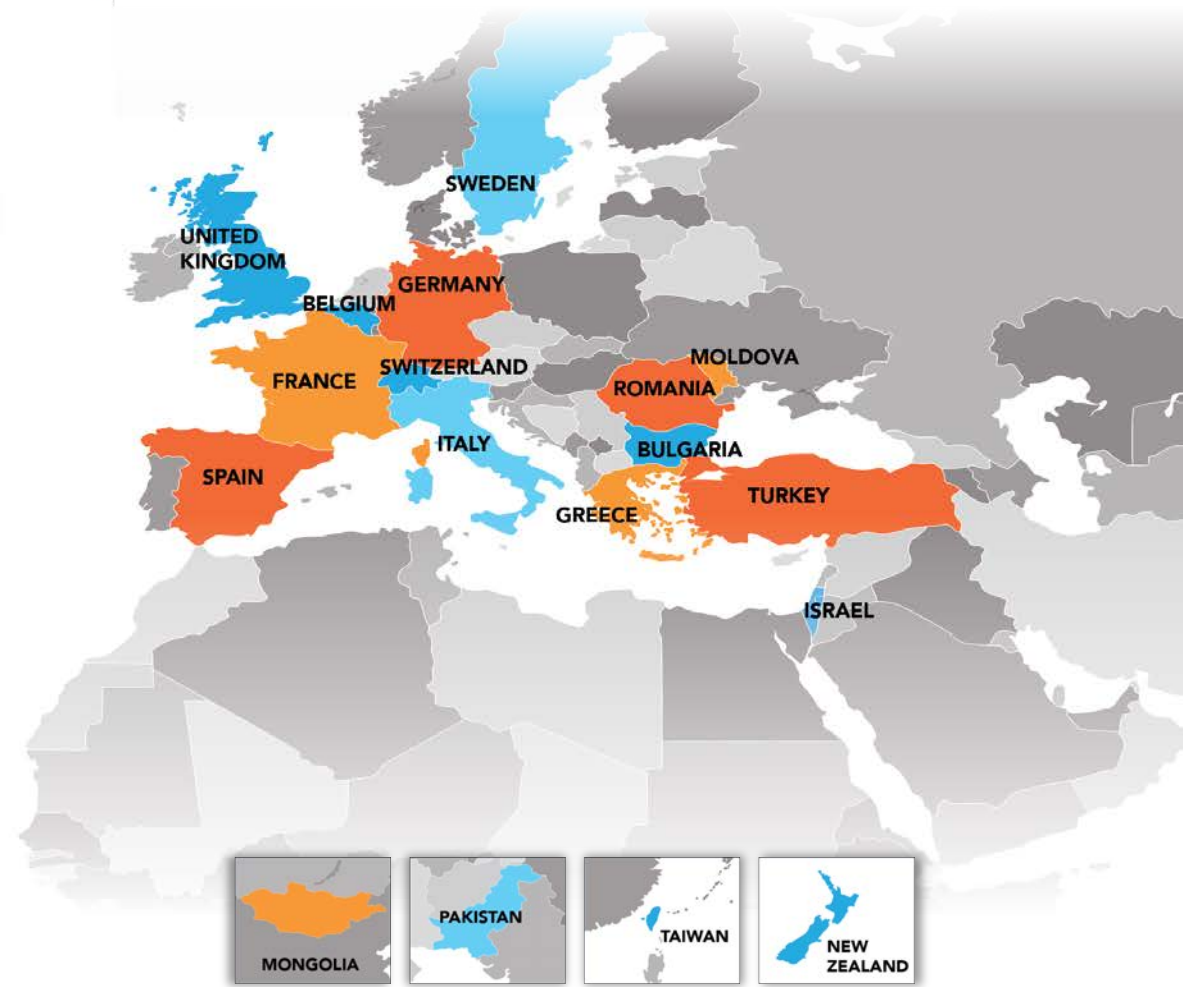
# D-LiVR

## Global Study



# HDV PHASE 3 SITES

20 COUNTRIES | 103 SITES





**A Global Phase 3 Study with the ONLY ORAL Treatment in Development for Hepatitis Delta Virus (HDV) Infection**



**WORKING TO CHANGE THE FACE OF HDV**

[www.clinicaltrials.gov: NCT03719313](http://www.clinicaltrials.gov/NCT03719313)

[www.eigerbio.com](http://www.eigerbio.com)  
[DLIVR@eigerbio.com](mailto:DLIVR@eigerbio.com)



## > 80 SITES ACTIVATED; ~100 PLANNED

### UNITED STATES

California: Fresno, Los Angeles, Palo Alto, Sacramento  
Connecticut: New Haven  
Florida: Miami  
Illinois: Chicago  
Iowa: Iowa City  
Maryland: NIH Bethesda  
Michigan: Detroit  
New York: New York, Rochester  
Oklahoma: Norman  
Texas: Dallas, Houston

### BELGIUM

Antwerpen, Bruxelles, Edegem, Liege

### BULGARIA

Sofia, Stara Zagora

### CANADA

Calgary, Montreal, Toronto

### FRANCE

Clichy, Grenoble, Lyon, Nice, Pessac, Stasbourg, Villejuif

### GERMANY

Berlin, Dusseldorf, Essen, Frankfurt, Freiburg, Hamburg, Hannover, Tuebingen

### GREECE

Athens

### ISRAEL

Afula, Beer-Sheva, Haifa, Jerusalem, Nahariya, Ramat Gan

### ITALY

Brescia, Foggia, Messina, Milano, Modena, Napoli, Parma, Pisa, Roma, Torino

### MOLDOVA

Chisinau

### MONGOLIA

Ulaanbaatar

### NEW ZEALAND

Auckland

### PAKISTAN

Karachi

### ROMANIA

Bucuresti, Cluj-Napoca

### SPAIN

Barcelona, Madrid, Valencia

### SWEDEN

Falun, Huddinge, Malmo

### TAIWAN

Changhua, Chia-Yi City, Kaohsiung, Taipei, Taoyan

### TURKEY

Diyarbakir, Istanbul, Izmir

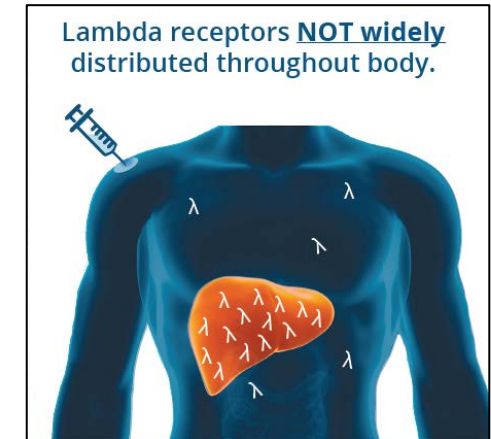
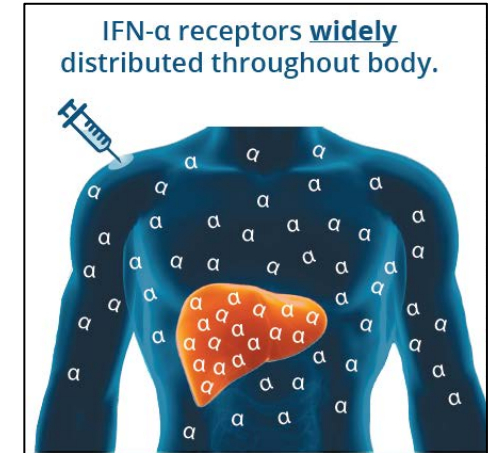
### UNITED KINGDOM

Glasgow, London

# PEGINTERFERON LAMBDA

## A Better Tolerated Interferon

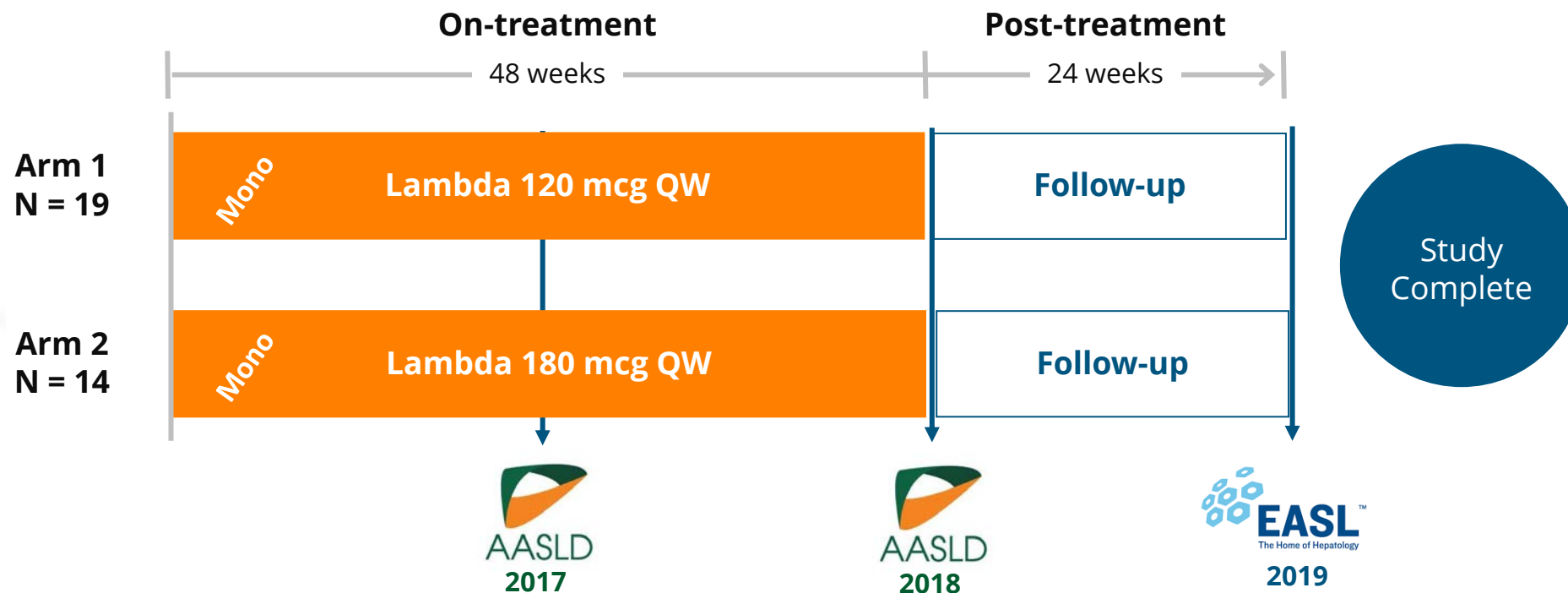
- A novel first in class Type III interferon
- Binds to a unique receptor versus Type I interferons
  - Highly expressed on hepatocytes
  - Limited expression on hematopoietic cells and CNS cells
- Uses similar downstream signaling pathway as Type I interferons
- Greater than 3,000 patients in 17 clinical trials (HCV / HBV)
- Comparable antiviral activity with less of the typical IFN alfa related side effects\*



