



Annual Shareholder Meeting

May 2016

www.sunshineheart.com

Forward Looking Statement



- This presentation contains forward-looking statements. All forward-looking statements are management’s present expectations of future events and are subject to a number of risks and uncertainties. Various factors could cause actual results to differ materially from these statements including timing, clinical enrollment, clinical results, financing availability, product sales and marketing or efficacy of products, and the other risks set forth under the caption “Risk Factors” and elsewhere in our periodic and other reports filed with the U.S. Securities and Exchange Commission, including our Annual Report or Form 10-K for the fiscal year ended December 31, 2015.
- Although the Company believes that the forward-looking statements are reasonable and based on information currently available, it can give no assurances that the Company’s expectations are correct. All forward looking statements are expressly qualified in their entirety by this cautionary statement.
- Caution: C-Pulse[®] is an investigational device. The device is limited by federal (United States) law to investigational use only.
- C-Pulse is a registered trademark of Sunshine Heart Inc.

Company Vision



Offer a minimally invasive therapy
for **moderate to severe heart failure**
that provides symptomatic relief and
halts the disease progression

Outline / Agenda

- Market Opportunity
- Key Events of the Past Year
- Progress and Learnings
- Next Steps
- Financial Summary

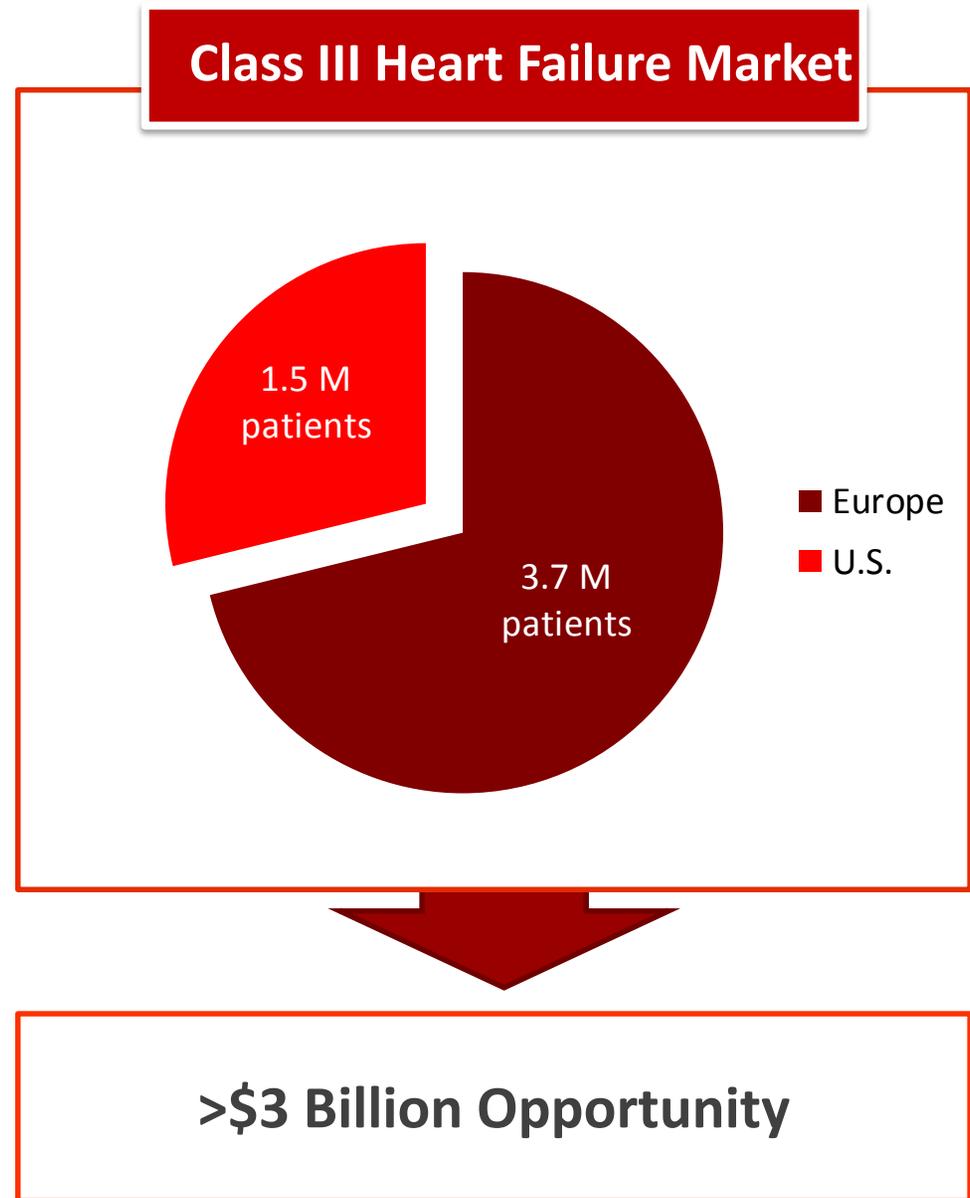
Heart Failure is a Huge Economic Burden



- Incidence: > 800,000 new cases/year*
- One of every 9 deaths*
- Heart Failure linked to other major diseases: Obesity, Diabetes, Hypertension
- Mortality: greater than 60% at 5 years, worse by heart class
- More than 1 Million hospitalizations per year
- More hospital days for Heart Failure than any other diagnosis
- By 2025: number of Heart Failure patients estimated to increase to more than 10 million
- **By 2030: U.S. cost expected to more than double: \$70 Billion**

Class III HF is a Large Market Opportunity

- CP focused on Class III / ambulatory Class IV
- Symptoms: shortness of breath, dizziness when performing normal or strenuous daily activities; inability to sleep, poor QOL
- Class III Readmission Rates: 25% at 6 months / 59% at 12 months
- Class III patients are very sick, but most are NOT sick enough to get an LVAD



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Key Events of Past Year



- Leadership Changes
- Revised Clinical Strategy
 - Stopped enrollment: COUNTER HF / OPTIONS HF
 - Defining the neuromodulation mechanism of C-Pulse
 - Determining best clinical pathway
 - Reallocating resources to fully implantable
- Financial
 - Cash burn reductions
 - Intend to raise capital in 2016

Reiterated Our Belief in C-Pulse Therapy

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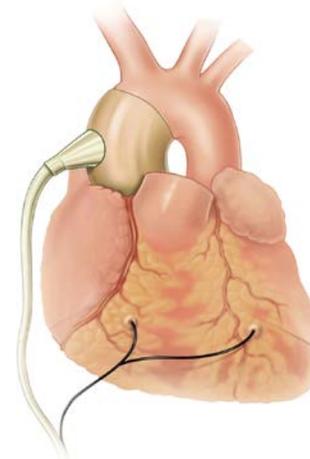
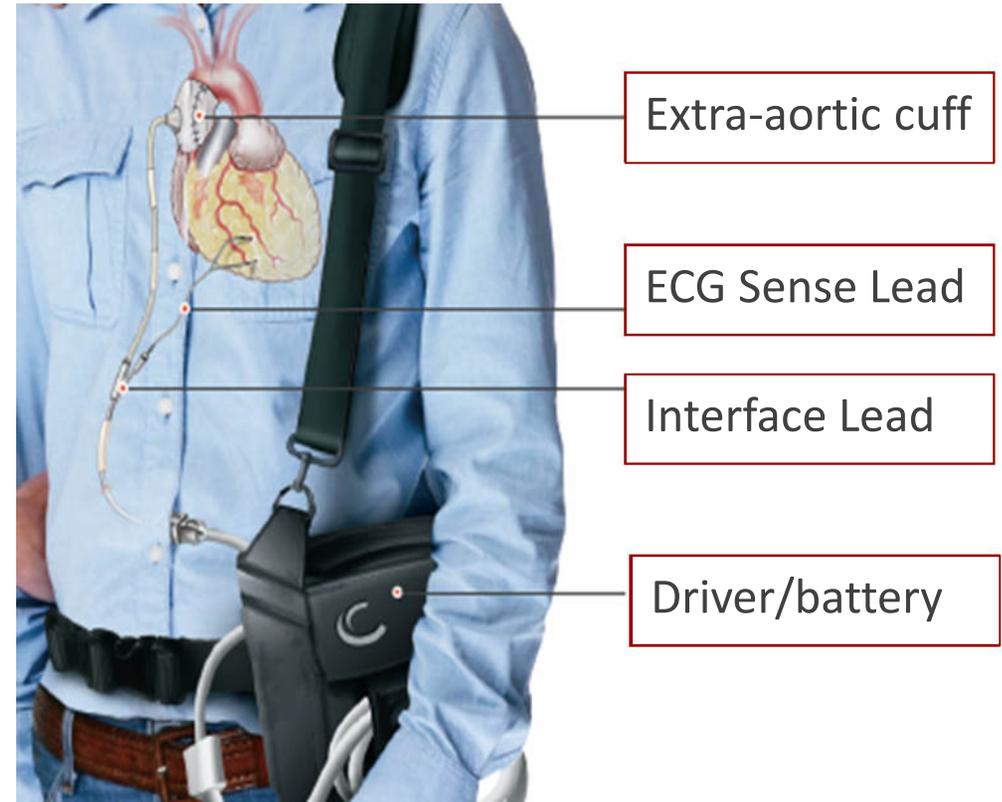
Counterpulsation: Primary Objectives



