



# INVESTOR PRESENTATION

NOVEMBER 2021

# 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 1A, "*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 [www.shockwavemedical.com](http://www.shockwavemedical.com), 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 <https://shockwavemedical.com/contact/>.

# Shockwave Mission and Differentiation

- Seeking to ***transform the treatment*** of calcified cardiovascular disease.
- Seeking to establish a ***new standard of care through intravascular lithotripsy (IVL)***.
- ***Differentiated and proprietary*** local delivery of sonic pressure waves for the treatment of calcified plaque.



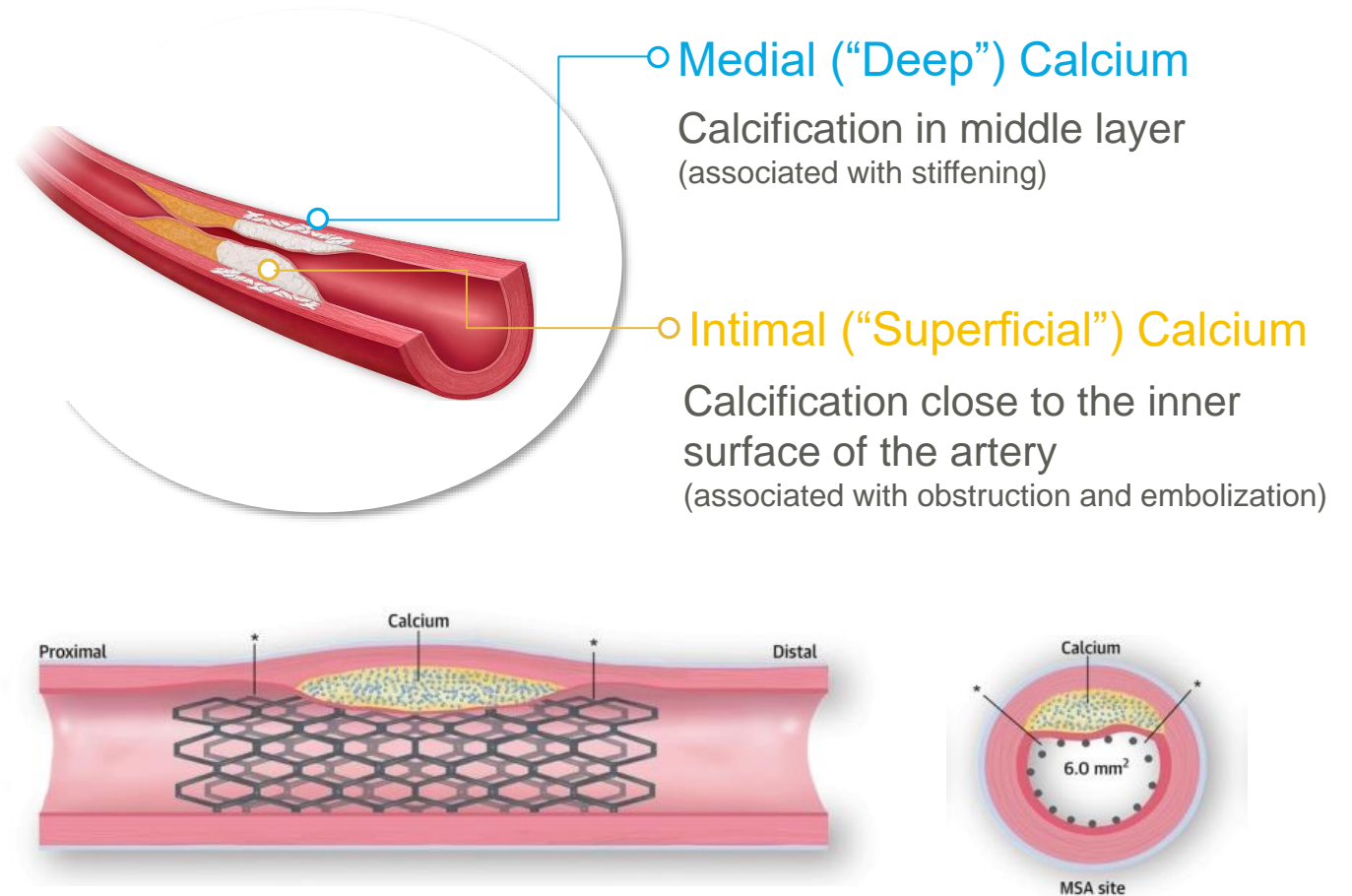
<sup>1</sup> Refer to slide 10 for TAM details.

# 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

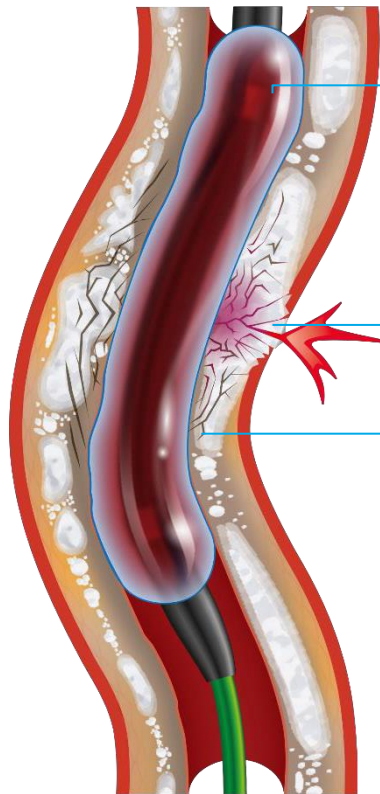


\* Stent struts

# Risks Posed by Current Technologies

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

### High Pressure Balloons

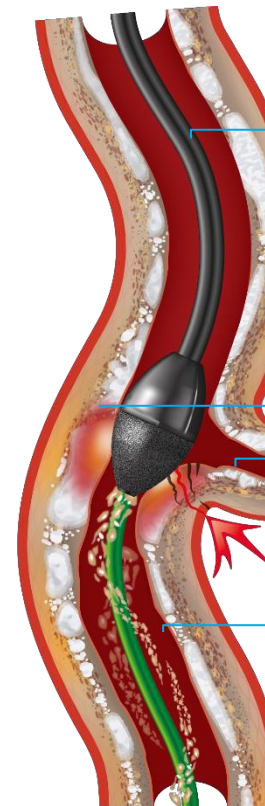


High pressure balloons preferentially expand away from calcium.

