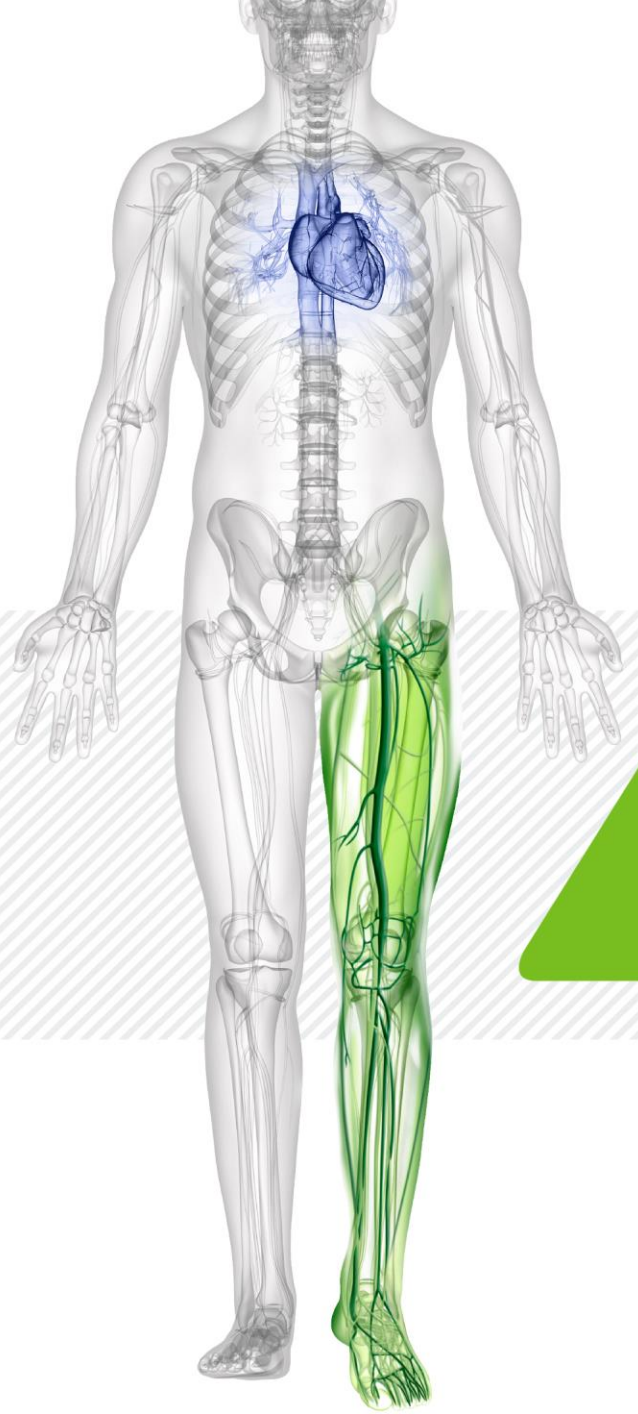
Cardiovascular Systems, Inc.

Raymond James Human Health Innovation Conference

June 23, 2021



CARDIOVASCULAR SYSTEMS, INC.

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; market estimates and opportunities; developments related to the COVID-19 pandemic; and anticipated product upgrades and reduced production volumes, and the impact thereof 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. In addition, this presentation also includes certain non-GAAP financial measures, such as Adjusted EBITDA. Reconciliations of the non-GAAP financial measures used in this presentation to the most comparable U.S. GAAP measures for the respective periods can be found in tables in the appendix to this presentation. Non-GAAP financial measures have limitations as analytical tools and should not be considered in isolation or as a substitute for CSI's financial results prepared in accordance with GAAP.

Our Mission

Saving Limbs, Saving Lives Every Day

Focused on Complex Peripheral and Coronary Artery Disease

2 Million+
Patients with Critical Limb Ischemia (CLI)[1]

160,000
Annual Amputations in the U.S.[2]

370,000
Deaths Annually From Coronary Artery Disease in the U.S.[3]

525,000
High Risk or Complex High Risk Procedures Annually in the U.S.[4]

1. Yost ML, CLI U.S. Supplement, Beaufort, SC. 2016 as presented at NCVH 2017
2. Allie DE, Hebert CJ, Ingraldi A, Patlola RR, Walker CM. 24-Carat Gold, 14-Carat Gold, or Platinum Standards in the Treatment of Critical Limb Ischemia: Bypass Surgery or Endovascular Intervention? J Endovsc Ther. 2009;16(Suppl I):I134–I146.
3. American Heart Association - Heart Disease and Stroke Statistics- 2018 Update
4. CSI estimates

Company Profile

Developing innovative solutions for treating peripheral & coronary arterial disease