\* Chan, HLY et al, J Hepatology 2016

# LIMT: PHASE 2 LAMBDA MONOTHERAPY STUDY

## A Better Tolerated Interferon for Monotherapy



### Primary Endpoint:

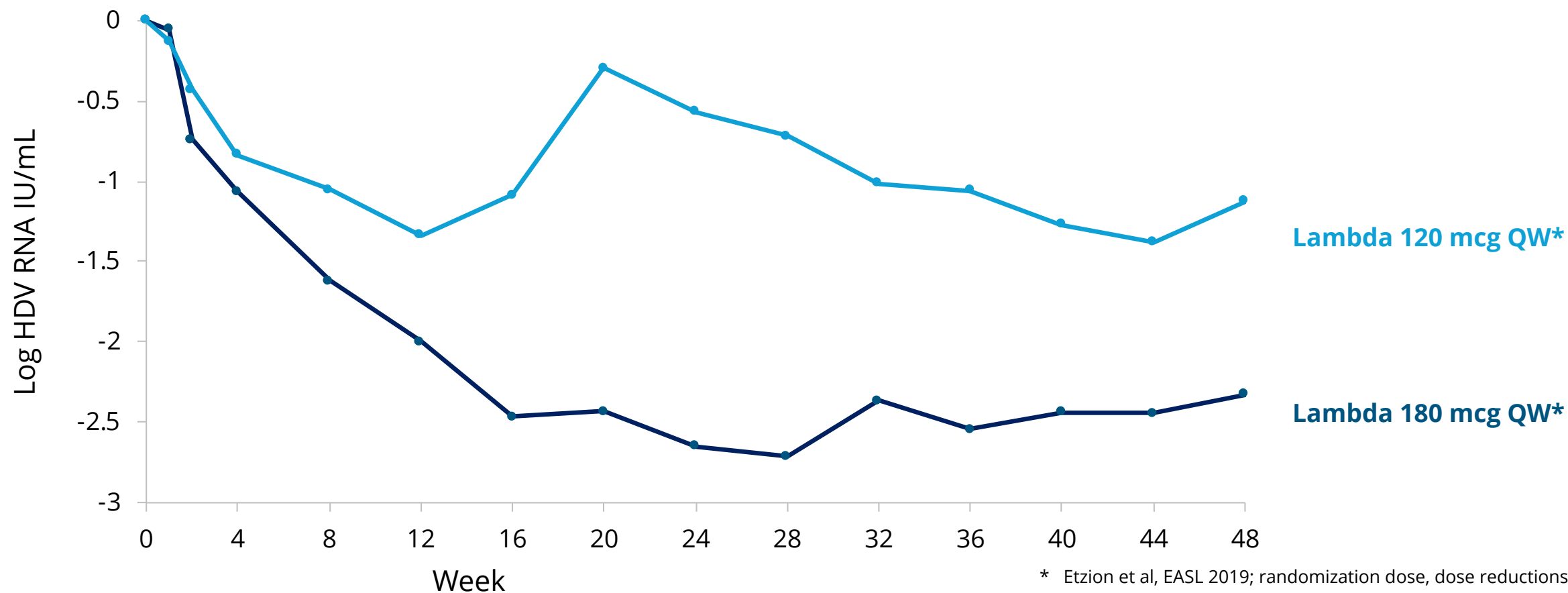
- Evaluate Safety, Tolerability, Efficacy

### Secondary Endpoint:

- Proportion of Patients with HDV RNA BLQ 24 weeks after EOT

# HDV-RNA REDUCTION WITH LAMBDA THRU WEEK 48

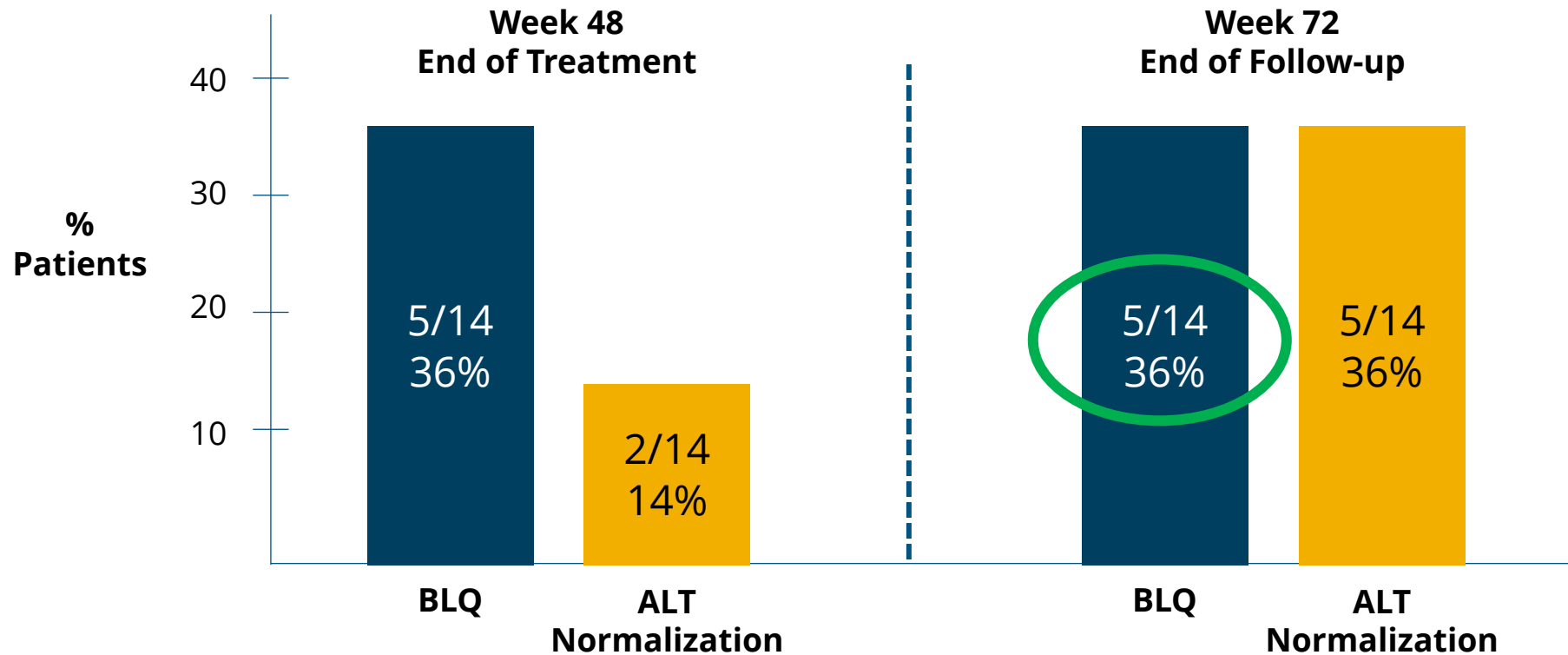
Lambda 180 mcg Better than Alfa 180 mcg with Improved Tolerability



\* Etzion et al, EASL 2019; randomization dose, dose reductions allowed

# LAMBDA: 36% DURABLE VIROLOGIC RESPONSE (DVR)\*

DVR Endpoint with Lambda Monotherapy to Be Discussed with Regulatory Agencies



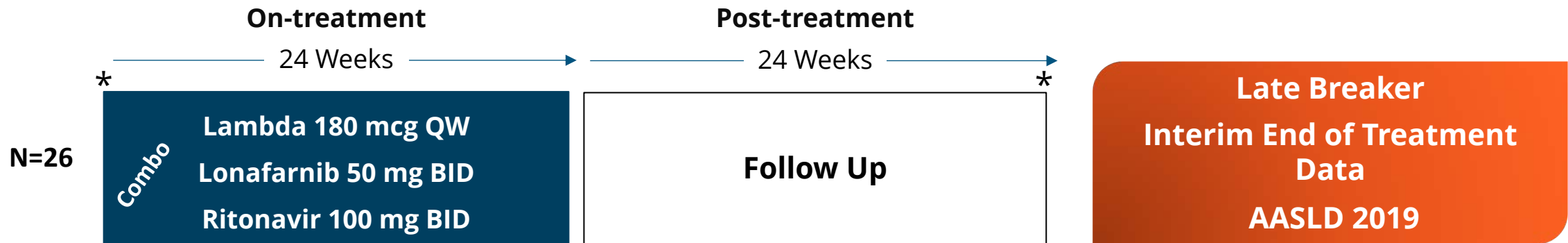
DVR = BLQ at 24 Weeks Post-Treatment

Etzion et al, EASL 2019



# LIFT: PHASE 2 LAMBDA – LONAFARNIB COMBO STUDY

## A Better Tolerated Interferon for Combination



\* biopsy

**Primary Endpoint:**

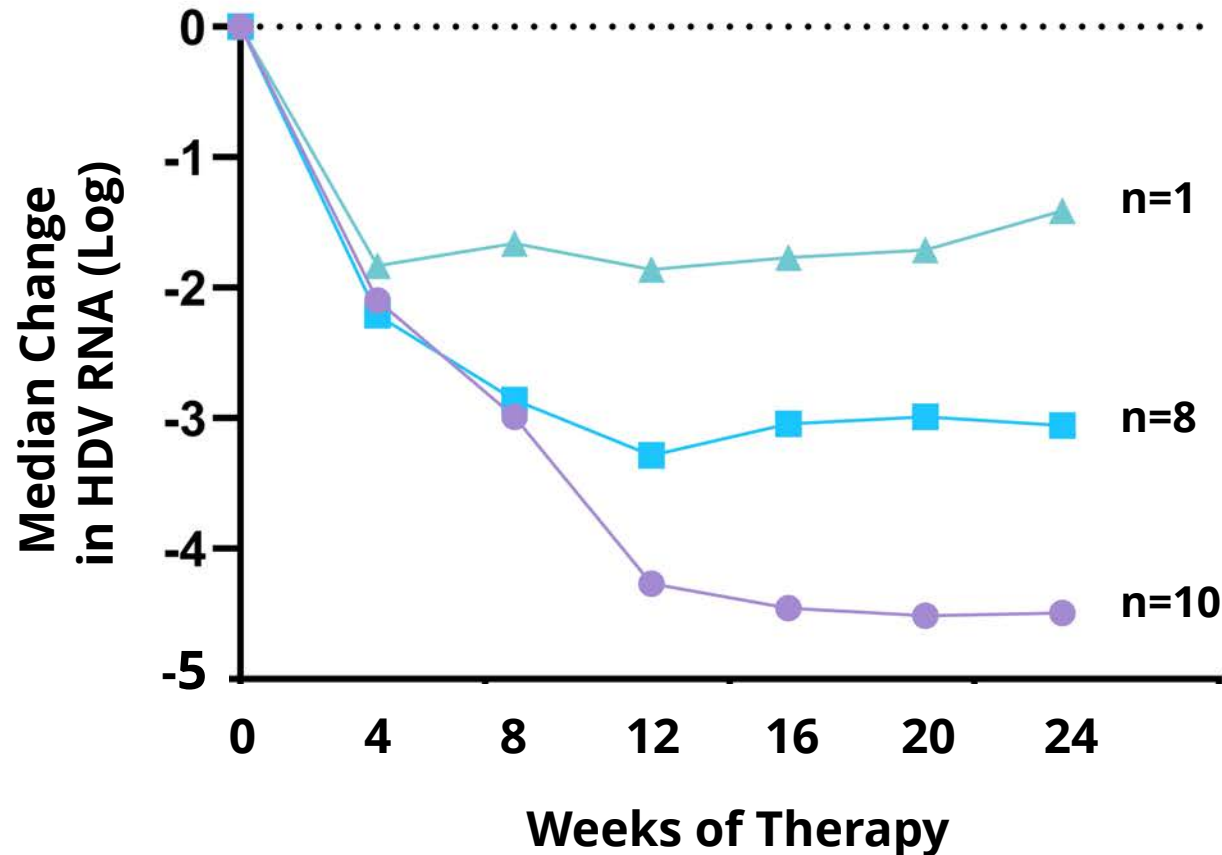
- > 2 Log HDV RNA reduction at EOT

**Secondary Endpoint:**

- Histological Improvement (biopsy confirmed)

