

CARDIOUS

A Heart Technology Company

AvA™ Valve Bypass System

Presentation to



LifeScience Alley™

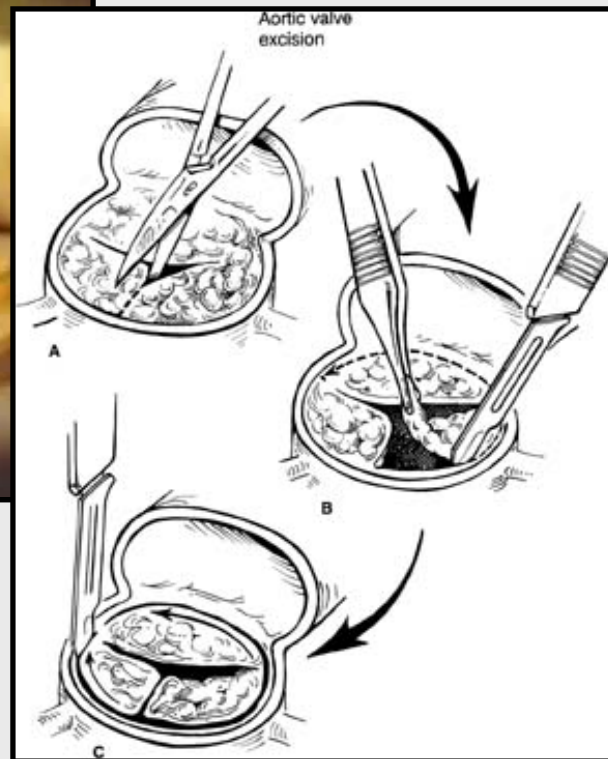
Coming together to collaborate, innovate, succeed.