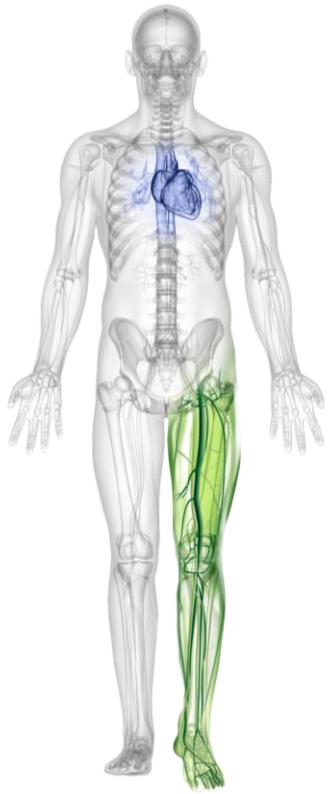
80,000+ Patients treated annually

#1 U.S. **market leader** in calcified peripheral and coronary atherectomy

7,100+ **Real-world patients studied** through clinical studies as of FY20

200 U.S. **direct sales representatives**

125 U.S. **clinical specialists**



200+ **Patents**

800+ **Employees** and a highly experienced leadership team

1,700+ U.S. **customers**; hospital and office-based labs

CSII: A Growth Company

Broadening Our Value Streams

Financial Goal: Accelerate Profitable Revenue Growth

Grow and Protect the Core Business	Innovation Drives Incremental Growth	Global Expansion Accelerates Growth of Core Business
Sustain Market Leadership	Expand Product Portfolio and Addressable Markets	Steady Cadence of Commercial Launches
Attractive and Consistent Growth in Core Business	Drive higher revenue per orbital atherectomy procedure	Capturing Market Share and Driving Market Development

Strategy is supported by a strong balance sheet
Over $200 million in cash and no long-term borrowings

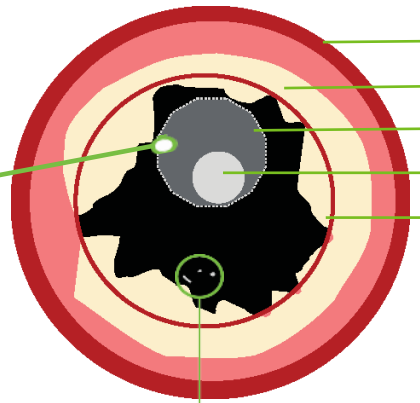
Dual-Action Mechanism of Action

Grow and Protect the Core Business

Uniquely designed for calcium:
Enables simultaneous modification of both intimal and medial calcium

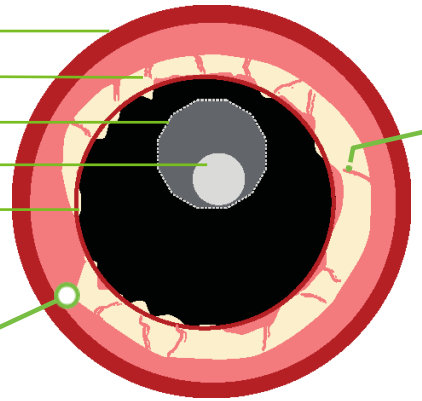
DIFFERENTIAL SANDING MODIFIES INTIMAL CALCIUM[1]

Crown's diamond surface sands intimal calcium[2,3,5]



Generated particulates are average ~2 microns in size, smaller than red blood cells [2,4]

PULSATILE FORCES FACILITATES FRACTURE OF MEDIAL CALCIUM[1,2]



Fracture

Facilitates fracture to affect medial calcium.[2]

1.Shlofmitz E, et al. Interv Cardiol. 2019;14(3):169-173.
2.Adams GL, Khanna PK, Staniloae CS, et al. Optimal techniques with the Diamondback 360° System achieve effective results for the treatment of peripheral arterial disease. J Cardiovasc Transl Res. 2011 Apr;4(2):220-9.
3.Chambers J, et al. JACC Cardiovasc Interv. 2014;7(5):510-518.
4.Shlofmitz E, et al. Expert Rev Med Devices. 2017;14(11):867-879.
5.Krishnan P, Martinsen BJ, Tarricone A, et al. Minimal Medial Injury After Orbital Atherectomy. J Endovasc Ther. 2017 Feb;24(1):167-168.

Leadership in Medical Evidence

Grow and Protect the Core Business

7,200+	~9,800	600+
Patients	Lesions	Physicians

Trial		Size	Importance
PAD	LIBERTY 360° (3-year Data)	n=1,204	• "All-comers" trial, any treatment option • Nearly 700 Rutherford Class 4-6 patients enrolled
	REACH PVI	n=50	• OAS via transradial access • High rate of procedural and treatment success
	OPTIMIZE	n=66	• OAS + DCB vs. DCB alone • Calcified below-the-knee lesions
	OASIS, CONFIRM series, TRUTH, CALCIUM 360, and COMPLIANCE 360	n=3,384	• High rates of procedural success and durability • Low adverse events/bail-out stenting
CAD	ECLIPSE (Enrolling)	n=2,000	• Largest randomized trial to study coronary atherectomy for calcified coronary lesions • OAS + DES vs. angioplasty (including cutting/scoring balloons) + DES
	ORBIT II (3-year Data)	n=443	• High freedom from revascularization resulting in economic benefits[1,2]
	COAST (1-year Data)	n=100	• Supported approvals of Coronary OAS in U.S. and Japan • Japan commercialization began in FY18

Patient, lesion, and physician counts as of 05Mar2021.

1. Lee M, et al. Cardiovasc Revasc Med. 2017 Jun;18(4):261-264.
2. Garrison LP Jr, et al. Cardiovasc Revasc Med. 2017 Mar;18(2):86-90.