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



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.

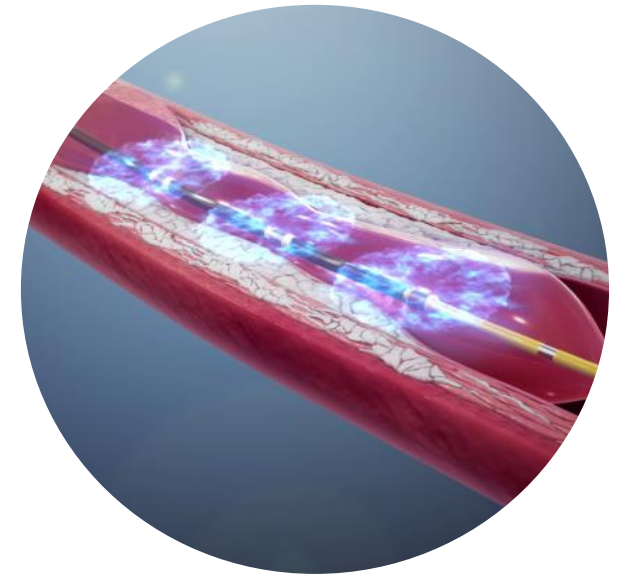
# Lithotripsy Has a History of Safely Cracking Calcium

## Lithotripsy

- Method has 30 years of success for safe elimination of kidney stones.
- Sonic pressure waves preferentially crack calcium without harming soft tissue.

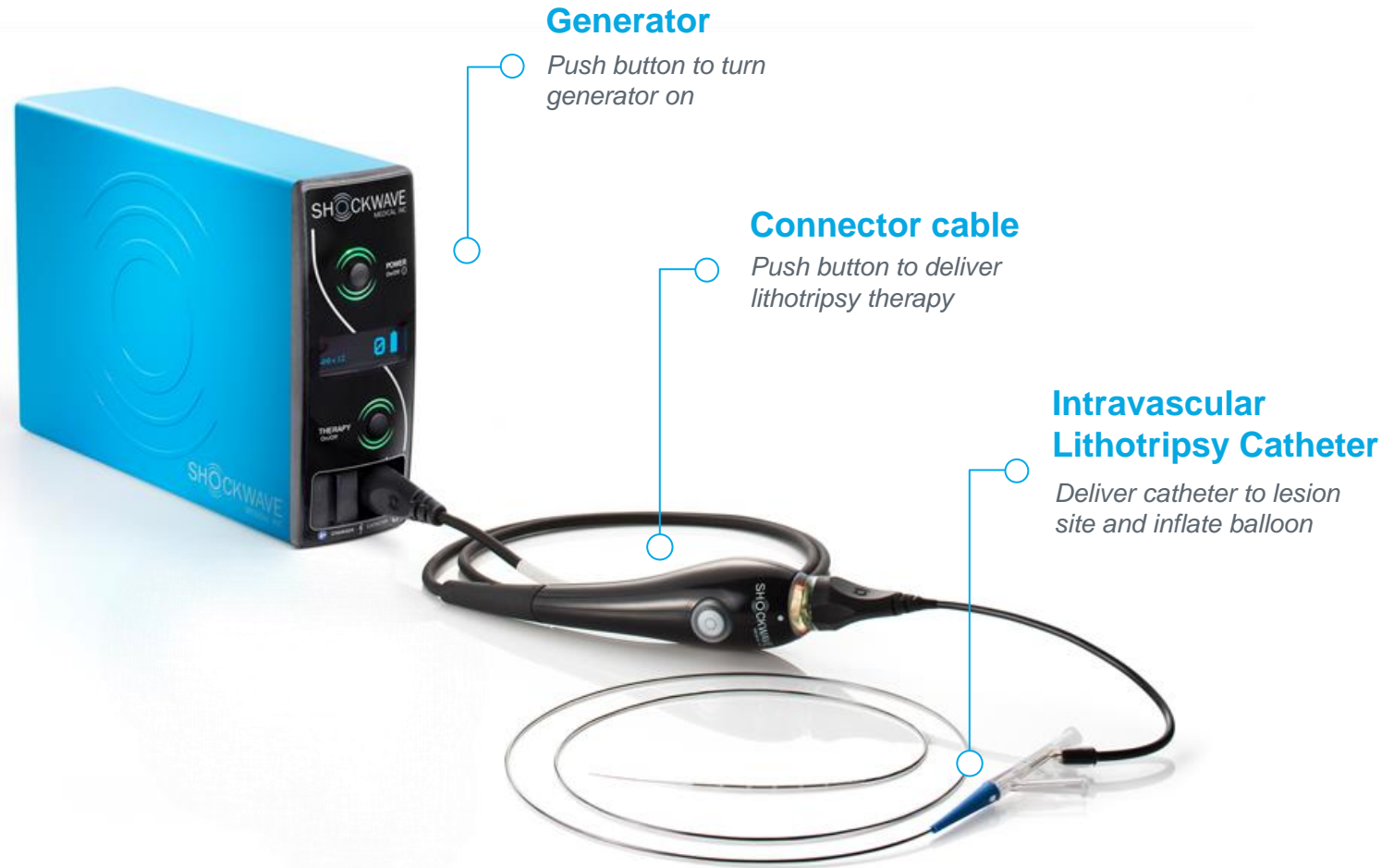
## Shockwave's Cardiovascular Lithotripsy

