

### **INVESTOR PRESENTATION**

**FEBRUARY 2024** 

### **Disclaimer**

FORWARD-LOOKING STATEMENTS – This presentation includes statements relating to Shockwave's expectations, projections, beliefs, and prospects (including statements regarding Shockwave's product development outlook), which are "forward-looking statements" within the meaning of the federal securities laws and by their nature are uncertain. The words "anticipate," "believe," "continue," "estimate," "expect," "intend," "may," "will" and similar expressions or the negative of these words are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs.

All statements contained in this presentation, other than statements of historical facts, are forward-looking statements. Forward-looking statements include discussions regarding our business strategy and plans, our objectives for future operations and financial performance, our capital requirements, future growth of the company, our ability to commercialize our products, expectations regarding product design, development and manufacturing, progress of clinical trials regarding our products, our ability to obtain and maintain regulatory approvals or clearances for our products, the development of competing products by our competitors, our ability to protect our intellectual property and not infringe the intellectual property rights of others, and other matters.

These forward-looking statements are subject to a number of risks and uncertainties, particularly in light of the current COVID-19 pandemic. Such risks include, but are not limited to, those discussed in our filings with the Securities and Exchange Commission, including those contained in Part I, Item IA, "Risk Factors" of our most recent Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, which we have filed with the Securities and Exchange Commission.

The future events and trends discussed in this presentation may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, achievements or events and circumstances reflected in the forward-looking statements will occur. You are cautioned not to place undue reliance on any forward-looking statements. Except to the extent required by law, we do not undertake to update any of these forward-looking statements after the date of this presentation to conform these statements to actual results or revised expectations.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. Such data and estimates involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such data or estimates. Neither we nor any other person makes any representation as to the accuracy or completeness of such estimates or data or undertakes any obligation to update such estimates or data after the date of this presentation. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

IVL CATHETERS – Shockwave's IVL catheters may only be utilized by, or under the direction of, a qualified physician who is familiar with interventional vascular procedures and who has been trained prior to use of the device, including use of the generator. Additional information regarding Shockwave's products may be found at <a href="https://www.shockwavemedical.com">www.shockwavemedical.com</a>, including Instructions for Use and information on indications, contraindications, warnings, precautions and adverse events. Shockwave's IVL catheters are commercially available in the U.S. and in certain countries outside the U.S. Please contact Shockwave for specific country availability at <a href="https://shockwavemedical.com/contact/">https://shockwavemedical.com/contact/</a>.



### **Shockwave Mission and Differentiation**

Establish Shockwave as the premier MedTech growth company by transforming treatment of poorly served patient populations with paradigmchanging technologies





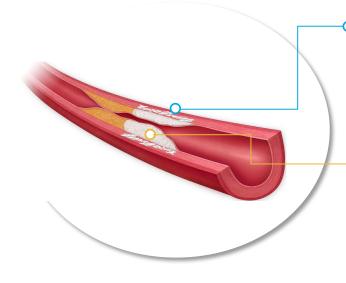


### **Goal of Vascular Intervention:**

#### Restore Vessel Size and Blood Flow

#### **Atherosclerosis**

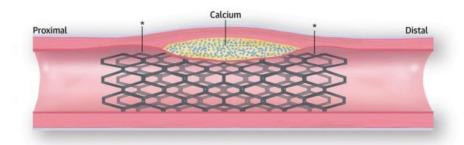
- Disease of aging in which arteries become narrowed ("stenotic") by the progressive growth of plaque.
- Calcium in atherosclerotic plaque can prevent therapies from opening the stenotic artery.
- Calcified Arteries Resist Expansion Resulting in More Complications and Vessel Damage.

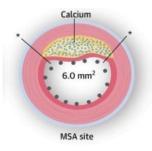


Calcification in middle layer (associated with stiffening)

OIntimal ("Superficial") Calcium

Calcification close to the inner surface of the artery (associated with obstruction and embolization)





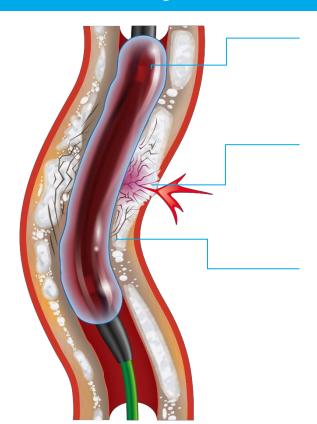


<sup>\*</sup> Stent struts

## Risks Posed by Current Technologies

### **High Pressure Balloons & Atherectomy Can Result in Serious Complications**

#### High Pressure Balloons<sup>1</sup>

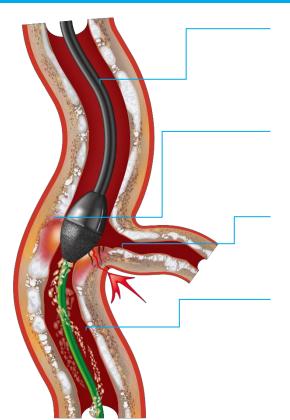


High pressure balloons preferentially expand away from calcium.

This predisposes to major dissection and perforation often at the interface between calcium and healthy tissue.