Stable Reimbursement

CPT® LER Code Review to Reflect Advances in Technologies

Grow and Protect the Core Business

AMA Action Plan: January 2019

Specialty Societies: SVS, SIR, ACC and ACR

Screen: **In October 2018, code 37229 was identified by the High-Volume Growth screen**, for services with 2017e Medicare utilization of 10,000 or more that has increased by at least 100% from 2012-2017

CPT descriptor: Revascularization, endovascular, open or percutaneous, tibial, peroneal artery, unilateral, initial vessel; with atherectomy, includes angioplasty within the same vessel when performed.

The specialties will recommend referring this set of codes to CPT to update the code descriptors and to accommodate new technologies.

AMA reasoning for review:

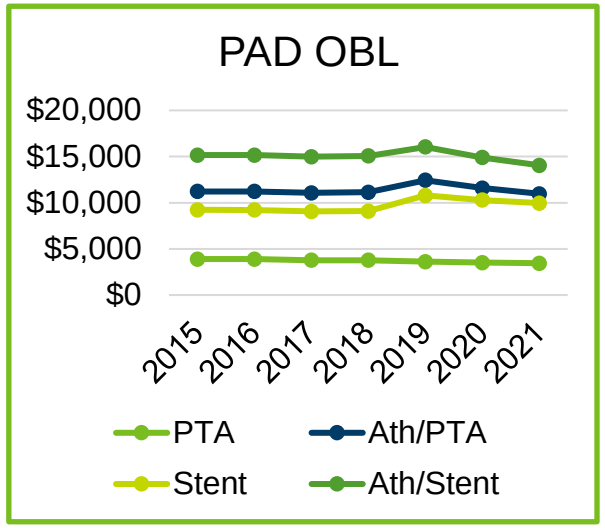
"We **believe the growth in CPT Code 37229 (BTK Atherectomy)** is appropriate and **in line with the best practices for limb sparing**.

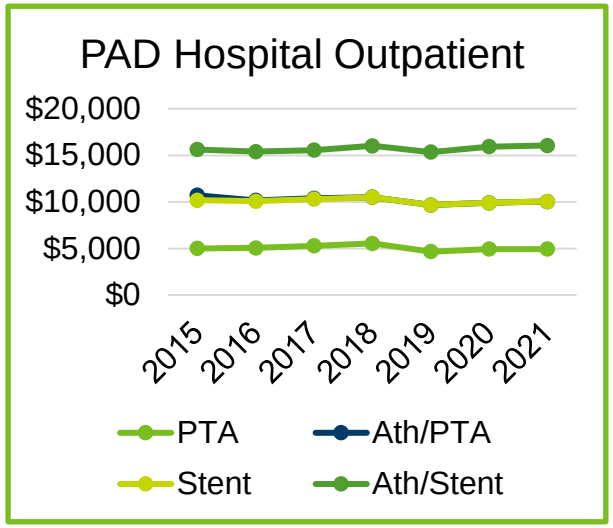
However, there have been many advances in lower extremity endovascular **treatment** since the creation of the family of codes."

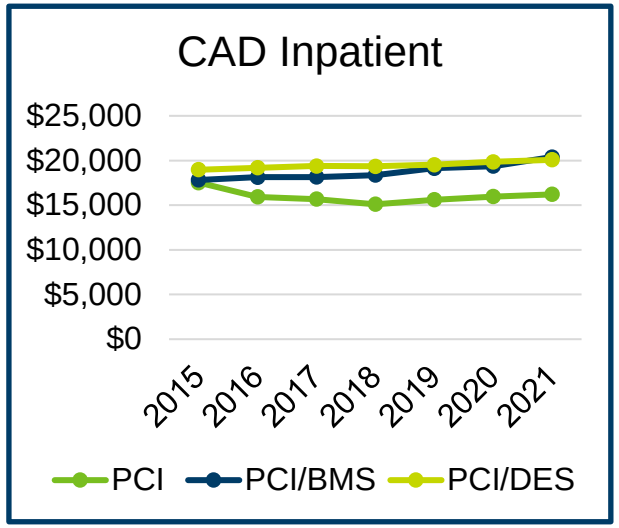
Code set update to reflect advances in technologies since 2011 creation of current codes.
Changes may take effect in CY 2023 at earliest and could be 2024-25.

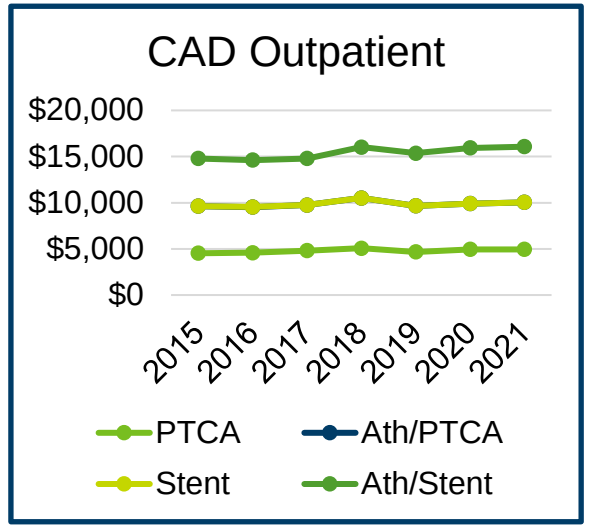
Stable Reimbursement

Grow and Protect the Core Business









Facility	Inpatient/ Outpatient	Procedure	2021 Reimbursement	% Change from 2020
Hospital	Inpatient	PAD	***$17,282 – $34,301****	***2.9% - 3.0%***
Hospital	Inpatient	CAD	***$10,968 - $20,959****	***2.7% - 3.0%***
Hospital	Outpatient	PAD/CAD	$10,043 - $16,064**	0.8% - 1.3%
Office Based Lab	NA	PAD (ATK)	$10,957 - $14,044**	(5.4)% - (5.7)%
Office Based Lab	NA	PAD (BTK)	$11,021 - $14,091**	(2.7)% - (5.2)%

* **MS-DRG 246, 247, 248, 249, 250, 251, 270, 271, 272 BOLDED AMOUNTS REFLECT PROPOSED IPPS AMOUNTS FOR FY 2022 vs. FY 2021 RATES**
** 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.