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



# Our Solution: Intravascular Lithotripsy

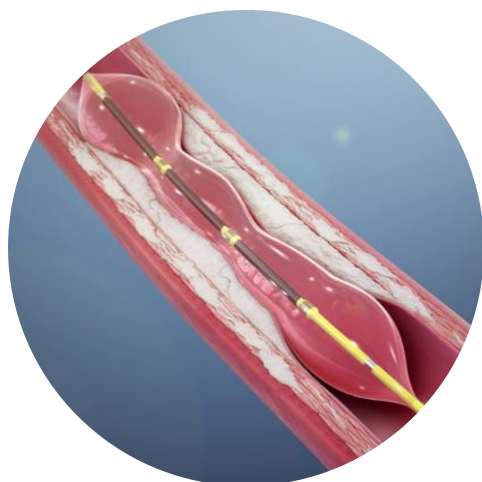
- Miniaturized local treatment of arterial calcium
- Dilates vessel under low pressure
- Treats both superficial and deep arterial calcium
- No harm to soft tissue
- Improves stent expansion
- Easily integrates into interventional practice
- Expands access to interventional therapies



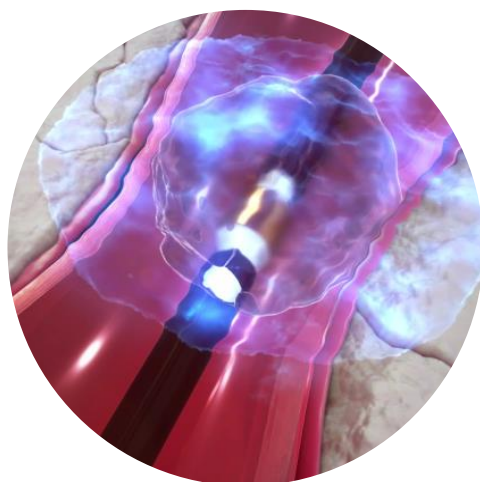


# IVL is Uniquely Able to Address Superficial and Deep Calcium

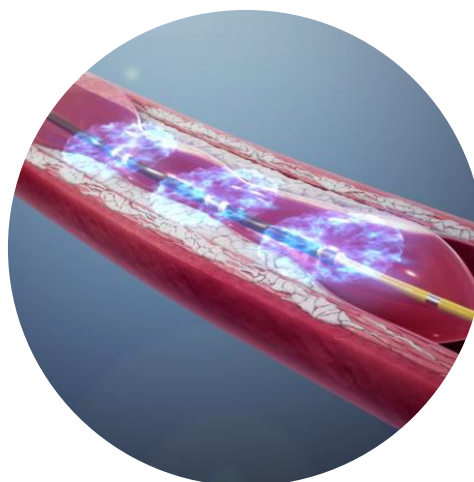
Standard Interventional Techniques Encourage Adoption



**Couple to  
the Vessel**



**Create Sound  
Waves**



**Crack  
Calcium**



**Expand the  
Vessel**



# Why Shockwave

» **SAFE** «

Treating most complex calcified anatomies while minimizing complications

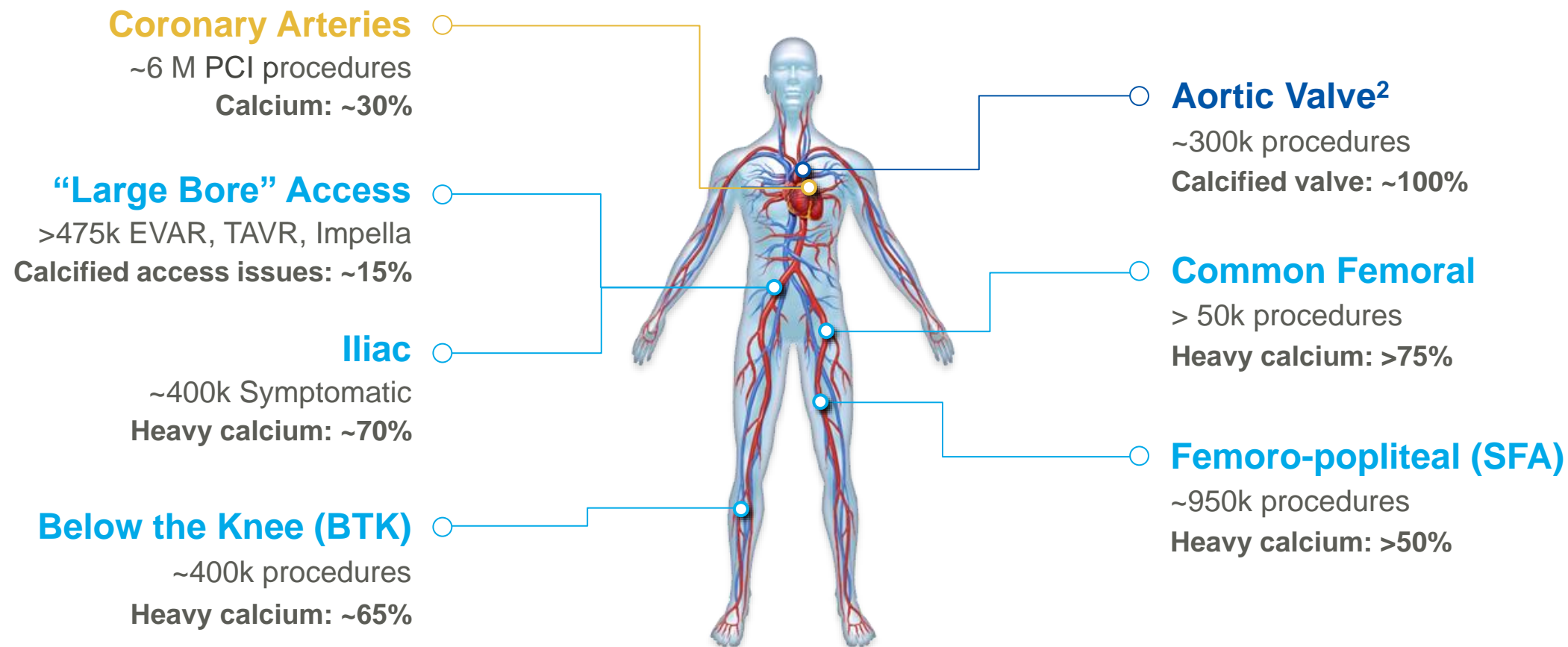
» **SIMPLE** «

Integrates easily into procedure flow with short learning curve

» **EFFECTIVE** «

Unique mechanism of action that cracks both medial and intimal calcium

# Targeted Segments Have a TAM of >\$8.5 Billion<sup>1</sup>



<sup>1</sup> Based on 2022 estimates. Annual procedures in the United States and international markets where IVL is sold (see slide 19) or is in process of being approved for sale (China, Japan), 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 iliac and EVAR / TEVAR). Aortic Valve annual procedures in 2025 according to the Journal of Thoracic Disease, 2017;9(6):1432-1436.

