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 growth, future financial measurements, product development and introductions (including the timing thereof), clinical trials (including the timing thereof), international expansion, the timing of manufacturing transfer of the WIRION system, product benefits, and market 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

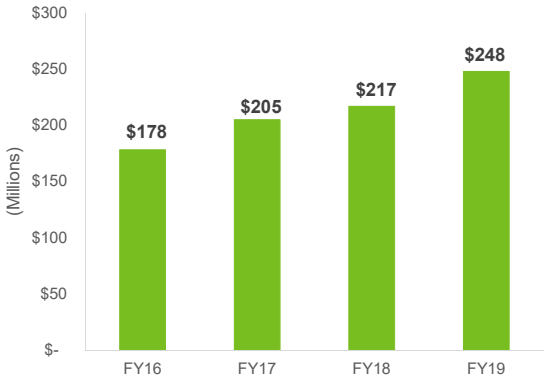
This presentation includes calculations or figures that have been prepared internally and have not been reviewed or audited by CSI's independent registered accounting firm. Use of different methods for preparing, calculating or presenting information may lead to differences, which may be material. In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

Cardiovascular Systems, Inc.

Overview

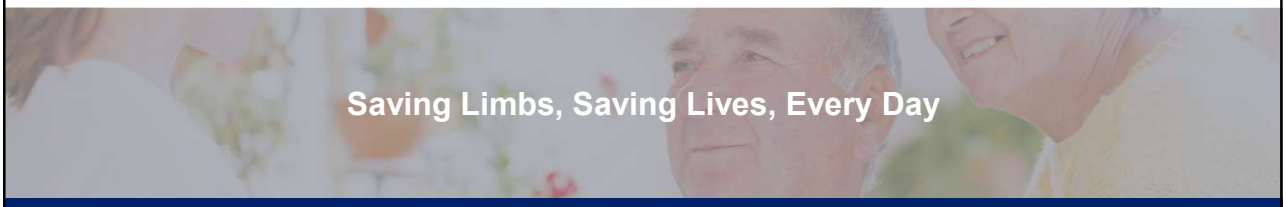
- Highly Differentiated and Proprietary Core Technology
- Serving Large and Growing Markets
- Complex and Difficult Disease State
- Robust Medical Evidence
- Large and Established U.S. Sales Organization
- Exceptional Clinical Case Support and Medical Education

Historical Revenue



14.3% Revenue Growth in FY19

Commitment to Our Mission



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, Patiola 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 Company Estimates

Key Growth Drivers

Achieve $435M - $500M in Revenue in FY23 (15% - 18% 5-YR CAGR)

Key Growth Drivers

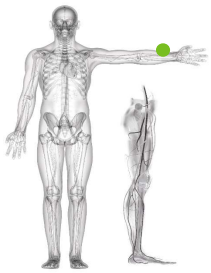
- Innovation in product line extensions
- Site of service strategies
- Evidence
- Expertise
- Excellence in quality and manufacturing

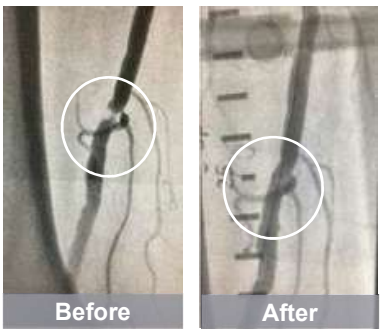
Sustain 10+ % Growth in our Core Business

Innovation

Radial is a Core Competitive Advantage

- **A new differentiated route of access for CSI, complementary to tibial/pedal**
- **Diamondback low 5Fr profile, with extended working length enables unique radial approach**
- **Expansion in portfolio of radial support devices: wires, sheaths, catheters, PTA balloons**
- **Value Drivers**
  - Few vascular complications, lower bleeding
  - Efficiency in workflows, increase patient volumes, shorter length of stay; especially attractive for OBL's





CSI CARDIOVASCULAR SYSTEMS, INC.