Excellence in Quality and Manufacturing

Grow and Protect the Core Business

Scalable and Continuous COGS Management

Manufacturing Initiatives

+

Sourcing and Supply Chain

- Volume driven overhead leverage
- Labor productivity
- LEAN continuous improvement
- Material cost reductions
- Vertical Integration

Scalable and continuous reductions to protect strong gross margins

CSI Coronary Innovation

Innovation Drives Incremental Growth

Diamondback 360® Orbital Atherectomy System

Sands intimal lesions *and* facilitates fracture of medial calcium to optimize stent delivery, expansion and apposition.

ECLIPSE Clinical Trial

2000-patient randomized controlled trial—generating level one medical evidence to impact guidelines.

Diamondback 360® with GlideAssist®

Enhanced navigation for lesion access and device removal in complex anatomy.

Complex PCI Toolkit

Full line of PTCA SC and NC balloons including the 1.0mm Sapphire and Teleport, the lowest profile torqueable microcatheter

Nitinol ViperWire Advance® with Flex Tip

Flexible nitinol body with shape-able tip for navigation and reduced wire bias in complex anatomy.

2nd Generation Diamondback®

Enhanced procedural control and smarter software to increase procedural efficiency.

Support devices can generate an incremental $800 - $1,000 per procedure

CSI Peripheral Innovation

Innovation Drives Incremental Growth

Diamondback 360® Orbital Atherectomy System

Sands intimal lesions *and* facilitates fracture of medial calcium. Low profile enables minimally invasive treatment options.

Exchangeable Series with GlideAssist®

Provides enhanced navigation for lesion access in complex anatomy.and allows the use of multiple crowns with one handle to enable full leg revascularization.

Radial Length Orbital Atherectomy System

Full line of PTCA SC and NC balloons including the 1.0mm Sapphire. Teleport is the lowest profile torqueable microcatheter

PTA Toolkit

Full line of PTA SC and NC balloons, Zilient wires and the Teleport microcatheter

Radial Length PTA Balloons

A full line of radial length PTA balloons. 2021 Launch.

WIRION Embolic Protection System

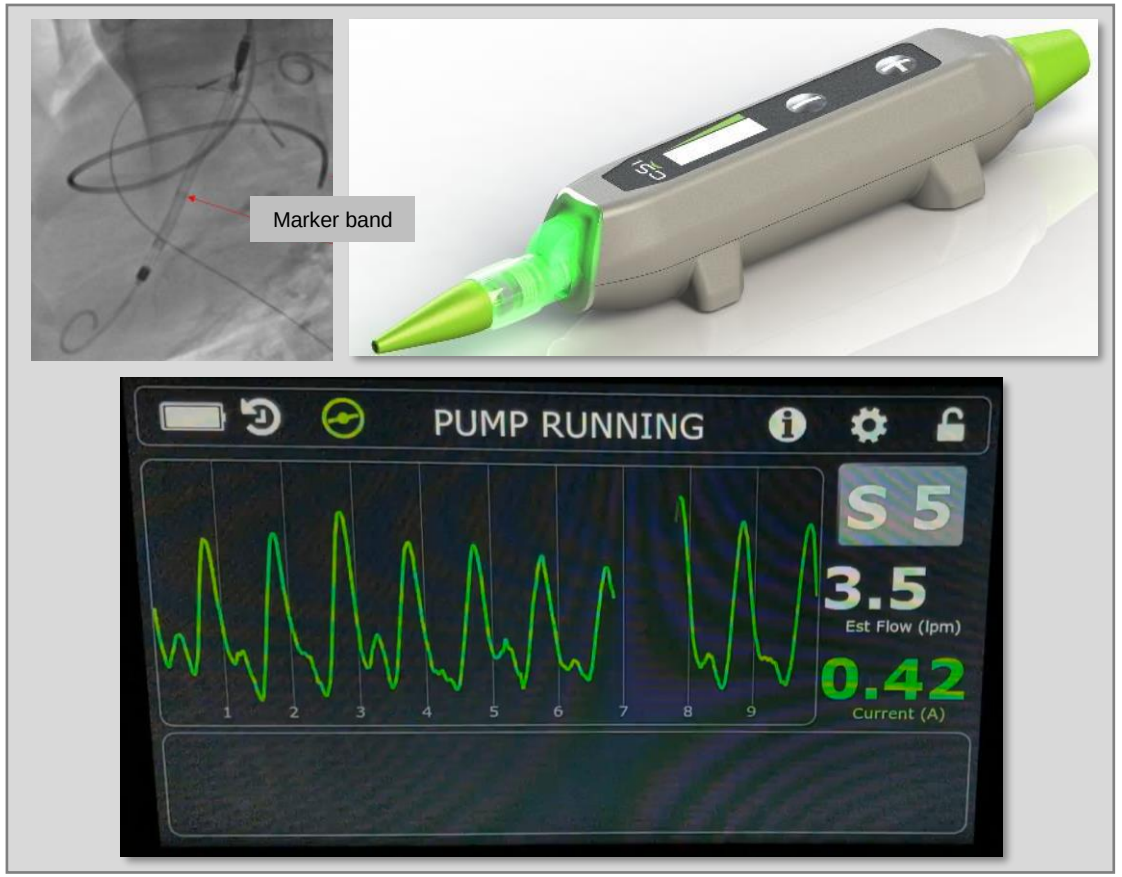
Versatile EPD that can be used on any 0.014 guidewire. 2021 Launch