As a result, balloons are typically unable to effectively modify calcium.

#### Atherectomy<sup>1</sup>



Atherectomy has a steep learning curve compared to balloon-based therapies.

It causes thermal injury that leads to increased risk of clotting.

There is also a potential for large dissection and perforation.

The calcium ablated from the wall can travel downstream and block the artery.

<sup>&</sup>lt;sup>1</sup> Arterial cross sections

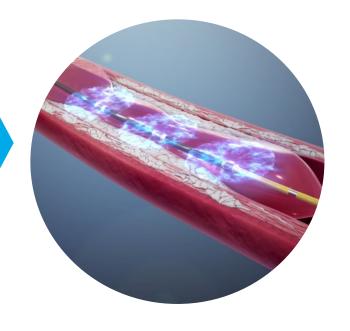
## Lithotripsy Has a History of Safely Cracking Calcium

### Lithotripsy

- Method has 40 years of success for safe elimination of kidney stones.
- Sonic pressure waves preferentially crack calcium without harming soft tissue.

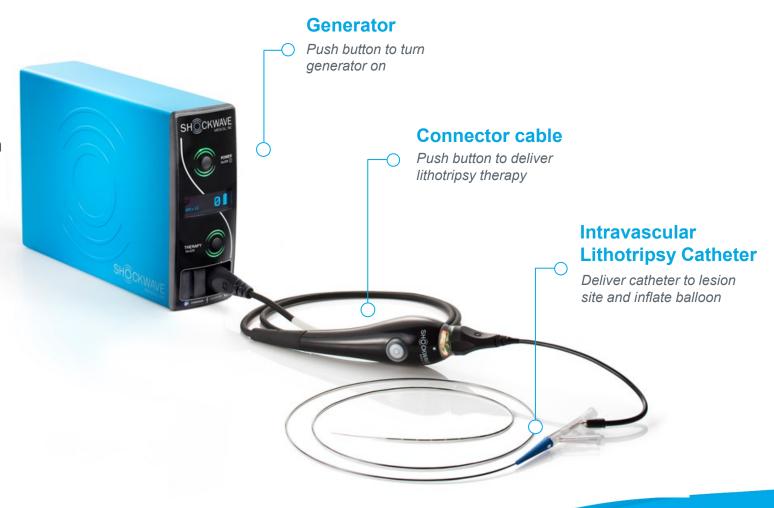
### Shockwave's Cardiovascular Lithotripsy

- Miniaturized, localized treatment.
- Sound waves pass through soft tissue to crack calcium.
- Vessel expands under low pressure.



# **Our Solution: Intravascular Lithotripsy**

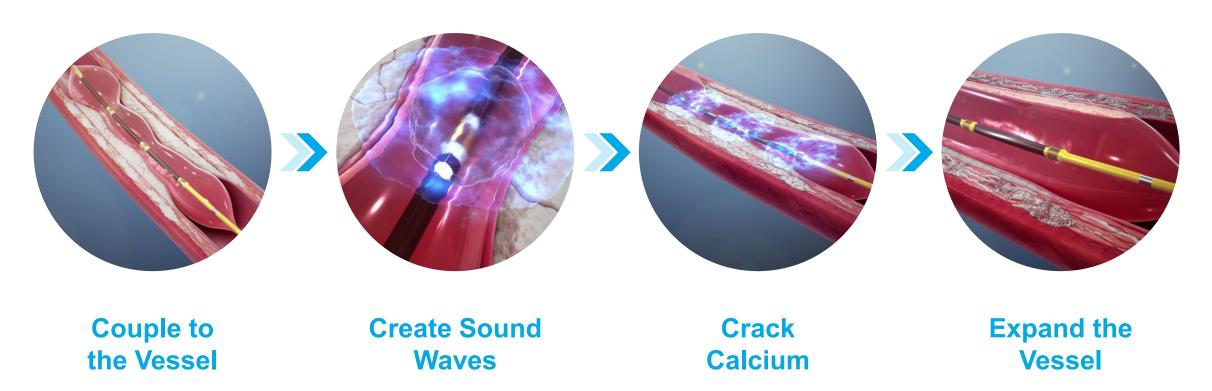
- Miniaturized local treatment of arterial calcium
- Dilates vessel under low pressure
- Treats both superficial and deep arterial calcium
- No harm to soft tissue
- Improves stent expansion
- Easily integrates into interventional practice
- Expands access to interventional therapies





# IVL is Uniquely Able to Address Superficial and Deep Calcium

**Standard Interventional Techniques Encourage Adoption** 



Standard techniques and equipment are utilized to deliver and deploy the IVL catheter IVL has a short learning curve and is not technique dependent