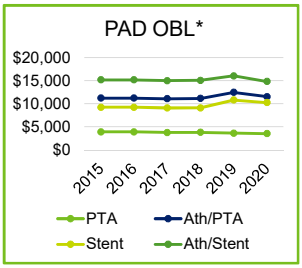
Leadership in Clinical Evidence

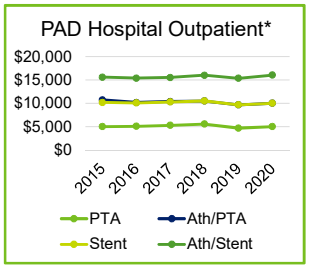
5000+	7000	600
Patients	Lesions	Physicians

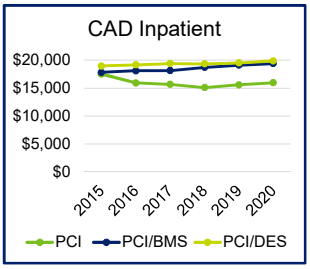
	Trial	Size	Importance
PAD	LIBERTY 360° (3-year Data)	n=1,204	• "All-comers" trial vs. any other treatment • Nearly 700 Rutherford Class 4-6 patients enrolled
	OPTIMIZE (Enrollment Complete)	n=66	• OAS + DCB vs. DCB alone • Calcified below-the-knee lesions
	OASIS, CONFIRM series, CALCIUM 360 and COMPLIANCE 360	n=3,359	• High rates of procedural success and durability • Low adverse events/bail-out stenting
CAD	ECLIPSE (Enrollment Began March 2017)	n=2,000	• Largest randomized trial to study coronary atherectomy for calcified coronary lesions • OAS + DES vs. angioplasty + DES
	ORBIT II (3-year Data)	n=443	• 92% freedom from revascularization at 3-years • Up to $4,946 per patient cost savings at 2-years
	COAST (Enrollment Complete)	n=100	• Supported 2nd Gen OAS in U.S. and Japan approval • Japan commercialization to begin in FY18

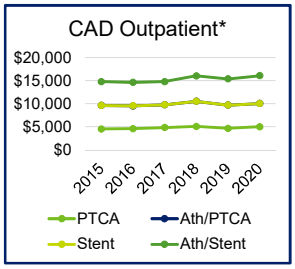
CSI CARDIOVASCULAR SYSTEMS, INC.

Consistent, Attractive Reimbursement





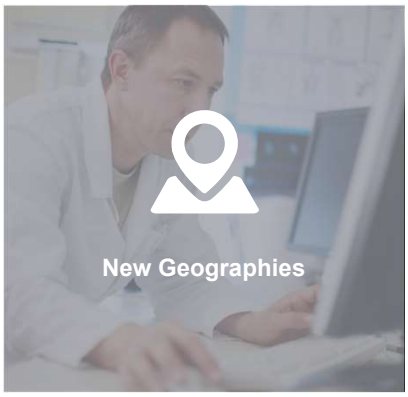




Facility	Inpatient/ Outpatient	Procedure	2020 Reimbursement	% Change from 2019
Hospital	Inpatient	PAD	$11,400 - $20,548	4.4% - 4.5%
Hospital	Inpatient	CAD	$10,542 - $19,874	4.2% - 1.7%
Hospital	Outpatient	PAD/CAD	$10,013 - $16,050*	3.6% - 4.5%*
Non-Hospital	Outpatient/OBL	PAD (ATK)	$11,517 - $14,810*	(7.4)% - (7.6)%*
Non-Hospital	Outpatient/OBL	PAD (BTK)	$11,564 - $14,378*	(5.6)% - (7.1)%*