Support devices can generate an incremental $600 - $1,200 per procedure and the WIRION EPD could add $1,000

Percutaneous Ventricular Assist Device (pVAD) System

Innovation Drives Incremental Growth

Providing temporary hemodynamic support for use in high-risk PCI procedures



Deliver hemodynamic support to aide in complete revascularization during high risk PCI procedures

Provide optimal Profile-to-Output (PTO) to support high risk interventions

- Flow: 3-5 LPM
- Crossing Profile: 10-14 Fr Access
- Catheter Profile: 6-8 Fr

Physician control and flow monitoring within the sterile field

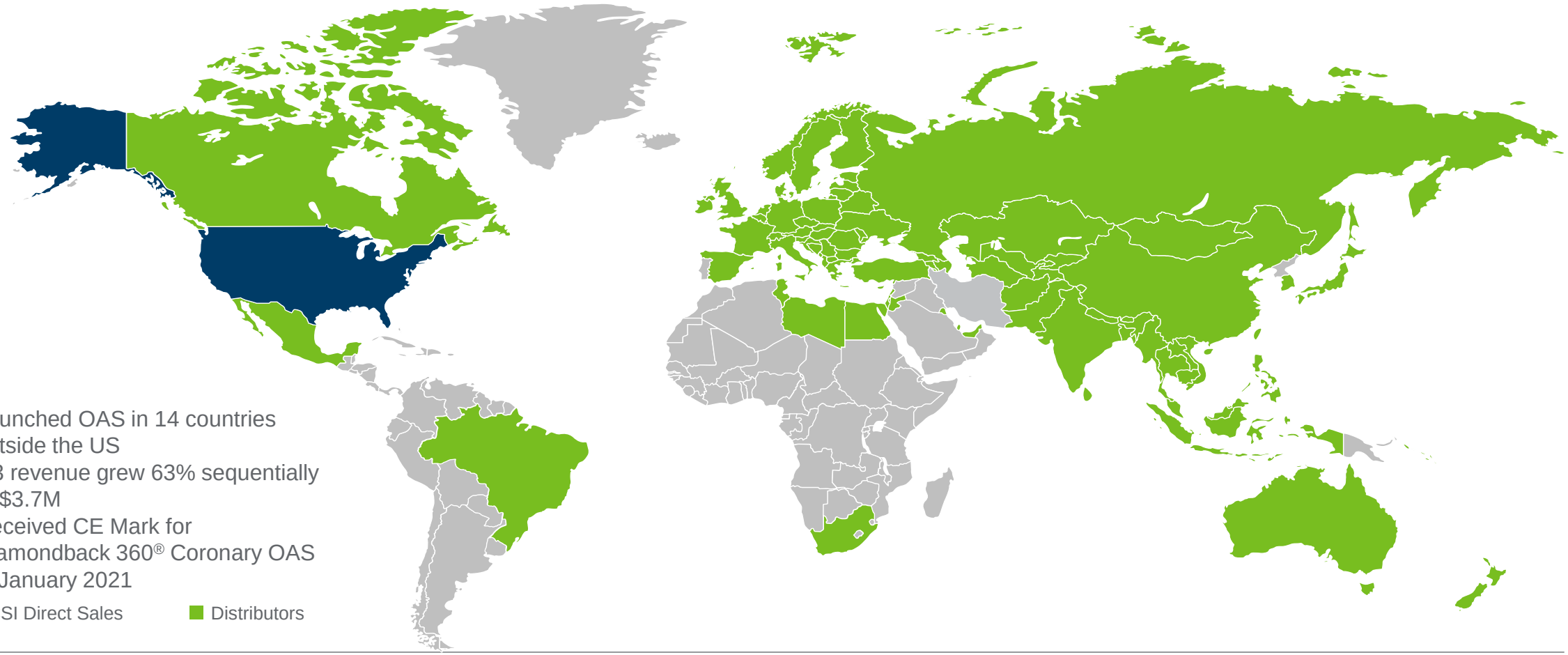
Improving ease of use, simplified user interface, hospital mobility, and increased runtime (12+ hours), Compact console design (<15 lbs)

* Product is in development and not approved for sale in the United States. Safety and effectiveness have not been established. Features and performance of future approved product may vary.

