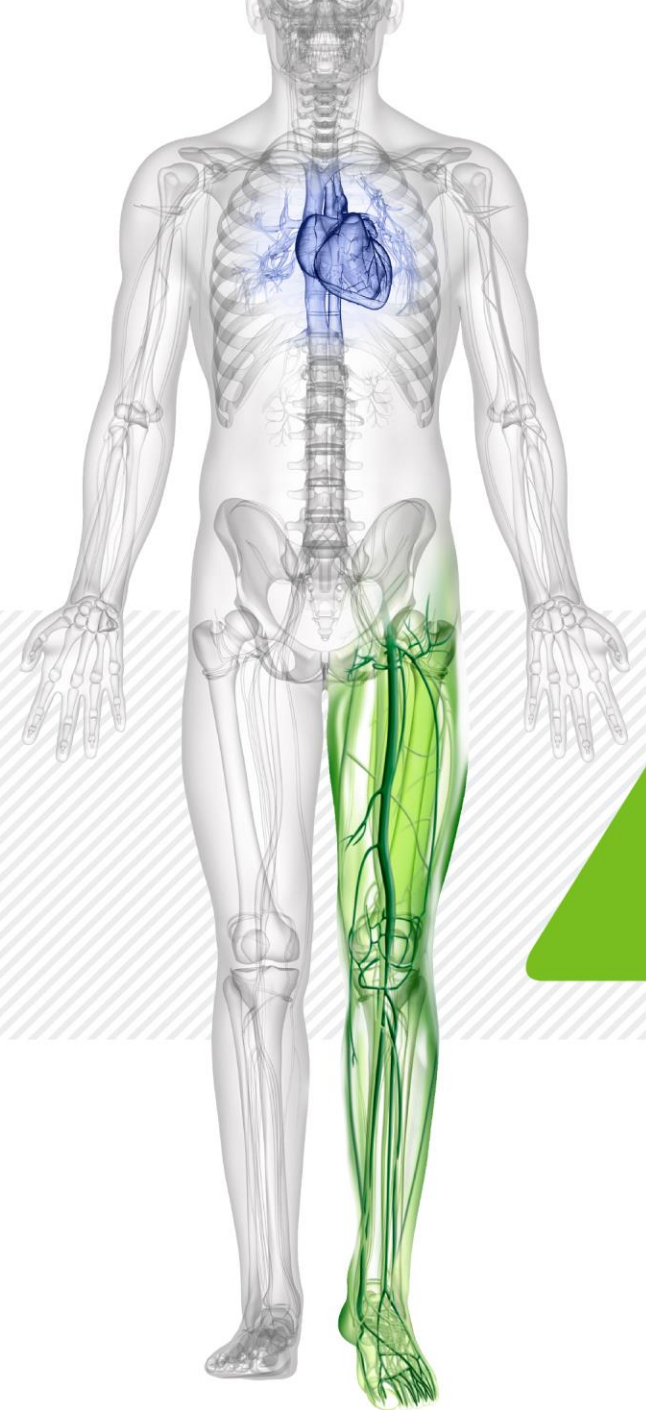


Boston Investor Meetings

February 13, 2020



Safe Harbor

FORWARD LOOKING STATEMENTS

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Report Act of 1995, which are provided under the protection of the safe harbor for forward-looking statements provided by that Act. For example, statements in this presentation regarding CSI's strategy; growth; future financial measurements and investments; product development plans, milestones and introductions; geographic expansion; clinical trials and evidence; professional education efforts; and market estimates and opportunities, are forward-looking statements. These statements involve risks and uncertainties that could cause results differ materially from those projected, including, but not limited to, those described in CSI's filings with the Securities and Exchange Commission, including its most recent annual report on Form 10-K and subsequent quarterly and annual reports. CSI encourages you to consider all of these risks, uncertainties and other factors carefully in evaluating the forward-looking statements contained in this presentation. As a result of these matters, changes in facts, assumptions not being realized or other circumstances, CSI's actual results may differ materially from the expected results discussed in the forward-looking statements contained in this presentation. The forward-looking statements contained in this presentation are made only as of the date of this presentation, and CSI undertakes no obligation to update them to reflect subsequent events or circumstances.

FINANCIAL INFORMATION

This presentation includes calculations or figures that have been prepared internally and have not been reviewed or audited by CSI's independent registered accounting firm. Use of different methods for preparing, calculating or presenting information may lead to differences, which may be material.