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
* PROPOSED

Key Growth Drivers



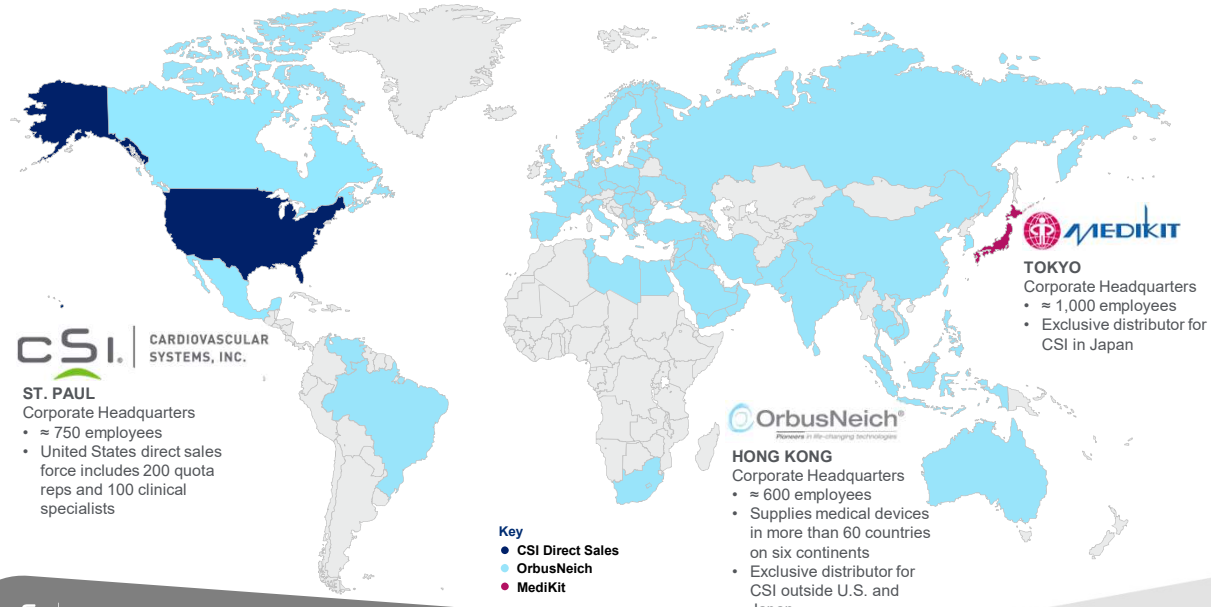
OUS Launches Progressing Well

Expanding Global Distribution Network

Steady Cadence of New Geographies

New Geographies to Provide $25M - $50M in Revenue in FY23

Global Distribution Network



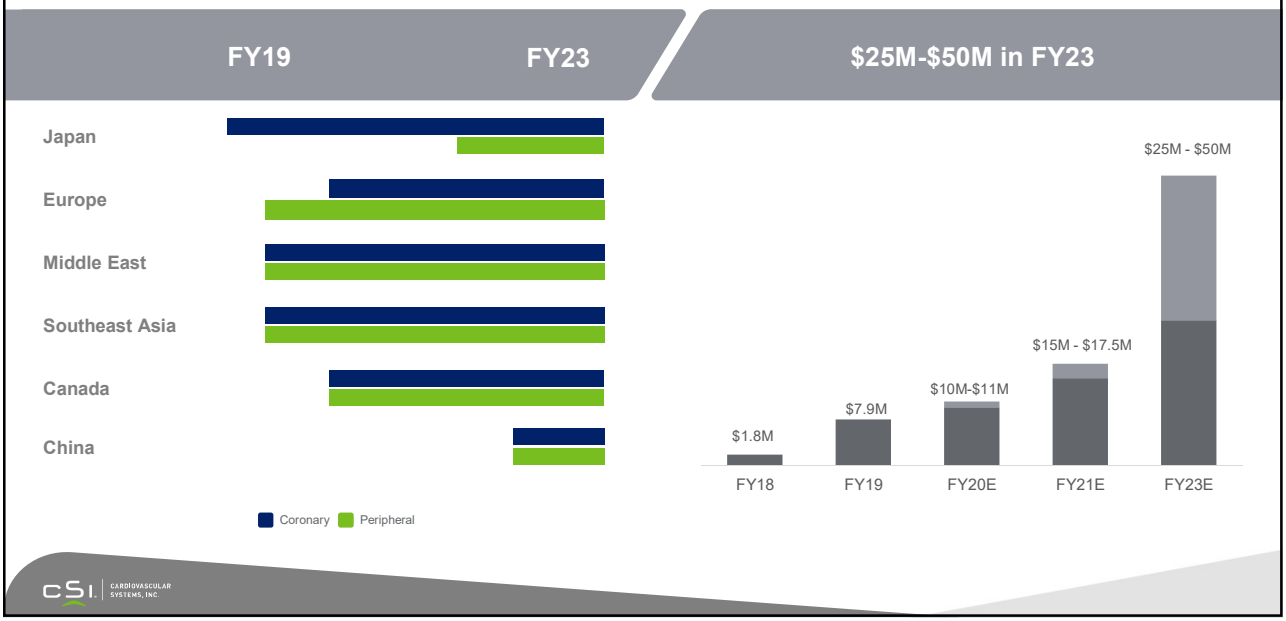
ST. PAUL
Corporate Headquarters
- ≈ 750 employees
- United States direct sales force includes 200 quota reps and 100 clinical specialists

