

### Safe Harbor

Certain statements made in this presentation contain forward-looking statements. All statements other than statements of historical facts contained in this presentation, including statements regarding the timing of our clinical trials, our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth, are forward-looking statements. Forward-looking statements give our current expectations or forecasts of future events. You can find many (but not all) of these statements by looking for words such as "approximates," "believes," "hopes," "expects," "anticipates," "estimates," "projects," "intends," "plans," "would," "should," "could," "may" or other similar expressions. These forward looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from our historical experience and our present expectations or projections. Actual results may differ materially from those discussed as a result of various factors, including, but not limited to: our limited operating history and our ability to achieve profitability; our potential inability to develop commercially feasible applications; our need to secure required regulatory approvals from governmental authorities in the European Union, United States and other jurisdictions; our dependence on third parties to design, manufacture, obtain required regulatory approvals, market and distribute our TAEUS™ applications; our ability to commercialize any of our TAEUS™ applications and the pricing of any such applications; our ability to protect our intellectual property and the risk we may infringe on the intellectual property of others; and our ability to obtain adequate financing in the future. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. These forward-looking statements represent our estimates and assumptions only as of the date hereof and, except as required by law, we undertake no obligation to update or review publicly any forward-looking statements, whether as a result of new information, future events or otherwise. We anticipate that subsequent events and developments will cause our views to change.

In this presentation, we refer to information regarding potential markets for products and other industry data. We believe that all such information has been obtained from reliable sources that are customarily relied upon by companies in our industry. However, we have not independently verified any such information.

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### **ENDRA's Mission**

Broaden access to better healthcare

Enhance ultrasound to enable doctors to see human tissue composition, function and temperature

- 1. In ways previously possible only on CT & MRI
- 2. At a fraction of the cost (of CT & MRI)
- 3. At the point-of-care



### **ENDRA** at a Glance

IPO closed May 12, 2017, with overallotment option fully exercised on May 22, 2017

Key Statistics (as of November 2, 2017)		
Common Stock Price (NASDAQ: NDRA)	\$2.50	
Warrant Price (NASDAQ: NDRAW) 1	\$0.40	
Shares Outstanding	3.9M	
Market Capitalization	\$9.8M	
Net Proceeds from IPO <sup>2</sup>	\$8.6M	
Management / Director Ownership	13.6%	



Depiction of TAEUS accessory next to ultrasound system

### **Technology**

30+ IP assets

Platform with multiple revenue streams

## Strategic Partnership

**GE** Healthcare

#1 ultrasound market leader

## Market Opportunity

\$13B addressable market

Initial focus on Liver Disease

#### Leadership

GE Healthcare, Smith & Nephew

Stanford, University of Michigan



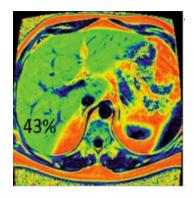
<sup>&</sup>lt;sup>1</sup> Warrant is a 5 year warrant with a \$6.25 exercise price.

<sup>&</sup>lt;sup>2</sup> Includes costs associated with underwriters' fees and expenses.

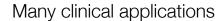
### The Core Problem ENDRA is Targeting

Gap between imaging performance, access and safety

#### CT & MRI





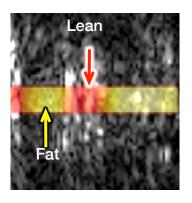


Not broadly available

Expensive (\$1M-\$3M)

Safety concerns





Advanced applications

Ultrasound availability & safety

Target \$40K ASP

# Conventional Ultrasound



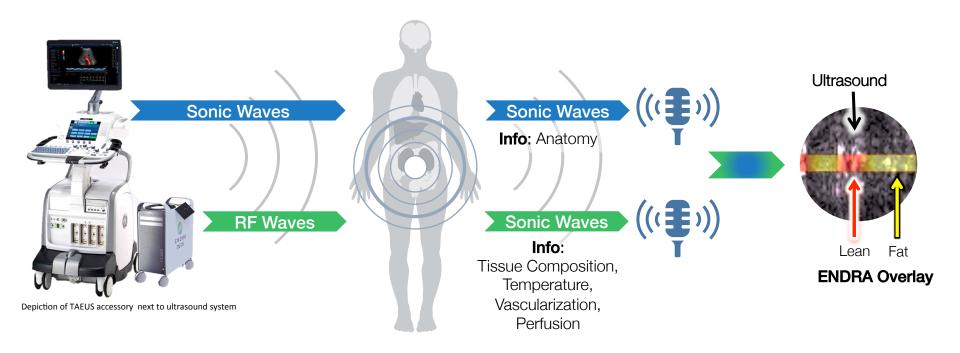
Broadly available Inexpensive (~\$100K) Safe (E.g., no radiation)