Driving Sustainable Growth

Broaden Our Value Streams

Financial Goal: Revenue of \$435M - \$500M in FY23
FY19 - FY23 CAGR of 15% - 18%

Grow and Protect the Core Business

Sustain Market Leadership

10+% Growth in Core Business

Innovation Drives Incremental Growth

Launch 20+ New Products

\$70M - \$100M in FY23

Global Expansion Accelerates Growth of Core Business

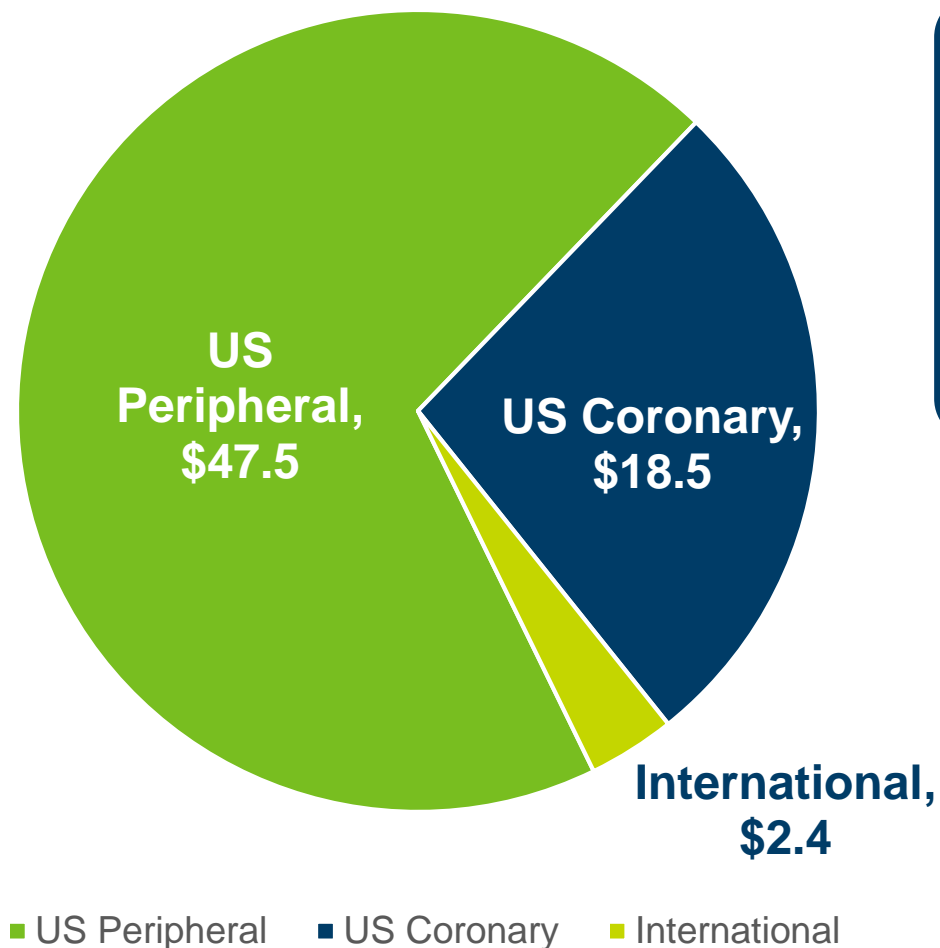
OrbusNeich and Medikit

\$25M - \$50M in FY23

Financial strength and the talent to execute

Q2 Worldwide Revenues of \$68.3 Million – 13.5% Increase

Revenues, \$ in millions



US Peripheral grew 9%

Drivers

12% unit growth
21% OBL revenue growth
4% hospital revenue growth

US Coronary grew 22%

Drivers

14% unit growth
Launch of full line of support products

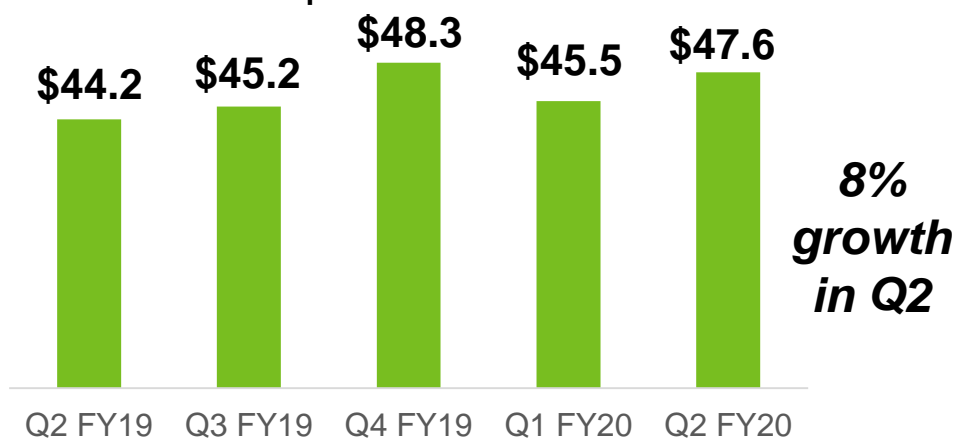
International grew 48%

Drivers

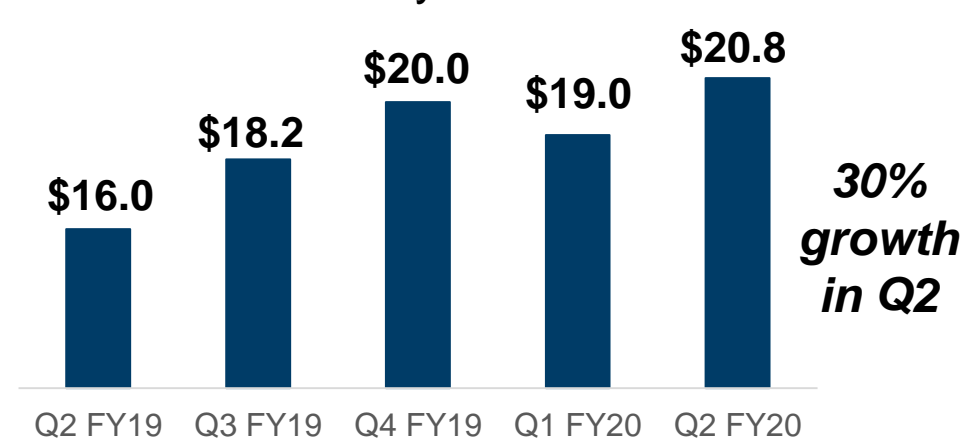
Coronary Classic and ViperWire Flex Tip in Japan
OAS launched in 13 countries to-date

Q2 FY20 Financial Results: \$68.3 Million and 13.5% Growth

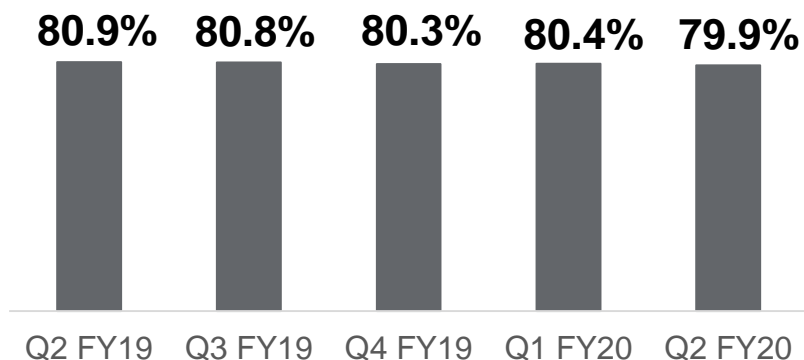
Worldwide Peripheral Revenue Growth



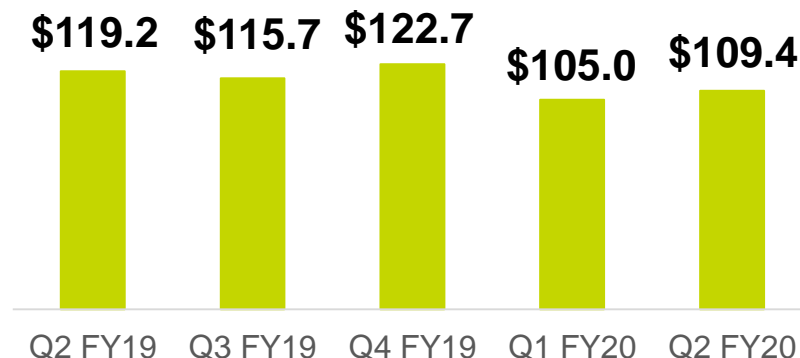
Worldwide Coronary Revenue Growth



Gross Margin



Cash and Marketable Securities



(\$ in millions)