# >50% HDV RNA UNDETECTABLE / BLQ AT WEEK 24




95% of Patients Achieve >2 Log Decline in HDV RNA



% of Patients	Week 24 HDV RNA
95%	> 2 Log Decline
53%	BLQ
37%	Undetectable

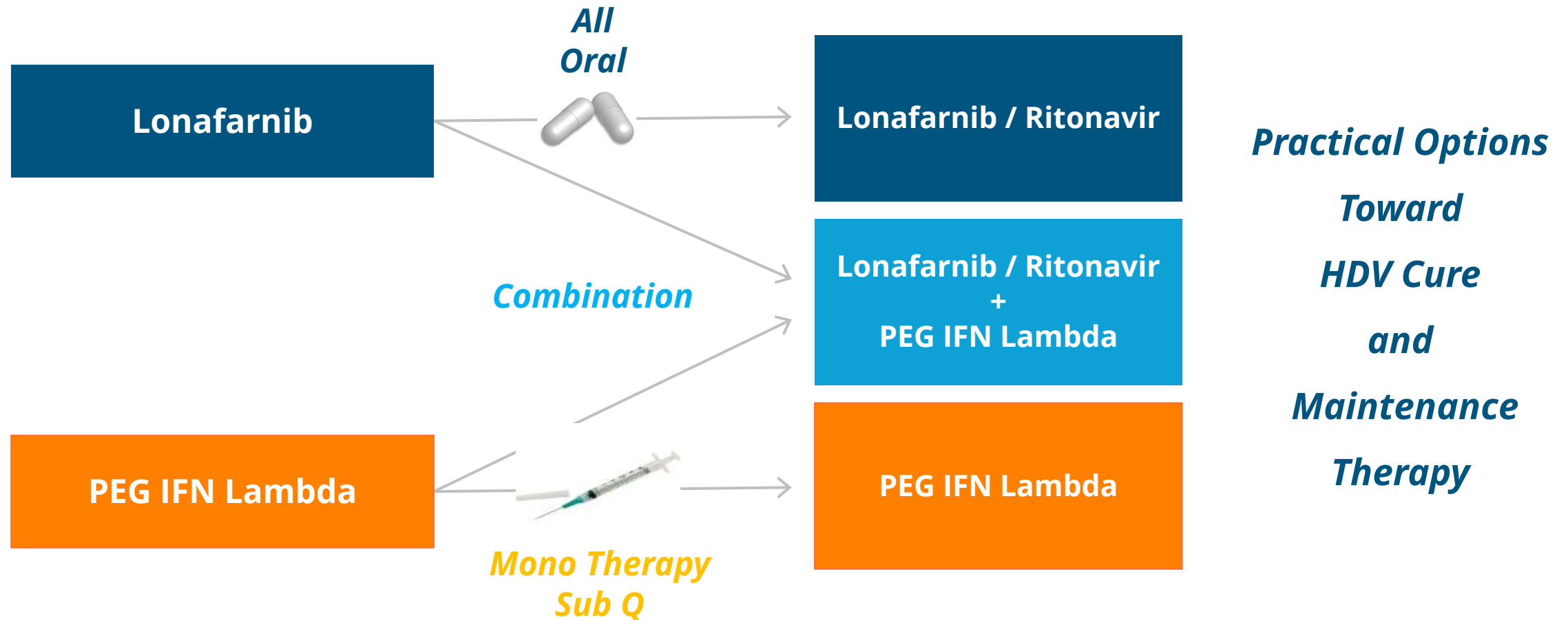
# LIFT: LAMBDA - LONAFARNIB COMBO STUDY

## A Better Tolerated Interferon for Combination

- Interim End of Treatment Week 24 data (N=19) 
  - 95% (18/19) achieve >2 log decline in HDV RNA
  - >50% (10/19) achieve undetectable or BLOQ HDV RNA
  - Median Decline of HDV RNA: -3.4 log
  - Most common adverse events were gastrointestinal related
- End of Treatment Week 24 data expected 
- End of Study Data Week 48 data expected 

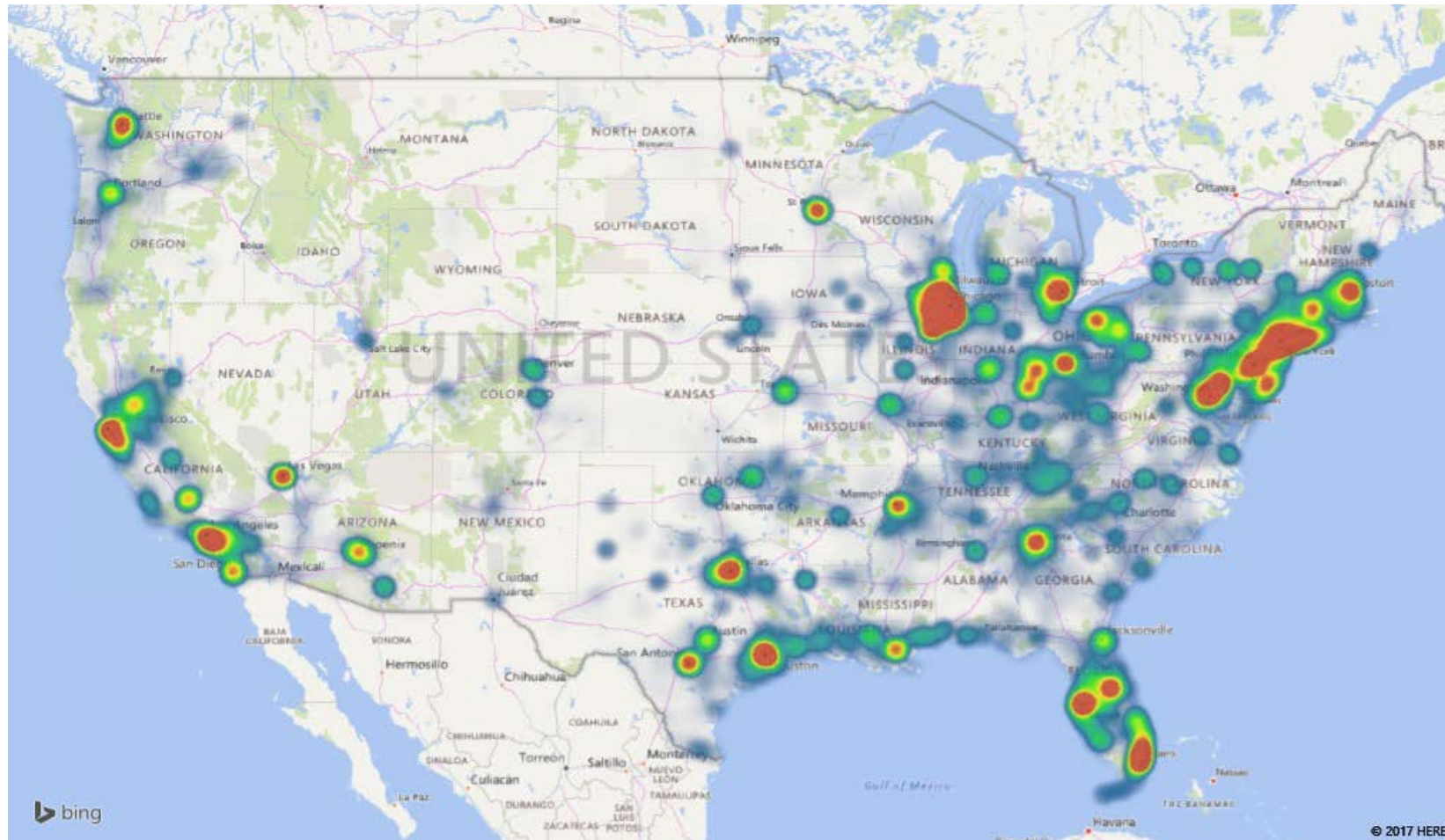
# FIRST-IN-CLASS TREATMENTS IN DEVELOPMENT FOR HDV

## Multiple Treatment Options for Patients



# U.S. MAJOR METRO HOTSPOTS IDENTIFIED

HDV Geographic Footprint is Growing

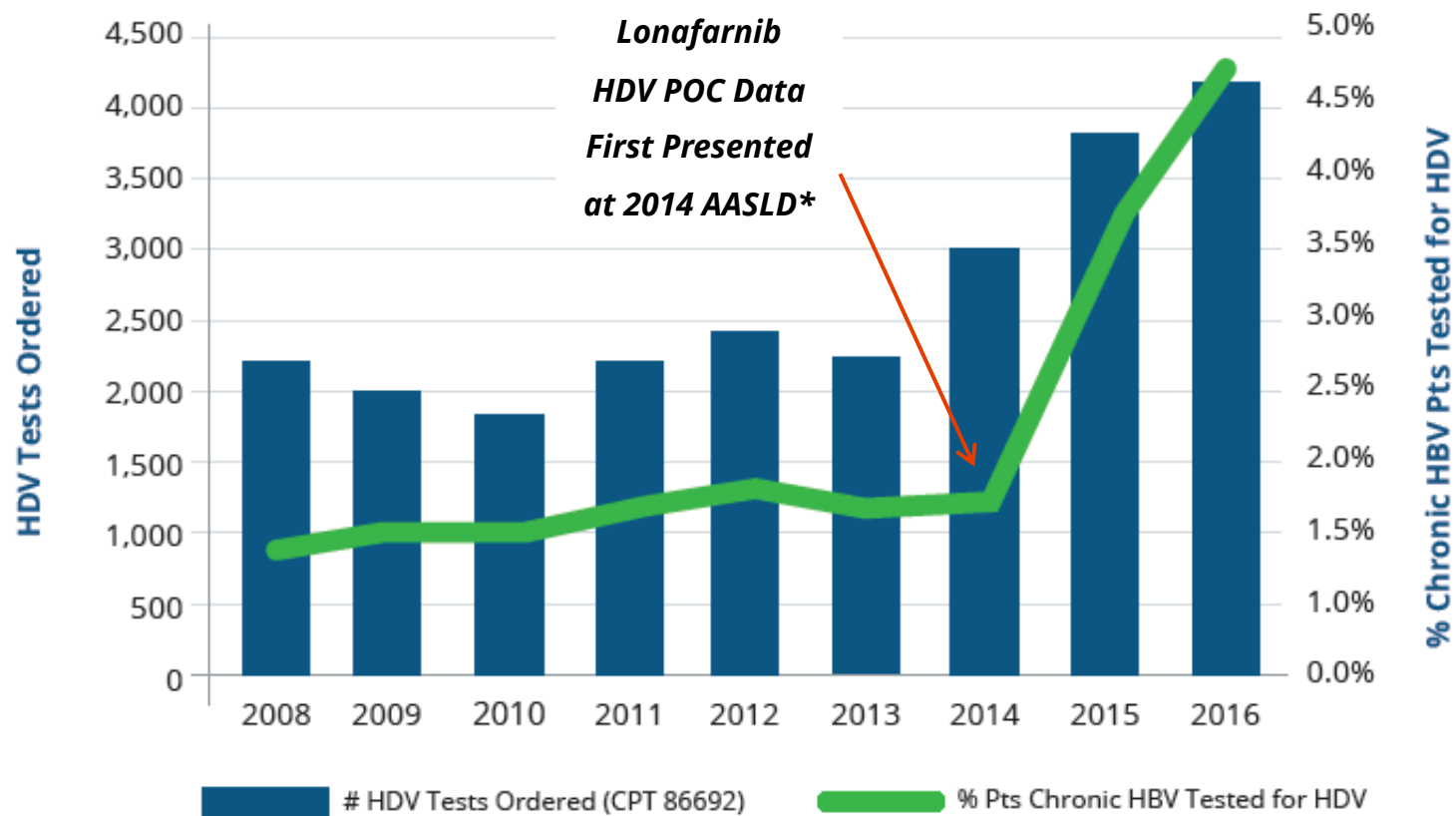


## Top 10 U.S. Cities in 2016

1. Chicago, Illinois
2. Berwyn, Illinois
3. Brooklyn, New York
4. Corona, New York
5. Waukegan, Illinois
6. New York, New York
7. Bronx, New York
8. Jamaica, New York
9. Lombard, New York
10. Aurora, Illinois

# INCREASE IN HDV TESTING IN THE U.S.

## Increasing % of Chronic HBV Patients Tested for HDV



Poster, DDW 2017, "Prevalence of Hepatitis Delta Virus (HDV) Infection in the United States: Results from an ICD-10 Review"

# COMMERCIAL HDV RNA PCR TESTS NOW AVAILABLE IN U.S.

## Building the HDV Market

- Commercial HDV RNA PCR tests available at:

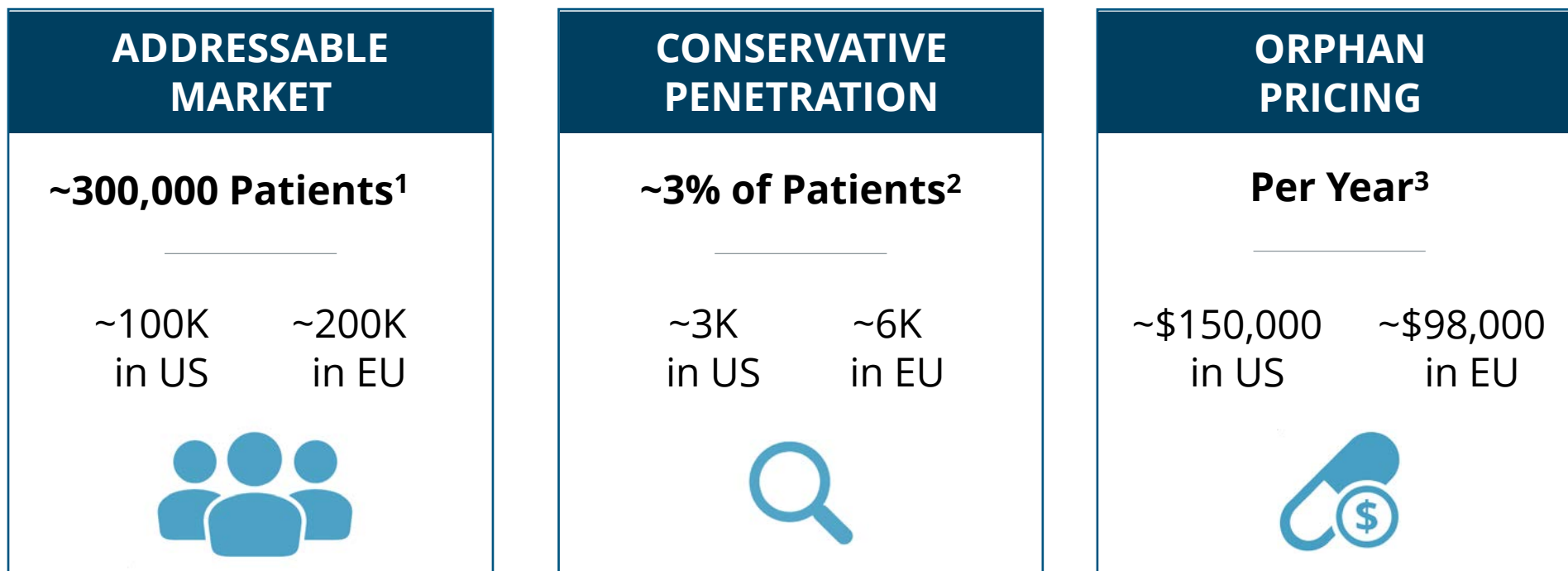


- EASL treatment guidelines recommend screening HBsAg (+) patients for HDV
- AASLD treatment guidelines recommend screening high-risk HBsAg (+) patients for HDV

**All HBV-infected patients should be tested for HDV**

# HDV MARKET OPPORTUNITY

## Conservative Market Penetration, Orphan Pricing



**>\$1B Potential Peak Year Market Opportunity<sup>2,3</sup>**



# MONGOLIA: 60% HDV CO-INFECTION IN HBV PATIENTS

Highest Rate in the World of Hepatocellular Carcinoma

HEPATOLOGY

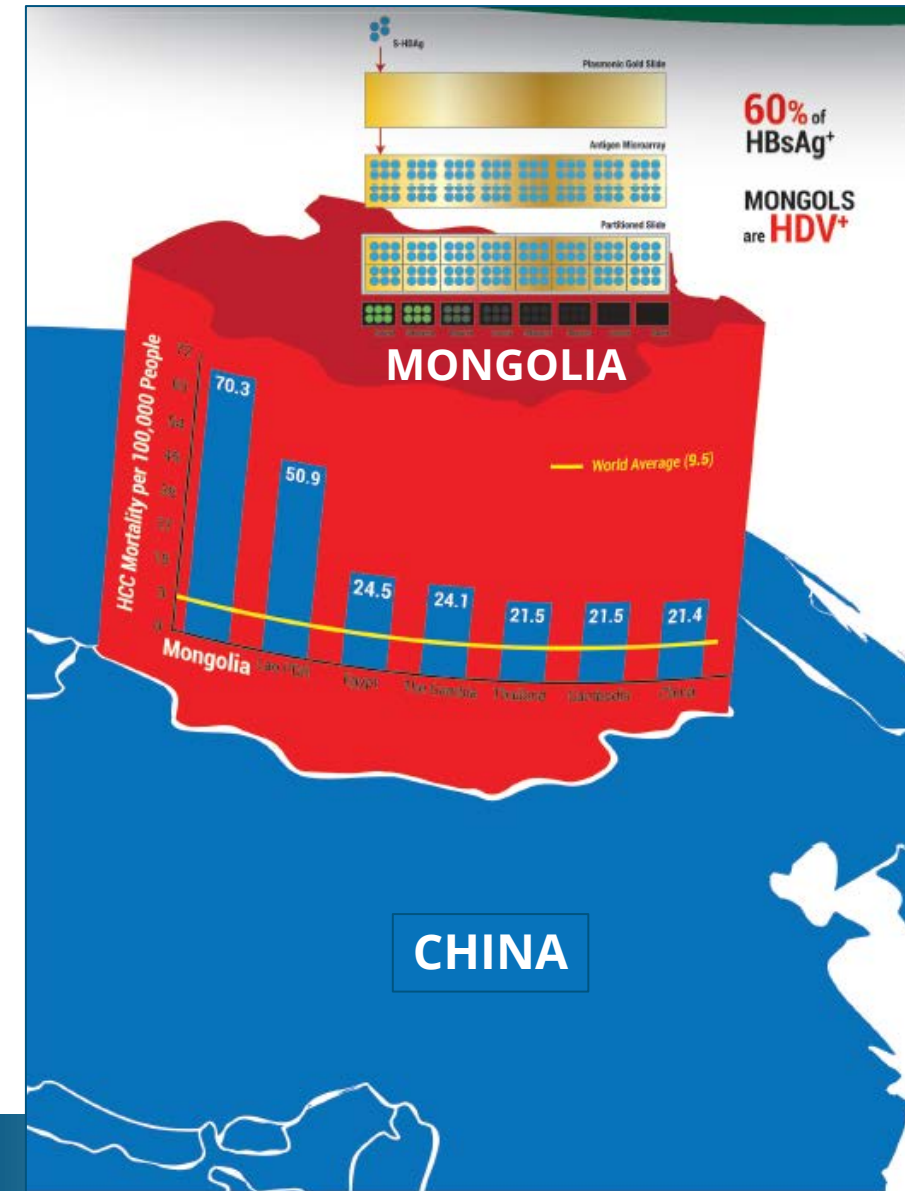
HEPATOLOGY, VOL. 66, NO. 6, 2017



VIRAL HEPATITIS

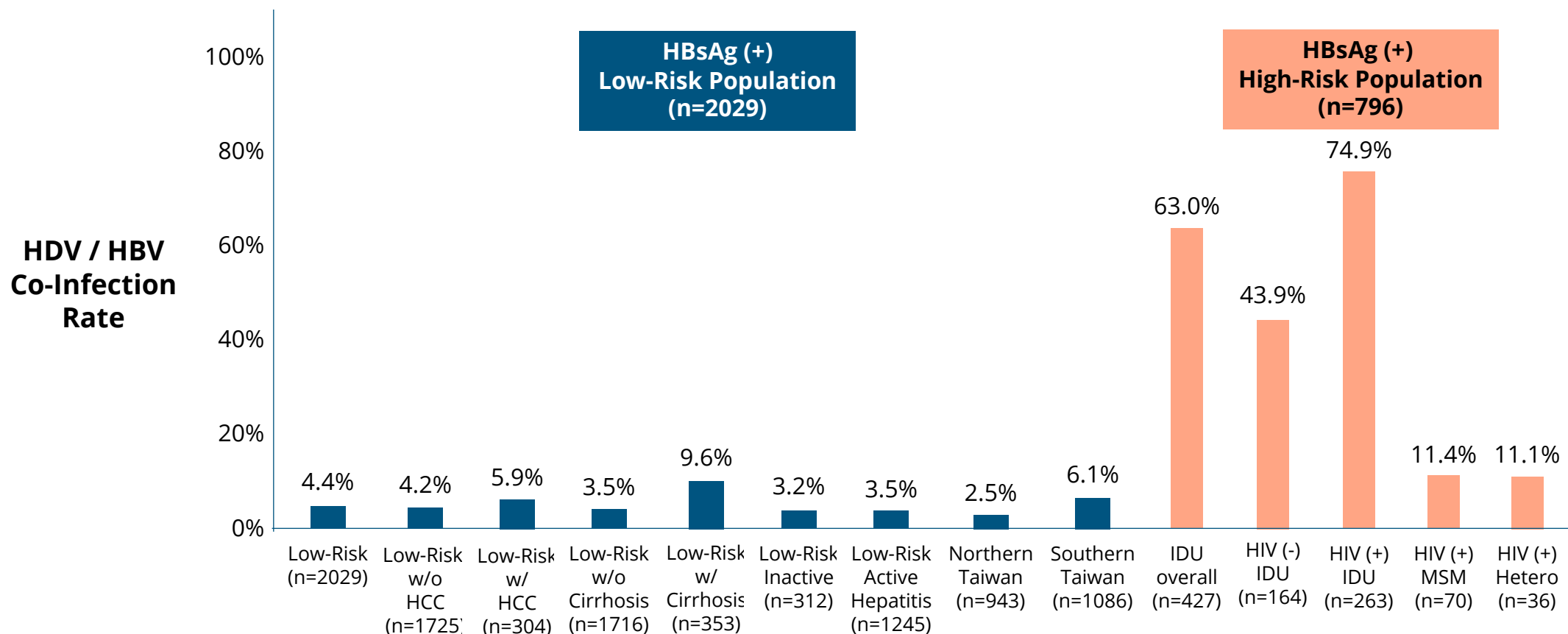
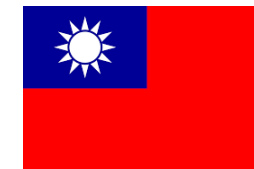
## A Novel Quantitative Microarray Antibody Capture Assay Identifies an Extremely High Hepatitis Delta Virus Prevalence Among Hepatitis B Virus Infected Mongolians

- Mongolia Population of ~3,000,000
  - > 300,000 (11%) is infected with HBV
- 60% of HBsAg positive patients are coinfecting with HDV
  - > 180,000 HDV-infected patients in Mongolia



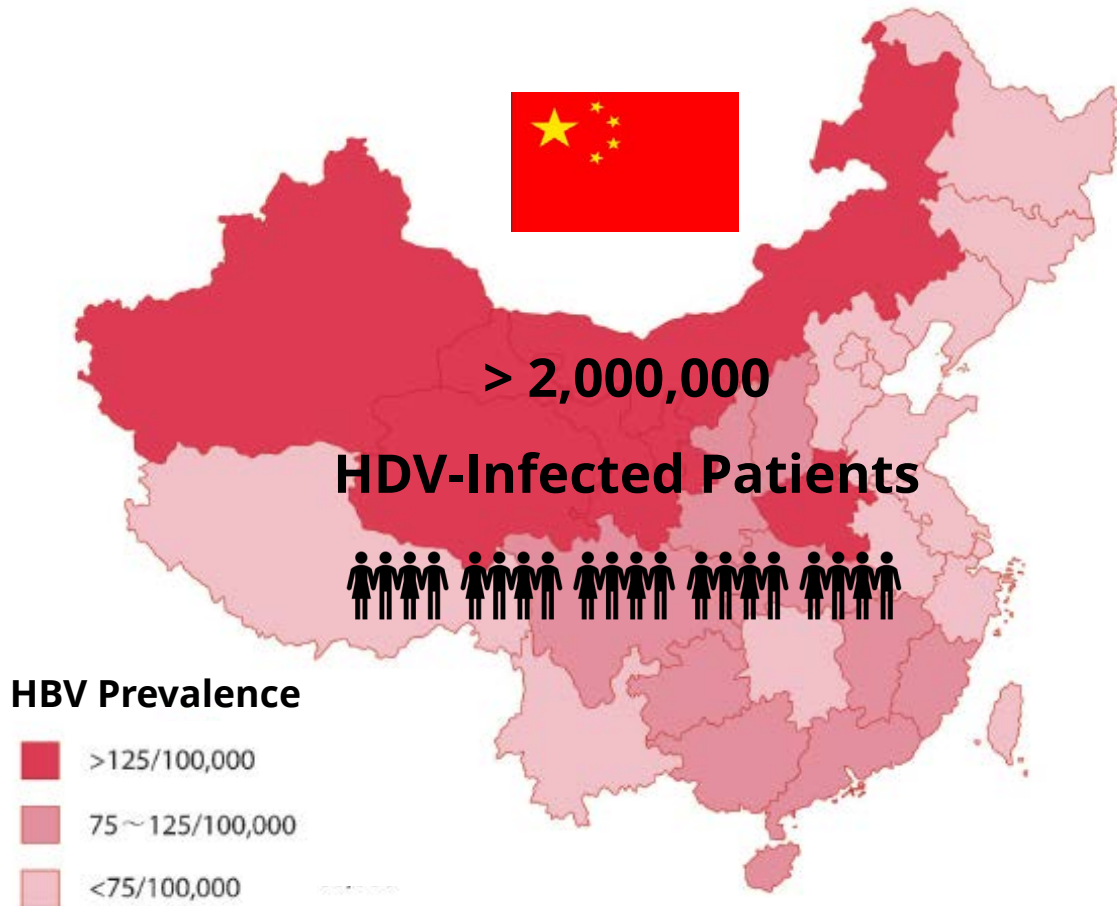
# 14.5% HDV / HBV CO-INFECTION IN TAIWAN