1. Increase diastolic pressure: ↑ Coronary Blood Flow
2. Unloading of the left ventricle
3. Maintenance of mean aortic pressure
4. Optimize left ventricular coupling

We Have Learned A Lot with Our Current C-Pulse System

- Reduce LV work, increase flow
 - Balloon inflates – increases oxygen to heart muscle
 - Balloon deflates – reduces left ventricle work
- No blood contact – lower likelihood of clot or stroke
- Ability to disconnect – patient comfort and convenience
- Evidence of neuromodulatory effect with balloon compressing baroreceptors at aortic arch



Early Clinical Results are Promising

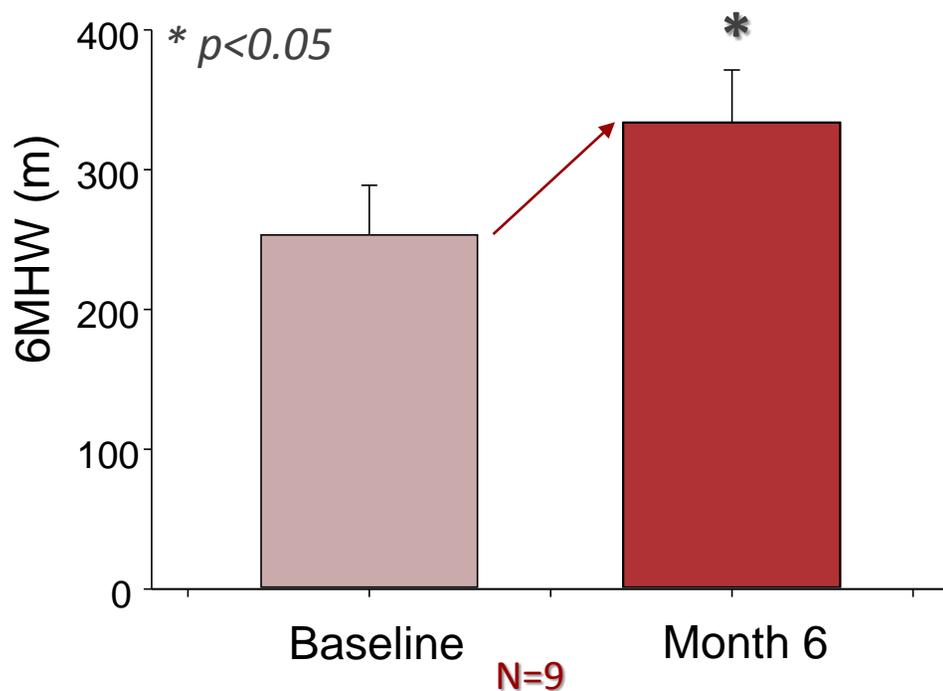


EU Post-Market Study: OPTIONS HF

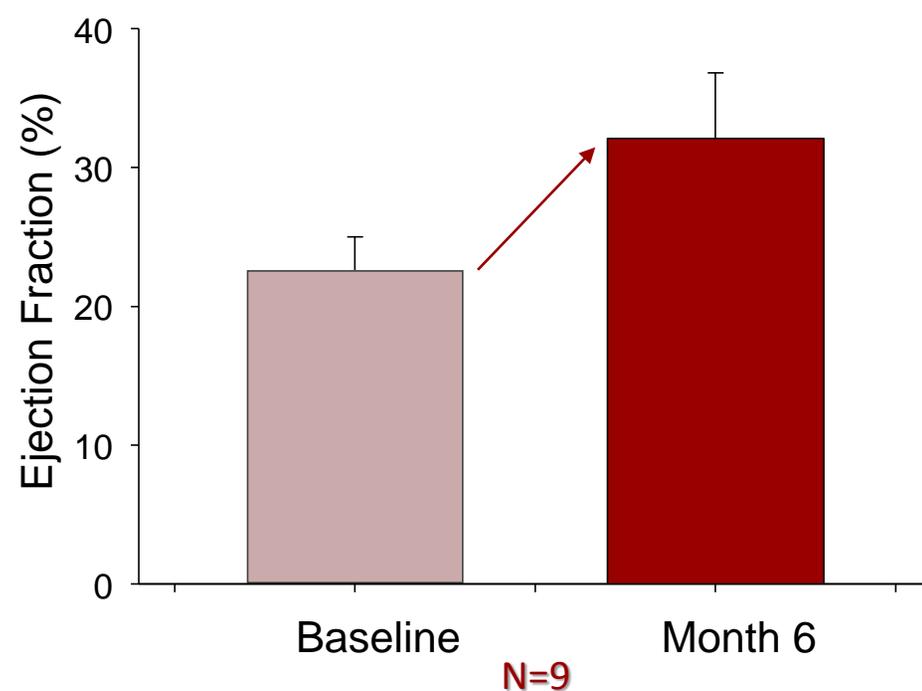
- 15 patient implants in Europe
- One patient weaned at 6.5 months with ejection fraction of 55%
- Improvements in 6 minute walk, reduction of Heart Failure class and increased quality of life
- Lower rate of exit site infections (2/15) as compared to US pilot study (8/20)

OPTIONS HF

Functional Capacity Improvement

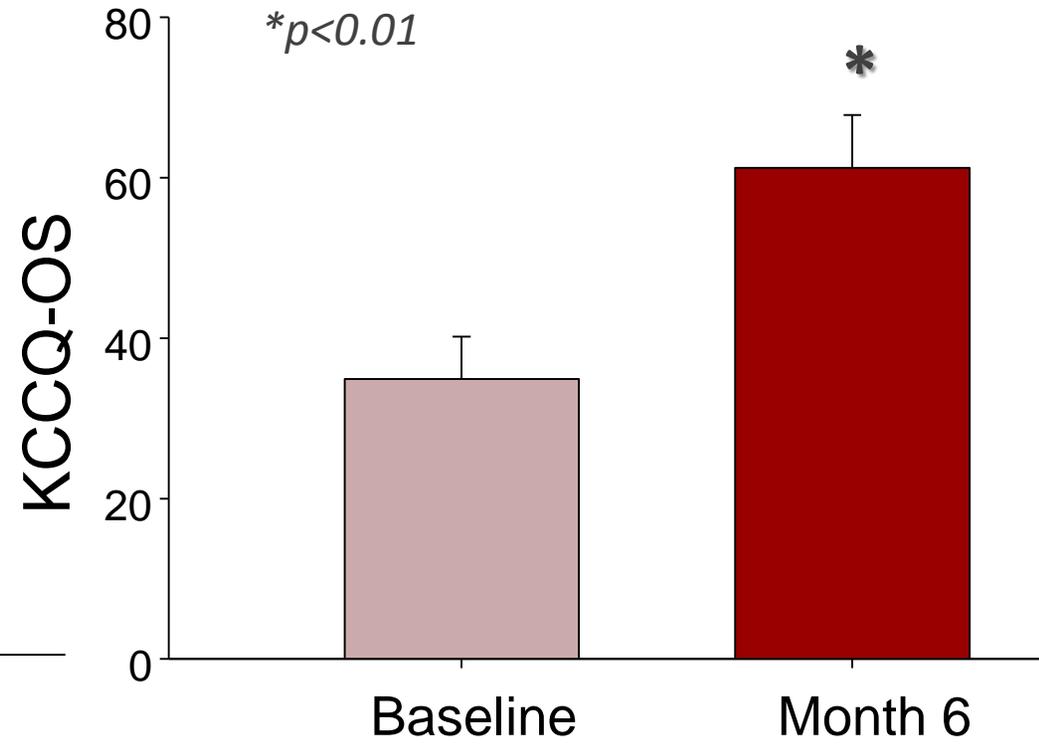
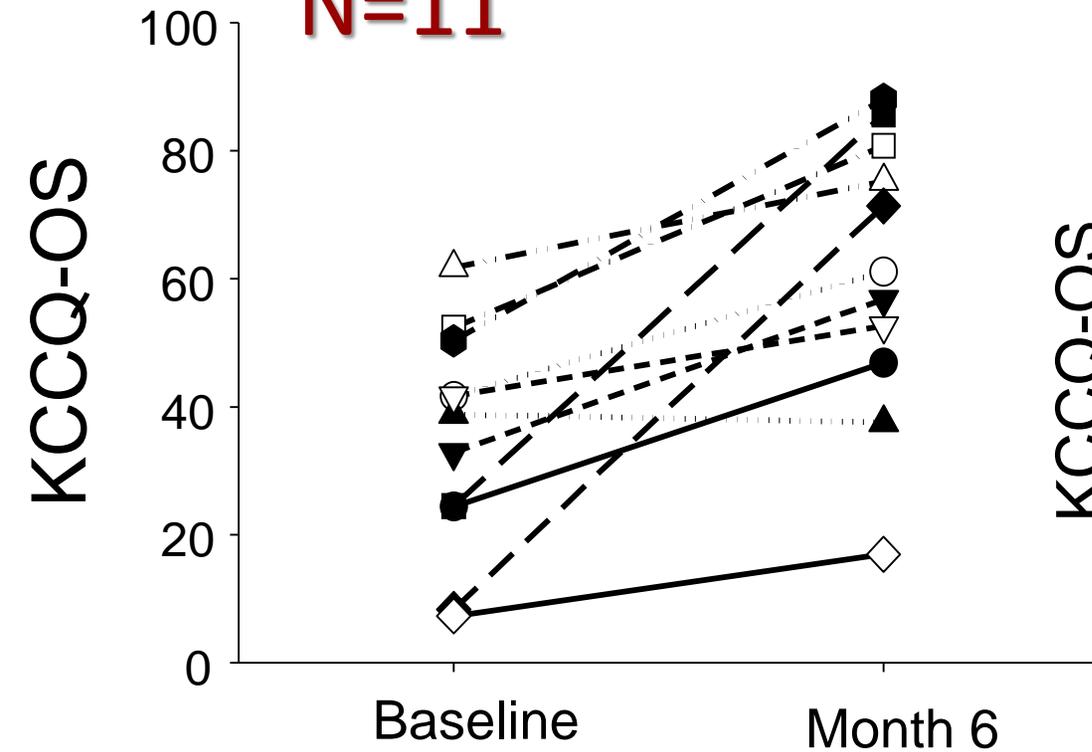