TOKYO
Corporate Headquarters
- ≈ 1,000 employees
- Exclusive distributor for CSI in Japan

HONG KONG
Corporate Headquarters
- ≈ 600 employees
- Supplies medical devices in more than 60 countries on six continents
- Exclusive distributor for CSI outside U.S. and Japan

Key
- CSI Direct Sales
- OrbusNeich
- MediKit

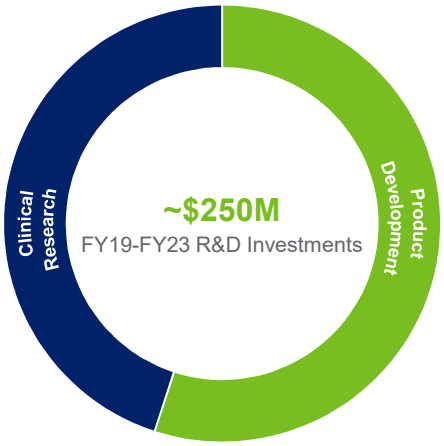
A Steady Cadence of New Geographies



Key Growth Drivers

- Innovation drives long term growth potential
- 20 new product launches by FY23
- Portfolio expansion into complex coronary and peripheral patients
- **$70M - $100M in Revenue From New Products in FY23**

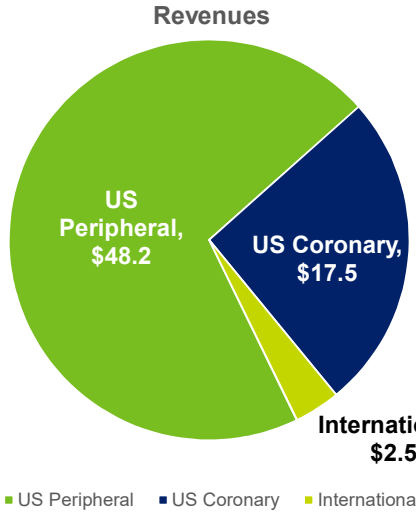
Platform for Growth



- Growth through geographic expansion and innovation
- Organic growth investments are internally funded
- R&D investments increase to 14%-17% of revenues in FY21 (13% in FY19)
- Leveraging SG&A spend down as a % of revenue
- Opportunistic portfolio management

Q4 CSI Worldwide Revenues of $68.2 Million

15% Increase in Revenue
$ in millions



US Peripheral grew 12%

Drivers
16% unit growth
Strong OBL and hospital growth

US Coronary grew 16%

Drivers
11% unit growth
Adoption of coronary toolkit

International grew 164%

Drivers
Coronary Classic and ViperWire FlexTip in Japan
OAS launched in 10 countries to-date

WIRION™ Embolic Protection System Acquisition

- WIRION has CE Mark and FDA clearance as a distal embolic protection filter used to protect a patient's lower extremities from distal embolization that can occur during PVI
- WISE LE showed the device is safe and non-inferior to the pre-specified performance goal in capturing debris in the vast majority of patients with a low adverse event rate
- WIRION is significantly easier to use and more versatile than competing EPDs with clearance for use with any peripheral atherectomy device and any .014" guidewire
- Reimbursement is included within existing atherectomy codes

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 FlexTip in Japan
- ✓ New product revenue = $3.9 million
- ✓ Launched Teleport Microcatheter
- ✓ Launched ViperCath XC
- ✓ Launched Peripheral Viperwire with FlexTip
- ✓ 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 = $10M-$11M
- New product launches:
  - ✓ PAD Exchangeable full market release
  - PAD Next Gen OAS with GlideAssist
  - PAD JADE angioplasty balloons
  - PAD radial guidewire
  - PAD radial sheath
  - CAD Nitinol ViperWire FlexTip
  - 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.

CSI | CARDIOVASCULAR SYSTEMS, INC.

Driving Sustainable Growth: Broaden Our Value Streams

Financial Goal: Five Year CAGR of 15% - 18% and Revenue of $435M - $500M in FY23

Financial Strength and the Talent to Execute

Growth, Profitability, Cash and Liquidity

Experienced and Talented Team

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

CSI | CARDIOVASCULAR SYSTEMS, INC.