Global Distribution Network

Global Expansion Accelerates Growth of Core Business

Partnerships to Expand Orbital Atherectomy Across the Globe



- Launched OAS in 14 countries outside the US
- Q3 revenue grew 63% sequentially to $3.7M
- Received CE Mark for Diamondback 360® Coronary OAS in January 2021

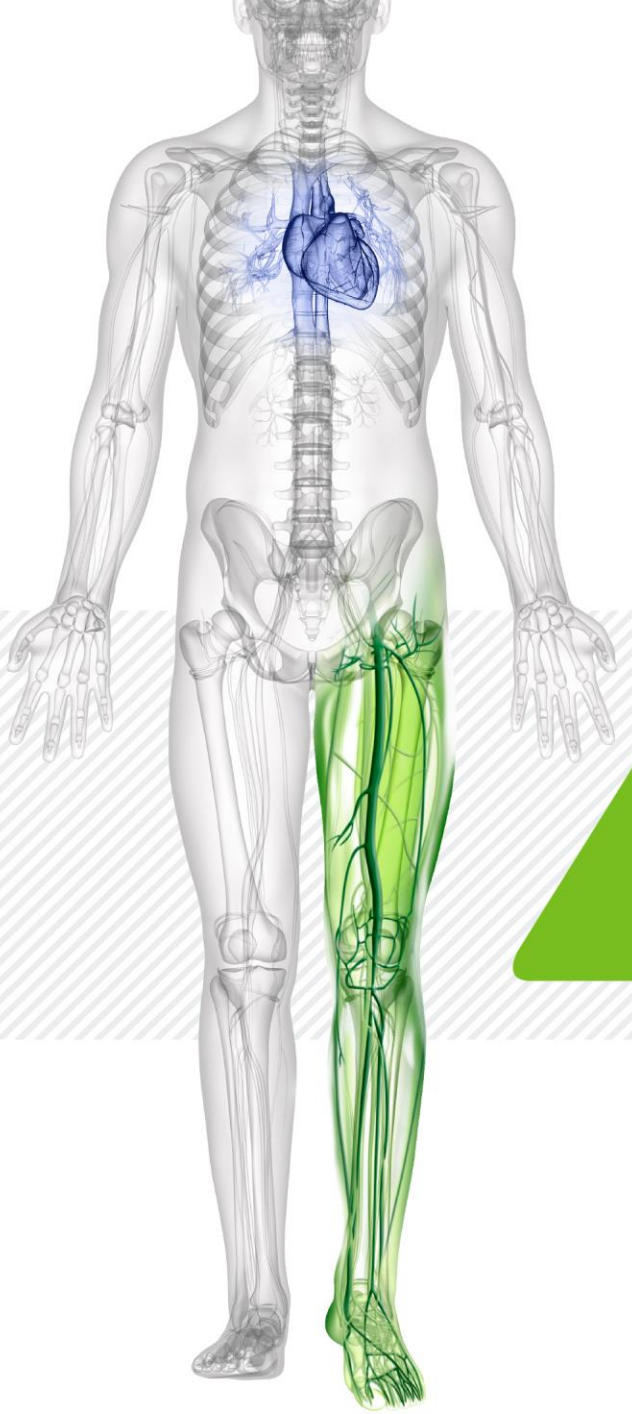
CSI Direct Sales Distributors

Cardiovascular Systems, Inc.

Creating Shareholder Value

Leveraging a Strong Core Business	A Compelling Growth Strategy	Creating Competitive Advantage	Financially Strong with the Team and Talent to Win
Improving outcomes for complex coronary and peripheral artery disease	Driving market leading performance in orbital atherectomy	High quality products, services and relationships	Sustaining double digit growth with strong gross margins
Proprietary core technology	Expanding into new geographic markets	Innovation and robust medical evidence	Positive cash flow, strong cash position and no long-term debt
Serving large and growing markets	Developing an innovative portfolio of new products	Medical education and superior clinical support	Positioned to invest in organic growth
			A Mission driven organization with the leadership and talent to succeed

Appendix

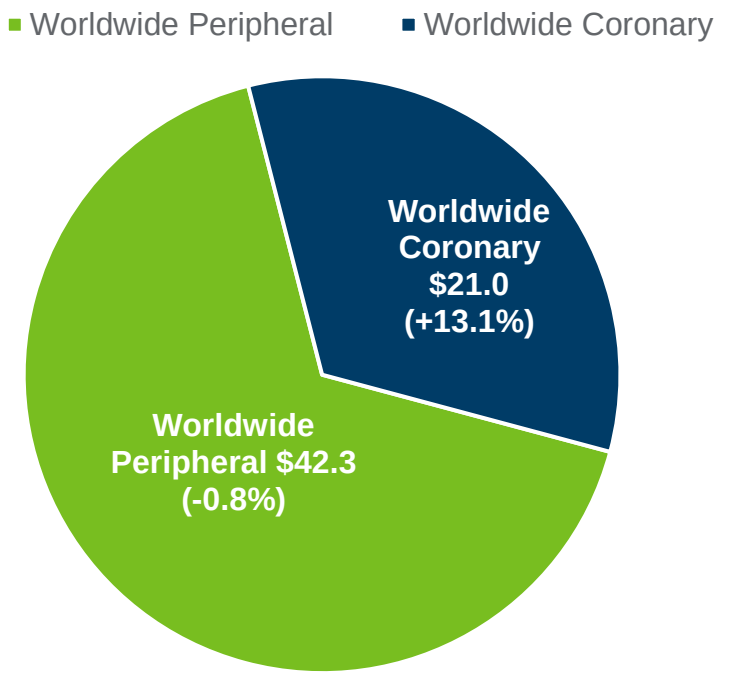


CARDIOVASCULAR SYSTEMS, INC.