Key Events & Milestones

FY19A

- ✓ Sold 80,650 OAS
- ✓ International revenue = \$7.9M
- ✓ Launched OAS in SE Asia, Europe and Middle East
- ✓ Certified 120 OUS physicians
- ✓ Launched Classic Crown and ViperWire Flex Tip in Japan
- ✓ New product revenue = \$3.9 million
- ✓ Launched Teleport Microcatheter
- ✓ Launched ViperCath XC
- ✓ Launched Peripheral ViperWire with Flex Tip
- ✓ Radial full market release
- ✓ Exchangeable limited market release
- ✓ 81% consolidated gross margin
- ✓ Enrolled first patient in REACH PVI
- ✓ Enrollment of ECLIPSE passes 950
- ✓ Pre-submission meetings with FDA for hemodynamic support
- ✓ Completed \$350M shelf filing

FY20E

- ✓ WIRION acquisition
- ✓ LIBERTY 360 3-Year Data
 - Launch OAS in up to 10 new countries
- ✓ Certify >120 international physicians
 - International revenue = \$11M
 - New product launches:
 - ✓ PAD Exchangeable full market release
 - ✓ CAD Nitinol ViperWire Flex Tip
 - ✓ PAD Next Gen OAS with GlideAssist
 - PAD JADE angioplasty balloons
 - Sapphire 1.0mm over-the-wire
 - ✓ Sapphire NC Plus 4.5-5.0mm
- ✓ REACH PVI enrollment completion
 - ECLIPSE enrollment reaches 1500

FY21E

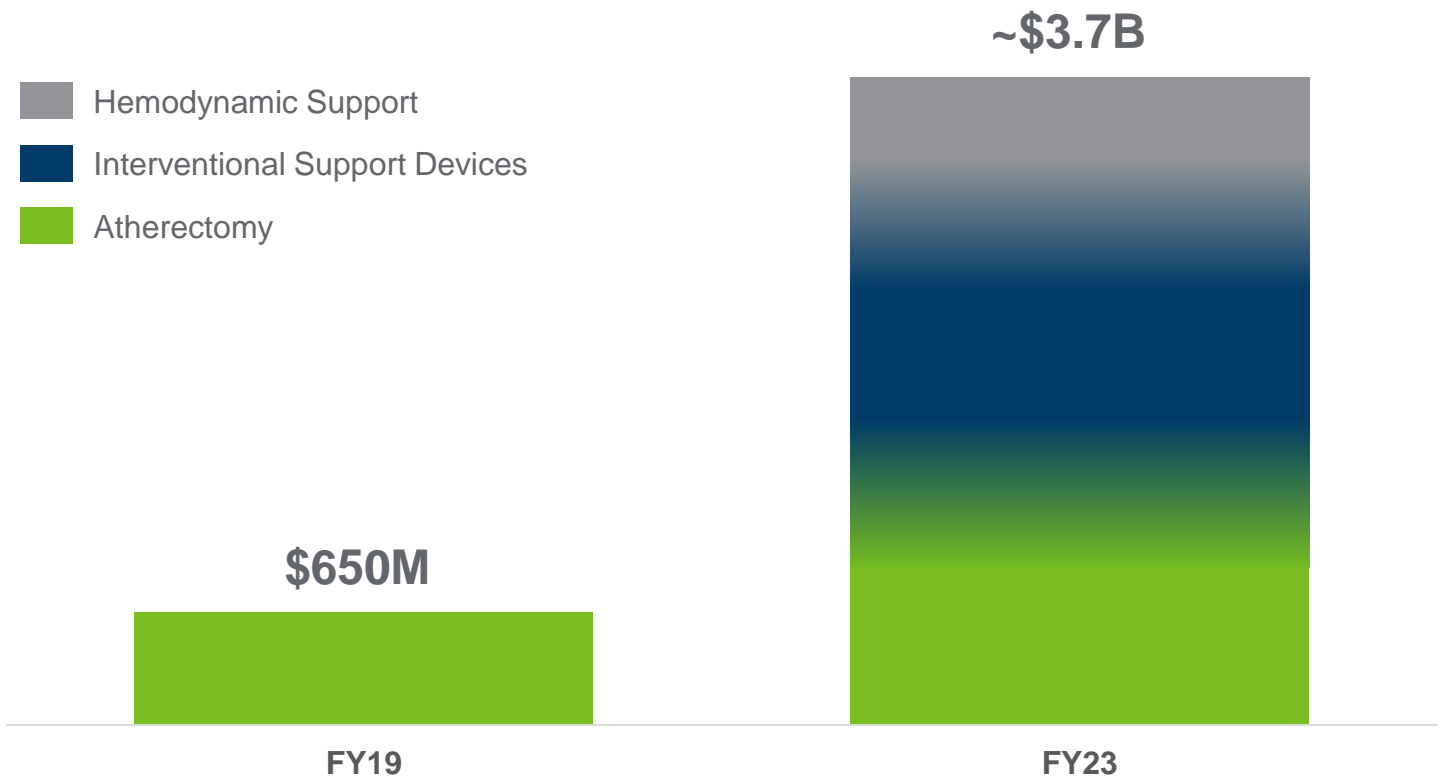
- Hemodynamic support - First in Human
- International revenue = \$15-\$17.5M
- Launch OAS in Canada and other countries
- Japan peripheral first enrollment
- ECLIPSE enrollment complete
- REACH PVI data release
- US IDE Small Vessel first enrollment
- Manufacturing transfer of WIRION
- WIRION launch in U.S.
- CAD ScoreFlex NC in U.S.
- PAD radial support products

Diversification Accelerates Growth

Broadens Value Streams

CSI's Addressable Markets (US)

Portfolio expansion will drive a
>4X increase
in CSI's addressable market



• Millennium Research Group (2018 December) Medtech360 Market Analysis - Interventional Cardiology Devices – US – 2019
• Millennium Research Group (2018 December) Medtech360 Market Analysis – Peripheral Vascular Devices – US – 2019
• Millennium Research Group (2017 December) Medtech360 Market Analysis – Cardiac Assist Devices– US – 2018
• CSI Internal Estimates

* Coronary markets include device revenue attributed to PTCA balloon catheters, microcatheters / guidecatheters, PTCA guidewires, CTO / STO devices, and hemodynamics pumps. Peripheral markets include device revenue attributed to lower extremity (iliac, fempop, infrapop) endovascular procedures for PTA guidewires, catheters / sheaths, embolic protection devices, CTO / STO devices, and PTA balloon catheters