December 10, 2008

Heart Valve Therapy Has Remained Unchanged Over the Last 30 Years

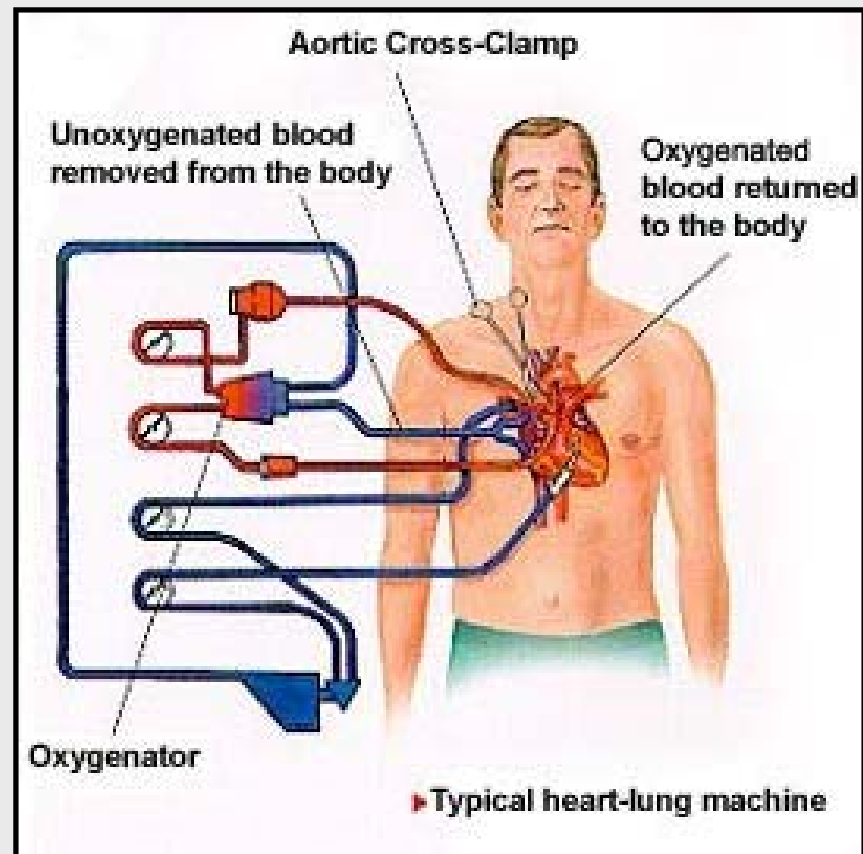


Diseased Aortic Valve



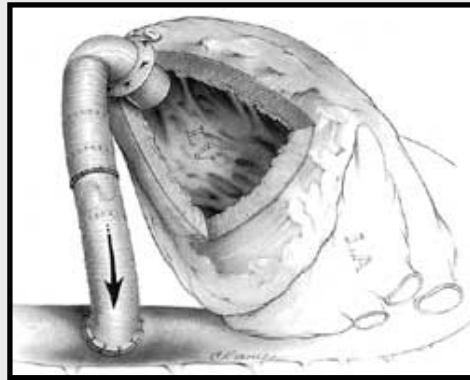
Unserved Patient Population is Driving the Development of Alternative Treatments

- Difficulty Tolerating Cardiopulmonary Bypass
- No Surgical Option
- High Mortality Risk

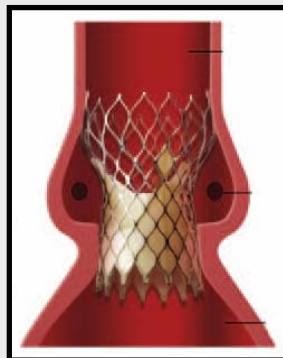


Alternative Therapies Under Development

- Aortic Valve Bypass Graft (AVBG)



- Stent Valve



Patient Populations	AVBG	Stent Valve
Tricuspid	X	X
Bicuspid	X	
Coronary Artery Disease	X	