## Why Shockwave



Treating most complex calcified anatomies while minimizing complications



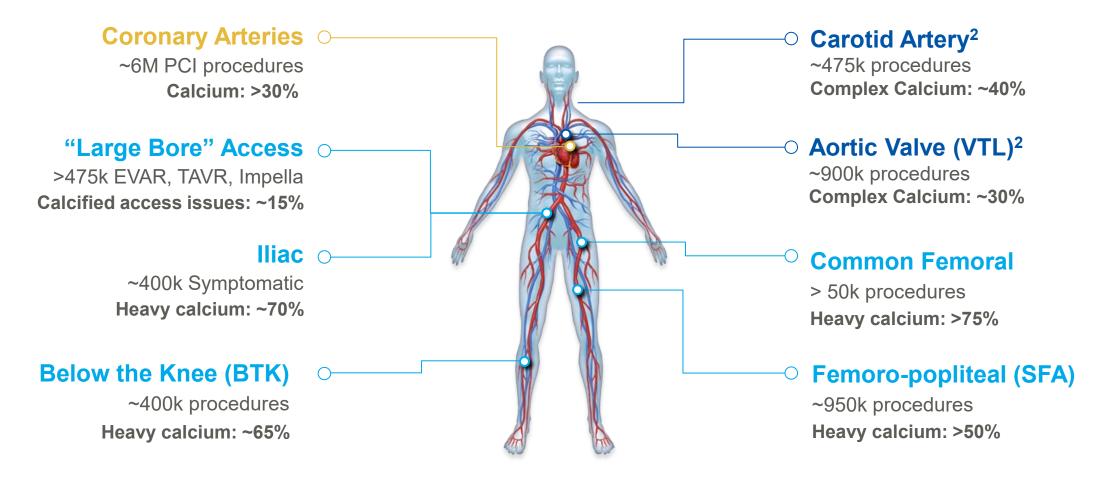
Integrates easily into procedure flow with short learning curve



Unique mechanism of action that cracks both medial and intimal calcium



# Targeted IVL Segments Have a TAM of >\$9.5 Billion<sup>1</sup>



<sup>&</sup>lt;sup>1</sup> Based on 2022 estimates. Annual procedures in the United States and international markets where IVL is sold (see slide 23) according to DRG and Company estimates; Proportion of annual procedures associated with calcified disease, according to Yost, M. L., Prevalence and Significance of Calcium, Vulnerable Plaque and Plaque Morphology in Peripheral Artery Disease (PAD). Beaufort, SC: THE SAGE GROUP; 2016 (for femoropopliteal, BTK, TAVR and common femoral) and Company estimates based on multiple occlusive disease studies (for ilian and EVAR / TEVAR). Aortic Valve annual procedures in 2025 according to the Journal of Thoracic Disease, 2017;9(6):1432 1436



### **Prevalence of Problematic Coronary Calcium >30% and Growing**

Multiple Large Studies Show ≥ 30% But May Underestimate Ca++ Presence and Severity

Significant Calcific Coronary Lesions Are Common >30% in Multiple Large Analyses

#### **Angiographic Studies**

#### Guedeney et al., JACC CI 2020

Pooled angiographic core lab data of 18 DES clinical trials totaling over 19,000 patients

#### Genereux et al., JACC 2014

Analysis of Outcomes by Calcium Severity in 6,855 PCI patients

#### Bangalore et al., CCI 2011

Analysis of Outcomes by Calcium Severity in 1,537 PCI patients from NHLBI registry Moderate-Severe Calcium (%)

31%

**32**%

30%

# **Angiography Alone Underestimates Calcium Presence and Severity**

# Wang et al., JACC Imaging 2017

Analysis of Calcium
Detection with Intravascular
Imaging vs. Angiography
Alone in 440 Lesions

**Estimated % of Lesions with Problematic Calcium via IVI** 

**40%** 

#### Significant Predictors of Coronary Artery Calcium Growing in Prevalence

Age
Diabetes
Renal Failure
Hypertension

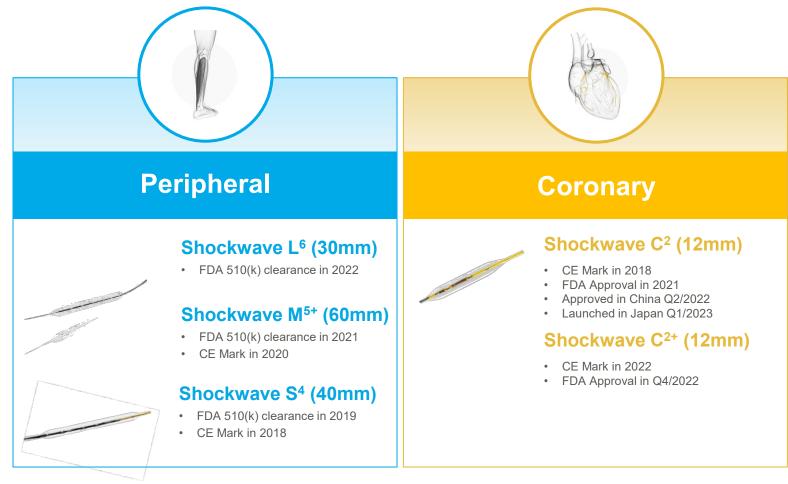


IVI = Intravascular Imaging (IVUS, OCT)

Problematic Calcium defined as moderate or severe calcium under angiography or with an arc > 180-dgrees via IVI.