Current Market Dynamics Favor Innovation

Large Under-Served and Under-Treated Disease States

Peripheral Artery Disease

Significantly under-diagnosed and under-treated patient populations

18-20 million

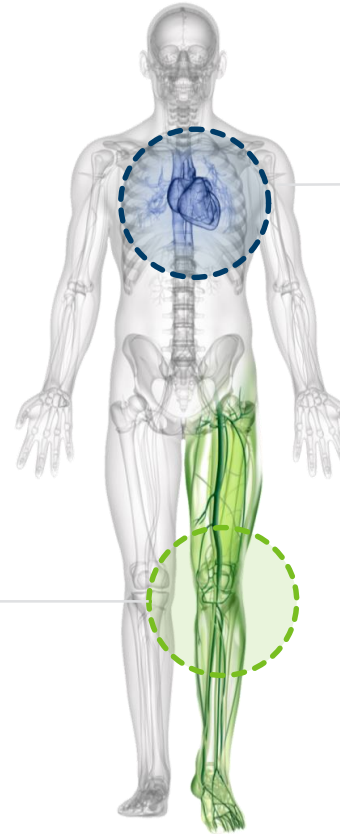
People living with peripheral artery disease in the U.S. with **2 million+** patients suffering from critical limb ischemia

>740K

Lower extremity PVLs

160K

Amputations per year



Coronary Artery Disease

Growing proportion of coronary interventions represented by complex or complex high-risk PCIs

16-18 million

People living with coronary artery disease

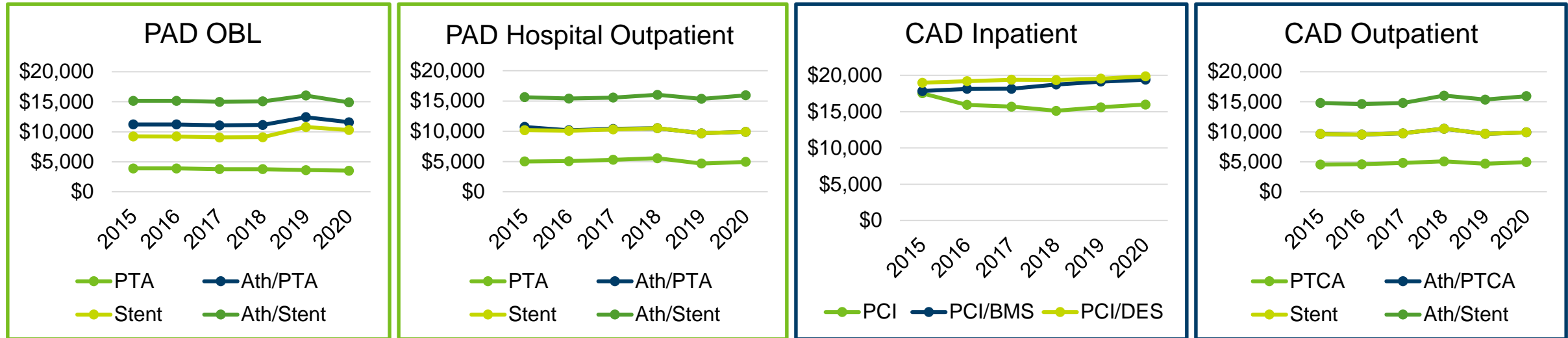
370,000

Deaths annually from coronary artery disease

525K

Complex or complex high-risk PCIs

Consistent Reimbursement

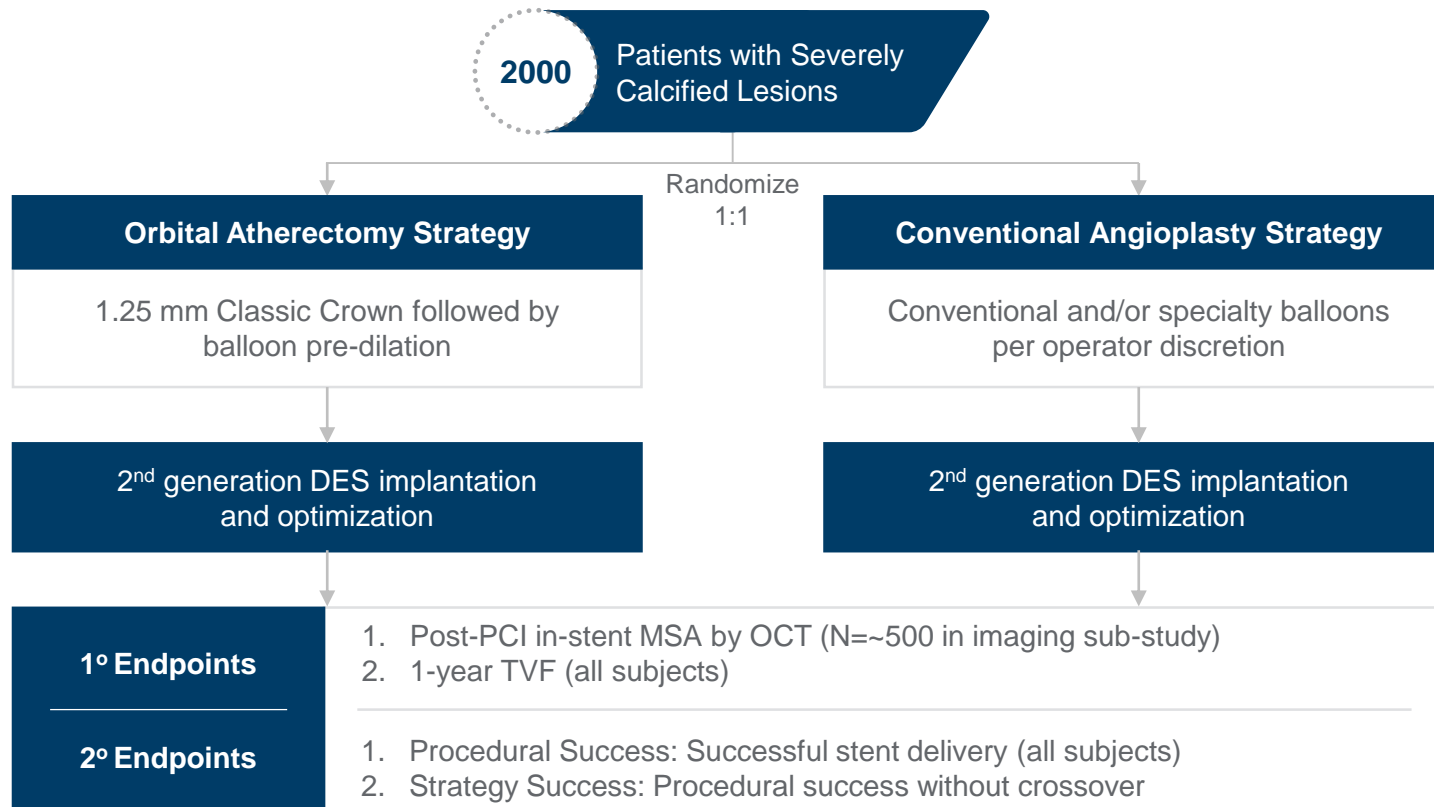


Facility	Inpatient/ Outpatient	Procedure	2020 Reimbursement	% Change from 2019
Hospital	Inpatient	PAD	\$11,400 - \$20,548	4.4% - 4.5%
Hospital	Inpatient	CAD	\$10,542 - \$19,874	4.2% - 1.7%
Hospital	Outpatient	PAD/CAD	\$9,907 - \$15,938	2.5% - 3.8%
Non-Hospital	Outpatient/OBL	PAD (ATK)	\$11,582 - \$14,891	(6.9)% - (7.1)%
Non-Hospital	Outpatient/OBL	PAD (BTK)	\$11,626 - \$14,476	(6.6)% - (5.0)%