Multi-center, Prospective, Longitudinal Cohort Study (2001-2012)



# HDV: LARGE COMMERCIAL OPPORTUNITY IN CHINA

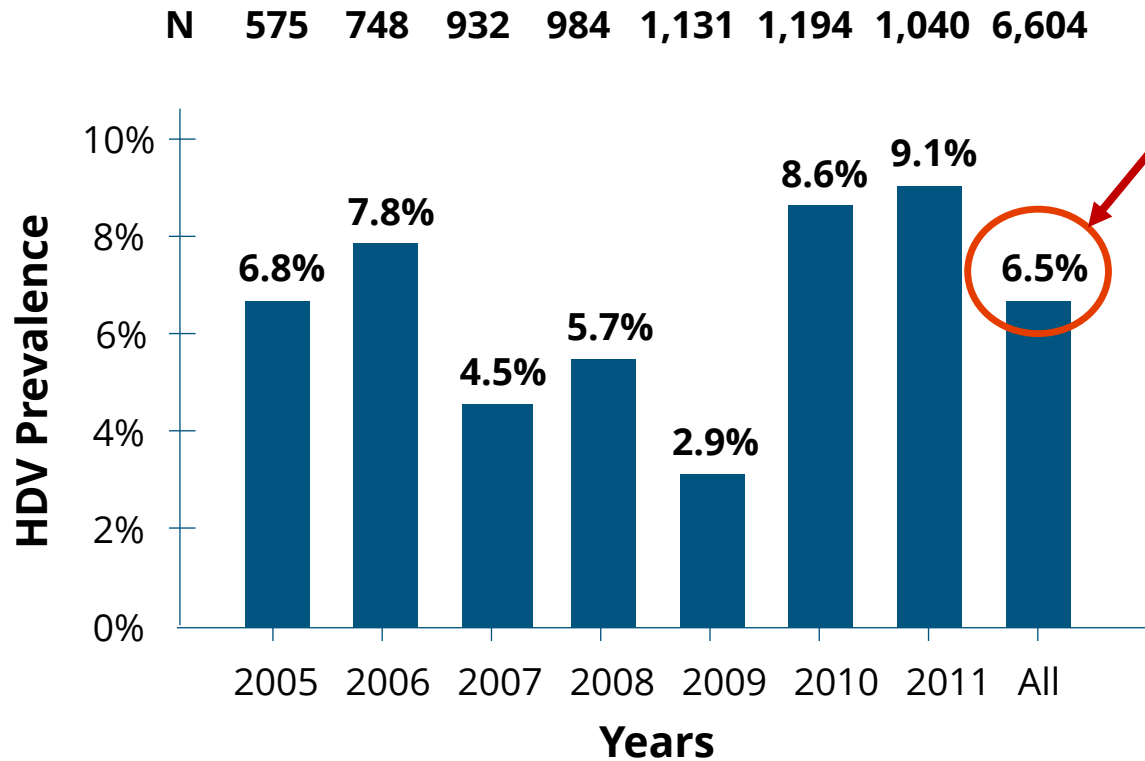
> 100 Million HBV-infected Patients in China



- 50% of All New Liver Cancer Cases are in China
- HDV Co-Infection Rates Range from 1% to 12%
- HDV Screening in HBsAg (+) Patients Needed

# 6.5% HDV / HBV CO-INFECTION IN GUANGDONG, CHINA

HBsAg (+) Patients Screened for HDV Antibody at Guangzhou People's Hospital (2005-2011)



- 6.5% HDV / HBV Co-Infection Identified
- HDV Screening in HBsAg (+) Patients Needed
- Validated and Reliable HDV Assay Needed
- Large Commercial Opportunity in China



# WORKING TO CHANGE THE FACE OF HEPATITIS DELTA VIRUS

**D-LIVR**

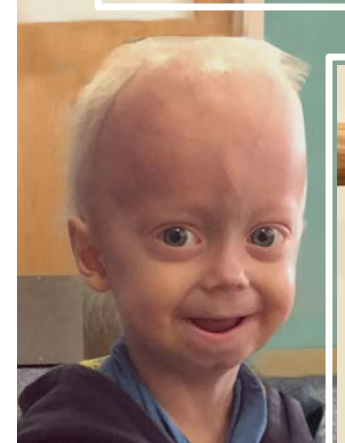
**Global Phase 3 Study**



# HUTCHINSON-GILFORD PROGERIA SYNDROME (PROGERIA)

## OVERVIEW

- Ultra-rare, fatal, premature aging pediatric disease
- Point mutation in the Lamin A gene
  - Results in a farnesylated aberrant protein, Progerin
  - Disruption of scaffold structure of the nuclear membrane
- Accelerated atherosclerosis with cardiovascular decline
- Average lifespan = 14.5 years
- Prevalence of 1 in 20 million (~400 worldwide)
  - 1 child born each year in the US
- No FDA approved Rx
- >90 Children treated with lonafarnib

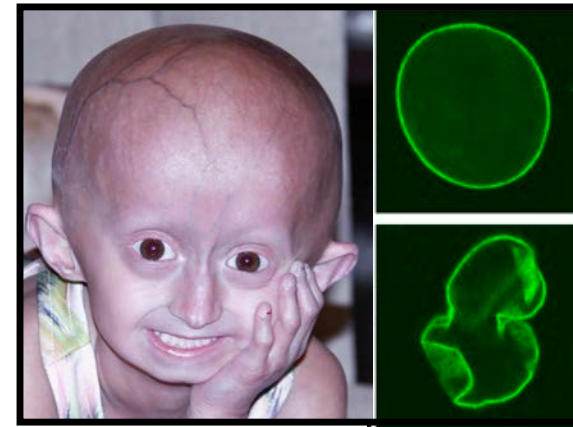




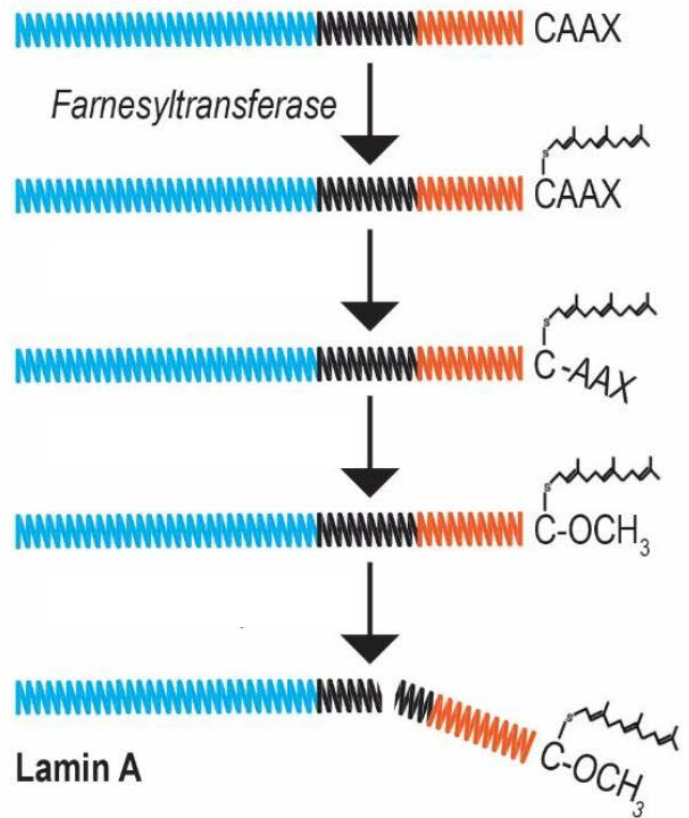
**Berns Family**  
**Founders of The Progeria Research Foundation (PRF)**

# ACCUMULATION OF PROGERIN

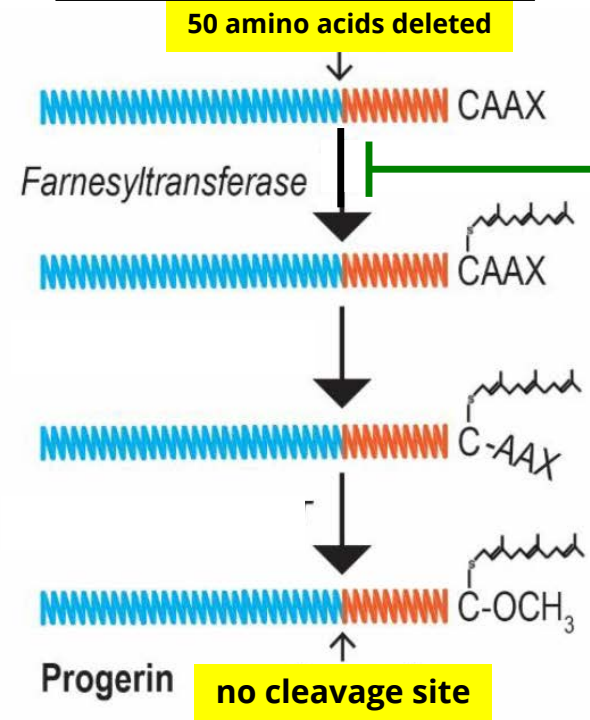
Disrupts Cell Scaffold, Leads to Disfigurement of Nucleus