Appendix: Consolidated Balance Sheet

Dollars in thousands, except per share and share amounts

	June 30, 2019	June 30, 2018
ASSETS		
Current assets		
Cash and cash equivalents	$ 74,237	$ 116,260
Marketable securities	48,435	544
Accounts receivable, net	36,015	31,225
Inventories	18,058	16,605
Prepaid expenses and other current assets	3,330	2,977
Total current assets	180,075	167,611
Property and equipment, net	27,324	27,744
Patents, net	5,105	5,231
Other assets	6,073	2,766
Total assets	$ 218,577	$ 203,352
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	11,194	10,441
Accrued expenses	29,387	25,776
Deferred revenue	1,764	1,243
Total current liabilities	42,345	37,460
Long-term liabilities		
Financing obligation	20,972	21,064
Deferred revenue	6,541	8,946
Other liabilities	775	1,412
Total liabilities	70,633	68,882
Commitments and contingencies		
Common stock, $0.001 par value; authorized 100,000,000 common shares; issued and outstanding 34,934,569 at June 30, 2019 and 33,360,032 at June 30, 2018	34	33
Additional paid in capital	477,368	461,927
Accumulated other comprehensive income	78	101
Accumulated deficit	(329,536)	(327,591)
Total stockholders' equity	147,944	134,470
Total liabilities and stockholders' equity	$ 218,577	$ 203,352

Appendix: Consolidated Statements of Operations

Dollars in thousands, except per share and share amounts

	Year Ended June 30,		
	2019	2018	2017
Net revenues	$ 248,017	$ 217,043	$ 204,906
Cost of goods sold	47,680	39,484	39,441
Gross profit	200,337	177,559	165,465
Expenses:			
Selling, general and administrative	167,700	148,569	144,096
Research and development	33,462	26,756	22,911
Total expenses	201,162	175,325	167,007
(Loss) income from operations	(825)	2,234	(1,542)
Other (income) expense, net:			
Interest expense	1,684	1,717	500
Interest income and other, net	(2,444)	(1,327)	(336)
Total other (income) expense, net	(760)	390	164
(Loss) income before income taxes	(65)	1,844	(1,706)
Provision for income taxes	190	132	86
Net (loss) income	$ (255)	$ 1,712	$ (1,792)
Basic earnings per share	$ (0.01)	$ 0.05	$ (0.06)
Diluted earnings per share	$ (0.01)	$ 0.05	$ (0.06)
Basic weighted average shares outstanding	33,535,759	33,145,140	32,373,709
Diluted weighted average shares outstanding	33,535,759	33,614,260	32,373,709

Appendix: Consolidated Statements of Cash Flows

Dollars in thousands

	Year Ended June 30,		
	2019	2018	2017
Cash flows from operating activities			
Net (loss) income	$ (255)	$ 1,712	$ (1,792)
Adjustments to reconcile net (loss) income to net cash provided by operating activities			
Depreciation of property and equipment	3,150	3,730	3,917
Provision for (recovery of) doubtful accounts (including note receivable)	125	(225)	465
Amortization of patents	296	204	218
Write-off of patent costs	800	497	733
Stock-based compensation	11,266	10,302	10,354
Accretion of discount on marketable securities	(62)	—	—
Loss on disposal of property and equipment and other	42	16	296
Changes in assets and liabilities			
Accounts receivable	(4,915)	(2,878)	(5,809)
Inventories	(1,453)	292	543
Prepaid expenses and other assets	(386)	2,308	(1,823)
Accounts payable	566	104	1,761
Accrued expenses and other liabilities	2,918	(6,577)	725
Deferred revenue	(1,884)	189	10,000
Net cash provided by operating activities	10,208	9,674	19,588
Cash flows from investing activities			
Expenditures for property and equipment	(2,665)	(1,956)	(981)
Purchases of marketable securities	(47,892)	—	—
Purchases of long-term investments	(3,055)	(2,538)	—
Sales of marketable securities	150	194	46
Costs incurred in connection with patents	(890)	(1,113)	(844)
Proceeds from convertible note receivable	—	318	—
Net cash used in investing activities	(54,352)	(5,095)	(1,779)
Cash flows from financing activities			
Proceeds from the employee stock purchase plan	3,752	3,242	3,254
Payment of employee taxes related to vested restricted stock	(1,791)	—	—
Exercise of stock options	196	513	5,263
Proceeds from financing	—	—	20,944
Other	(36)	14	4
Net cash provided by financing activities	2,121	3,769	29,465
Net change in cash and cash equivalents	(42,023)	8,348	47,274
Cash and cash equivalents			
Beginning of period	116,260	107,912	60,638
End of period	$ 74,237	$ 116,260	$ 107,912
Supplemental cash flow information			
Interest paid	$ 1,684	$ 1,717	$ 500