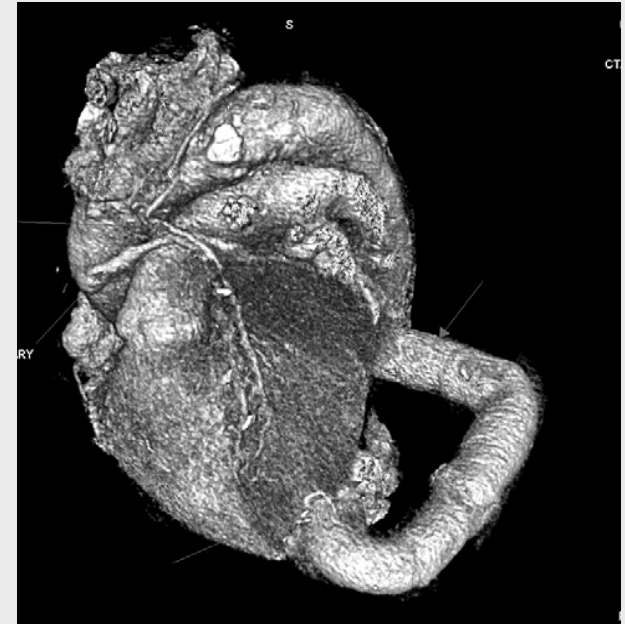
AVBG Clinical History

Human Experience

- “On pump”
- Non-standardized components

Physiology works

- Reduced pressure gradients
- Normal coronary flow
- 20+ year survival

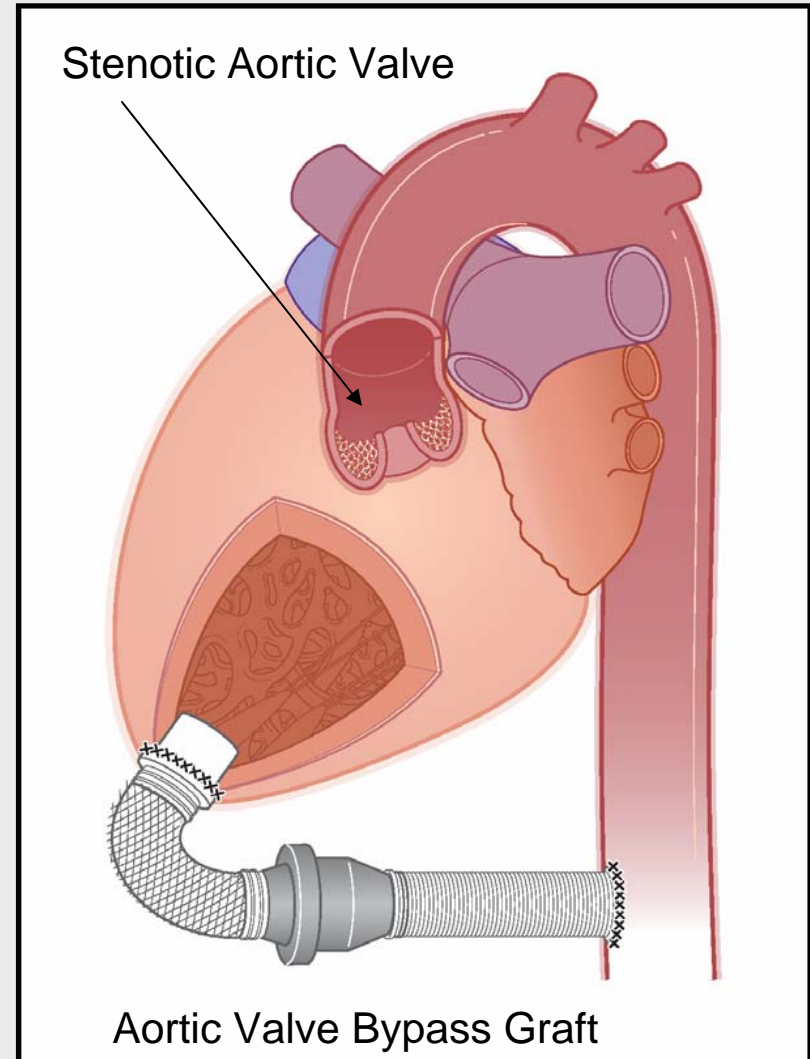


1910	Carrel	First Concept
1955	Sarnoff	Animal Series
1962	Templeton	First Human
1974-84	Brown	Human Series
1975-00	Cooley	Human Series
2003	Vassiliades	Human Series
2005-07	Gammie	Human Series