### **Shockwave's Current Portfolio**

Foundational Products Established IVL as a Safe and Effective For Vascular Calcium





## Shockwave's Unparalleled Clinical Program

### Peripheral<sup>1</sup>

Largest Randomized Study in Complex Patients<sup>2</sup>

Completed **Studies** 

SWM & Investigatorsponsored Studies

1438

SWM & ISR Planned Enrollment

104

Published **Papers** 

1392

Patients from **Published Studies** 

#### Coronary<sup>3</sup>

Most Challenging Calcified Lesions in an IDE

Completed Studies

SWM & Investigatorsponsored Studies

SWM & ISR Planned Enrollment

Published **Papers** 

5969

Patients from Published Studied

<sup>&</sup>lt;sup>1</sup> Disrupt PAD I, II, PAD III RCT, PAD III OS, BTK, BTK II (Follow-up) and PAD+ Studies Data on file at company. Data as of February 15, 2024

<sup>&</sup>lt;sup>2</sup> Disrupt PAD III RCT. Data on file at company, Data as of February 15, 2024

<sup>3</sup> Disrupt CAD I - IV Studies. Investigator-sponsored Research data as of February 15, 2024

# **Disrupt PAD III Results**<sup>1</sup>

#### Largest-Ever Randomized Study of Calcified Peripheral Artery Lesions

### Simple and Safe

77%

Reduction in Grade C or Higher Dissection

306

Patients at 45 Sites

44%

Lower Max Pressure with IVL

69%

Reduction in Post-Dilatation 0%

Final Angiographic Complications with IVL

**75%** 

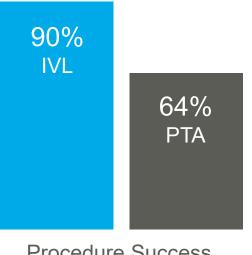
Reduction in Provisional Stent **Placement** 

### **Superiority**

25.6%

(P<0.0001) TREATMENT EFFECT 15.4%

(P<0.0065) TREATMENT EFFECT









Procedure Success

- CORE LAB -

<sup>1</sup> Tepe et al. JSCAI, 2022. Results as of May 19, 2022

# Peripheral IVL Preserves Future Treatment Options

IVL maintains control of the procedure by minimizing complications such as dissections, embolization, and perforations. IVL significantly reduces the need for bailout stents, preserving future treatment options

#### **Reduced Dissections**

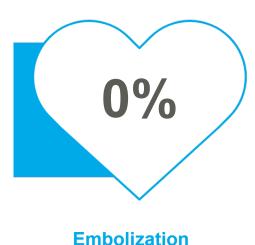
**77%** Reduction in Type  $\geq$  C Dissections

# **PTA** 15.1% 77% (p=0.03)IVL 3.5%

> Type C Dissections

Embolic protection: Utilized in 1.3% of cases in IVL treatment arm. Provisional stent: Utilized if residual stenosis ≥50% by visual estimate or unresolved ≥ type D dissection, and trans-lesional gradient > 10 mmHg Tepe et al. JSCAI, 2022. Results from PAD III study

### **Low Complications**



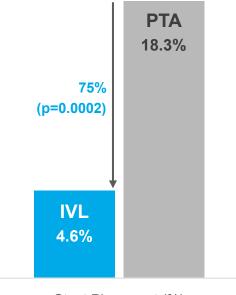
**Perforations** 

**Thrombus** 

No Flow

#### **Reduced Bailout Stenting**

**75%** Reduction in Bailout Stenting

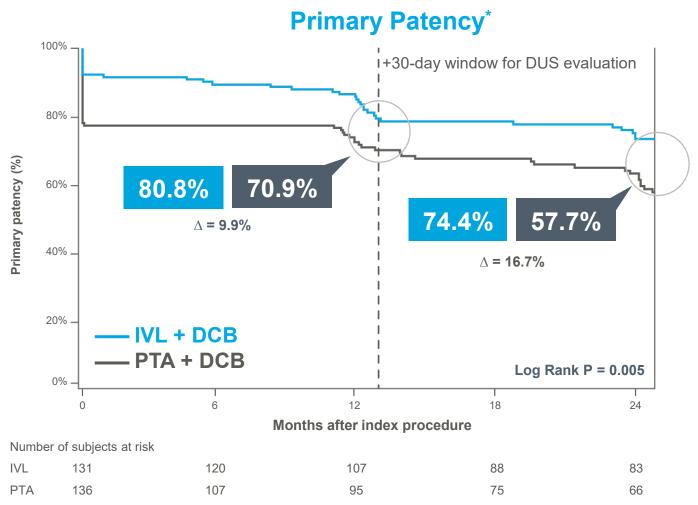


Stent Placement (%)



# Peripheral IVL: Excellent Long-Term Results

IVL Has Demonstrated Excellent Patency Out to Two Years in a Severely Calcified Patient Population

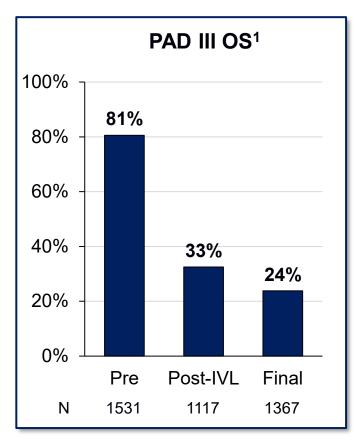


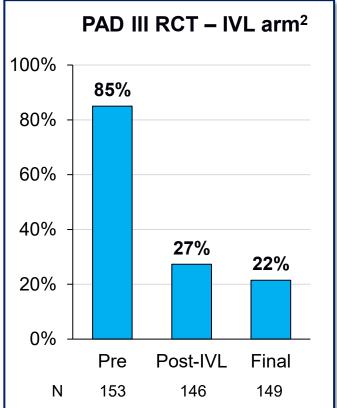
Primåry Patency defined as freedom from provisional stenting at index procedure, freedom from clinically-driven target lesion revascularization, and freedom from restenosis determined by duplex ultrasound Tepe et al. JSCAI, 2022.