<sup>2</sup> Clinical development stage

# Shockwave TAM: What Has Changed

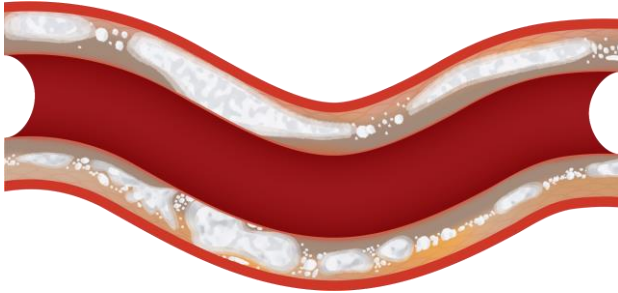
	Growth Drivers			
	2019 TAM <sup>1</sup>	2022E TAM <sup>2</sup>	Existing Markets <sup>2</sup>	New Markets
<b>Femoropopliteal (SFA)</b>	700k procedures	950k procedures	<ul style="list-style-type: none"> <li>✓ Population growth</li> <li>✓ Improved visibility</li> </ul>	<ul style="list-style-type: none"> <li>✓ Rest of Europe</li> <li>✓ Rest of APAC</li> <li>✓ Canada / LA</li> </ul>
<b>Large Bore</b>	275k procedures	475k procedures	<ul style="list-style-type: none"> <li>✓ Population growth</li> <li>✓ TAVR growth</li> </ul>	<ul style="list-style-type: none"> <li>✓ Rest of Europe</li> <li>✓ Rest of APAC</li> <li>✓ LA</li> </ul>
<b>Below the Knee</b>	300k procedures	400k procedures	<ul style="list-style-type: none"> <li>✓ Population growth</li> <li>✓ Improved visibility</li> <li>✓ Market development</li> </ul>	<ul style="list-style-type: none"> <li>✓ Rest of Europe</li> <li>✓ Rest of APAC</li> <li>✓ Canada / LA</li> </ul>
<b>Coronary</b>	3.5 million procedures	6 million procedures	<ul style="list-style-type: none"> <li>✓ Population growth</li> <li>✓ Market growth</li> <li>✓ China</li> </ul>	<ul style="list-style-type: none"> <li>✓ Rest of Europe</li> <li>✓ Middle East / SA</li> <li>✓ LA</li> </ul>

<sup>1</sup> Based on 2019 estimates, according to DRG market reports and Company estimates. Annual procedures in the United States and international markets where IVL was sold in 2019; 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 iliac and EVAR / TEVAR). Aortic Valve annual procedures in 2025 according to the Journal of Thoracic Disease, 2017;9(6):1432-1436.

<sup>2</sup> See slide 11 for market size and growth sources and calcification sources. Additional growth drivers from Company estimates and experience

# To Stent or Not to Stent

Physicians Have Distinct Preferences Depending on the Vessel



**Stent Not Preferred**

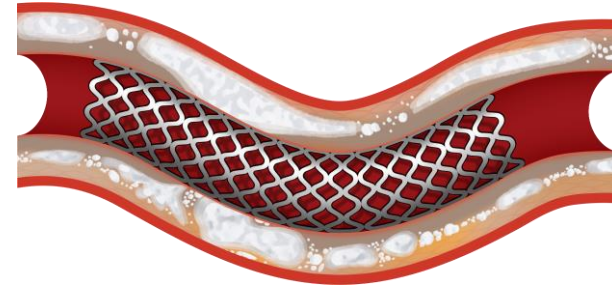
Iliac (“Large Bore” Access)

Common Femoral

Femoro-popliteal (SFA)

Below the Knee (BTK)

Popliteal



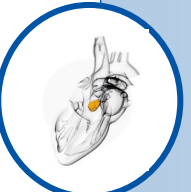


**Stent is the Objective**

Coronary Artery >2.5mm

Iliac Artery (symptomatic disease)

# IVL has Potential to Grow Markets and Take Market Share

		Market Growth	Potential Shockwave Market Share Gain
	<b>Peripheral Artery Disease (PAD)</b>	<ul style="list-style-type: none"><li>▲ Iliac</li><li>▲ Common Femoral</li><li>▲ “Large Bore” Access</li><li>▲ Below-the-Knee</li></ul>	<ul style="list-style-type: none"><li>✓ Femoropopliteal (SFA)</li><li>✓ Below-the-Knee</li></ul>
	<b>Coronary Artery Disease (CAD)</b>	<ul style="list-style-type: none"><li>▲ Left Main</li><li>▲ Ostial Lesions</li><li>▲ “High-Risk PCI</li></ul>	<ul style="list-style-type: none"><li>✓ All cross-able lesions</li></ul>
	<b>Aortic Stenosis (AS)<sup>1</sup></b>	<ul style="list-style-type: none"><li>▲ Very Old/Frail</li><li>▲ Contraindicated for TAVR</li><li>▲ Co-Morbidities</li><li>▲ Young Patients</li></ul>	<ul style="list-style-type: none"><li>✓ TAVR Procedures</li></ul>

