



# Pat Mackin President & CEO



# Forward Looking Statement

*Statements made in this presentation that look forward in time or that express management's beliefs, expectations, or hopes are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements reflect the views of management at the time such statements are made. These statements include those regarding the ability of CryoLife's product portfolio to drive profitable growth; the ability of the On-X acquisition to accelerate growth and expand gross margins; the expected growth of the market for our aortic heart valves due to demographics and device adoption; our expectations that our 2016 revenue and gross margins for BioGlue sales in France will improve from 2014 as a result of our move to a direct sales model in France; our expectation that there will be additional upside for our product sales in France as we leverage direct sales of our full product portfolio in France; our ability to expand our sales of BioGlue in Japan as a result of receiving in 2015 an expanded indication for BioGlue for use in thoracic aneurysm, Bentall & LVAD procedures; our expectations regarding our ability to execute on our clinical trial for BioGlue in China and the timeline for that clinical trial; our expectations regarding the ability of the On-X transaction to enhance our growth profile, increase opportunities for cross selling, drive margin expansion, provide CryoLife with a new addressable market opportunity of \$220MM, generate highly attractive margins, facilitate increased adoption of On-X portfolio penetration, enhance and leverage our existing direct sales organization, and strengthen our strategic focus on aortic and mitral valve repair and replacement surgery; the ability of the INR indication for the On-X valve of 1.5 to 2.0, to be a significant differentiator, distinct competitive advantage and catalyst for us to achieve market leadership in the mechanical heart valve market; our belief that compelling clinical data regarding the On-X valve supports future growth; the anticipated benefits for our business development program; and our beliefs regarding our expectations for financial performance in 2016. These forward-looking statements are subject to a number of risks, uncertainties, estimates, and assumptions that may cause actual results to differ materially from current expectations. These risks and uncertainties include the risk factors detailed in our Securities and Exchange Commission filings, including our Form 10-K for the year ended December 31, 2014 and our subsequent filings with the SEC, including our Form 10-K for year ended December 31, 2015. CryoLife does not undertake to update its forward-looking statements.*