MS-DRG 246, 247, 248, 249, 250, 251, 252, 253, 254; CPT® Codes 37225, 37227, 37229, 37231, 92924, 92933; C-APCs 5193, 5194; HCPCS Code C9602
Payment amounts based on National Medicare Averages and will vary by provider.

ECLIPSE Trial

Generating Level One Evidence to Impact Guidelines



**Principal Investigators
Study Chairman**

Ajay Kirtane, MD; Philippe G  n  reux, MD;
Gregg W. Stone, MD

Primary Endpoints



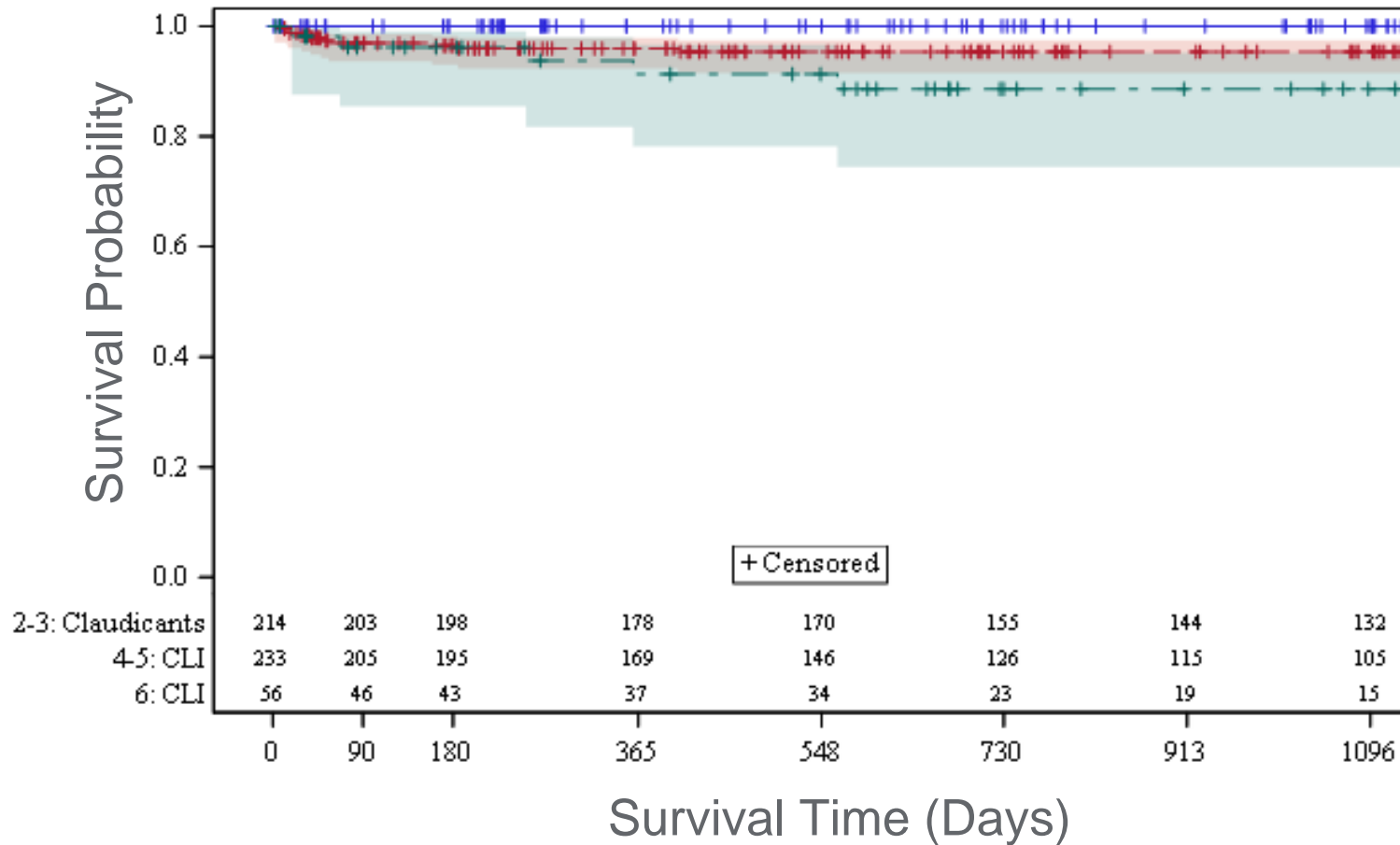
~500 subjects in OCT cohort
OAS >1 mm² superior MSA vs. POBA



All subjects
OAS >5% reduction in TVF vs. POBA

LIBERTY 360°

Orbital Atherectomy Subanalysis: 3-Year Freedom from Major Amputation on Target Limb



Freedom from Major Amputation on Target Limb

2-Year

3-Year

RC2-3 100%

RC2-3 100%

RC4-5 95.3%

RC4-5 95.3%

RC6 88.6%

RC6 88.6%

— RC2-3

- - RC4-5

- . - RC6

Expansion of the Complex Coronary Toolkit

Drives Incremental Revenue Opportunity Per Case Today

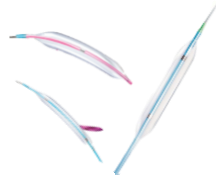
Adding Essentials of
the Complex PCI Toolkit