<sup>1</sup> Clinical development stage

# IVL's Platform Technology

## Multi-Year Pipeline of Vascular & Structural Heart Products



### Peripheral

#### Shockwave M<sup>5</sup> (60mm)

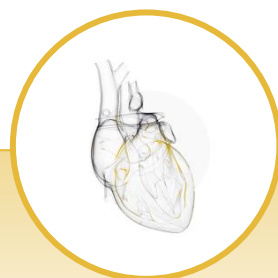
- FDA 510(k) clearance 2017
- CE Mark in 2018

#### Shockwave M<sup>5+</sup> (60mm)

- FDA 510(k) clearance in 2021
- CE Mark in 2021

#### Shockwave S<sup>4</sup> (40mm)

- FDA 510(k) clearance 2019
- CE Mark in 2018

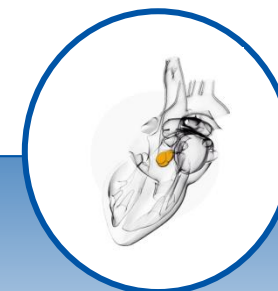


### Coronary

#### Shockwave C<sup>2</sup> (12mm)

- CE Mark in 2018
- FDA Approval in 2021

Ongoing global studies to support Japan approval<sup>1</sup>



### Valve<sup>2</sup>

#### TAVL

- Treat calcific leaflets
- Delay replacement

<sup>1</sup> Enrollment completed in Q2 2020 for CAD IV

<sup>2</sup> Clinical development stage



# Shockwave's Unparalleled Clinical Program

## Peripheral<sup>1</sup>

Largest Randomized Study in  
Complex Patients

**6**

Completed  
Studies

**925**

Patients  
Studied

**56**

Published  
Papers

**1794**

Patients in PAD  
Clinical Program

**32**

Current Registry  
Sites

## Coronary<sup>2</sup>

Most Challenging Calcified  
Lesions in an IDE

**4**

Completed  
Studies

**1859**

Patients  
Studied

**136**

Published  
Papers

**30**

Investigator-  
Sponsored Trials

**6667**

ISR Planned  
Enrollment

<sup>1</sup> Disrupt PAD I, II, PAD III RCT, PAD III OS (200 IA and Iliac), BTK Studies. Data on file at company. Data as of July 13, 2021

<sup>2</sup> Disrupt CAD I - IV Studies. Data as of July 13, 2021

# Key Advantage of Shockwave IVL: Safety

## Demonstrated Safety Profile of IVL Delivered Via a Low-Pressure Balloon

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

<b>468</b>	Number of patients
<b>78%</b>	Severe Calcium
<b>YES</b>	Core Lab
<b>0.2%</b>	Perforation <sup>3</sup>
<b>0%</b>	Embolization
<b>0%</b>	Abrupt Closure / Slow Flow

### Coronary<sup>2</sup>

<b>628</b>	Number of patients
<b>97%</b>	Severe Calcium
<b>YES</b>	Core Lab
<b>0.2%</b>	Perforation <sup>4</sup>
<b>0.2%</b>	Abrupt Closure
<b>0.2%</b>	Cardiac Death (in hospital)
<b>0.6%</b>	Q-wave MI (in hospital)
<b>5.7%</b>	Non-Q-wave MI (in hospital)

<sup>1</sup> Disrupt PAD I, II, PAD III RCT, PAD III OS (200IA), BTK Studies.

<sup>2</sup> Pooled Disrupt CAD I-IV.

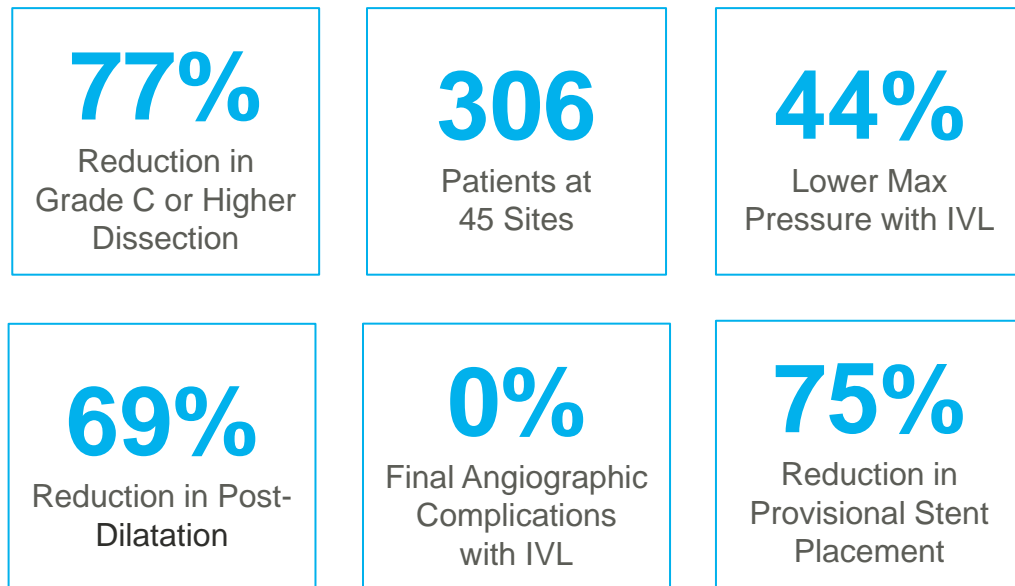
<sup>3</sup> Perforation post-DCB, not IVL-related