## Normal Lamin A Generation



## Progerin Generation



**LONAFARNIB**

**Lonafarnib blocks production of Progerin**



# W/W PREVALENCE ~ 400 CHILDREN WITH PROGERIA

162 Identified Across 47 Countries Worldwide with Progeria and Progeroid Laminopathies

**162** Patients Identified  
Worldwide

- Progeria\* W/W = 125
- Progeroid Laminopathies\*\* W/W = 37

**43** Patients Identified  
in US/EU

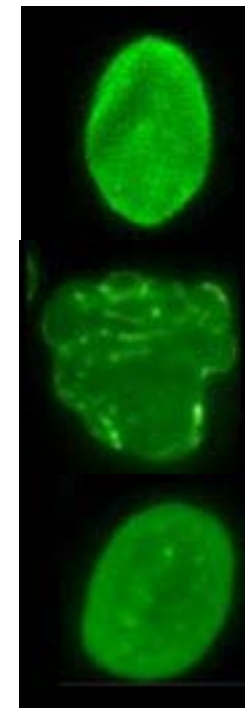
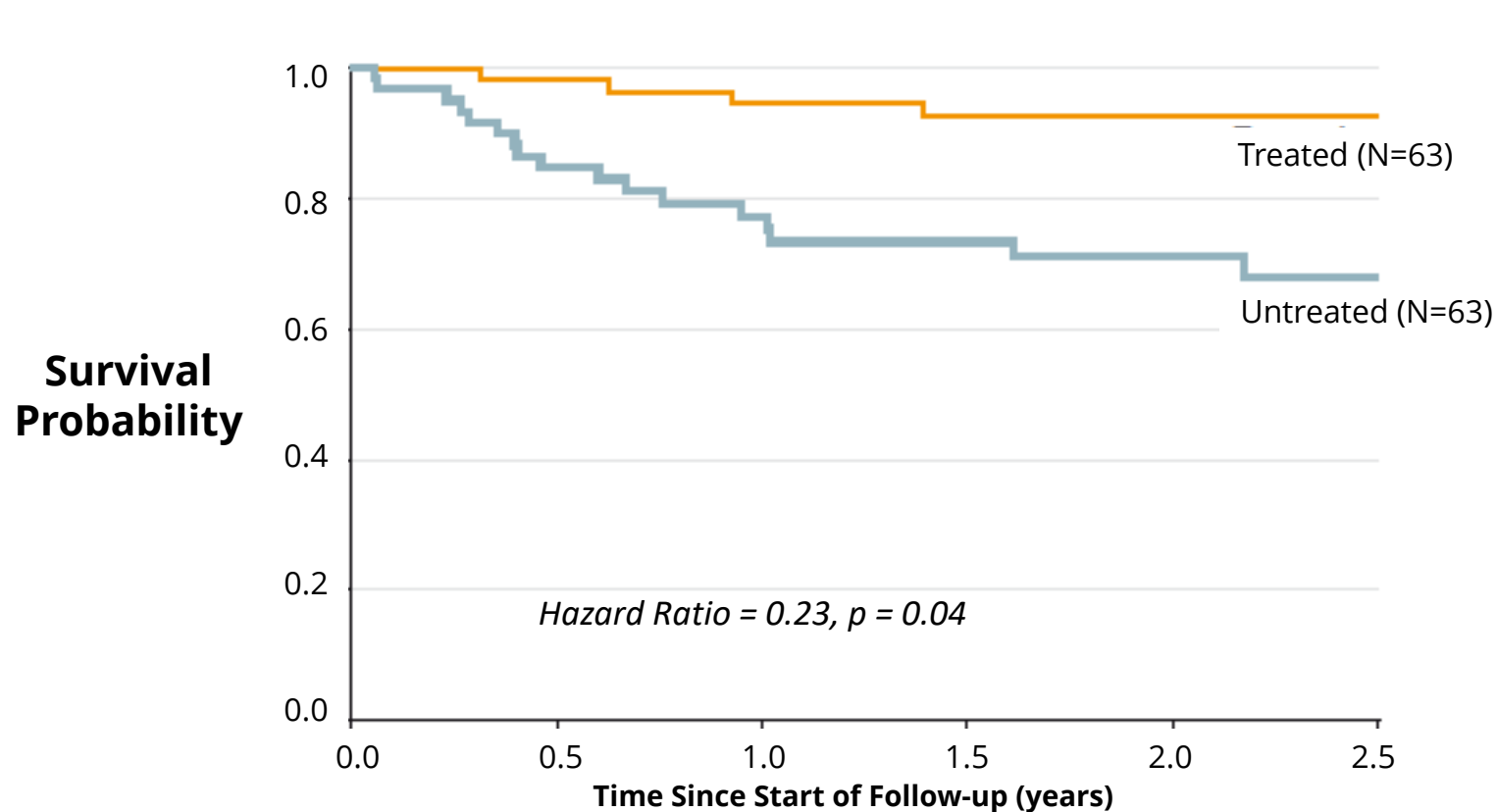
- Progeria\* US/EU = 29
- Progeroid Laminopathies\*\* US/EU = 14



\* Progeria (HGPS) patients have a progerin-producing mutation in the LMNA gene  
\*\* Progeroid Laminopathies have a mutation in the lamin pathway but do not produce progerin

# LONAFARNIB IMPROVED SURVIVAL IN PROGERIA

77% Reduction in Risk of Mortality Compared to No Treatment



Normal Cell

Progeria Cell

Progeria Cell After Treatment with Lonafarnib

Gordon, L et al, *JAMA*, 2018, 319(16): 1687

# ***PROGERIA AND HDV***

**Distinct Diseases, Distinct Treatment Regimens, Distinct Commercial Strategies**

## **PROGERIA**



**Lonafarnib Monotherapy  
(weight-based)**

## **HDV**



**Lonafarnib Boosted with Ritonavir  
± Peginterferon-Alfa**



# POST-BARIATRIC HYPOGLYCEMIA (PBH)

## Complication of Bariatric Surgery



### OVERVIEW

- Bariatric Surgery Increasing due to Morbid Obesity
  - ~240K US / ~90K EU in 2019\*
  - Significant Impact: Weight Loss, Glycemic Control
- Postprandial Hypoglycemia
  - Dangerously low blood sugar after meals
  - Impacts ~10% of Roux-en-Y (RYGB) patients
  - Impacts ~2.5% of Sleeve Gastrectomy (SG) patients
- PBH estimated prevalence ~120K in US / ~30K in EU
- No approved therapy

\* American Society for Metabolic and Bariatric Surgery 2015

# TARGETED BLOCKADE OF GLP-1

Designed to Normalize Insulin Secretion

ALTERED NUTRIENT TRANSIT  
POST ROUX-EN-Y GASTRIC BYPASS

HYPER-SECRETION  
OF GLP-1

INSULIN SECRETION

SYMPTOMATIC  
HYPOGLYCEMIA

HYPER-SECRETION OF INSULIN

NORMALIZED INSULIN SECRETION

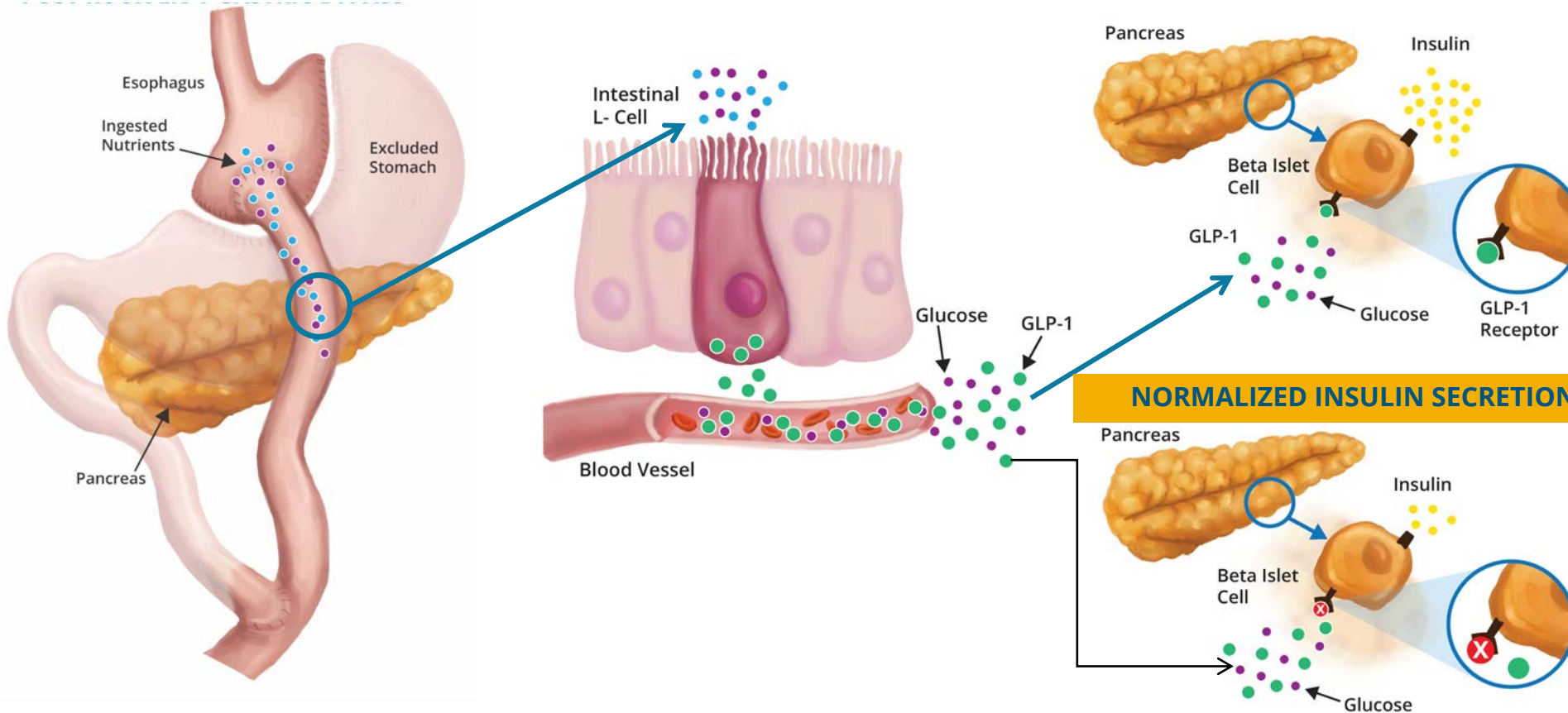
**Avexitide  
GLP-1 Receptor  
Blockade**

## Autonomic

- Sweating
- Shaking
- Palpitations
- Hunger

## Neuroglycopenic

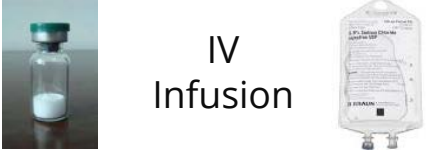

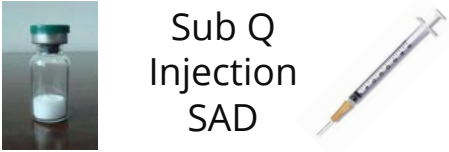

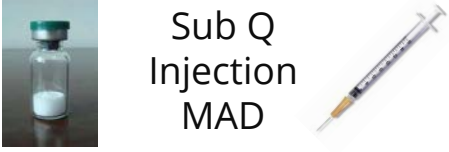




- Blurred vision
- Confusion
- Drowsiness
- Odd behavior
- Speech difficulty
- Incoordination
- Dizziness
- Inability to concentrate



Craig et al. Diabetes, Obesity and Metabolism 2017

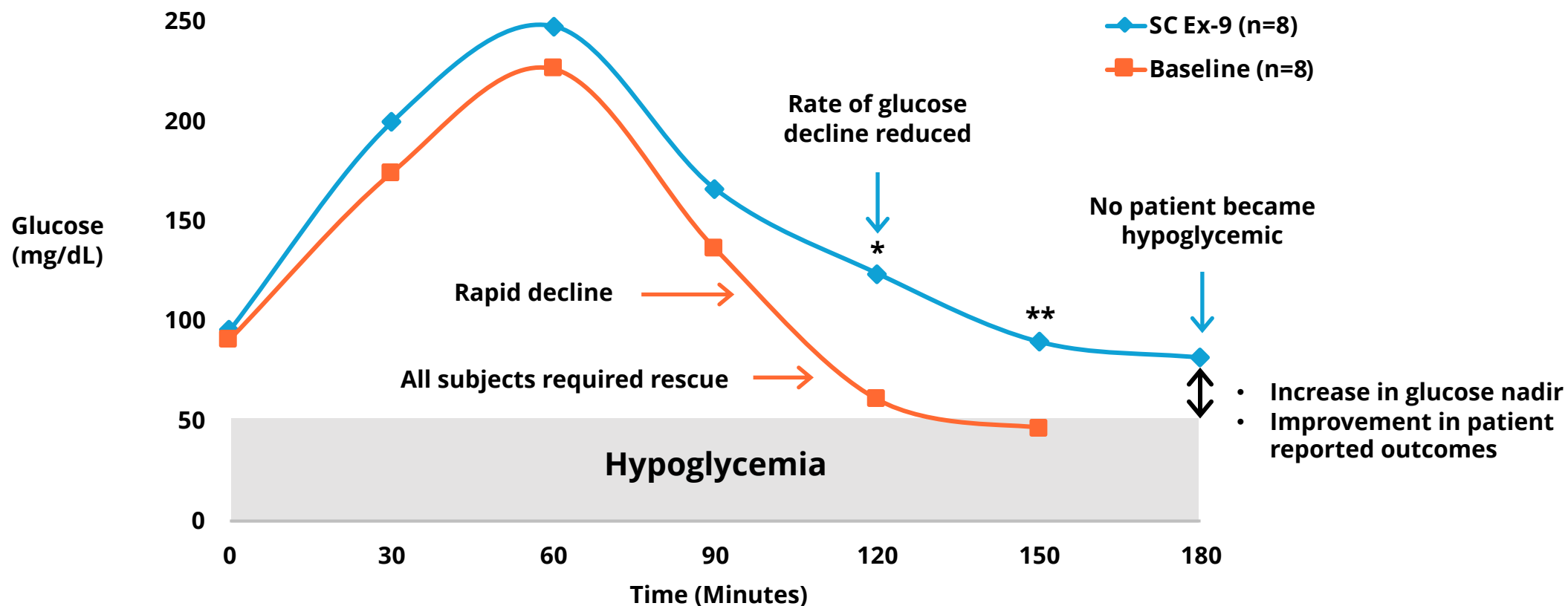
# AVEXITIDE: PROOF OF CONCEPT DEMONSTRATED IN PHASE 2