Represents ≈\$800-\$1000 of
incremental revenue
opportunity

Increasing the Clinical Utility
of the Sapphire Portfolio in
the Near-Term

Continuing to Innovate around
the Complex Patient Long-Term

Launched FY19



- Sapphire SC II PRO 1.0-4.0mm
- Sapphire NC Plus 2.0-4.0mm

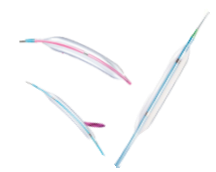
Sapphire® Balloons

Launched FY19



Coronary Diamondback 360®
with GlideAssist®

FY20 Launches



- Sapphire SC II PRO 1.0mm OTW
- Sapphire NC Plus 4.5-5.0mm

Sapphire® Expansion

Launched FY19



Teleport® Microcatheter

Launched Q1 FY20



ViperWire Advance® with Flex Tip

Expected Launch FY21



ScoreFlex NC

Percutaneous Ventricular Assist Device (pVAD) System

Multi-Generational Platform Highly Synergistic with Our Strategy and Competency

Generation 1 Overview

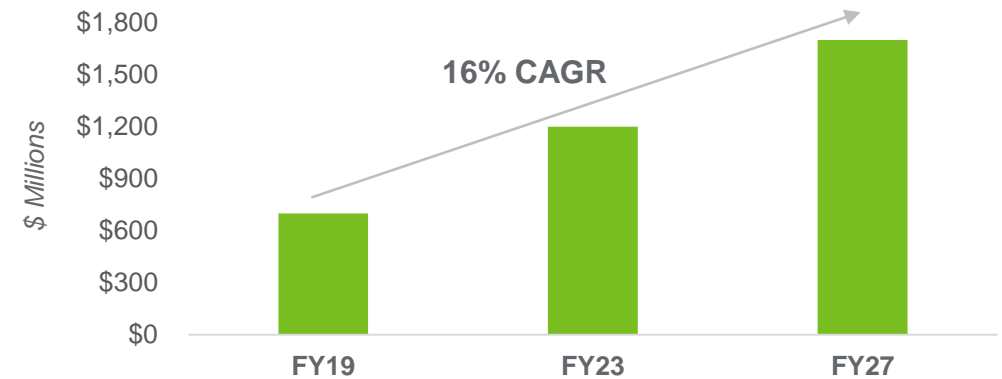


IDE clinical studies planned to highlight procedural safety and perfusion metrics/endpoints



- Leverages CSI core competency in motor control and spinning cables
- Easy setup and use
- Flow: 3-5 LPM
- Crossing Profile: 10-14 Fr
- Catheter Profile: 6-8 Fr
- Improved deliverability
- Physician control in the sterile field
- Simplified touch screen display
- Compact console design (<15 lbs.)

Entering a High Growth pVAD Market*



* Includes Complex PCI and Cardiogenic Shock

Recent Accomplishments / Status

- ✓ Multiple animal studies completed successfully
- ✓ Pre-submission meetings completed and underway with the FDA
- ✓ First-in-human in FY21

Innovation on Our Core Peripheral Technology

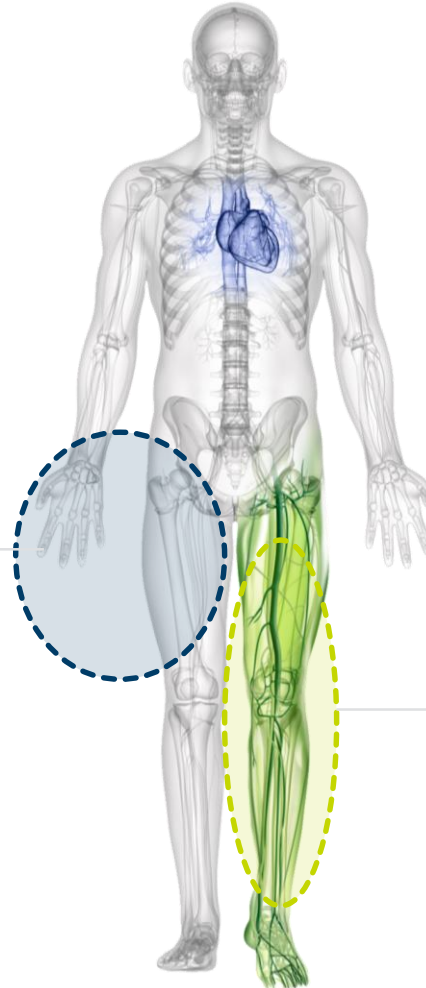
Provides comprehensive approach for each patient