### **Consistent Outcomes with PAD III RCT**

#### Consistent Outcomes Between Clinical Trial and 'Real-World' Environments.





Complications	PAD III OS <sup>1</sup> N=1367	PAD III RCT <sup>2</sup> N=149
Dissections D-F	0.7%	0%
Perforation	0.2%	0%
Distal Emboli	0%	0%
Slow Flow/ No Reflow	0%	0%
Abrupt Closure	0%	0%
Thrombus	0%	0%

# **Coronary IVL**

### **Consistent Outcomes Across Disrupt CAD Studies**

	DISRUPT CAD I <sup>1</sup>	DISRUPT CAD II <sup>2</sup>	DISRUPT CAD III <sup>3</sup>	DISRUPT CAD IV <sup>4</sup>	DISRUPT CAD POOLED <sup>5</sup>
Patients	60	120	384	64	628
Severe Calcification	100%	94.2%	100%	100%	97%
<b>Procedural Success</b>	95%	94%	92.4%	93.8%	92.4%
Stent Delivery	100%	100%	99.2%	100%	99.5%
<b>Final Severe Dissections</b>	0%	0%	0.3%	0%	0.2%
Final Perforations	0%	0%	0.3%	0%	0.2%
Final Abrupt Closure	0%	0%	0.3%	0%	0.2%
Final Slow Flow/No Reflow	0%	0%	0%	0%	0%

<sup>&</sup>lt;sup>1</sup> https://www.ahajournals.org/doi/full/10.1161/CIRCULATIONAHA.118.036531



<sup>&</sup>lt;sup>2</sup> https://www.ahajournals.org/doi/full/10.1161/CIRCINTERVENTIONS.119.008434

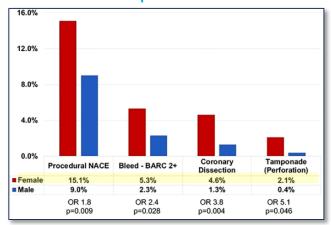
<sup>&</sup>lt;sup>3</sup> https://www.jacc.org/doi/full/10.1016/j.jacc.2020.09.603

<sup>&</sup>lt;sup>4</sup> Circulation Journal Circ J 2021; 85: 826 – 833 <sup>5</sup> https://www.jacc.org/doi/10.1016/j.jcin.2021.04.015

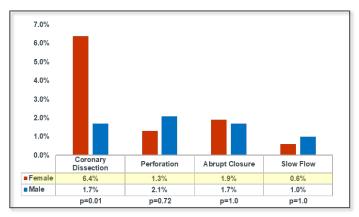
# Females and Coronary IVL: Similar Safety Outcomes to Men

### Females Have Traditionally Suffered Worse Outcomes Than Men with OA & RA1

**RA:** Increased complication rates in women<sup>2</sup>



#### **OA:** Increased severe dissection rate in women<sup>3</sup>



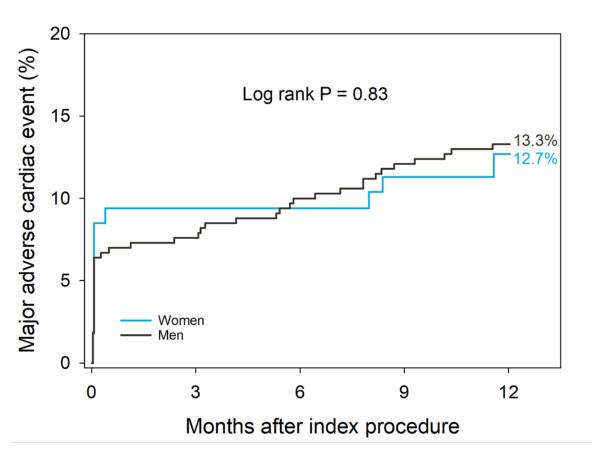
**IVL:** Low and similar complication rates in women and men<sup>4</sup>