Limited clinical applications



### Thermo Acoustic UltraSound (TAEUS™)

Short RF pulses differentiate tissues in concert with ultrasound



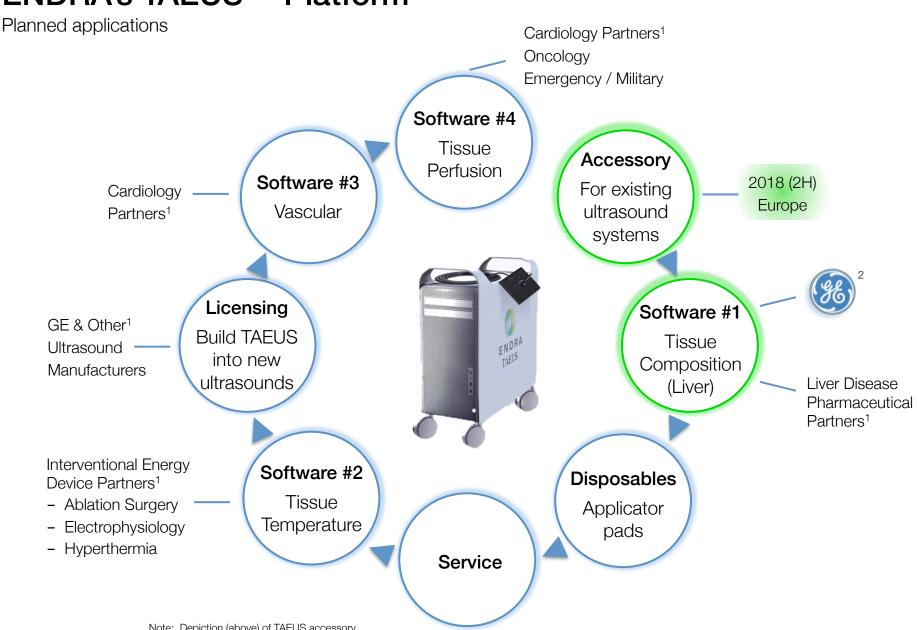
Traditional ultrasound and low energy radio (RF) waves are pulsed into patient

RF energy is absorbed by tissues differently based on water & ion content, creating small sonic waves Sonic waves
are detected by
ultrasound
equipment

TAEUS™ image is processed and overlaid on ultrasound image



### **ENDRA's TAEUS™ Platform**



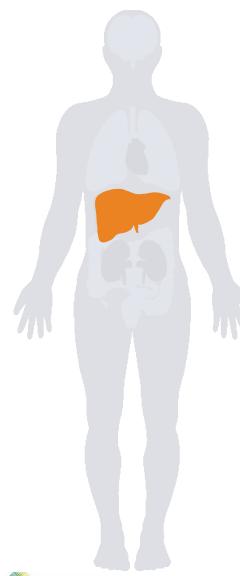
ENDRA LIFE SCIENCES Note: Depiction (above) of TAEUS accessory

<sup>&</sup>lt;sup>1</sup> Potential ENDRA partners

<sup>&</sup>lt;sup>2</sup> Existing ENDRA partner

### Opportunity #1: Non-Alcoholic Fatty Liver Disease (NAFLD)

Large unaddressed population and cost. ENDRA's TAEUS would provide significant diagnostic advantages



#### 1.4 Billion people affected globally<sup>1</sup>

- Drivers: obesity, diabetes, Hep-C, drugs
- Often asymptomatic, needs to be monitored
- ~30%² of NAFLD cases progress to NASH, then Fibrosis, Cirrhosis, Cancer
- Total annual direct medical costs for NAFLD: \$103B in the U.S<sup>3</sup>
- Median Medicare inpatient charge per NAFLD patient: \$36K<sup>4</sup>
- By 2025, NAFLD likely the greatest root cause of liver transplants<sup>5</sup>