**EXTEND YOUR
OPTIONS.**
THE RADIAL ACCESS ALTERNATIVE.



Launched Q1 FY19

Extended Length Orbital Atherectomy
System with Low 5Fr Profile



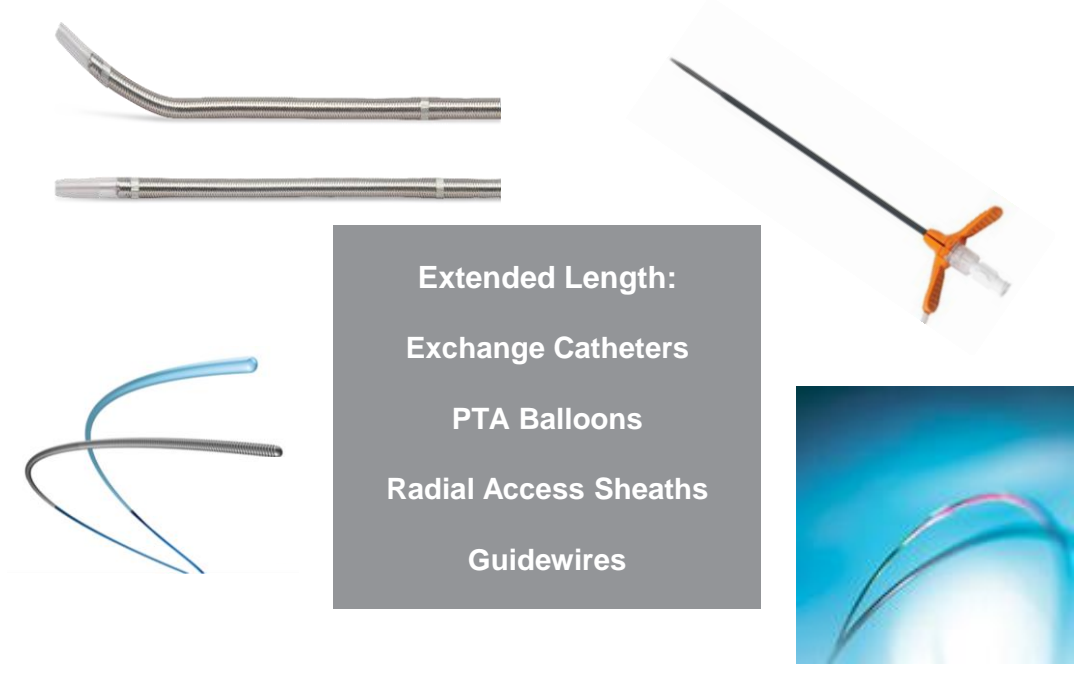
**COMPLETE LEG
REVASCLARIZATION**



Launched Q1 FY20

Expansion of the Peripheral Toolkit

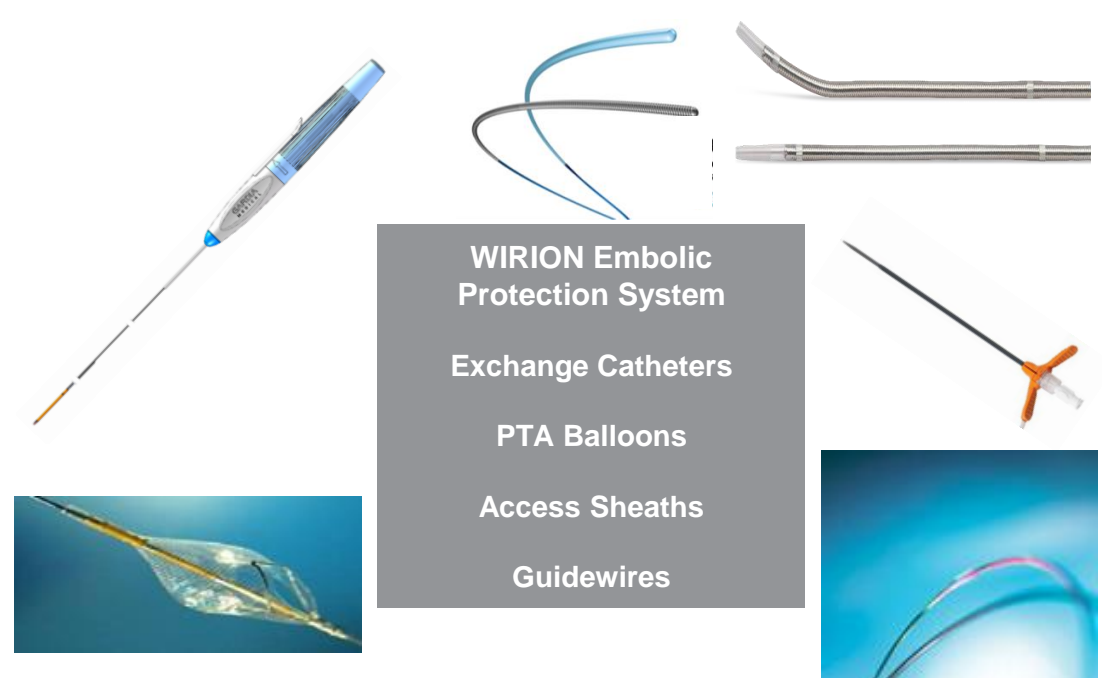
Increasing Revenue Opportunity Per Case in FY21



Extended Length:
Exchange Catheters
PTA Balloons
Radial Access Sheaths
Guidewires

Radial PAD Products: **\$800-\$1000/OAS Procedure**

This panel displays various medical devices for radial access procedures. It includes two long, thin catheters at the top left, a blue PTA balloon on the middle left, and a guidewire with an orange handle on the top right. A central grey box lists the product types. At the bottom right, there is a blue-tinted image showing a catheter and guidewire in use.

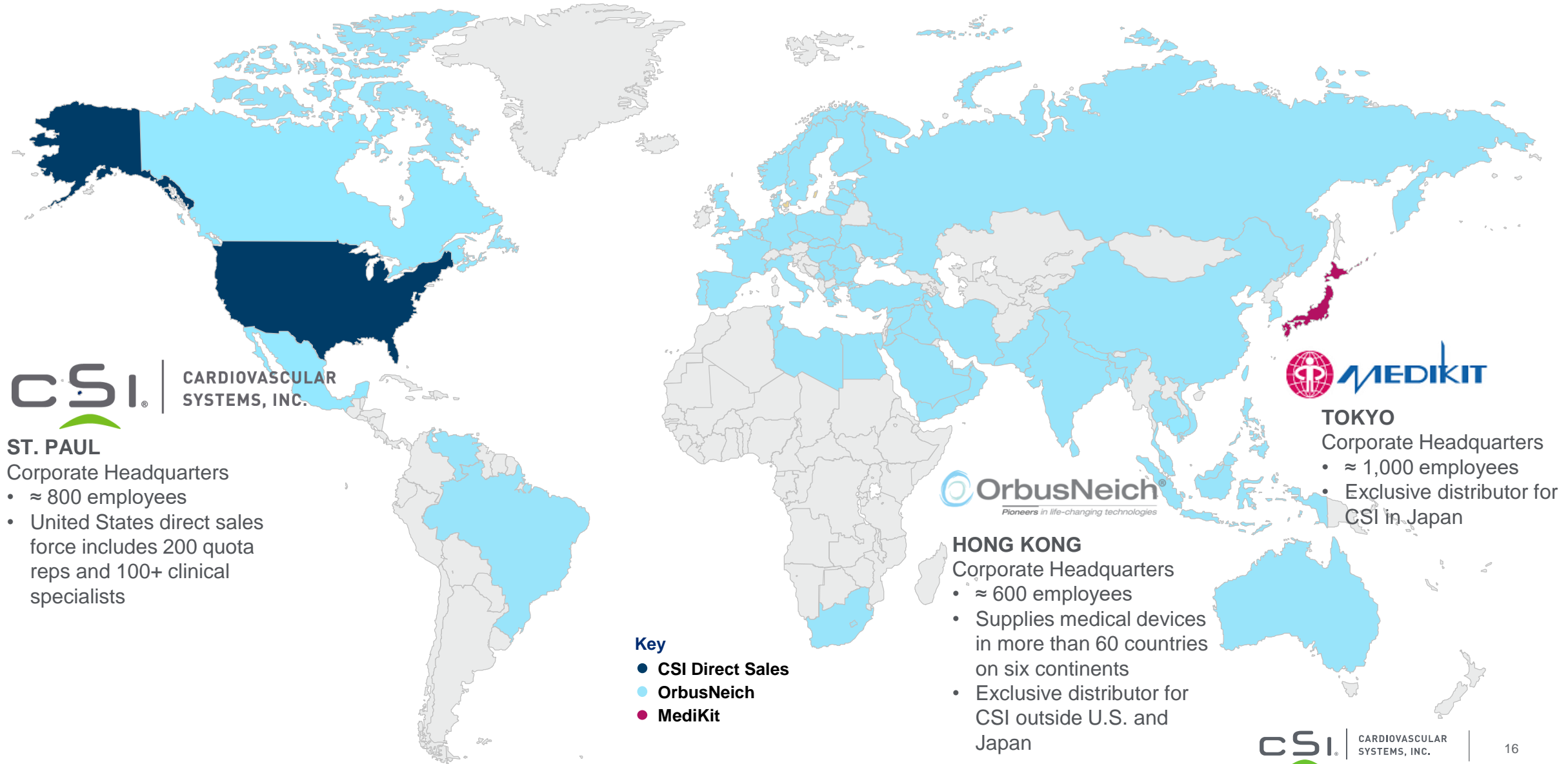


WIRION Embolic
Protection System
Exchange Catheters
PTA Balloons
Access Sheaths
Guidewires

PAD Products: **\$1600-\$1800/OAS Procedure**

This panel displays medical devices for percutaneous aortic dilation (PAD) procedures. It features a WIRION embolic protection system on the top left, a blue PTA balloon on the middle left, and a guidewire with an orange handle on the top right. A central grey box lists the product types. At the bottom left, there is a blue-tinted image showing a catheter and guidewire in use.