Appendix: Non-GAAP Financial Measures

To supplement CSI's consolidated condensed financial statements prepared in accordance with GAAP, CSI uses a non-GAAP financial measure referred to as "Adjusted EBITDA" in this presentation. Reconciliations of this non-GAAP measure to the most comparable U.S. GAAP measure for the respective periods can be found in the following table. In addition, an explanation of the manner in which CSI's management uses this measure to conduct and evaluate its business, the economic substance behind management's decision to use this measure, the substantive reasons why management believes that this measure provides useful information to investors, the material limitations associated with the use of this measure and the manner in which management compensates for those limitations is included following the reconciliation table.

(in thousands)	Year Ended June 30			
	2016	2017	2018	2019
Net income (loss)	$(56,024)	$(1,792)	$1,712	$(255)
Less: Other (income) and expense, net	(145)	164	390	(760)
Less: Provision for income taxes	92	86	132	190
Income (loss) from operations	(56,077)	(1,542)	2,234	(825)
Add: Stock-based compensation	12,977	10,354	10,302	11,266
Add: Depreciation and amortization	3,917	4,135	3,934	3,446
Adjusted EBITDA	**$(39,183)**	**$12,947**	**$16,470**	**$13,887**

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 and non-cash charges such as stock based compensation. 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.

Appendix: Non-GAAP Financial Measures

The following is an explanation of each of the items that management excluded from Adjusted EBITDA and the reasons for excluding each of these individual items:

-- Stock-based compensation. CSI excludes stock-based compensation expense from its non-GAAP financial measures primarily because such expense, while constituting an ongoing and recurring expense, is not an expense that requires cash settlement. CSI's management also believes that excluding this item from CSI's non-GAAP results is useful to investors to understand the application of stock-based compensation guidance and its impact on CSI's operational performance, liquidity and its ability to make additional investments in the company, and it allows for greater transparency to certain line items in CSI's financial statements.

-- Depreciation and amortization expense. CSI excludes depreciation and amortization expense from its non-GAAP financial measures primarily because such expenses, while constituting ongoing and recurring expenses, are not expenses that require cash settlement and are not used by CSI's management to assess the core profitability of CSI's business operations. CSI's management also believes that excluding these items from CSI's non-GAAP results is useful to investors to understand CSI's operational performance, liquidity and its ability to make additional investments in the company.

Material Limitations Associated with the Use of Non-GAAP Financial Measures and Manner in which CSI Compensates for these Limitations
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. Some of the limitations associated with CSI's use of these non-GAAP financial measures are:

-- Items such as stock-based compensation do not directly affect CSI's cash flow position; however, such items reflect economic costs to CSI and are not reflected in CSI's "Adjusted EBITDA" and therefore these non-GAAP measures do not reflect the full economic effect of these items.

-- Non-GAAP financial measures are not based on any comprehensive set of accounting rules or principles and therefore other companies may calculate similarly titled non-GAAP financial measures differently than CSI, limiting the usefulness of those measures for comparative purposes.

-- CSI's management exercises judgment in determining which types of charges or other items should be excluded from the non-GAAP financial measures CSI uses. CSI compensates for these limitations by relying primarily upon its GAAP results and using non-GAAP financial measures only supplementally. CSI provides full disclosure of each non-GAAP financial measure.

-- CSI uses and detailed reconciliations of each non-GAAP measure to its most directly comparable GAAP measure. CSI encourages investors to review these reconciliations. CSI qualifies its use of non-GAAP financial measures with cautionary statements as set forth above.

CSI CARDIOVASCULAR SYSTEMS, INC.

NASDAQ: CSII

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CSI CARDIOVASCULAR SYSTEMS, INC.