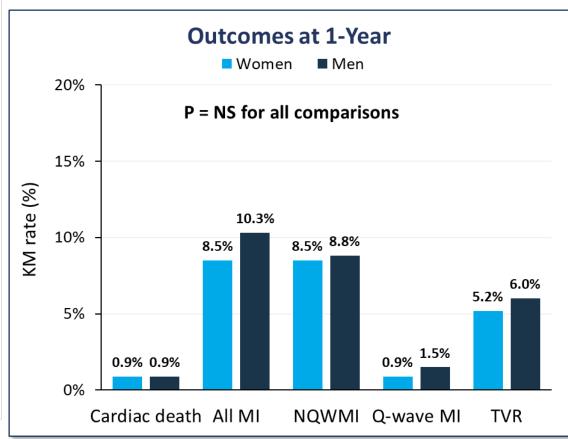
Complication	Women N=144	Men N=484	P value
Any serious angiographic complication	0.0%	0.4%	1.0
Severe dissection (Type D-F)	0.0%	0.2%	0.5
Perforation	0.0%	0.2%	1.0
Abrupt closure	0.0%	0.2%	1.0
Slow flow	0.0%	0.0%	
No-reflow	0.0%	0.0%	



Females Maintain Similar Safety Outcomes to Men with cIVL

**Outcomes Remain Durable at 1-Year** 



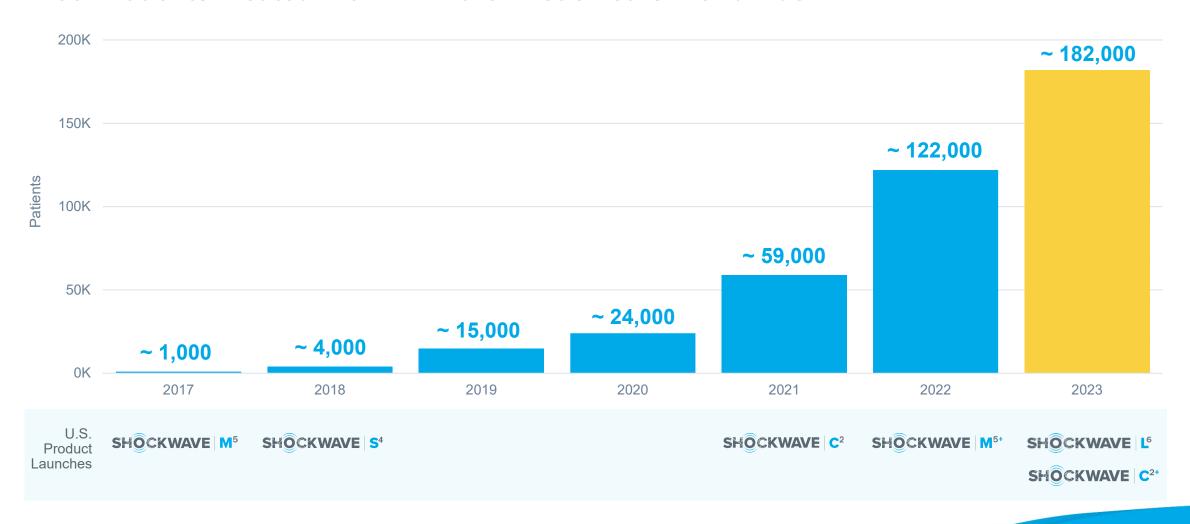


<sup>&</sup>lt;sup>1</sup>Presented at the Society for Cardiovascular Angiography and Interventions annual conference (Atlanta, GA), A. Lansky, 2022 KM: Kaplan-Meier; MI: Myocardial Infarction; NQWMI: Non Q-wave MI; TVR: Total Vessel Revascularization.



### **Innovation Making an Impact on Patient Lives**

>400k Patients Treated with IVL in the First 5 Years Worldwide



## **R&D Pipeline Quadrupled in Just Two Years**

Investments in innovation drive continued growth

2021 Development **Programs** Early Stage Technology Product ~\$50 MILLION

2023 Development Programs Early Stage **Technology Product** ~\$150 MILLION

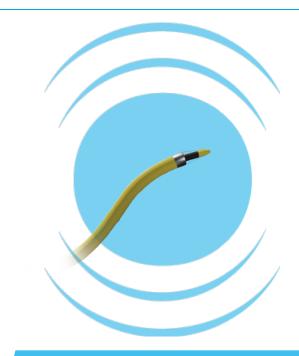
### **Shockwave Now Has Three Lithotripsy Platforms**

Balloon-Based Platform



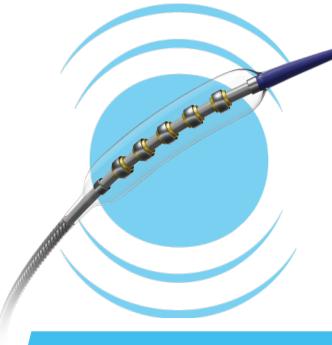
**Workhorse Platform for Balloon-Crossable Lesions** 