<sup>4</sup> Perforation post-stent, not IVL-related

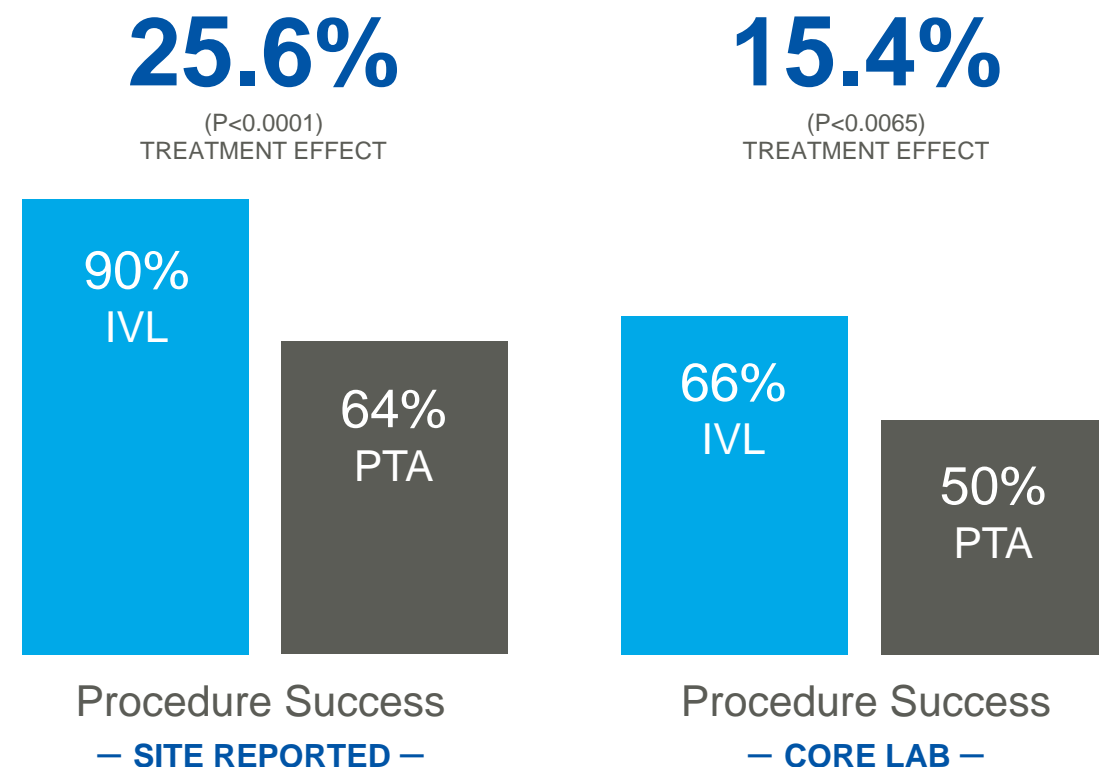
# Disrupt PAD III Results

## Largest-Ever Randomized Study of Calcified Lesions

### Simple and Safe



### Superiority



# CAD III By the Numbers

Showcases Safety, Effectiveness & Ease of Use of Coronary IVL

**384**

Patients at  
47 Sites

**100%**

Severe Ca<sup>++</sup>

**47.9mm**

Calcium Length

**98%**

IVL Crossing &  
Therapy Delivery

**99%**

Stent Delivery

**0.5%**

Final Serious  
Angio Complications

**11.9%**

Residual Stenosis

**1.7mm**

Acute Gain

**92.4%**

Procedural Success

**7.0%**

In-hospital MACE

**7.8%**

30-day MACE

**13.8%**

MACE  
at 1-year

**10.5%**

MI  
at 1-year

**4.3%**

TLR  
at 1-year

**1.1%**

Stent thrombosis  
at 1-year\*

\*One definite or probable stent thrombosis event beyond 30 days

# U.S. Coronary Launch Strategy

Rigorous Sales Training to Ensure Effective Management of Both the Coronary & Peripheral Businesses

## Targeted Account Segmentation

### Prioritized targeting based on specific criterion

- ✓ PCI volumes
- ✓ Complex PCI operators
- ✓ IVL experience
- ✓ VAC process & timing

## Systematic Account Launch

### Ensure optimal outcomes with IVL and ongoing independence from reps

- ✓ Account commitment for 1-2 week install and purchase of an initial “starter kit”
- ✓ In-service focused on performing cases and cross-training entire staff
- ✓ Territory manager and clinical specialist follow-up visits to reinforce best practices
- ✓ TM and CS partner to manage coronary launch while growing peripheral utilization

## Pricing Strategy

### Optimize long-term reimbursement<sup>1</sup>

- ✓ Price is predicated on a novel, differentiated product
- ✓ Hospital Outpatient Reimbursement: Transitional Pass Through (TPT) payment effective July 1, 2021
- ✓ Hospital Inpatient Reimbursement: New Technology Add On Payment (NTAP) effective October 1, 2021