Q3 FY21 Worldwide Revenues of $63.3 Million

3.4% Year Over Year Increase

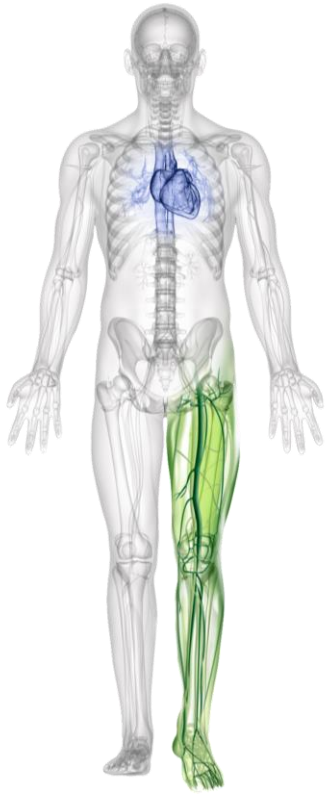
Q3 FY21 Revenue Breakdown



($ in millions)

Highlights

- Announced partnership with CVT to develop everolimus peripheral and coronary drug-coated balloons
- First patients in Europe treated with Coronary OAS
- First patients treated with WIRION® embolic protection system
- Acquired ViperCross peripheral support catheters
- Announced investment in and acquisition option for telehealth company, CarePICS, LLC.
- Net loss of $(6.0)M included $(3.4)M related to acquisition of peripheral catheters
- Adjusted EBITDA of $2.5M improved $0.8M year-over-year
- Cash and marketable securities of $211.1M
- No long-term borrowings*



*Excludes $20.9M financing obligation for lease payments on company headquarters

Q3 FY21: U.S. Peripheral

Strong growth in revenue from office-based labs as patients seek treatment during surge

U.S. Peripheral revenue of $42.1M was flat year over year

- Peripheral franchise was led by 21% revenue growth in the OBL
- Hospital revenue declined 8% as a result of surge in Covid cases in early Q3
- Peripheral hospital segment was negatively impacted by temporary deferral of claudicant (primarily above-the-knee) cases
- WIRION EPS received FDA clearance in Q3 FY21
- Launch of peripheral support products begins in Q4 FY21

U.S Peripheral Revenue[1]

($ in 000)	Q1	Q2	Q3	Q4	Total
FY19	$41,051	$43,426	$44,632	$48,207	**$177,316**
FY20	$45,272	$47,463	$42,134	$30,667	**$165,536**
FY21	$42,932	$43,924	$42,104	-	**$128,960**

Orbital Atherectomy System Revenue[2]

($ in 000)	Q1	Q2	Q3	Q4	Total
FY19	$40,839	$43,191	$44,384	$47,905	**$176,318**
FY20	$44,944	$47,159	$41,839	$30,465	**$164,407**
FY21	$42,657	$43,625	$41,782	-	**$128,064**

Interventional Support Device Revenue[3]

($ in 000)	Q1	Q2	Q3	Q4	Total
FY19	$212	$235	$248	$302	**$998**
FY20	$328	$304	$295	$202	**$1,129**
FY21	$275	$299	$322	-	**$896**

[1] Is the total of Orbital Atherectomy System Revenue plus Interventional Support Device Revenue.
[2] Includes peripheral orbital atherectomy devices, ViperWire, ViperSlide, Exchangeable cartridges, ViperTrack and other
[3] Zilient Guidewires, ViperCath and WIRION

Q3 FY21: U.S. Coronary

Steady year-over-year growth despite Covid pressures

U.S. Coronary revenue increased 9.4% year over year

- Coronary OAS units sold increased 9% Y/Y
- Coronary ISDs, including 1.0mm Sapphire angioplasty balloons, Teleport Microcatheter and nitinol ViperWire with Flex Tip drove $604 of incremental revenue for every coronary OAS sold in Q3 FY21
- Steady ECLIPSE enrollment – 1,550 enrolled

Orbital Atherectomy System Revenue[2]

($ in 000)	Q1	Q2	Q3	Q4	**Total**
FY19	$13,514	$14,686	$15,402	$16,160	**$59,762**
FY20	$14,669	$16,490	$14,058	$8,651	**$53,868**
FY21	$13,952	$15,762	$15,093	-	**$44,807**

U.S Coronary Revenue[1]

($ in 000)	Q1	Q2	Q3	Q4	**Total**
FY19	$13,873	$15,170	$16,265	$17,490	**$62,798**
FY20	$16,257	$18,497	$15,988	$9,785	**$60,527**
FY21	$15,899	$17,983	$17,489	-	**$51,371**

Interventional Support Device Revenue[3]

($ in 000)	Q1	Q2	Q3	Q4	**Total**
FY19	$359	$484	$863	$1,330	**$3,036**
FY20	$1,588	$2,007	$1,930	$1,134	**$6,659**
FY21	$1,947	$2,221	$2,396	-	**$6,564**

[1] Is the total of Orbital Atherectomy System Revenue plus Interventional Support Device Revenue.
[2] Includes coronary orbital atherectomy devices, Coronary Guidewire, ViperSlide and other
[3] Includes Sapphire angioplasty balloons and Teleport microcatheters