Catheter-Based Platform



Forward-Shifted, Non-Balloon Platform for Tight, Difficult-to-Cross Lesions

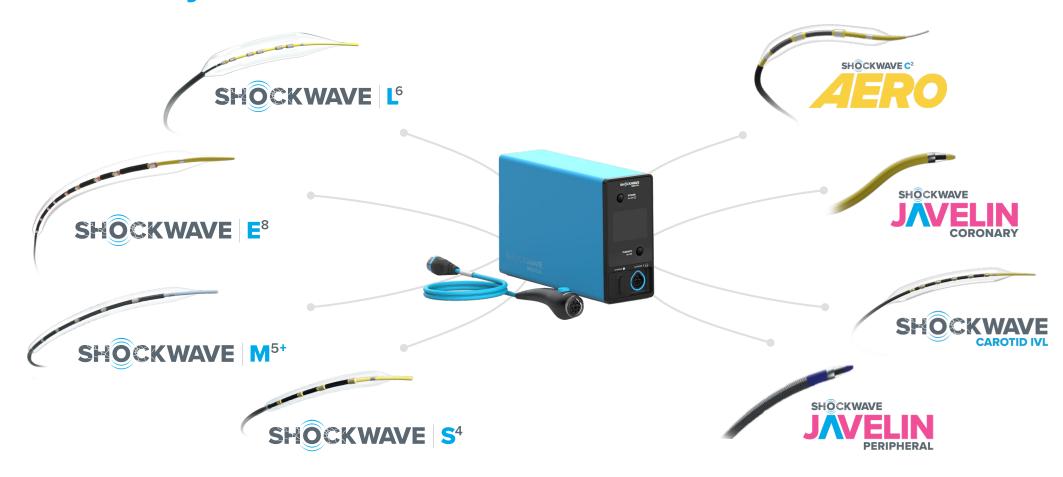
High-Power Platform



High-Power Platform
That Delivers Far-Field
Lithotripsy



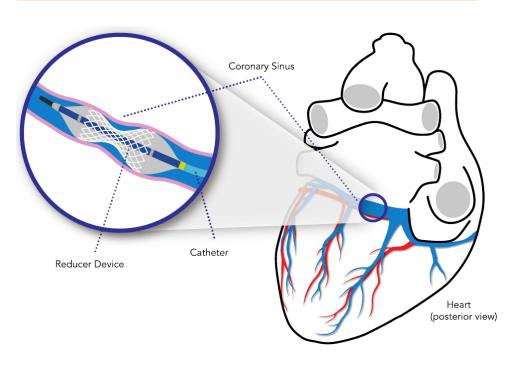
# The Future of IVL: Eight Purpose-Designed Catheters **Powered by the Same Generator**



# **REDUCER**: Addressing Another Large Unmet Need

#### Refractory Angina Represents a Multi-Billion Dollar TAM

The Reducer System increases coronary sinus pressure to redistribute blood to ischemic areas of the heart



- Each year up to 300,000 patients in the U.S. and E.U. who are already revascularized continue to experience angina<sup>1</sup>
- Refractory angina impacts patient quality of life and has significant costs to healthcare system
- The Reducer has been shown to improve angina in ~80% of patients
- The Reducer System has been granted breakthrough device designation by the FDA
- The COSIRA II US IDE approval trial is currently enrolling patients
- It is estimated that up to 500,000 new patients present with angina and non-obstructive coronary artery disease (ANOCA) in the U.S. and the E.U. each year<sup>2,3</sup>

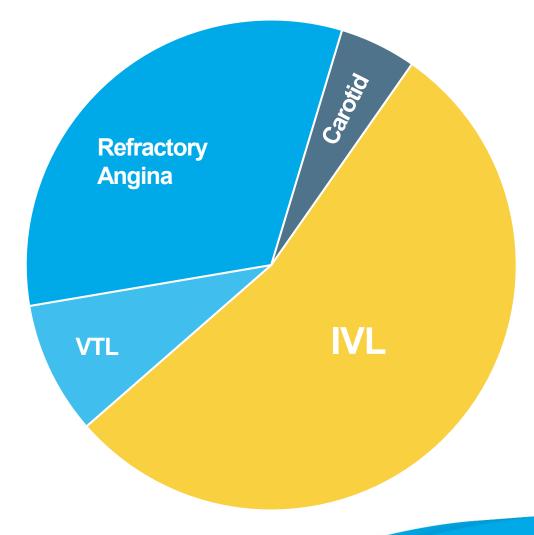


## **Expanding TAM Provides Opportunity for Long-Term Growth**

Increased from \$6B at 2019 IPO

\$14.5 Billion

**TOTAL ADDRESSABLE MARKET** 



# Significant Progress on Medicare Reimbursement

#### **Enhanced Access to IVL for our Customers**

2020 2021 2022 2023 2024 **Future Coronary Hospital** Coronary Coronary Coronary **Outpatient** Inpatient **Physician Outpatient** Coronary Effective: Jan 2024 TPT Effective: Jul 2021 Effective: Oct 2023

Peripheral

**Peripheral Inpatient** (ATK, BTK)



Effective: Oct 2020

**Peripheral BTK** Outpatient



Effective: Jan 2021

**Peripheral ATK** Outpatient



Effective: Jan 2022

**Peripheral Inpatient** (ATK, BTK)



Effective: Oct 2023

**Physician Payment** 

**OBL** 

ATK: Above-the-Knee; BTK: Below-the-Knee; ASC: Ambulatory Surgery Center; OBL: Office-Based Labs.