# Cardiovascular Technology Business

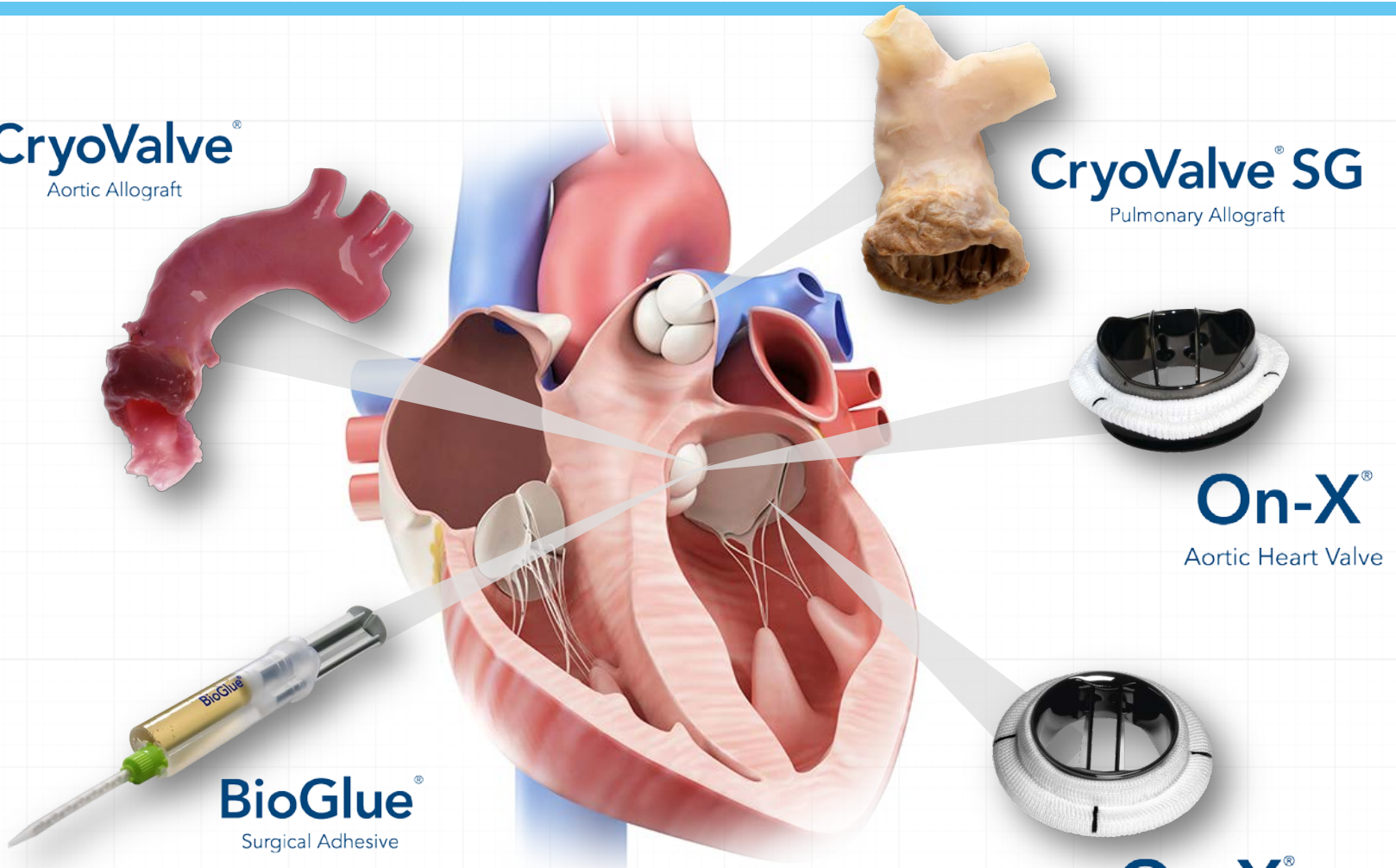
**CryoValve®**  
Aortic Allograft

**CryoValve® SG**  
Pulmonary Allograft

**On-X®**  
Aortic Heart Valve

**BioGlue®**  
Surgical Adhesive

**On-X®**  
Mitral Heart Valve





# CryoLife Major Product Lines

## Allograft Tissues



37% of Revenue

## On-X Heart Valve



20% of Revenue

## BioGlue® Surgical Adhesive



35% of Revenue

Source: Revenue calculated as pro forma 2015



# Investment Rationale

Established Product Portfolio Driving Profitable Growth

On-X Acquisition Accelerates Growth and Margin Expansion

Highly Experienced Direct Sales Organization

Proven Leadership

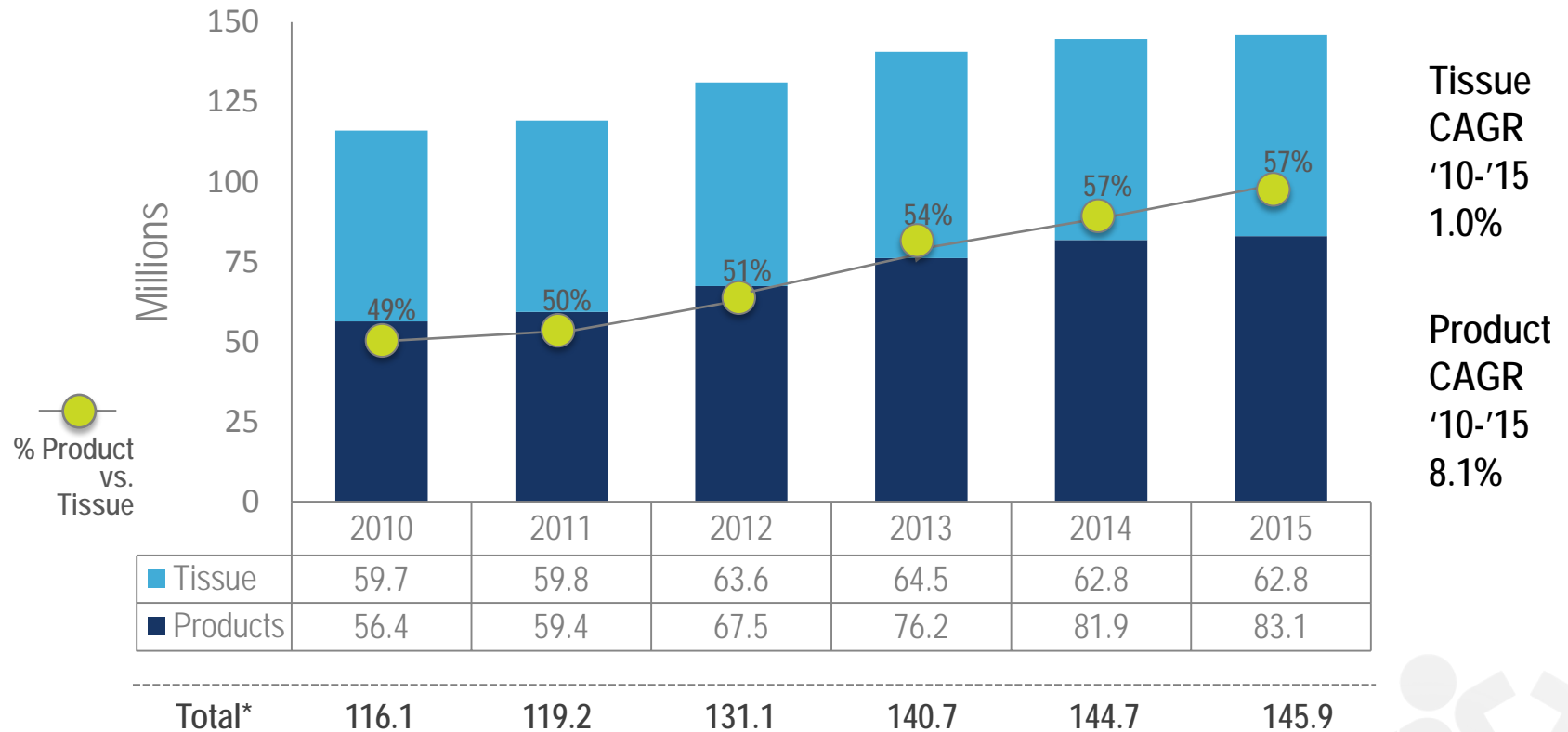
Active Business Development Program



# Growing Annual Revenues

CAGR '10-'15: 4.7%

Mix Shift to Higher Margin Medical Device Products



\*Excludes grant revenue

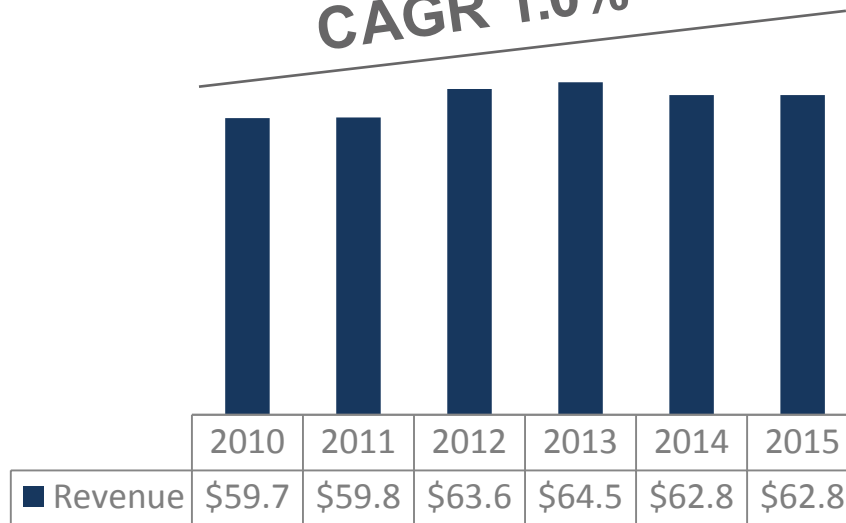


# CryoLife Products- Cryopreserved Tissue

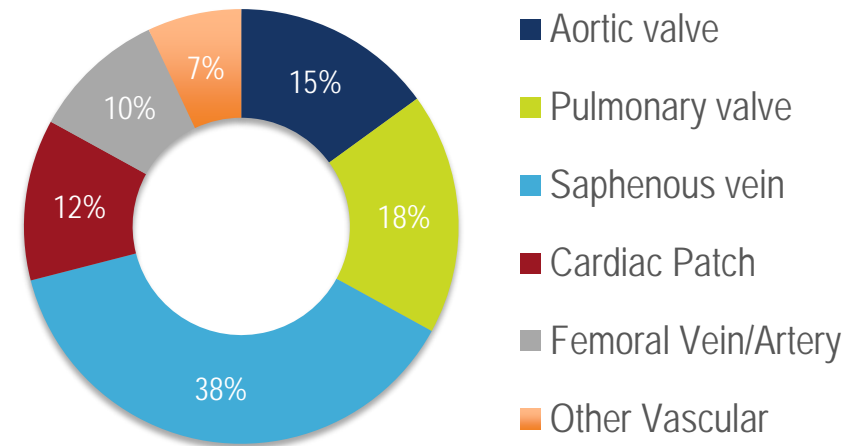
## Cryopreserved Tissue: Five-Year Tissue Revenue