#### Current NAFLD diagnostic & monitoring tools are impractical:

invasive surgical biopsy, expensive MRI

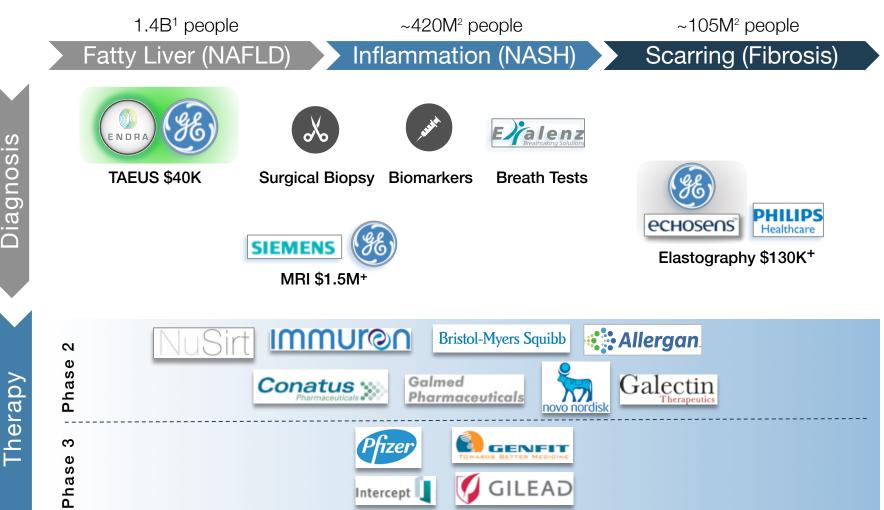
"The ability to accurately quantify fat in the liver, at the point-of-care with ENDRA's TAEUS ultrasound could be revolutionary"

Xiang Jing M.D, Deputy Chairman, Ultrasound Committee, China Medical Assoc.



### Liver Disease Diagnostic & Therapy Landscape

ENDRA strategically positioned at forefront of growing focus on liver disease



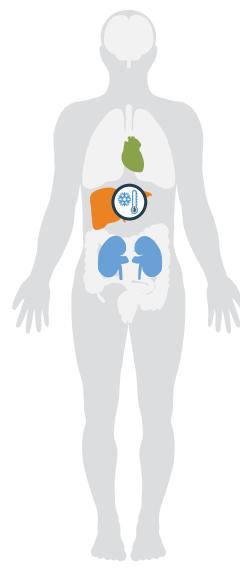


Intercept

**GILEAD** 

### Opportunity #2: Energy-Based Surgery

Safely and inexpensively map the heat signature of tissue ablation in real time on ultrasound

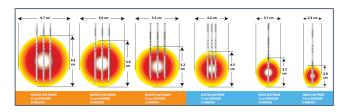


#### 5+ million RF ablation procedures annually1

- Growing 20% CAGR
- Driven by aging-related diseases: cancer, pain, cardiology

#### Current diagnostic tools are inaccurate or impractical:

Printed guidelines, expensive MRI



Manufacturer's printed RF ablation guidelines

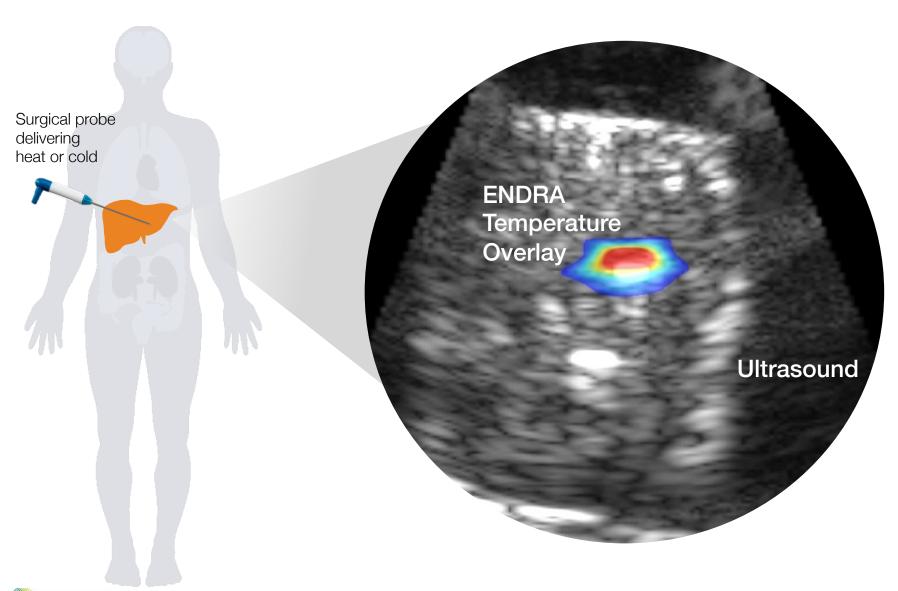
"Doctors aren't always sure where the (thermo-ablative) heat is going. They could hit a vessel or another heat-sink in the body and the academic models fall apart and treatment is ineffective."