54 Patients Dosed in 4 Completed Clinical Studies with Avexitide

Study	# Patients	Duration of Dosing	Status
 <p>IV Infusion</p>	8	Single dose	Published <i>Diabetologia</i> 
 <p>Sub Q Injection SAD</p>	8	Single dose	Published <i>Diabetes, Obesity and Metabolism</i> 
 <p>Sub Q Injection MAD</p>	20	Up to 3 days BID dosing	Presented at 2017 ADA 
Sub Q Injection; Durability of Effect 	18	28 days QD / BID dosing	Presented at 2019 ENDO  

# AVEXITIDE REDUCED PBH

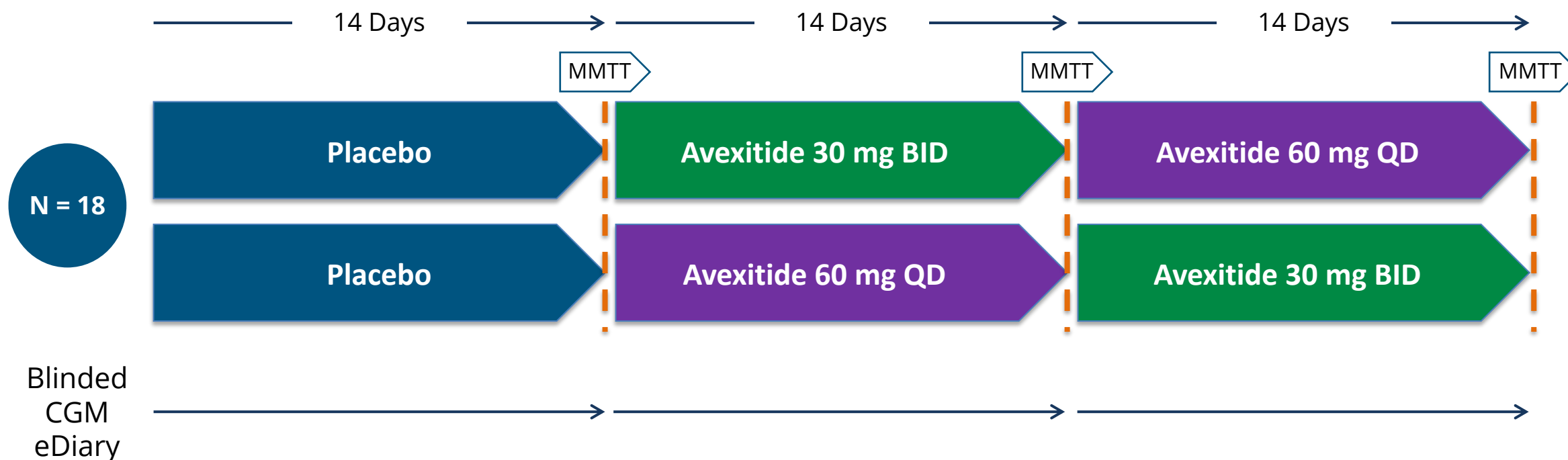
## Single Ascending Dose Study Results



\* P<0.05, \*\* P<0.01  
Craig C et al, Diabetes, Obesity and Metabolism 2017.

# 28-DAY, PHASE 2 STUDY

Goal: Demonstrate Durability of Effect, Define Dose, Safety, Tolerability

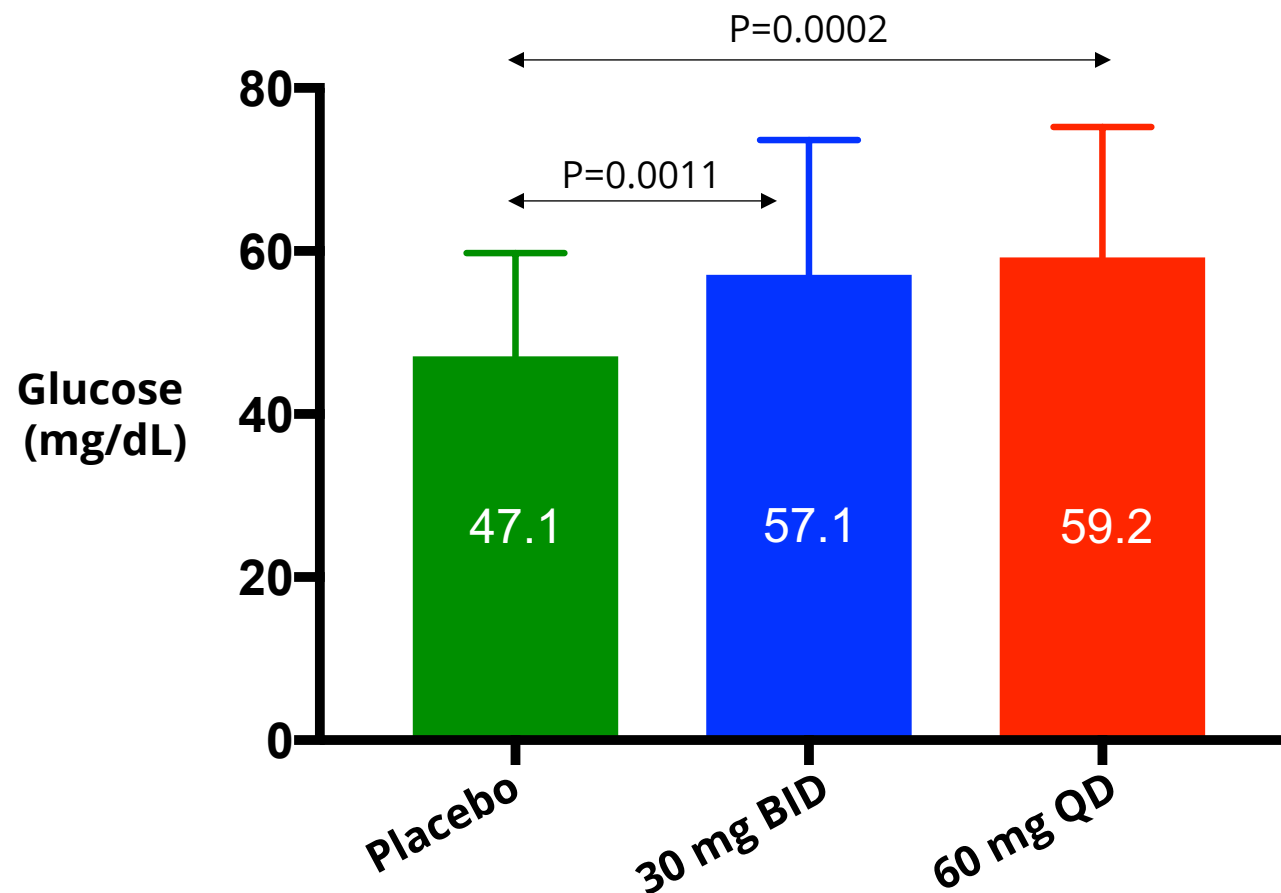


**Primary Endpoint:** Magnitude of postprandial hypoglycemia defined as the plasma glucose nadir during MM TT provocation



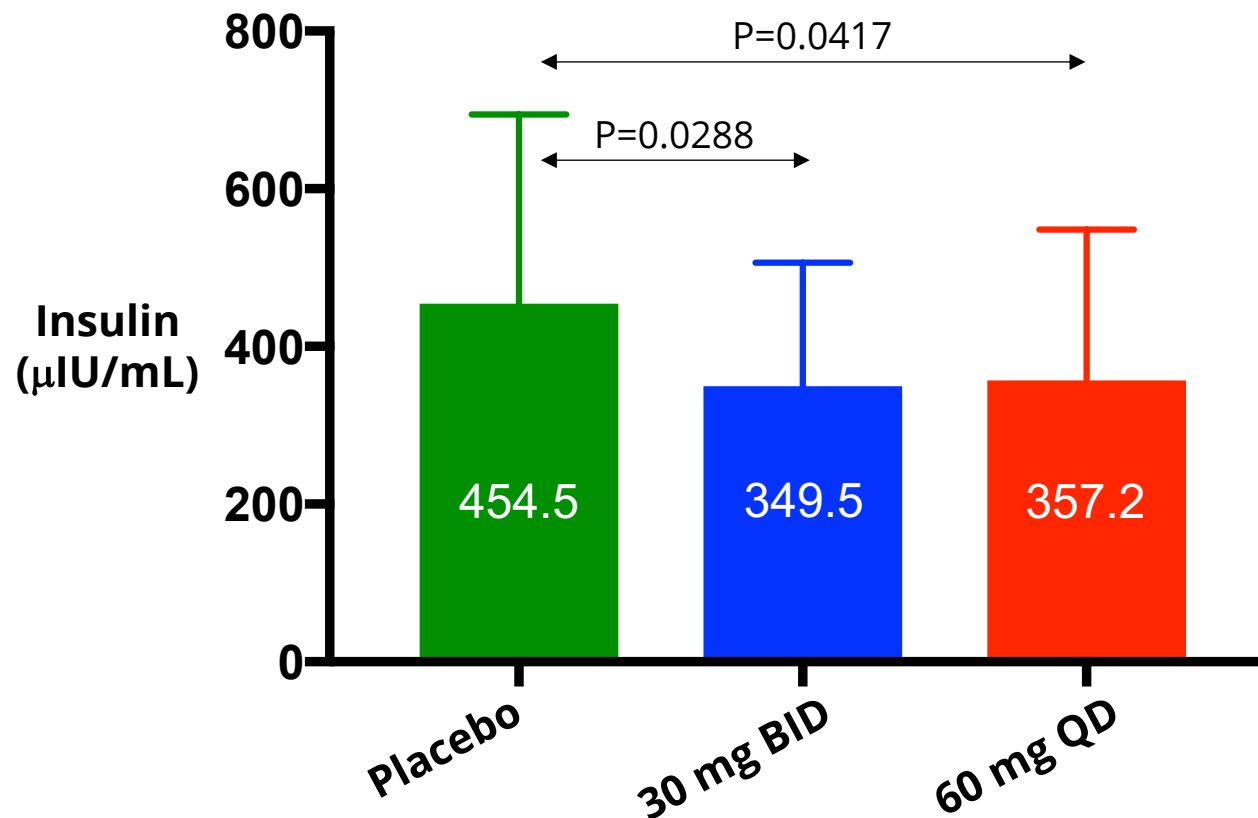
# IMPROVED POSTPRANDIAL GLUCOSE NADIR

Primary Endpoint Achieved



# REDUCED POSTPRANDIAL INSULIN PEAK

Secondary Endpoint Achieved



# METABOLIC AND CLINICAL IMPROVEMENTS

## Reduction in Rates<sup>1</sup> of Hypoglycemia, Severe Hypoglycemia and Rescue by eDiary

	Number of Episodes in 14 Day Period		
	Placebo	Avexitide 30 mg BID	Avexitide 60 mg QD
Rate of Hypoglycemia <sup>2</sup>	4.03	2.81	1.56
<i>Change from Placebo</i>	NA	-1.24 (p=0.0720)	-2.51 (p=0.0014)
Rate of Severe Hypoglycemia <sup>3</sup>	2.36	1.45	0.99
<i>Change from Placebo</i>	NA	-0.89 (p=0.0267)	-1.35 (p=0.0020)
Rate of Rescue	4.87	3.34	1.83
<i>Change from Placebo</i>	N/A	-1.6 (p=0.0614)	-3.13 (p=0.0013)

<sup>1</sup> Rate is defined as number of episodes in a 14 day period

<sup>2</sup> Hypoglycemia is defined as hypoglycemia symptoms confirmed by SBGM concentrations of <70 mg/dL