### REVENUE

CAGR 1.0%



### BUSINESS MIX



### PRODUCTS



Pulmonary valve



Aortic valve



Saphenous vein



Cardiac patch





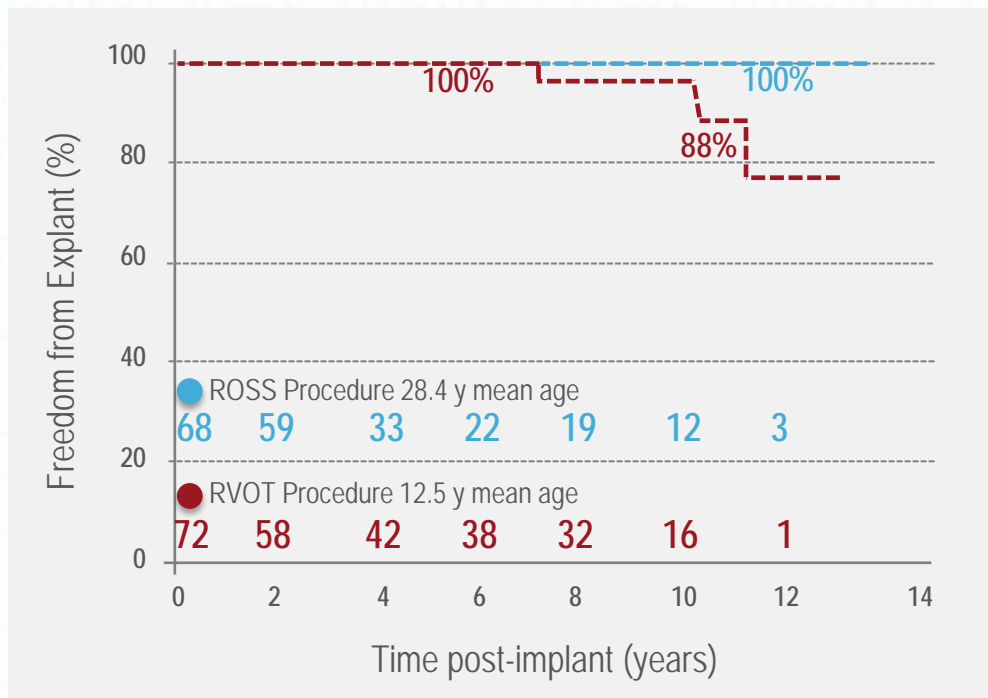
# Pulmonary Valve Homografts

## CryoValve® SG Pulmonary Valves



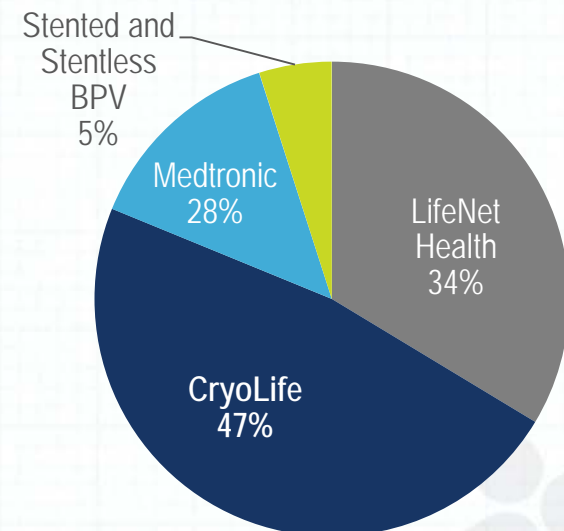
### SynerGraft® decellularized technology

- + Seven published papers with >2,000 patient years follow up
- + 10 year actuarial freedom from explant = 93%<sup>1</sup>
- + Over 28,000 pulmonary valves implanted since 1984<sup>2</sup>



### US Pulmonary Valve Replacement Market: 2,300 procedures

Market Size = \$24M  
2% CAGR



US Clinical Effectiveness<sup>1</sup>

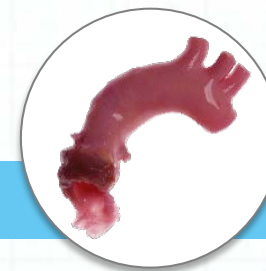
1 CryoLife, Inc. Post-clearance Study (CSG801.002), data on file; 2. CryoLife, Inc. data on file

Note: Market procedures, share, size, and CAGR are approximate annual U.S. numbers based on actual CryoLife data and market reports, including LSI, iData and IMS.



# Aortic Valve Homografts

CryoValve® Aortic Heart Valves



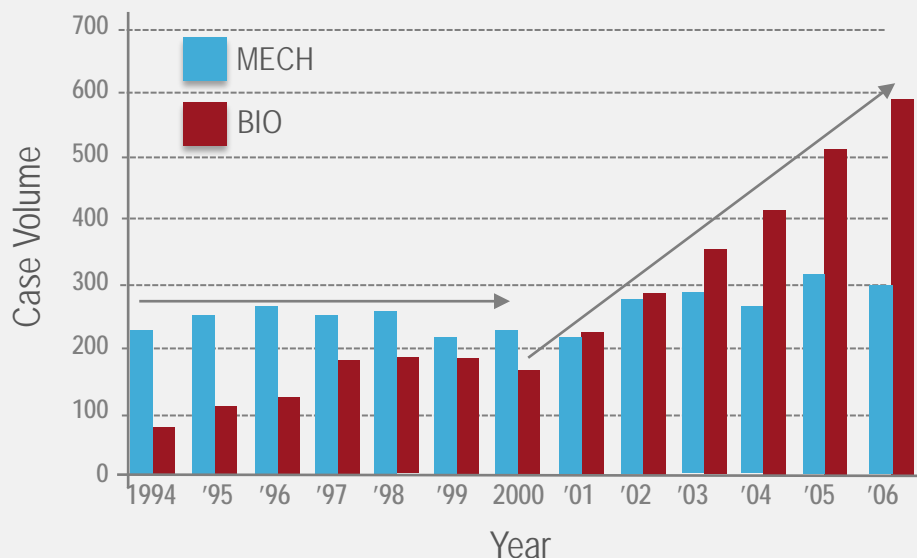
## Society of Thoracic Surgeons recommendation<sup>1</sup>

**Class I** - Homograft replacement of the aortic root should be considered for patients with extensive active endocarditic destruction of the aortic annulus. (Level of evidence B)

**Class IIa** - Homograft replacement of the aortic valve can be considered for patients with endocarditis without annular destruction, especially when the potential for reinfection is elevated. (Level of evidence B)

95% freedom from recurrent endocarditis at 10 years<sup>2,3</sup>

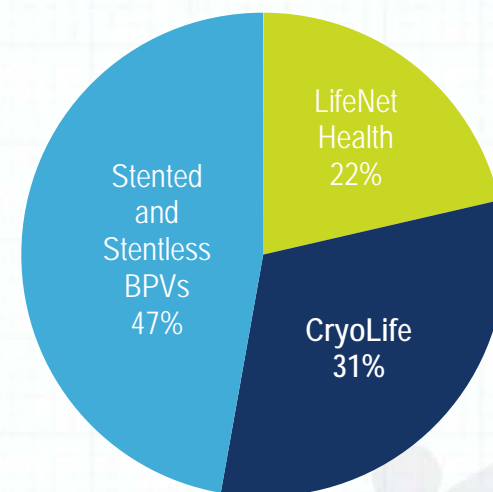
Growing market due to demographics and device adoption (TAVR)



## US Aortic Valve Replacement due to Endocarditis Market<sup>5</sup>: 3,200 procedures

Market Size = \$22.5M

9% CAGR



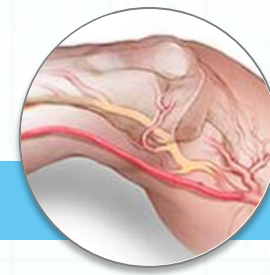
US Incidence of Endocarditis<sup>4</sup>

1. Svensson LG, et al. Ann Thorac Surg 2013; 95:1491-1505; 2. Doty JR, et al. J Thorac Surg 1998; 115:371-380; 3. Sabik JF, et al. Ann Thorac Surg 2002; 74:650-659; 4. Byrne JG, et al. Ann Thorac Surg 2011;91:2012-2019; 5 Estimated number of endocarditis cases based on figures from "Infective Endocarditis in the U.S., 1998-2009: A Nationwide Study" by Bor DH, et al. PLoS ONE, published 3/20/2013 and Cleveland Clinic estimates that ~30% of diagnosed infective endocarditis require surgery, of those, the majority are aortic (vs mitral or pulmonary) valve."

Note: Market procedures, share, size, and CAGR are approximate annual U.S. numbers based on actual CryoLife data, clinical publications, and market reports, including LSI, iData and IMS.