**Jonathan Rubin, M.D,** Head for Ultrasound & Abdominal Interventional Radiology, The University of Michigan



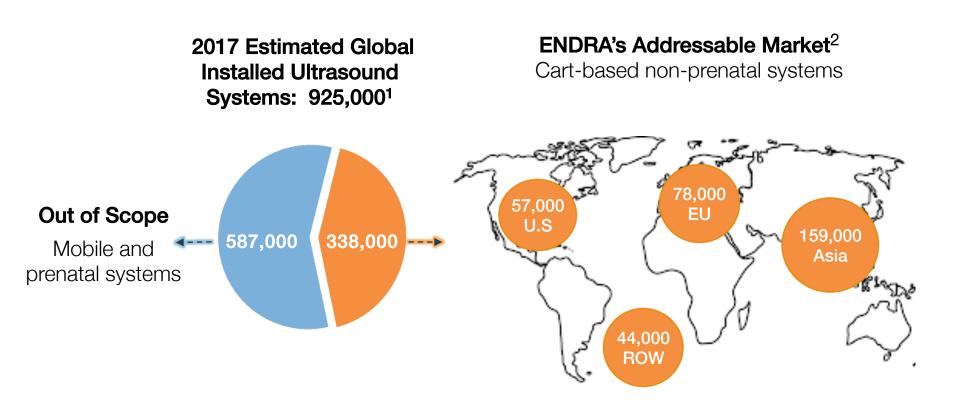
### TAEUS Guidance of Energy-Based Surgery

Inexpensively and safely map the heat signature of tissue ablation in real time on ultrasound



### Addressable Market For ENDRA's Accessory & Software

Large installed base of diagnostic ultrasound systems<sup>1</sup>



338,000 Addressable Ultrasound Systems x \$40,000 ENDRA Accessory<sup>3</sup> = \$13B+ Market



### **ENDRA – GE Healthcare Partnership**

Focused on early diagnosis of Non-Alcoholic Fatty Liver Disease



#### **#1 Ultrasound Market Leader**

#### ENDRA agreement signed April 2016, renewed April 2017

- ENDRA provides 1 year sales exclusivity on TAEUS liver application
- GE provides technical advice and GE equipment
- GE provides introductions to GE ultrasound customers

"We believe that ENDRA's technology has the potential to bring significant new capabilities to ultrasound – which aligns well with GE Healthcare's mission of increasing access to high-quality, cost-effective healthcare"

Brian McEathron, VP and GM GE Radiology & Vascular Ultrasound



### **ENDRA Technology Benefits For Key Stakeholders**

6-month payback<sup>1</sup> until dedicated reimbursement secured

Potential TAEUS Benefits - Short Term	Clinician	Patient	Payer
Earlier detection through cost-effective screening	<b>V</b>	<b>✓</b>	V
Increase utilization of existing, reimbursed ultrasound	<b>~</b>		
Cost-avoidance of CT/MRI: More diagnoses with inexpensive ultrasound		<b>V</b>	<b>✓</b>
Patient ownership. Fewer patients referred (from primary care) to CT/MRI	<b>✓</b>		
Reduced safety risks: No radiation or contrast agents		<b>✓</b>	

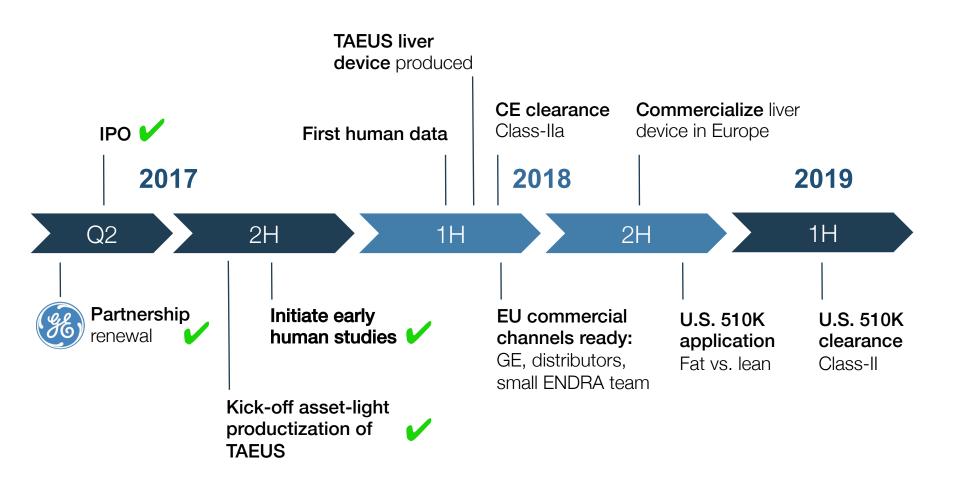
#### TAEUS Reimbursement Strategy - Medium Term