Q3 FY21: International

Strong growth in Japan and EU launch underway

International revenue increased 20.5% year over year

- International revenue increased 62.7% sequentially
- Record case volume and revenue in the quarter
- Received CE Mark for Diamondback 360® Coronary OAS in January 2021
  - Successful remote training to certify new physicians
  - Launched in 6 EU countries

($ in 000)	Q1	Q2	Q3	Q4	Total
FY19	$1,342	$1,610	$2,414	$2,537	**$7,903**
FY20	$2,961	$2,374	$3,053	$2,094	**$10,482**
FY21	$1,713	$2,262	$3,680	-	**$7,655**

Countries Launched

	Country/Region	Coronary	Peripheral
	Asia Pacific		
1	Hong Kong	X	X
2	Indonesia	X	
3	Japan	X	
4	Malaysia	X	X
5	Singapore	X	X
	EMEA		
6	France	Q3 FY21	X
7	Germany	Q3 FY21	X
8	Italy	Q3 FY21	X
9	Kuwait	X	
10	Spain	Q3 FY21	X
11	Switzerland	Q3 FY21	X
12	UAE	X	X
13	The Netherlands	Q3 FY21	X
14	Saudi Arabia	X	

Q3 FY21 vs. Q2 FY21 and Q3 FY20

Dollars in thousands

	Q3 FY21	Quarter Over Quarter Change	Year Over Year Change
Worldwide Revenue	$63,273	-1.4%	3.4%
Worldwide Peripheral Revenue	$42,295	-3.8%	-0.8%
Worldwide Coronary Revenue	$20,978	3.8%	13.1%
US Revenue	$59,593	-3.7%	2.5%
US Peripheral Revenue	$42,104	-4.1%	-0.1%
US Coronary Revenue	$17,489	-2.7%	9.4%
International Revenue	$3,680	62.7%	20.5%
US Peripheral Units	-	-4.0%	8.3%
US Coronary Units	-	-3.2%	9.3%

Q3 FY21: Select Financial Information

Dollars in thousands, except earnings per share

	Q3 FY21	Q2 FY21	Q/Q Change Fav (Unfav)	Q3 FY20	Y/Y Change Fav (Unfav)
Net revenues	**$63,273**	**$64,169**	$(896)	**$61,175**	$2,098
Cost of goods sold	14,013	13,920	(93)	12,225	(1,788)
Gross Margin	77.9%	78.3%	Decreased 40BP	80.0%	Decreased 210 BP
Selling, general and administrative	41,442	40,061	(1,381)	41,384	(58)
% of sales	65.5%	62.4%	Increased 310 BP	67.7%	Decreased 220 BP
Research and development	13,163*	9,601	(3,562)	9,964	(3,199)
% of sales	20.8%*	15.0%	Increased 580 BP	16.3%	Increased 450 BP
Amortization of intangible assets	304	304	-	337	33
Income (loss) from operations	**(5,649)**	**283**	(5,932)	**(2,735)**	(2,914)
Other (income) and expense, net	292	276	(16)	107	(185)
Provision for income taxes	63	63	-	47	(16)
Net (loss)	**$(6,004)**	**$(56)**	$(5,948)	**$(2,889)**	$(3,115)
Basic and diluted earnings per share	$(0.15)	-	$(0.15)	$(0.08)	$(0.07)
Basic and diluted weighted average shares outstanding	38,911,454	38,808,980	102,474	34,149,561	4,761,893

* Includes $3.4 million related to acquisition of peripheral catheters from WavePoint, LLC.

Non-GAAP Financial Measures

($ in thousands)	Q3 FY20	Q4 FY20	Q1 FY21	Q2 FY21	Q3 FY21
Net (loss)	$(2,889)	$(15,166)	$(2,076)	$(56)	$(6,004)
Less: Other (income) and expense, net	107	334	355	276	292
Less: Provision for income taxes	47	102	63	63	63
Income (loss) from operations	(2,735)	(14,730)	(1,658)	283	(5,649)
Add: Stock-based compensation	3,273	3,143	4,907	3,877	3,704
Add: IPR&D charges incurred in connection with asset acquisitions	-	-	-	-	3,353
Add: Depreciation and amortization	1,088	1,027	1,029	1,058	1,056
Adjusted EBITDA	**$1,626**	**$(10,560)**	**$4,278**	**$5,218**	**$2,464**

Use and Economic Substance of Non-GAAP Financial Measures Used by CSI and Usefulness of Such Non-GAAP Financial Measures to Investors

CSI uses Adjusted EBITDA as a supplemental measure of performance and believes this measure facilitates operating performance comparisons from period to period and company to company by factoring out potential differences caused by depreciation and amortization expense, stock-based compensation, and IPR&D charges. CSI's management uses Adjusted EBITDA to analyze the underlying trends in CSI's business, assess the performance of CSI's core operations, establish operational goals and forecasts that are used to allocate resources and evaluate CSI's performance period over period and in relation to its competitors' operating results. Additionally, CSI's management is evaluated on the basis of Adjusted EBITDA when determining achievement of their incentive compensation performance targets.

CSI believes that presenting Adjusted EBITDA provides investors greater transparency to the information used by CSI's management for its financial and operational decision-making and allows investors to see CSI's results "through the eyes" of management. CSI also believes that providing this information better enables CSI's investors to understand CSI's operating performance and evaluate the methodology used by CSI's management to evaluate and measure such performance.

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