# Saphenous Vein Homografts

CryoVein® Saphenous Vein



High limb salvage rates: 70% at 4 years<sup>2</sup>

Excellent resistance to infection<sup>6</sup>

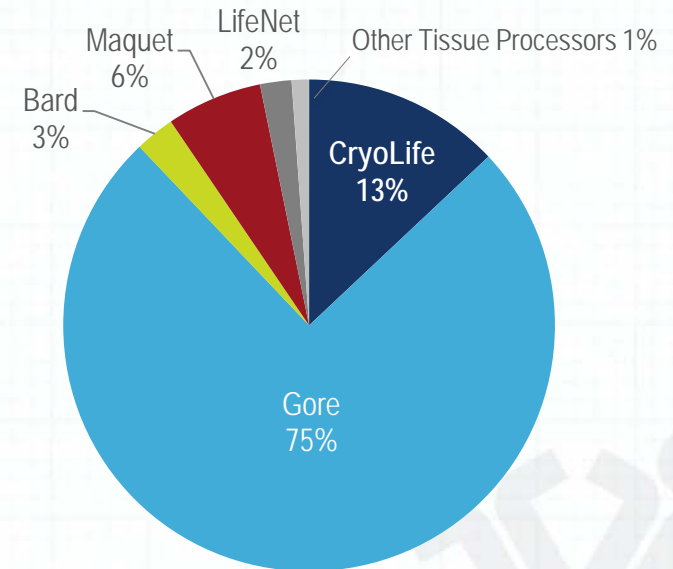
Provides natural suturability and compliance<sup>3</sup>

## Clinical Effectiveness

Reported Limb Salvage Rates for CryoVein Used in Peripheral Bypass						
Author	n	% redo	1 yr	2 yr	3 yr	4 yr
Randon, et al <sup>1</sup>	92	62%	85%	77%	70%	NR
CryoLife Multicenter <sup>2</sup>	381	59%	73%	72%	70%	70%
Martin, et al <sup>3</sup>	82	94%	84%	81%	NR	62%
Farber, et al <sup>4</sup>	177	50%	80%	71%	NR	NR
Buckley, et al <sup>5</sup>	24	27%	80%	80%	NR	NR

US Below the Knee Bypass Market:  
22,000 procedures (BTK)

Market Size = \$182.5M  
1.4% CAGR



1. Randon C, et al. J Vasc Surg 2010;51:869-77; 2. CryoLife data on file (ML0041); 3. Martin R, et al. Ann Surg 1994;219:6:664-72; 4. Farber A, et al. J Vasc Surg 2003;38:15-21; 5. Buckley C, et al. J Vasc Surg 2000;32:731-8; 6. Fujitani, et al. J Vasc Surg 1992;15:519-25.

Note: Market procedures, share, size, and CAGR are approximate annual U.S. numbers based on actual CryoLife data and market reports, including iData and IMS.

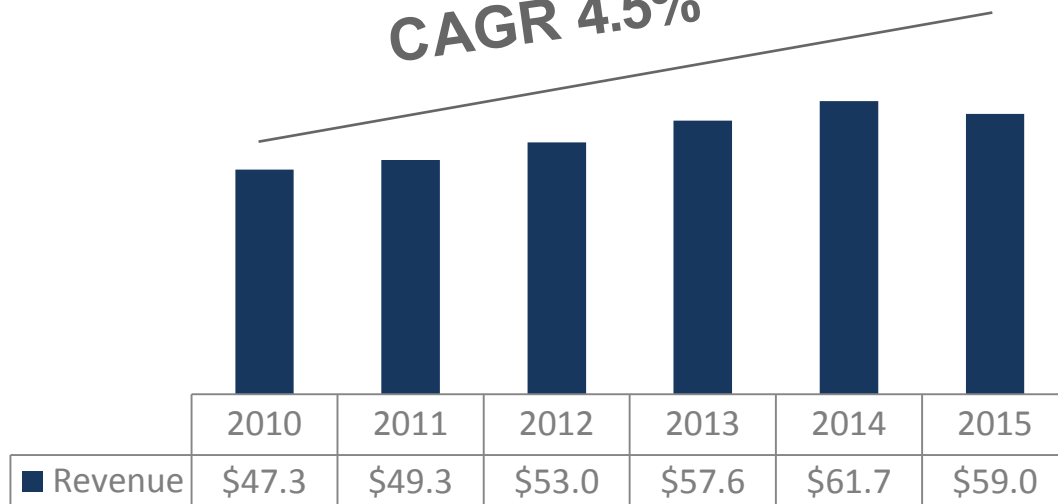
# CryoLife Products- BioGlue Sealant



## BioGlue Surgical Sealant

### REVENUE

CAGR 4.5%

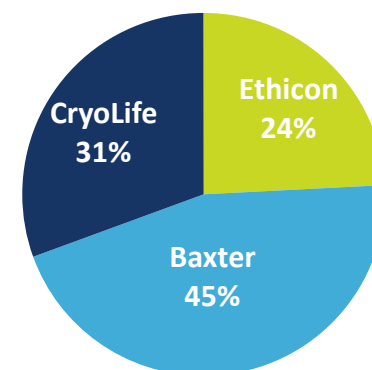


### US Cardiovascular Sealant Market:

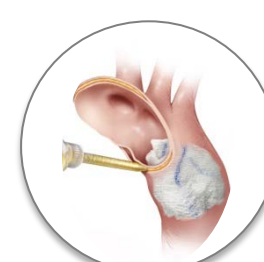
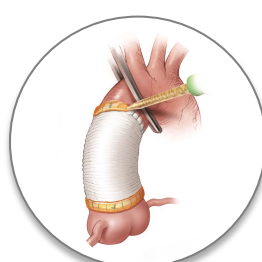
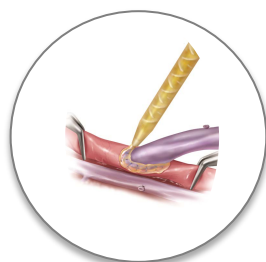
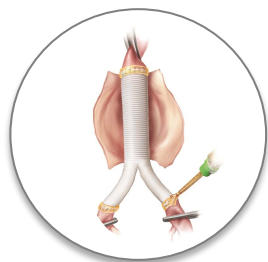
145,000 procedures

Market Size = \$112.2M

3% CAGR



### BioGlue Indications





# Global Expansion- Direct in France

## Direct in France

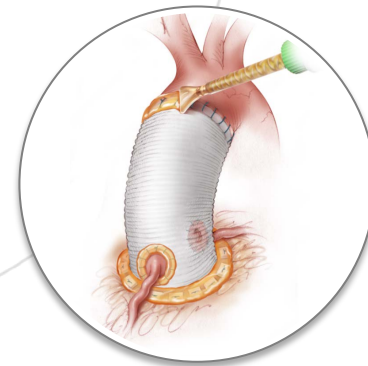
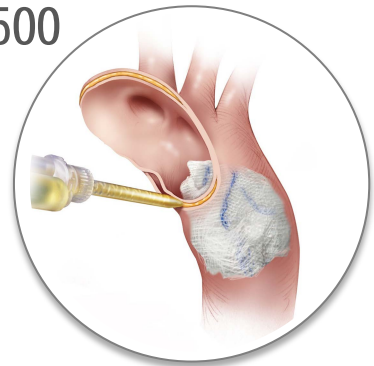
- Nominal revenue from France January-September 2015 as distributor sold off inventory
- June 22nd announced agreement with French distributor to take business direct on October 1st, 2015
- 2014 revenue of BioGlue and PerClot was \$3 million
- Expect 2016 revenue and gross margin will improve from 2014 as we sell directly to hospital customers
- Additional upside as we leverage direct sales of the full product portfolio



# Indication Expansion- Japan BioGlue

Japan BioGlue

- Current indication only for aortic dissection (5,500 procedures)
- Expanded approval for thoracic aneurysm, Bentall & LVAD (5,500 procedures)
- Doubles existing market from \$5 million to \$10 million
- PMDA approval July 2015
- MHLW reimbursement September 2015