Ejection Fraction Improvement



OPTIONS HF: Quality of Life

N=11

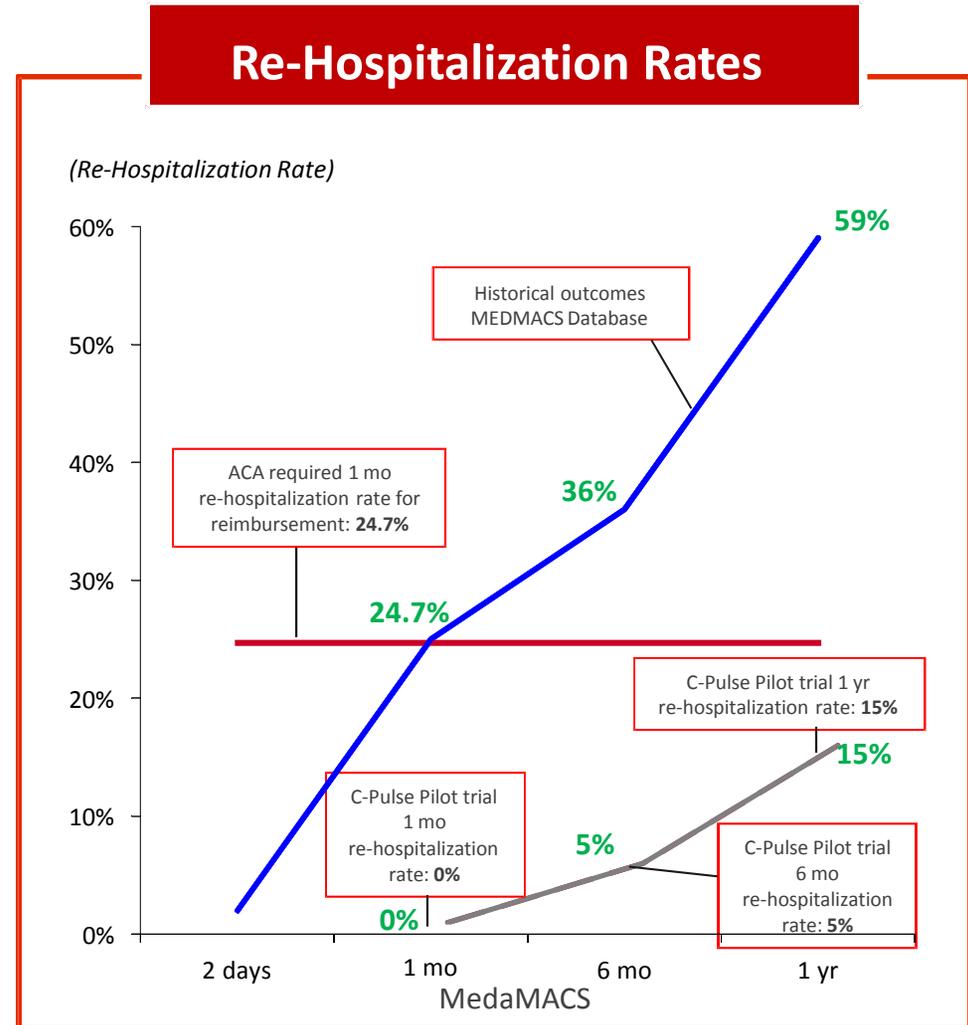


C-Pulse Reduces Readmission Rates



Readmission Rates	3-mo	6-mo	12-mo
Class III Average	25%	36%	59%
C-Pulse Pilot	0	5%	15%

- Meaningful readmission reductions at 3, 6, and 12 months
- Represents significant financial upside for Hospitals & Payers



Positive Results Greater than Clinically Predicted:

Original Hypothesis: C-Pulse results driven by bio-mechanical flow improvement



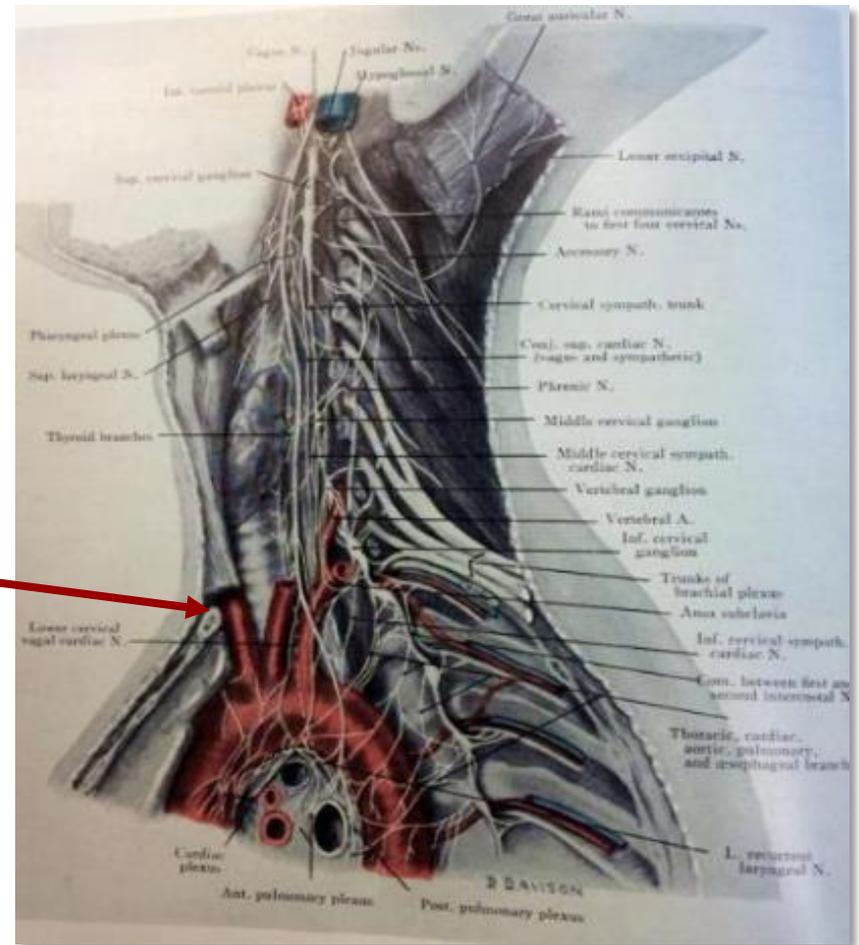
Initial Clinical Results: More positive than predicted by bio-mechanical action alone



Observation: C-Pulse cuff placement is the optimal location to active baroreceptor (neuro) reflexes



Question: Are the benefits from counterpulsation more biomechanical/hydraulic in nature?
OR
more neuromodulatory in nature?