# Commercialization Strategy

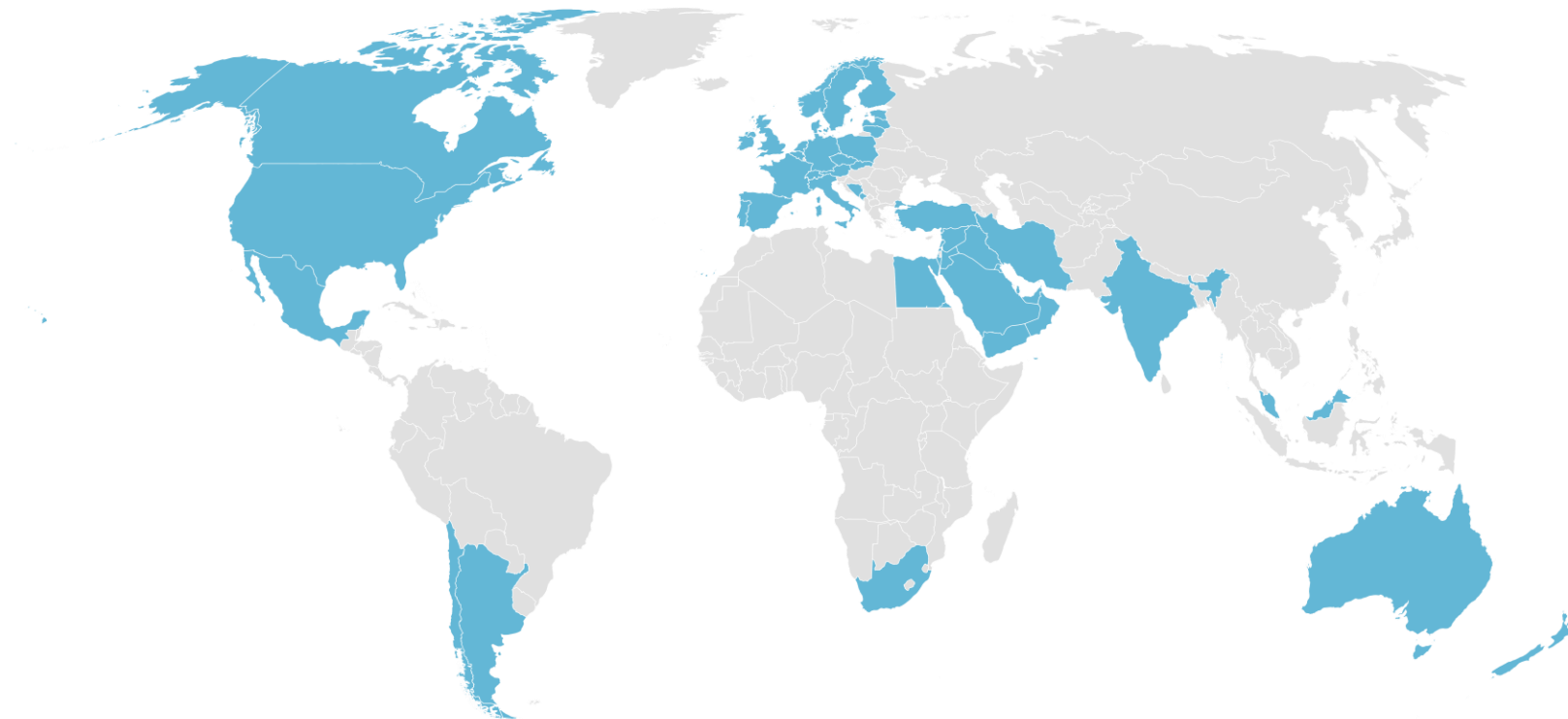
## Two Paths for Growth: Procedure Share and Expansion into New Indications

### United States

- Mix of direct sales reps and clinical specialists
- Low service burden enables cost efficient sales model

### International

- Commercial sales in 58 countries<sup>1</sup>
- Direct sales in Germany, Austria, France, UK and Switzerland.
- Distributors cover other European countries as well as Africa, ANZ, Asia, Canada, South America and the Middle East



***>200 sales and marketing professionals worldwide<sup>1</sup>***

• <sup>1</sup> As of September 30, 2021



# Significant Progress on U.S. Reimbursement Pathway for IVL

## Coding and Payment for Inpatient and Outpatient Peripheral and Coronary IVL Procedures

	Hospital Inpatient	Hospital Outpatient	Physician
Coronary	<ul style="list-style-type: none"><li>✓ Coding: ICD-10-PCS</li><li>✓ Payment: NTAP</li><li>✓ Effective: 1 Oct 2021</li></ul>	<ul style="list-style-type: none"><li>✓ Coding: HCPCS</li><li>✓ Payment: TPT</li><li>✓ Effective: 1 Jul 2021</li></ul>	<ul style="list-style-type: none"><li>⏸ Coding: CPT Cat III</li><li>⏸ Payment: Negotiated</li><li>⏸ Effective: 1 Jul 2022</li></ul>
Peripheral	<ul style="list-style-type: none"><li>✓ Coding: ICD-10-PCS</li><li>✓ Payment: DRG</li><li>✓ Effective: 1 Oct 2020</li></ul>	<ul style="list-style-type: none"><li>✓ Coding: HCPCS</li><li>✓ Payment: APC</li><li>✓ Effective: 1 Jul 2020; updated 1 Jan 2021</li></ul>	<ul style="list-style-type: none"><li>⏸ Coding: TBD</li><li>⏸ Payment: TBD</li><li>⏸ Effective: TBD</li></ul>



= Near-term objective complete



= Progress toward near-term objective



= Pending

# Recent Reimbursement Progress for IVL

## Additional Payment Now Available for Majority of Peripheral & Coronary IVL Applications

### Peripheral IVL

- CMS increased hospital outpatient payment for peripheral IVL (pIVL) procedures performed above the knee (ATK)
- For pIVL used stand alone or for lesion prep prior to definitive therapies such as DCB and/or stents.
- Adds \$5,000 – 6,000 per pIVL ATK procedure in the hospital outpatient setting <sup>1</sup>
- Payment increase of up to 2x per pIVL procedure for Ambulatory Surgical Centers (ASCs)
- New payment rates will become effective January 1, 2022

### Coronary IVL

- Additional hospital payment for coronary IVL (cIVL) procedures recently granted
  - **Transitional Pass-Through Payment (TPT)** for cIVL performed in the hospital outpatient setting
  - **New Technology Add-On Payment (NTAP)** for cIVL performed in the hospital inpatient setting
- Goal of the TPT program is to cover the entire cost of cIVL device(s) utilized during a procedure
- The NTAP program is designed to cover the majority of any costs in excess of the hospital's DRG payment.<sup>2</sup>

<sup>1</sup> See slide 23 for details

<sup>2</sup> CMS-1752-F calculates the maximum NTAP payment of \$3666 for coronary IVL.

# Reimbursement for Peripheral IVL Above the Knee

IVL Now at Parity with Alternative Vessel Prep Strategies in Hospital Outpatient Procedures

Coding & Payment ATK Outpatient Procedures		Definitive Therapy	
		DCB	Stent
Vessel Preparation	PTA +/- Cutting/Scoring Balloon	<b>\$5,062</b>  HCPCS Codes: 37220, 37224 APC: 5192	<b>\$10,258</b>  HCPCS Code: 37220, 37224 APC: 5192
	Atherectomy	<b>\$10,258</b>  HCPCS Codes: 37225 APC: 5193	<b>\$16,402</b>  HCPCS Code: 37227 APC: 5194
	IVL	<b>\$10,258</b>  HCPCS Codes: C9764 APC: 5193	<b>\$16,402</b>  HCPCS Code: C9765 APC: 5194

PAD = Peripheral Artery Disease.; PTA = Percutaneous Balloon Angioplasty; DCB = Drug Coated Balloon  
Above the Knee refers to iliac and fempop arterial territories.