- Leverage published evidence to influence Advocacy Groups (e.g., American Liver Foundation).
- Advocate for new Guidelines: AIUM, AASLD, National Cancer Care Network, etc.
- Secure Positive Coverage from Medicare and Private payers: CPT code for TAEUS™



### **ENDRA TAEUS™ Liver Application Roadmap**

Estimated timeline for human data and regulatory clearance



Continually engage strategic partners: pharma & device



### **ENDRA's Asset-Light Model To Bring TAEUS Liver To Market**

Partnerships to help execute ENDRA's operational plan

ENDRA leads project mgt., systems engineering & regulatory submissions



3-4 commercial ENDRA specialists in Europe supporting channel partners & customers

### Develop & Manufacture

#### Commercialize













Medical device engineering & manufacturing

Medical software developer CRO for human studies

Introductions to GE ultrasound customers

As needed, sales people & customer relationships Gastro/Hepatology, Internal Medicine, Primary Care, Radiology



### Leadership

#### **Board of Directors**

#### Sam Gambhir, MD

Chair of Radiology at Stanford University

#### Michael Harsh

36-year GE veteran

Retired CTO GE Healthcare

#### Anthony DiGiandomenico

Co-founder of MDB Capital

#### Alex Tokman

CEO Microvision 10+ years at GE Healthcare

#### Management and Key Personnel

## Francois Michelon CEO & Chairman

20 years med-technology experience

GE Healthcare, Smith & Nephew, Biomet MBA, Carnegie-Mellon

BA, University of Chicago

### Michael Thornton CTO

15+ years healthcare tech

Founded & sold Enhanced Vision Systems to GE

MSc Western Ontario

BASc. Univ. Toronto

#### David Wells CFO

CFO for 3 public firms

Founder and CEO of Wells Compliance Group

MBA, Pepperdine

BA, Seattle Pacific

#### Scott Belanger Director, Engineering

30 years' engineering at SRI, IBM, Lockheed

BS, MS EE, Michigan Tech

Ph.D. EE, Georgia Inst. of Technology

#### **Clinical Advisors**

#### Jon Rubin MD, PhD

Professor, Radiology

University of Michigan

#### Jing Gao, MD

Deputy President

Dalian University (China)



### Select Clinical Feedback

"If we could combine the imaging capabilities of MRI, PET or CT with the safety and access of ultrasound it would broadly change healthcare – improving clinical decisions at point-of-care for millions of people, and dramatically reducing costs. This is ENDRA's exciting vision."

Sam Gambhir, M.D PhD, Chair of Radiology, Stanford University; ENDRA Board Member

"Fatty liver would be a GREAT application of ENDRA's technology. If you could quantify fat at the point-of-care, a lot of clinicians would find it very useful."

Jonathan Rubin, M.D, Head for Ultrasound & Abdominal Interventional Radiology, University of Michigan

"ENDRA's TAEUS technology could be a game changer for the clinical care cycle of liver (and other) disease – from screening to diagnosis to therapy guidance – especially in markets (like China) where ultrasound is the primary imaging modality.

Bringing TAEUS' improved soft-tissue contrast capabilities to point-of-care ultrasound aligns extremely well with China's efforts to provide effective, lower-cost health services to its 1.4 billion citizens -- by shifting care delivery from large urban hospitals to primary-care community clinics."