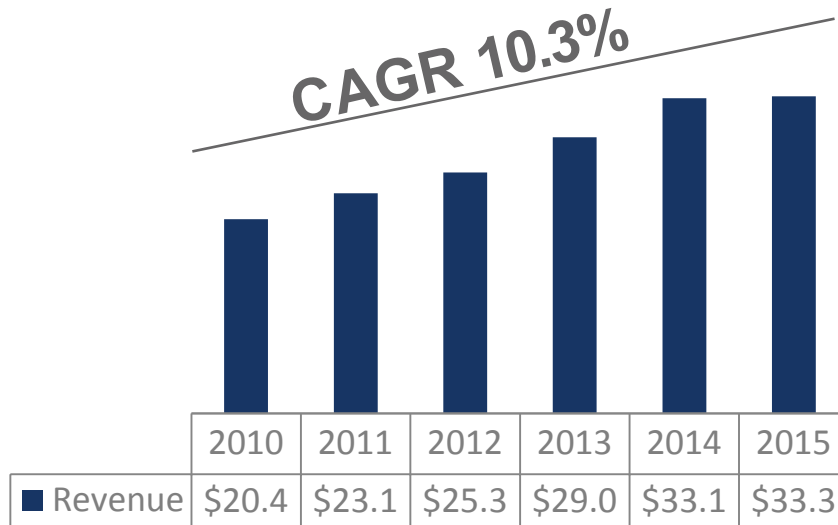
# Global Expansion- BioGlue China

## BioGlue in China

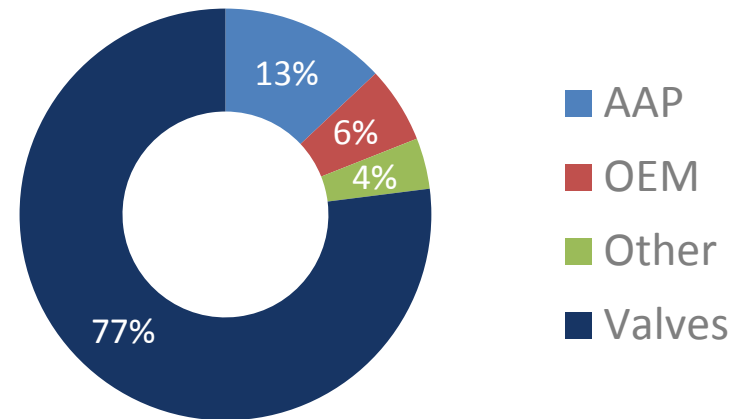
- Significant market opportunity: >40,000 aortic surgeries
- Estimated Timeline
  - Clinical trial design finalized in 2016
  - Standards testing completed, clinical trial approval by CFDA, and Ethics Committee submissions/approvals in 2016
  - Enroll trial and collect follow-up in 2017 (3 month follow-up)
  - Complete final report and CFDA submission in 2018
  - 15 months for CFDA approval in 2019

# CryoLife Products - On-X Valves

## REVENUE



## BUSINESS MIX



## PRODUCTS



On-X Aortic Valve



On-X Mitral Valve



On-X Ascending Aortic Prosthesis (AAP)



OEM





**Transformational acquisition that enhances our growth profile, increases opportunities for cross-selling and drives margin expansion**

- » Provides CryoLife with new addressable market opportunity of ~\$220MM
- » Acquired products generate highly attractive margins
- » Facilitates increased adoption of On-X portfolio penetration
- » Enhances and leverages existing CryoLife direct sales organization
- » Strengthens our strategic focus on aortic and mitral valve repair and replacement surgery

**The combination of On-X best-in-class mechanical valve technology supported by extensive clinical data are key growth drivers**

On-X has the only FDA approved mechanical aortic valve labeled for an INR of just 1.5 to 2.0, substantially reducing a patient's bleeding risk - a significant differentiator and distinct competitive advantage

# Worldwide Mechanical Valve Market

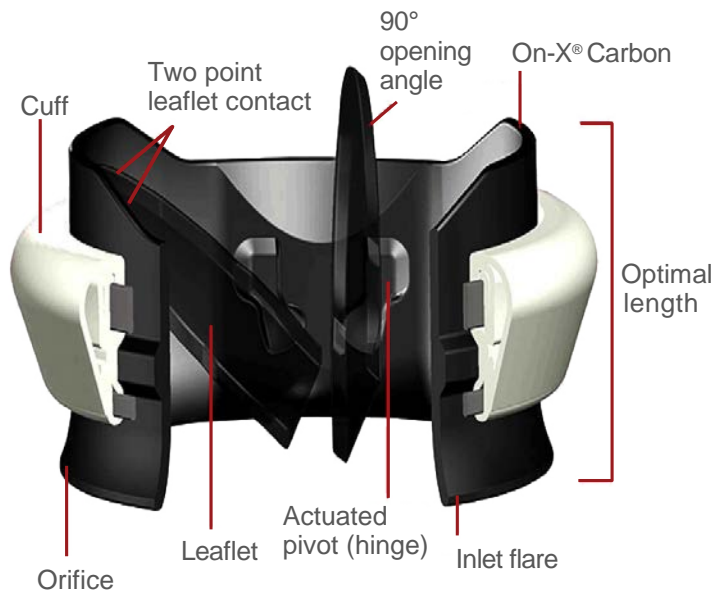


Source: Millennium Research Group

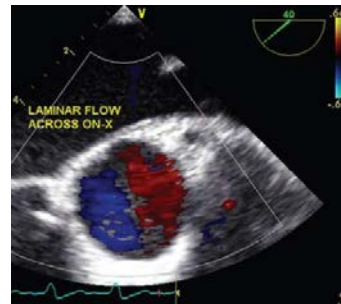
# Best-in-Class Mechanical Valve Technology

## Aortic Valve Flow Comparison

### ON-X VALVE



### ON-X VALVE FLOW



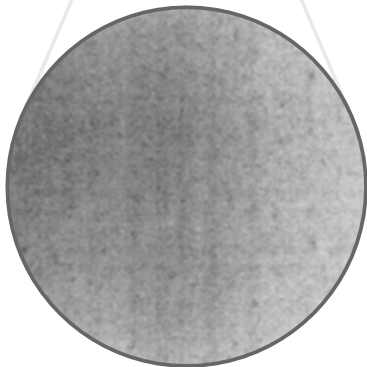
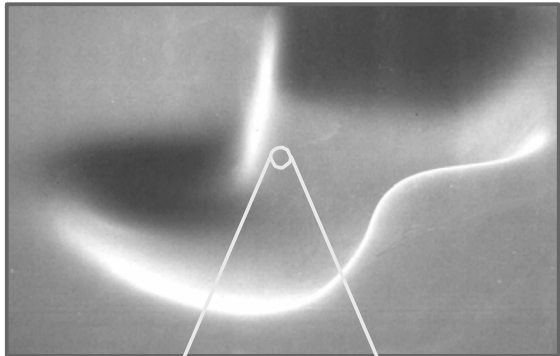
### TRADITIONAL MECHANICAL VALVE FLOW



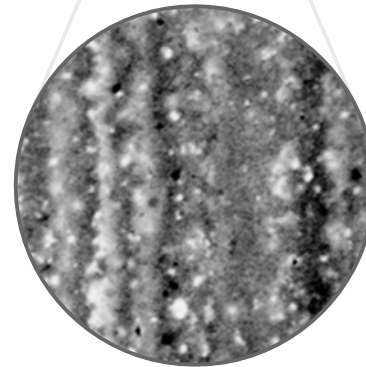
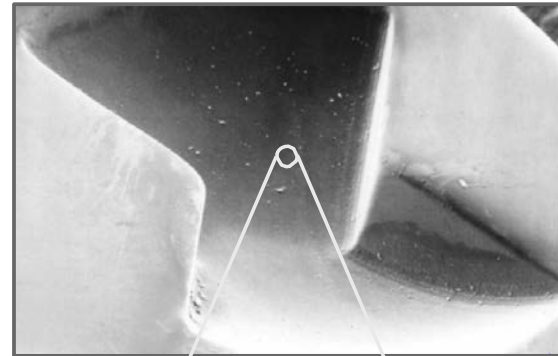
# Best-in-Class Mechanical Valve Technology