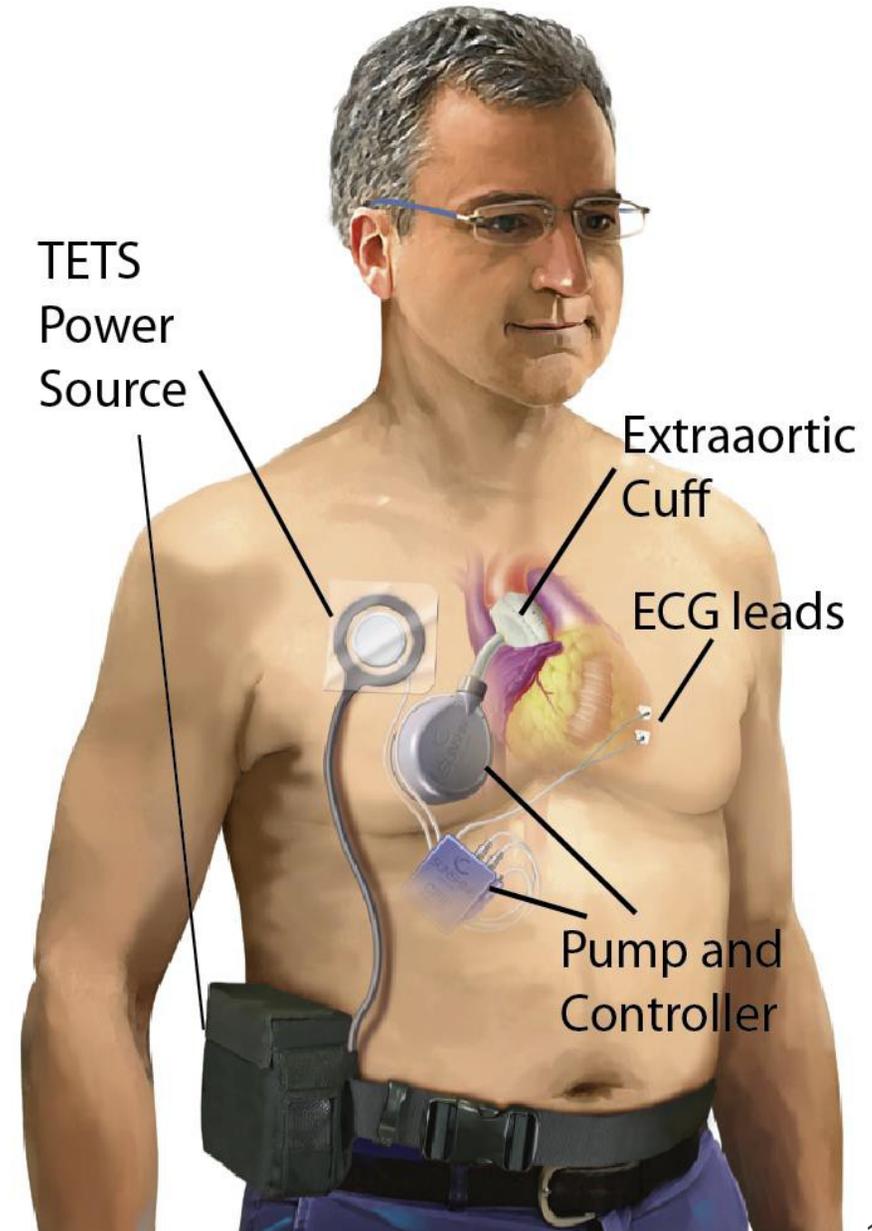
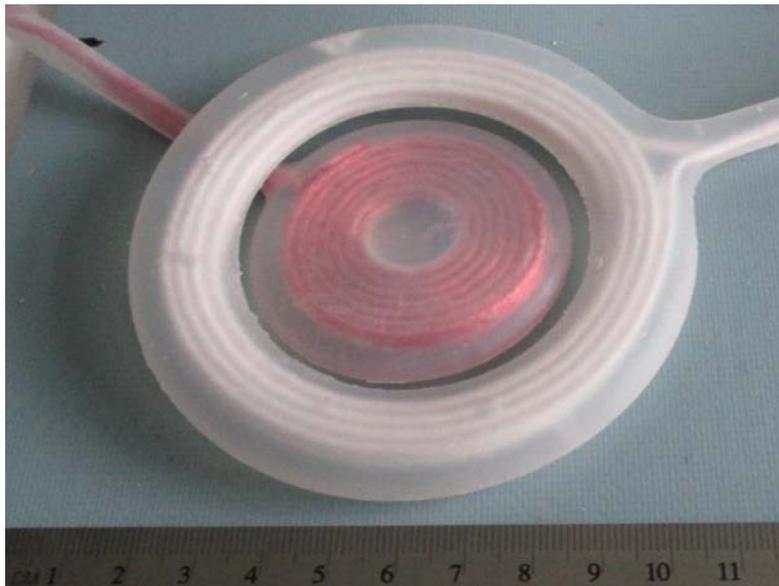
Mitchell GAG. Anatomy Autonomic Nervous System. 1953