Global Distribution Network



International Atherectomy Market

International Atherectomy Total Addressable Market is over \$1.6 Billion in 2020. ¹

The Coronary market is the largest International opportunity for CSI representing 500,000 potential Coronary OAS procedures.

International represents 430,000 potential Peripheral OAS procedures

<u>Coronary</u>			
#	Country	2020 PCI's ¹	Potential OAS Procedures (~12% Severe Calcium x PCI's)
1	China	1,220,000	146,000
2	India	730,000	88,000
3	Germany	330,000	40,000
4	Turkey	290,000	35,000
5	Japan	280,000	34,000
6	France	180,000	22,000
7	Italy	160,000	19,000
8	Brazil	160,000	19,000
9	UK	110,000	13,000
10	Russia	80,000	10,000
Total Coronary International		4,200,000	500,000

<u>Peripheral</u>			
#	Country	2020 PVI's ¹	Potential OAS Procedures (~50% Calcium x PVI's)
1	Germany	220,000	110,000
2	Russia	100,000	50,000
3	France	100,000	50,000
4	China	80,000	40,000
5	Japan	70,000	35,000
6	Italy	60,000	30,000
7	South Korea	50,000	25,000
8	Brazil	50,000	25,000
9	India	30,000	15,000
10	South Africa	30,000	15,000
Total Peripheral International		860,000	430,000

¹ Key Source: 2017/2018/2019 Medtech 360.

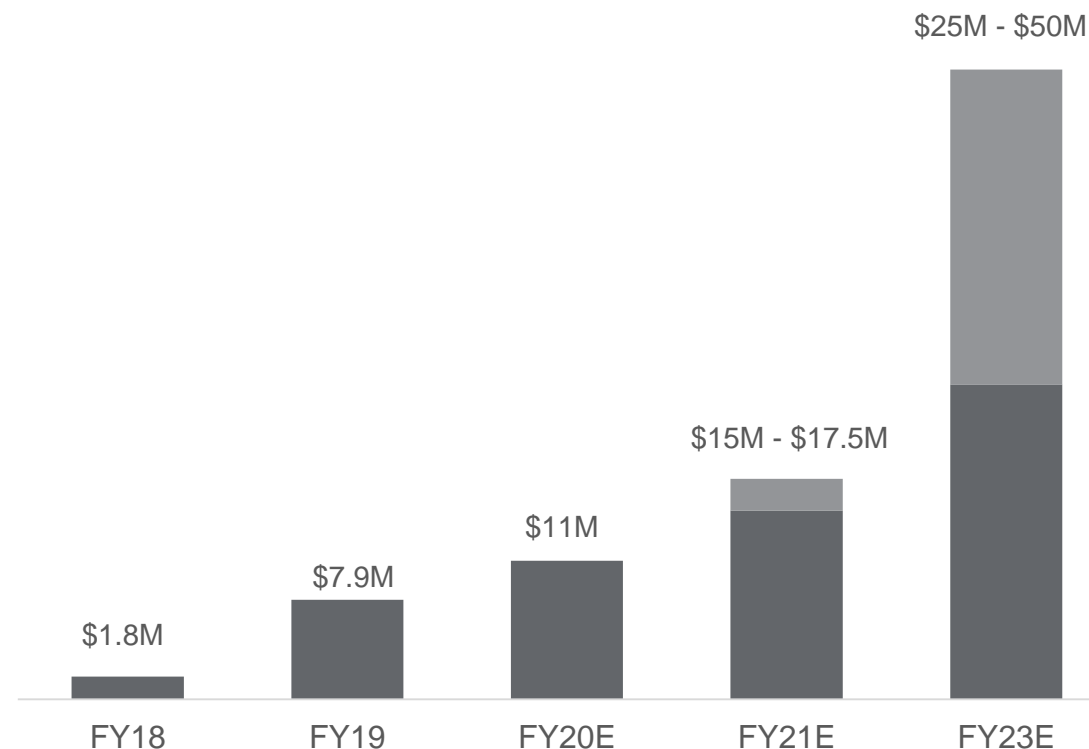
Steady Cadence of New Geographies

OUS Launches

	FY18	FY19	FY20E
Coronary	<ul style="list-style-type: none"> Japan 	<ul style="list-style-type: none"> Hong Kong* Kingdom of Saudi Arabia Malaysia* Singapore* United Arab Emirates 	<ul style="list-style-type: none"> EU Indonesia Kuwait Lebanon New Zealand Thailand Vietnam
Peripheral		<ul style="list-style-type: none"> France Germany Hong Kong* Malaysia* Singapore* Spain Switzerland 	<ul style="list-style-type: none"> EU (Austria, Belgium, Czech Republic, Denmark, Finland, Iceland, Ireland, Italy, Netherlands, Norway, Romania, Sweden, UK) Indonesia Kingdom of Saudi Arabia Lebanon New Zealand Thailand United Arab Emirates Vietnam
	1	9	Up to 10

FY19 - FY23 Revenue Growth

Targeting \$25M - \$50M in International Revenue in FY23



Bold – OAS launched

*** Coronary and Peripheral OAS launched**

Italic – Anticipated OAS regulatory approval

Cardiovascular Systems, Inc.

Creating Shareholder Value

Leveraging a Strong Core Business

Improving outcomes for complex coronary and peripheral artery disease

Proprietary core technology

Serving large and growing markets

A Compelling Growth Strategy

Driving market leading performance in orbital atherectomy

Expanding into new geographic markets

Launching an innovative portfolio of new products

Creating Competitive Advantage

Highest quality products, services and relationships

Innovation and robust medical evidence

Medical education and superior clinical support

Financially Strong with the Team and Talent to Win

Sustaining double digit growth with strong gross margins

Positive cash flow, strong cash position and no long-term debt

Positioned to invest in organic growth

A Mission driven organization with the leadership and talent to succeed

Investor Contact:

Jack Nielsen

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