## Microstructure Comparison

### ON-X VALVE Silicon-free On-X® carbon

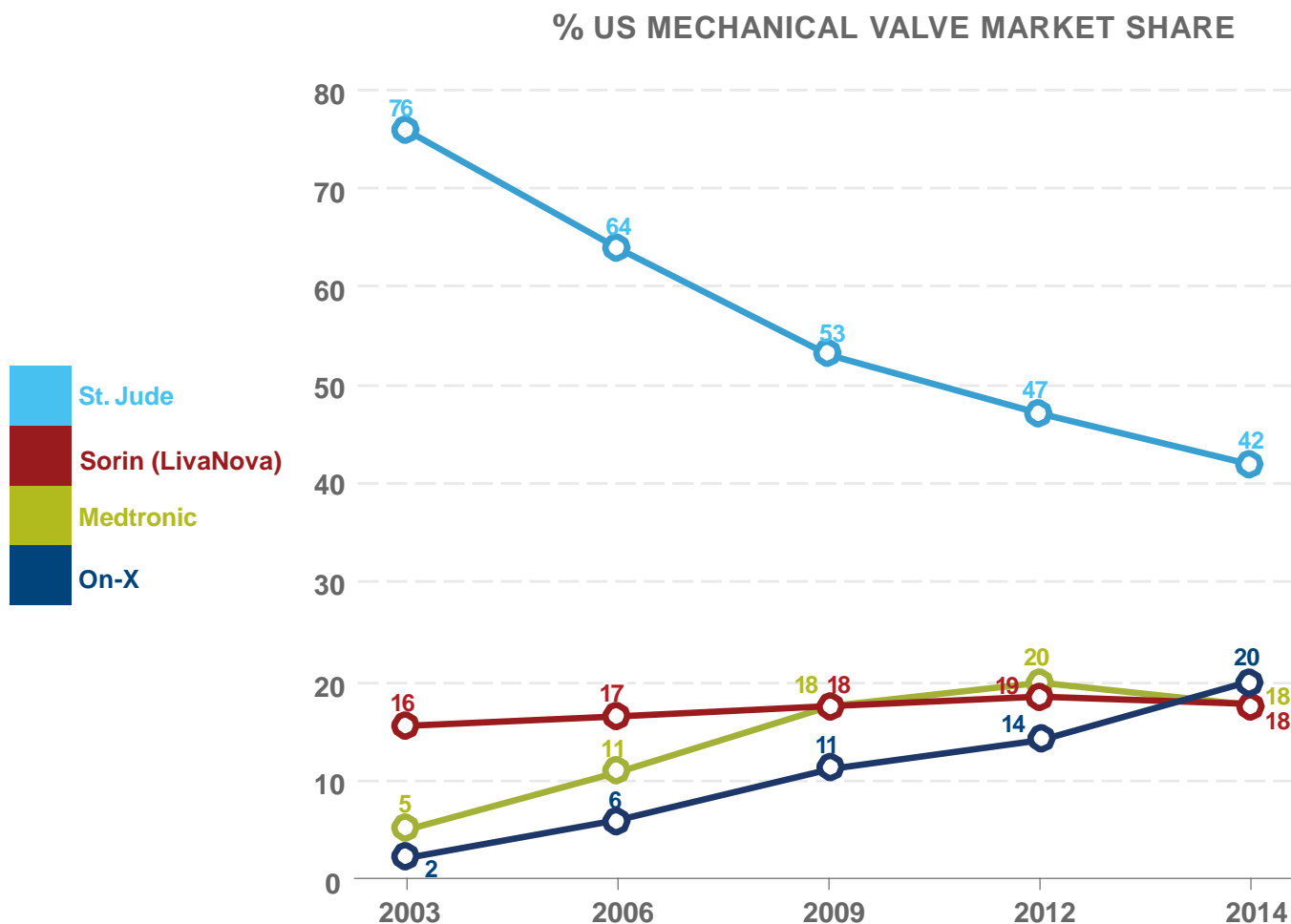


### MARKET-LEADING COMPETITOR



# Steady Growth With Modest Sales Support

## The Power of On-X Technology

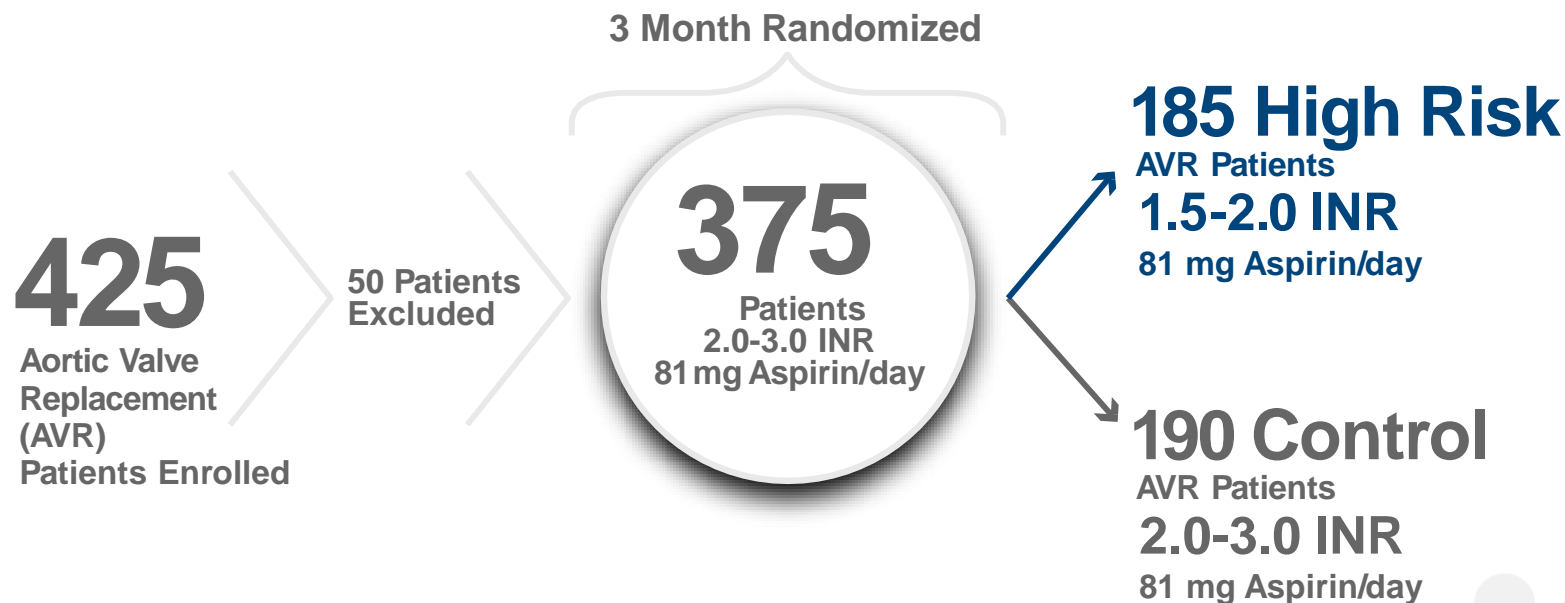


Source: Millennium Research Group

# Significant Recent Developments



PROACT trial results and recent FDA approval of 1.5 to 2.0 INR are catalysts for On-X valve to achieve market leadership