Jing Gao, M.D, Deputy President, Dalian University International Institute of Medical Imaging, China



### **ENDRA Life Sciences: Investment Summary**



30+ IP assets. World class team: Stanford, GE Healthcare, Smith & Nephew



Business model: Platform technology + capital efficient operating model



\$13B addressable market for ENDRA's \$40K accessory product



Partnership with #1 global ultrasound market leader



Initial focus on Fatty Liver Disease: 1.4B people affected, no practical diagnostic tools



#### **Contact Us**

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LIFE SCIENCES

### Capitalization Table at October 31, 2017\*

	Issued & Outstanding	Fully Diluted
Common Shares		
Shares Issued in IPO	1,932,000	25.7%
Existing Shareholders	1,719,453	22.9%
Management & Directors	255,574	3.4%
Common Shares Outstanding	3,907,027	52.0%
Warrants & Options		
Warrants Issued in IPO	2,086,560	27.8%
Mgmt, Empl. & Directors	938,121	12.5%
Employee Option Pool	423,633	5.6%
All Other	161,581	21%
Warrants & Options Outstanding	3,609,895	48.0%
Fully Diluted Issued & Outstanding	7,516,922	100.0%



### **ENDRA Technologies**

Leveraging IP to expand ENDRA into the clinical space



#### **Intellectual Property**



Depiction of TAEUS accessory next to ultrasound system

#### Laboratory System: 2010

Near-infrared light + ultrasound

World class customers: Stanford, University of Michigan, Jiaotong-Shanghai, Purdue

25 conference and journal publications

#### Clinical System: Expected 2018

RF pulses + ultrasound

Platform: Software, licensing, hardware, service & disposables



### **Ultrasound Technology Evolution**

A history of new technologies expanding ultrasound utility and driving M&A activity

Doppler Ultrasound
Cardiac imaging
3D imaging
Contrast agents
Color Doppler

Siemens / Quantum
Philips / ATL \$800M
GE / Vingmed \$244M
Siemens / Acuson \$500M

2000 - 2016

Harmonic imaging Elastography CMUT technology Miniaturization 4D

Siemens / Sensant
FujiFilm / SonoSite \$998M
Hitachi / Aloka \$315M
Samsung / Madyson \$262M

2017+



Tissue Composition
Tissue Temperature
Tissue Perfusion

Vascular Imaging

Potential Strategic Partners

Ultrasound OEMs
Veterinary Companies
Pharma (NAFLD, cancer)
Thermo-ablation OEMs
Interventional Cardiology



### Sources and Notes

#### Page 8

- <sup>1</sup> The LANCET, Vincent Wai-Sun Wong, November 2015
- <sup>2</sup> International Journal of Molecular Sciences, *The Natural Course of Non-Alcoholic Fatty Liver Disease*, 2016
- <sup>3</sup> Hepatology, <u>The economic and clinical burden of nonalcoholic fatty liver disease in the United States and Europe</u>. Younossi, Blissett, Henry, Stepanova, Racila, Hunt, Beckerman, 2016. Annual direct medical costs of NAFLD €35B in Germany, France, Italy, and U.K.
- <sup>4</sup> Journal of Clinical Gastroenterology, 2016: Variables associated with inpatient and outpatient resource utilization among Medicare beneficiaries with nonalcoholic fatty liver disease with or without cirrhosis Sayiner, Otgonsuren, Cable, Younossi Afendy, Golabi, et al.
- <sup>5</sup> Scientific American, *NAFLD America*'s *Greatest Health Risk of 2015?* Hyder Jamal MD, Feb., 2015

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- <sup>1</sup> The LANCET, Vincent Wai-Sun Wong, November 2015
- <sup>2</sup> International Journal of Molecular Sciences, The Natural Course of Non-Alcoholic Fatty Liver Disease, 2016

Note: Companies listed for purpose of illustrating broad but non-exhaustive 2017 interest in liver disease, and may not reflect companies' strategy or position

#### Page 10

<sup>1</sup> ENDRA estimate derived from Grand View Research, <u>Global Radiofrequency Ablation Devices Market Segment Forecast to 2020</u>, Oct. 2014. Data is for RF ablation procedures only. Procedure volumes are larger when including other energy-based ablation technologies such as microwave, ultrasound, cryotherapy and HIFU.

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- <sup>1</sup> ENDRA estimate of 2017 worldwide ultrasound units, based on GlobalData MediPoint, 2014 report indicating 800,000 units growing at 4%-5% CAGR.
- <sup>2</sup> Addressable market for all TAEUS accessory & software, including tissue composition, temperature, vascular and perfusion. Not including licensing, disposables or service.
- <sup>3</sup> Based on ENDRA's design work and understanding of the ultrasound accessory market, we intend to price our initial TAEUS liver system at approximately \$40K to \$50K.