# Operational Excellence

- Headquarters located in Santa Clara, CA
- Subsidiaries in Germany, U.K., France and Japan
- Third party logistics provider based in the Netherlands
- 589 employees<sup>1</sup>
- Lean manufacturing expected to drive margin expansion
- Contract manufacturer enhances capacity and efficiencies
- Approximately 145 manufacturing employees<sup>1</sup>
- Specialized sales force fosters deep relationships
- Marketed products in 58 countries and growing<sup>1</sup>
- Robust IP portfolio of 123 issued and 44 pending patents<sup>1</sup>

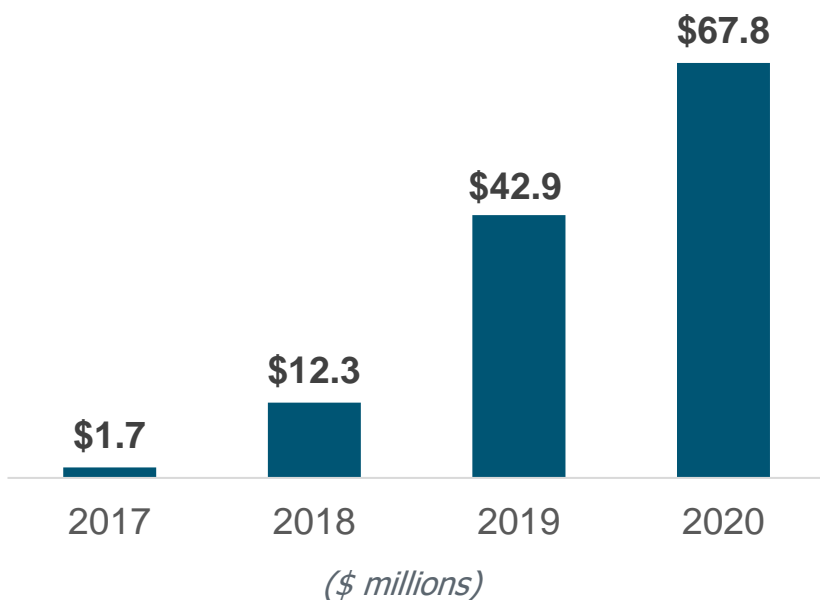


• <sup>1</sup> As of September 30, 2021

# Strong Financial Profile

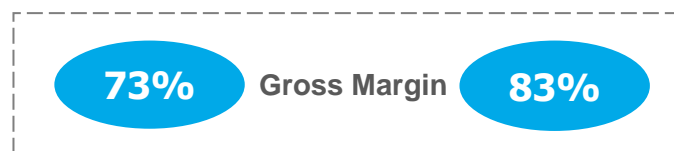
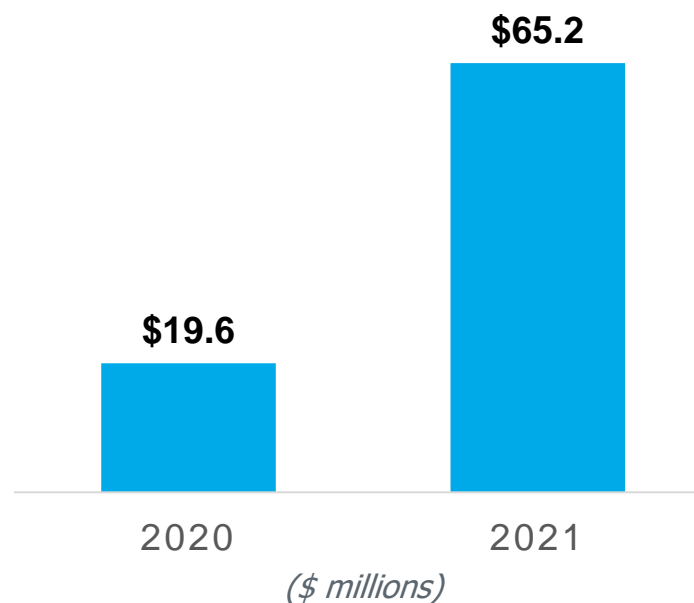
## Annual Revenue

Revenue CAGR: 242%



## Third Quarter Revenue<sup>1</sup>

Revenue Growth: 233%



<sup>1</sup> unaudited financial results

## Q3 2021 Performance<sup>1</sup>

Revenue growth of 233% year over year

- U.S. revenue grew by 374% to \$52.8MM
- International revenue grew by 47% to \$12.4MM

## Positive net income

- Continued improvements in gross margin and operating efficiencies

## Balance Sheet (as of September 30, 2021)

- Cash, cash equiv. and short-term investments: \$183 MM
- Debt outstanding: \$17 MM

# Growth Drivers



## Clinical Evidence

- Advance IVL as standard of care for calcified arteries across vessel beds
- Expand indications
- Improve patient access through continued progress with global reimbursement



## Commercial Capabilities

- Optimize direct and distributor field sales organizations
- Grow across indications and geographies through ongoing market expansion and partnerships
- Increase customer awareness of IVL indications and use



## Business Expansion

- New products
- Increase interventional procedures by addressing unmet clinical needs
- Partnerships for mutually beneficial outcomes
- Scale efficiencies



# Investment Highlights

## ➤ ADDRESSES LARGE UNMET CLINICAL NEEDS

- Advancing proprietary IVL System for multiple large addressable markets totaling \$8.5B+
- Cardiovascular Ca+ becoming increasingly prevalent globally with increase in diabetes and aging population

## ➤ DIFFERENTIATED PLATFORM

- Unique mechanism of action that cracks both medial and intimal calcium
- Safest, most predictable technology for treating the most challenging calcified anatomies

## ➤ STRONG PIPELINE

- Ongoing clinical programs to expand geographies and indications and build a robust body of clinical evidence
- Platform IVL Technology leverageable for new products to satisfy additional significant unmet clinical needs

# We Crack Calcium