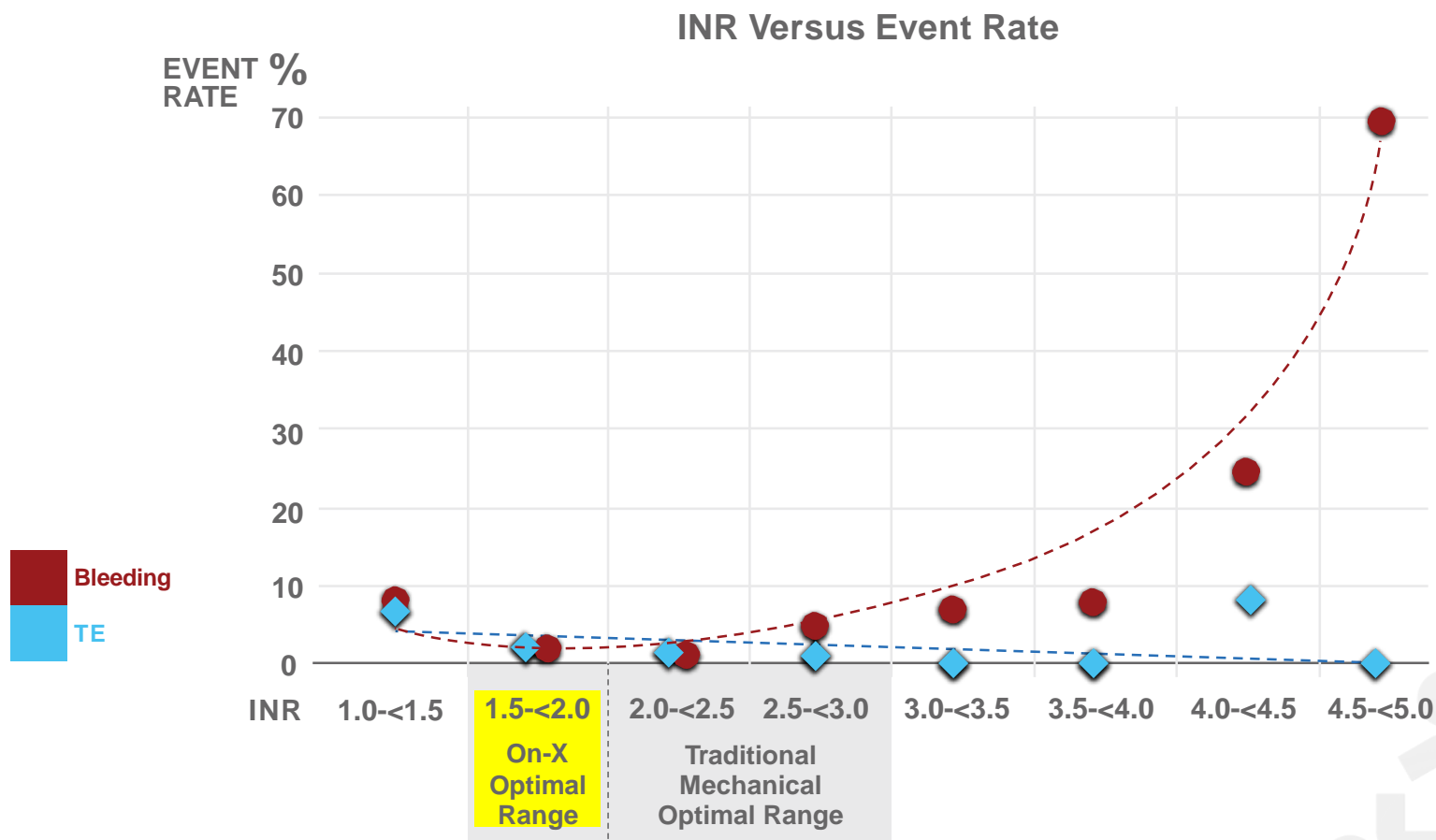


Source: PMA P000037 supplement 30, approval date April 01, 2015

# Clinical Data Supports Future Growth



Data shows an opportunity to switch future patients from tissue





# Clinical Data Supports Future Growth



On-X has the only FDA approved mechanical aortic valve requiring an INR of just 1.5 to 2.0, substantially reducing a patient's bleeding risk — a significant differentiator and distinct competitive advantage

**65%**  
Reduction  
in bleeding

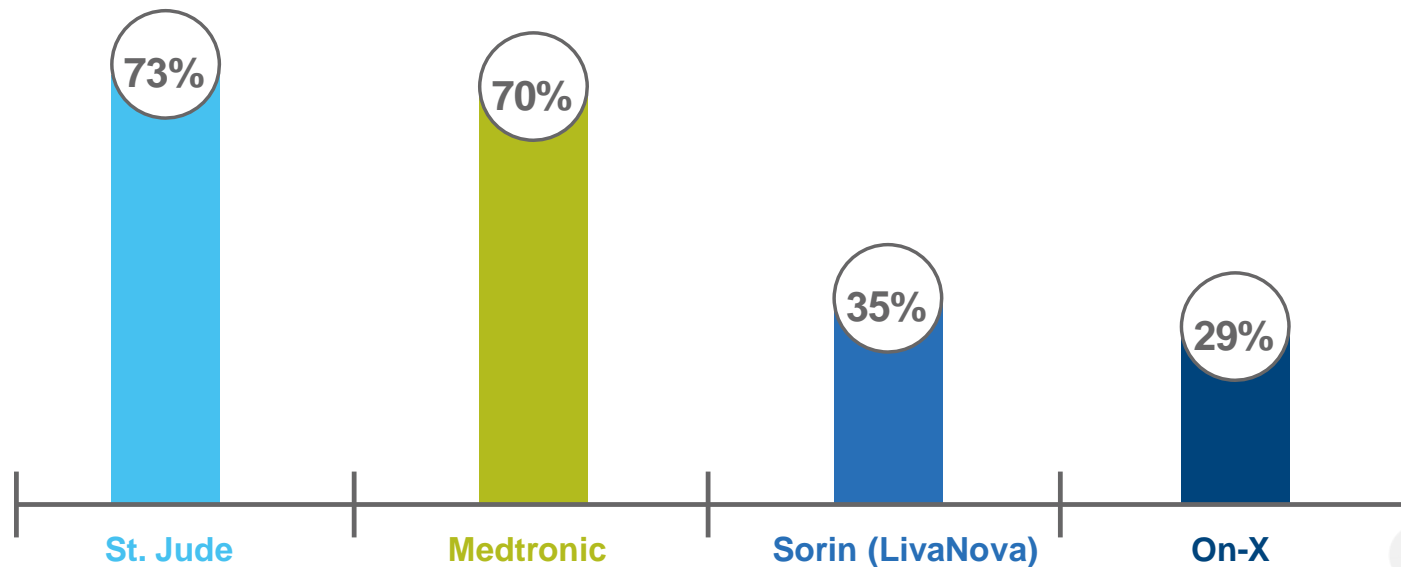
EVENT	CONTROL (ptyr=878.6) (2.0-3.0)		TEST (ptyr=766.2) (1.5-2.0)		RATE RATIO (test/control)	95% CI	P-VALUE
	N	RATE (%/ptyr)	N	RATE (%/ptyr)			
<b>Major Bleed</b>	<b>34</b>	<b>3.87</b>	<b>12</b>	<b>1.57</b>	<b>0.40</b>	<b>0.21-0.78</b>	<b>0.007</b>
Cerebral Bleed	4	0.46	1	0.13	0.29	0.03-2.56	0.264
<b>Minor Bleed</b>	<b>35</b>	<b>3.98</b>	<b>9</b>	<b>1.17</b>	<b>0.29</b>	<b>0.14-0.61</b>	<b>0.001</b>
<b>Total Bleed</b>	<b>69</b>	<b>7.85</b>	<b>21</b>	<b>2.74</b>	<b>0.35</b>	<b>0.21-1.57</b>	<b>&lt;0.001</b>
Ischemic Stroke	7	0.80	6	0.78	0.98	0.33-2.92	0.975
TIA	7	0.80	11	1.44	1.80	0.70-4.65	0.223
Neurologic Event	14	1.59	17	2.22	1.39	0.69-2.82	0.359
Peripheral TE	1	0.11	4	0.52	4.59	0.51-41.04	0.173
Thrombosis	2	0.23	2	0.26	1.15	0.16-8.14	0.891
Major Bleed, TE, Thrombosis (AATS Guideline)	51	5.80	35	4.57	0.79	0.51-1.21	0.275
<b>Primary Endpoint</b>	<b>86</b>	<b>9.79</b>	<b>44</b>	<b>5.74</b>	<b>0.59</b>	<b>0.41-0.84</b>	<b>0.004</b>
Sudden Death	3	0.34	3	0.39	1.15	0.23-5.68	0.867
Valve-related Death	3	0.34	2	0.26	0.76	0.13-4.57	0.769
Total Mortality	16	1.82	12	1.57	0.86	0.41-1.82	0.693