Dedicated coding & some payment, not yet to



# **Global Commercialization Strategy**

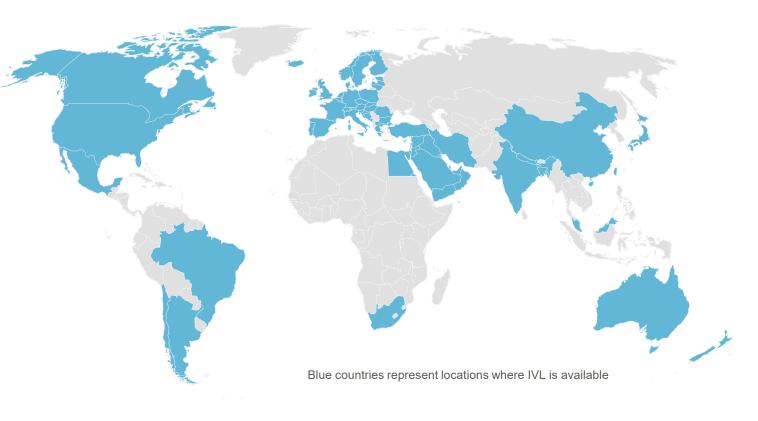
### IVL is Currently Available to 60% of the World's Population

#### **United States**

- Single sales force for both peripheral and coronary
- Mix of sales reps and clinical specialists
- Low service burden enables cost efficient sales model

#### International

- Commercial sales in approximately 70 countries
- Direct sales in Austria, Canada, France, Germany, Ireland, Italy, Japan, Portugal, Spain, Switzerland, United States, and United Kingdom
- Distributors cover other European countries as well as Africa, ANZ, Asia, North and South America and the Middle East
- Joint Venture with Genesis Medtech in China



Over 500 sales and marketing professionals worldwide<sup>1</sup>



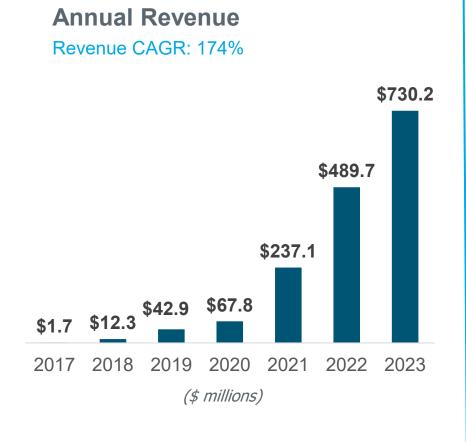
### **Operational Excellence**

- Headquarters located in Santa Clara, CA
- Approximately 1,500 employees<sup>1</sup>
- Lean manufacturing expected to drive margin expansion
- Contract manufacturer enhances capacity and efficiencies
- New production facility in Costa Rica
- Approximately 370 operations employees1
- Robust IP portfolio of 176 issued and 80 pending patents<sup>1</sup>



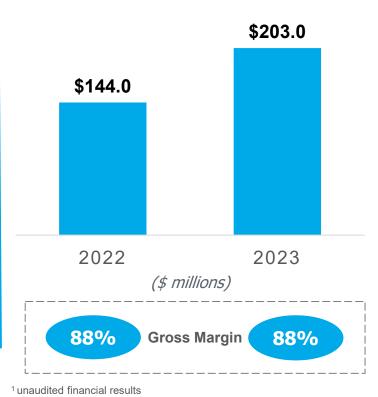


## **Strong Financial Profile**





Revenue Growth: 41%



#### Q4 2023 Performance<sup>1</sup>

#### Revenue growth of 41% year over year

- U.S. revenue grew 34% to \$158.1 MM
- International revenue grew 74% to \$44.8 MM

#### Adjusted EBITDA growth of 20%

#### Balance Sheet (as of December 31, 2023)

- · Cash, cash equiv. and short-term investments: \$990.6 MM
- Convertible debt outstanding: \$731.9 MM



# **Notable Accomplishments**

**5,000**<sup>1</sup>

**Customers** 

350<sup>1</sup>

**Publications** 

260<sup>1</sup>

**Patents** 

8,000<sup>1</sup>

Generators in Hospitals

**400,000**<sup>1</sup>

**Patients Treated** 

40,000

Clean Room ft<sup>2</sup> with Costa Rica 174%

Revenue CAGR ('17-'23)

\$730M

2023 Revenue



## **Strategy for Long-Term Growth**





**INCREASE** penetration with new products



**EXPAND** the pool of treatable patients



**IMPROVE** customer economics



**INVEST** in clinical data



**MAINTAIN** our team's high performance



**ACQUIRE** differentiated platforms



# **We Crack Calcium**



# **Regulatory Disclaimers**

Product	Disclaimer		
Shockwave S <sup>4®</sup> , Shockwave M <sup>5+®</sup> , Shockwave C <sup>2+®</sup>	Rx only. CE marked.		
Shockwave L <sup>6®</sup>	Rx only. Approved for use in the United States only.		
Shockwave Javelin™	Caution: Investigational device. Limited by U.S. federal and other applicable laws to investigational use. Not available for sale.		
Shockwave C <sup>2</sup> AERO <sup>™</sup> , Carotid IVL, Crescendo <sup>™</sup> VTL, Mitral VTL, Shockwave E <sup>8™</sup>	Device under development. Not approved or available for sale.		
Reducer	CE marked. Caution: Investigational device. Limited by U.S. federal law to investigational use. Under clinical investigation testing in Canada.		