Completed Initial Neuro Assessment



- Announced a small neuro assessment study in collaboration with Dr. William Cornwell and Dr. Ben Levine of University of Texas Southwestern and Dr. Phi Wiegand of Dallas VA Medical Center
- Attempting to directly measure the relationship between C-Pulse and sympathetic nerve activity
- Conducted an acute assessment of a patient who had been on counterpulsation therapy for 8 months
- Demonstrated a direct positive correlation in changes in nerve activity with the C-Pulse turned on versus turned off.

Original Design: Fully Implantable C-Pulse



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Our goal remains the commercialization of a fully implantable system

- Next Steps: Determine the mechanism of action (neuromodulation vs. mechanical) that is driving clinical benefit – **this will** impact the final design of the fully implantable system
- Any benefit from neuromodulation will positively impact the final design
- Key Considerations:
 - Neuromodulatory effect potentially allows for meaningfully smaller cuff and pump
 - Electrical-counterpulsation able to be delivered in a smaller, easier, more efficient way

Clinical: Key Next Steps



C-Pulse Near-Term

- Validate neuromodulation mechanism that is driving clinical benefits of C-Pulse
- Will utilize 5 existing patients on C-Pulse therapy
Measure sympathetic nerve activity with C-Pulse ON vs. OFF
- Enrollment underway, goal N=5 complete follow-up Q4 2016

Neuro-FIM

First-in-Man Acute Study

- Demonstrate acute feasibility for utilization in fully-implantable system
- Utilize external pulse generator and prototype leads
- Enrollment begins Q4 2016, follow-up complete Q4 2016

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Financial: Results / Key Priorities



Operations Summary	Year ended Dec 31, 2015	Year ended Dec 31, 2014	Q1 2016	Q1 2015
Net Loss	\$(26.7M)	\$(25.6M)	\$(4.8M)	\$(7.1M)
Loss per share	\$(1.47)	\$(1.51)	\$(0.26)	\$(0.40)
Net change in cash	\$(8.2M)	\$(22.8M)	\$(6.6M)	\$5.7M

Summary Balance Sheet	3/31/2016	12/31/2015
Cash & Cash Equivalents:	\$16.5M	\$23.1M
Long-term Debt	\$ 7.1M	\$ 8.0M
Total Stockholders' Equity:	\$ 7.6M	\$12.2M

Key Financial Priorities:

- Reducing cash burn rate
- Intend to raise capital in 2016

Key Financial Metrics



NASDAQ	May 25, 2016
Symbol:	SSH
Market Cap:	\$14M
Shares o/s:	18.4M
Price per Share (as of 5/25/16):	\$0.75
52-week high:	\$4.45
52-week low:	\$0.56
Avg. 50 day Daily Trading Volume (shares)	62,000
% Institutional / Mut. Fund / VC Ownership	22%

Largest Shareholders:	Shares (000's)
CM Capital Investments	1,625
GBS Ventures	1,195
The Vanguard Group, Inc.	668
Thoratec/St Jude	428

- Listed on NASDAQ Feb 2012
- Equity Offerings:
 - IPO Aug 2012 - \$21M
 - Corporate Investor \$3M
 - Follow-on April 2013 - \$15M
 - Follow-on September 2013 - \$46M
 - ATM 2015: \$7.0M



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Thank You!