# Familiarity With Replacement Valve Manufacturers



## Unaided Awareness

Total 120 | Base: all cardiac surgeons



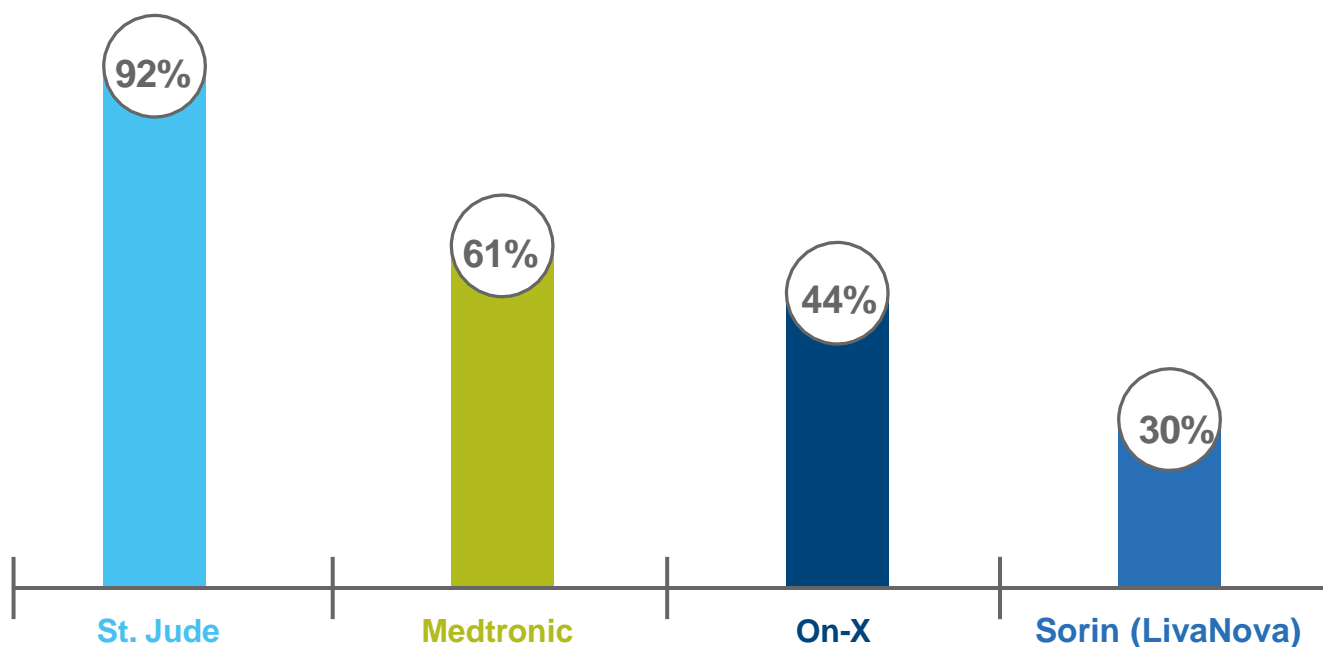
Q11,12: Please list all of the aortic valve replacement manufacturers you are aware of.  
Please rate how familiar you are with the following aortic valve replacement manufacturers.  
Survey conducted April 2015  
Base: All cardiac surgeons

# Percentage of Hospitals Stocking Each Manufacturer



## Mechanical Aortic Replacement Valves

Total 120 | Base: all cardiac surgeons



Q13: Does your hospital stock this manufacturer's aortic replacement valve?  
Survey conducted April 2015  
Base: All cardiac surgeons

# Broadened Direct Sales and Global Distribution



Combination will create critical mass in global distribution channels with significant opportunities for cross-selling

## U.S. DIRECT SALES FORCE

2015

2016



17 Cardiac Reps



28 Vascular Reps



17 Cardiac Reps

>50 Reps

## EU DIRECT SALES FORCE

2015

2018



23 Reps



0 Reps

>30 Reps

# Strategic Focus on Aortic and Mitral Valve Surgery



Combination of CryoLife and On-X creates a highly differentiated product portfolio with a strategic focus on aortic and mitral valve repair and replacement surgery



# Recent Additions to Leadership Team



**PAT MACKIN**, Chairman, President & Chief Executive Officer

*20 + Years Experience*

**Previous Companies:** Medtronic, Genzyme, Deknatel/Snowden-Pencer

**Education:** B.S. United States Military Academy at West Point and M.B.A. Kellogg Graduate School of Management at Northwestern University

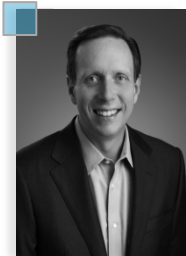


**JEAN HOLLOWAY**, Senior Vice President, General Counsel & Corporate Secretary

*30 + Years Experience*

**Previous Companies:** C.R Bard, Medtronic, Boston Scientific, Guidant Corporation

**Education:** J.D./M.B.A. (cum laude) from the University of Chicago, and two undergraduate degrees from Yale University



**JOHN DAVIS**, Senior Vice President, Global Sales & Marketing

*25 + Years Experience*

**Previous Companies:** CorMatrix Cardiovascular, St. Jude, Medtronic

**Education:** Bachelor of Arts, English from Western Carolina University



**BILL MATTHEWS**, Senior Vice President, Operations, Quality and Regulatory

*30 + Years Experience*

**Previous Companies:** BioDevice Solutions, Fresenius Medical Care, Cardinal Health's Viasys Healthcare, Beiersdorf AG

**Education:** Bachelor of Science in Chemistry from St. Peter's University and Business Administration programs from Rutgers University and Fairleigh Dickson University



# Active Business Development Program

- ✓ Physician preference products
- ✓ Higher growth rate than CRY
- ✓ Higher margin than CRY
- ✓ Competitive advantage in market
- ✓ Synergistic to CRY





# Summary

Established Product Portfolio Driving Profitable Growth

Proven Leadership

New Growth Opportunities Should Drive Top Line and Margin Expansion

Leverage our Strong Direct Sales and Distribution Platform

Solid Financial Position

Active Business Development Program



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**CryoLife**<sup>®</sup>

Life Restoring Technologies