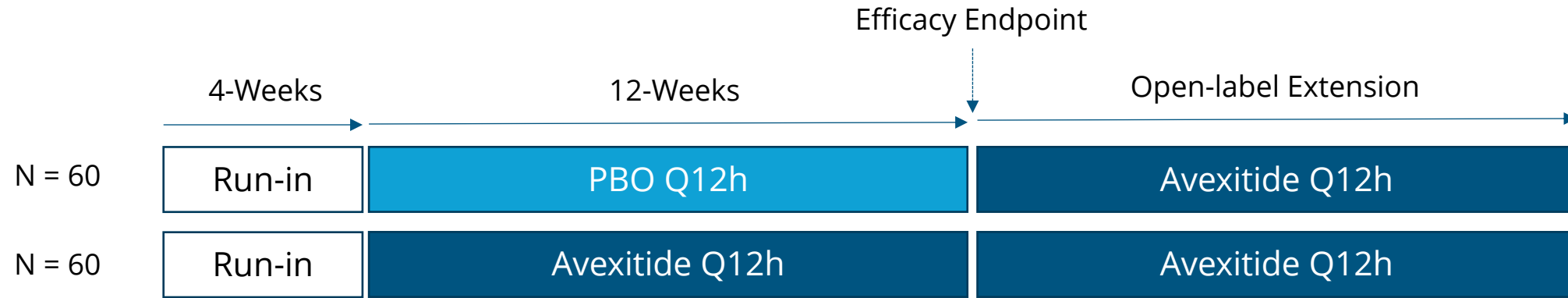
<sup>3</sup> Severe hypoglycemia is defined as neuroglycopenic symptoms confirmed by SBGM concentrations <55 mg/dL

## ***SAFETY AND TOLERABILITY***

- Avexitide was well-tolerated
- No treatment-related SAEs and no participant withdrawals
- AEs were typically mild to moderate in severity and transient
- Most common AEs were injection site bruising, nausea, headache
  - All occurred with higher frequency during placebo than active treatment
- Low occurrence of development of anti-drug antibodies (ADA)
  - 1 of 18 participants showed low positive titers for ADA
  - No associated AEs and no apparent effect on efficacy

# AVEXITIDE PHASE 3 STUDY IN PBH

## FDA Concurrence Received



### **Primary Efficacy Endpoint:**

- Rate of hypoglycemia-induced CNS impairment (per eDiary)
  - To be adjudicated by an adjudication committee

### **Secondary Efficacy Endpoints:**

- Rate of hypoglycemia (per eDiary)
- % time and # of episodes at various glycemic thresholds
- Quality of Life



# CONGENITAL HYPERINSULINISM (CHI)

Ultra-Rare, Pediatric Metabolic Disorder



## OVERVIEW

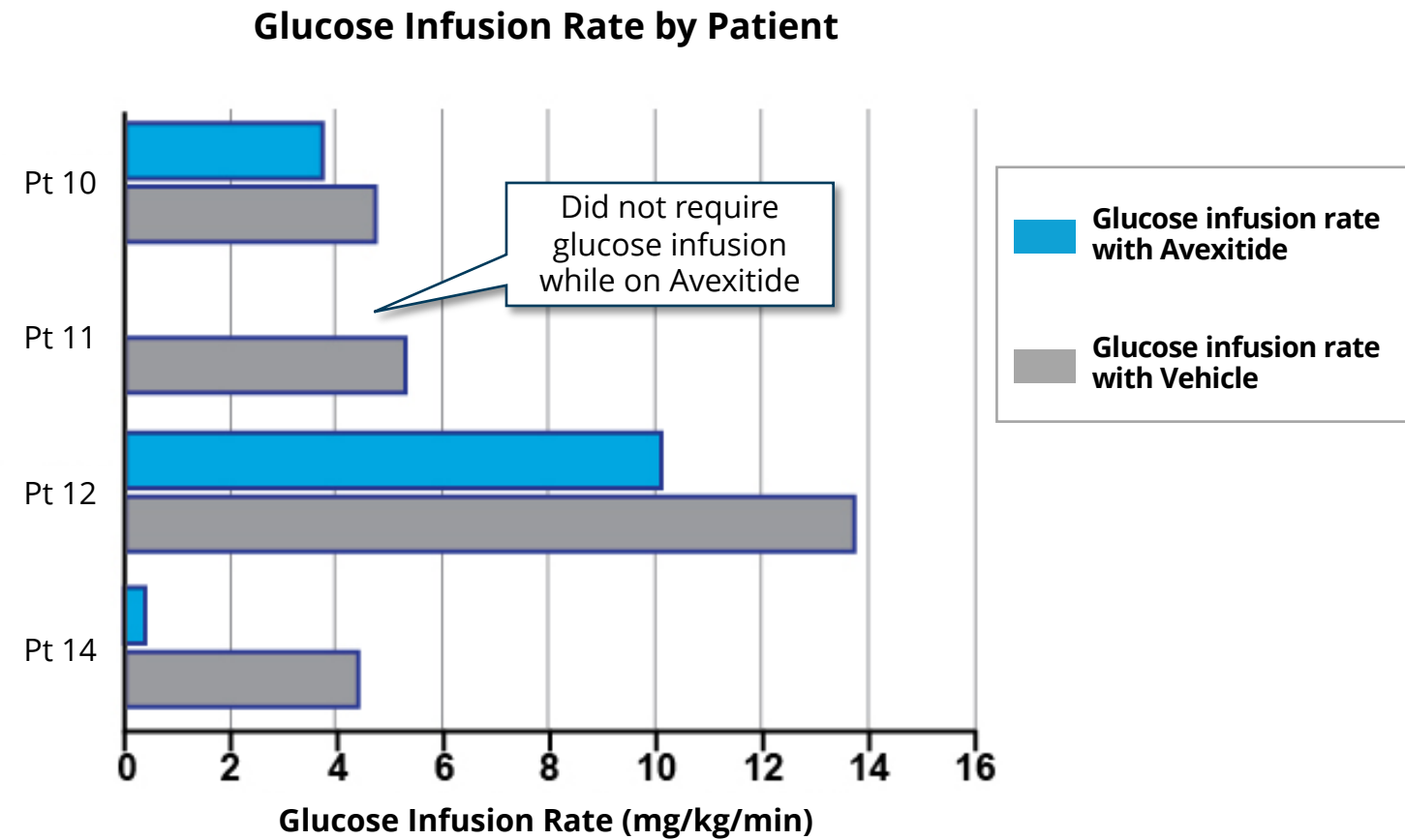
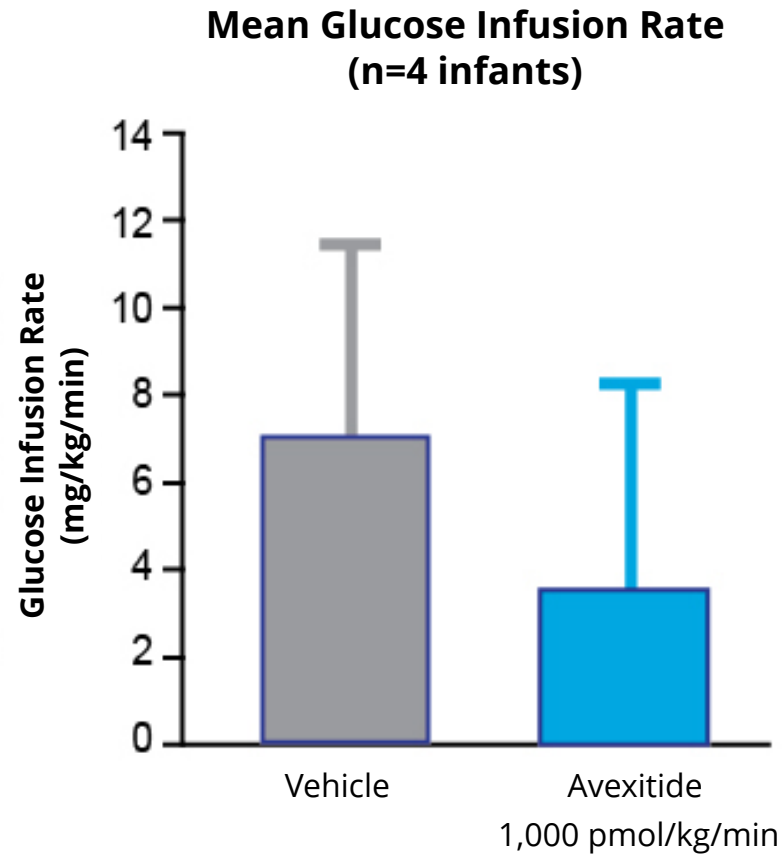
- Most frequent cause of persistent hypoglycemia in neonates and children
- Occurs in 1:25,000 to 1:50,000 live births
- Characterized by fasting and protein-induced hypoglycemia
- Results in permanent brain damage with neurodevelopmental deficits in up to 50% of patients
- Near-total pancreatectomy is often indicated and leads to life-long insulin-dependent diabetes (IDDM)
- Safe and effective therapies urgently needed to prevent brain damage, IDDM and death
- Strong patient advocacy community

## PROOF OF CONCEPT DEMONSTRATED IN 39 CHI PATIENTS

Study	No. of Patients	Status
<b>Adolescent and Adult Study<sup>1</sup></b>	10	Completed Calabria et al. <i>Diabetes</i> . 2012;61(10):2585–2591
<b>Child Study<sup>2</sup></b>	16	Completed
<b>Neonate Study<sup>3</sup></b>	13	Transitioning from IV infusion to SC injection






# NEONATE & INFANT STUDY RESULTS

Avexitide Reduced Mean Glucose Infusion Rates by 60%





# LATE STAGE PIPELINE: VALUE CREATING CATALYSTS

Targeted Indication	Drug	Orphan US / EU	Breakthrough Therapy	Rare Pediatric Disease	Status
 Hepatitis Delta Virus	<b>Lonafarnib + Ritonavir</b>	✓	✓	N/A	<b>Phase 3</b>
 Hepatitis Delta Virus	<b>Peginterferon Lambda</b>	✓	✓	N/A	<b>Phase 2</b>
 Progeria and Progeroid Laminopathies	<b>Lonafarnib</b>	✓	✓	✓*	<b>Rolling NDA</b>
 Post-Bariatric Hypoglycemia	<b>Avexitide</b>	✓	✓	N/A	<b>Phase 3 Ready</b>
 Congenital Hyperinsulinism	<b>Avexitide</b>	✓		✓*	<b>Phase 2</b>

# ***FINANCIAL SUMMARY: EIGR***

## **Well Capitalized**

### **Cash, Cash Equivalents and Investments**

- ~\$95 M – December 31, 2019





























### **Current Total Shares Outstanding**

- 24.5 Million

# EXPERIENCED MANAGEMENT

<p><b>DAVID CORY, RPH, MBA</b></p>	<p><b>Business Founder President Chief Executive Officer</b></p>	
<p><b>SRI RYALI, MBA</b></p>	<p><b>Chief Financial Officer</b></p>	
<p><b>STEPHANA PATTON, PHD, JD</b></p>	<p><b>General Counsel Corporate Secretary Chief Compliance Officer</b></p>	
<p><b>JIM SHAFFER, MBA</b></p>	<p><b>Chief Business Officer</b></p>	
<p><b>INGRID CHOONG, PHD</b></p>	<p><b>Senior Vice President Clinical Development</b></p>	
<p><b>MATTHEW BRYANT, PHARMD</b></p>	<p><b>Vice President Medical Affairs</b></p>	

# SEASONED BOARD

THOMAS DIETZ, PHD	Chairman	   
EVAN LOH, MD	Independent Director	  
ELDON MAYER, MBA	Independent Director	  
CHRISTINE MURRAY, MS, RAC	Independent Director	   
JEFFREY GLENN, MD, PHD	Independent Director	  
AMIT SACHDEV, JD	Independent Director	  
DAVID APELIAN, MD, PHD, MBA	Director	   
DAVID CORY, RPH, MBA	President Chief Executive Officer	   



**EIGER**  
BIOPHARMACEUTICALS

**LEADER IN HDV**