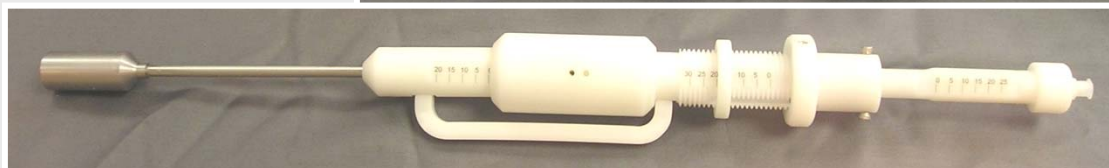
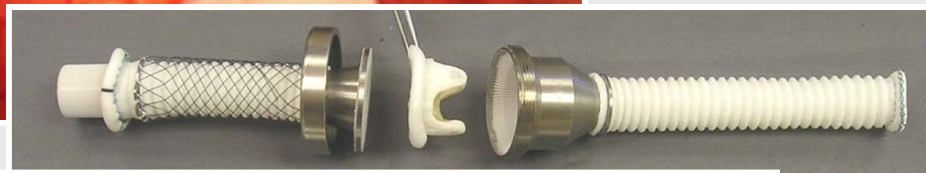
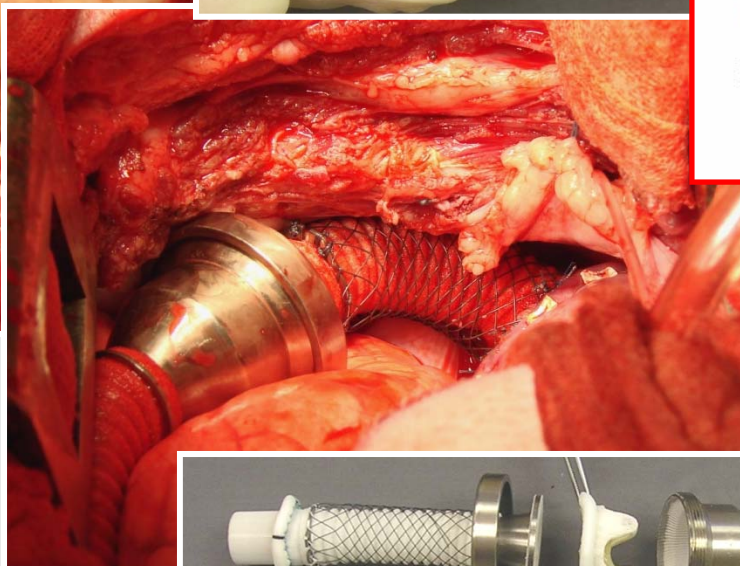
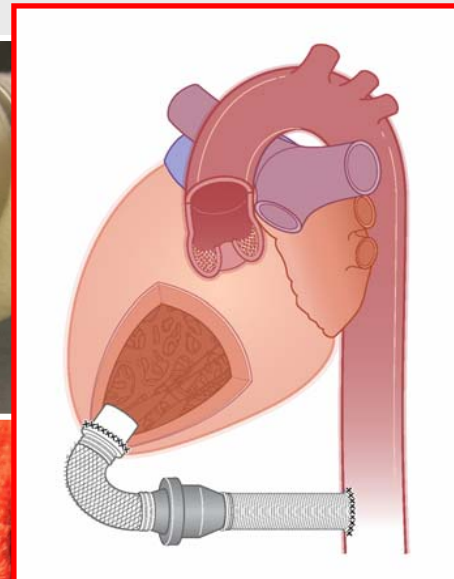
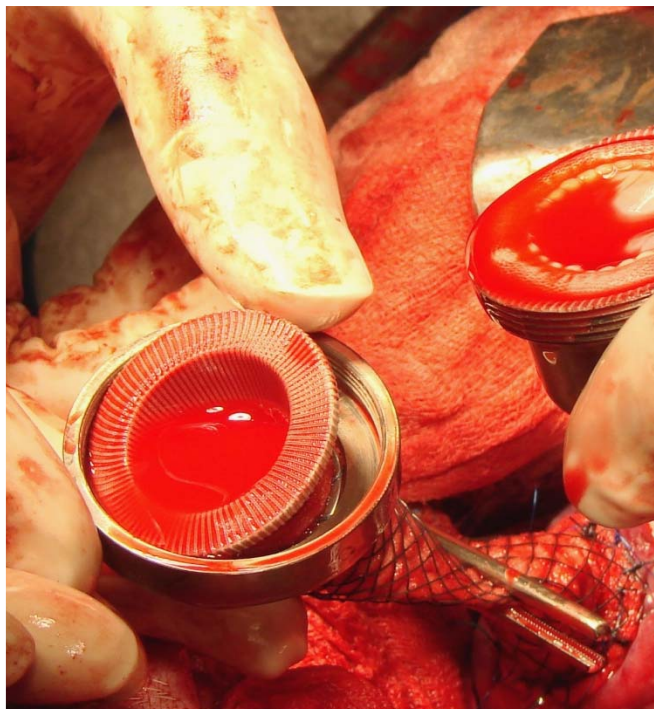
AvA Valve Bypass System

- Compatible with traditional prosthetic heart valves
- Off pump
- Applicable to tricuspid, bicuspid and CAD patients
- No valve excision or aortic cross clamp - reduced emboli generation
- No damage to conduction pathways

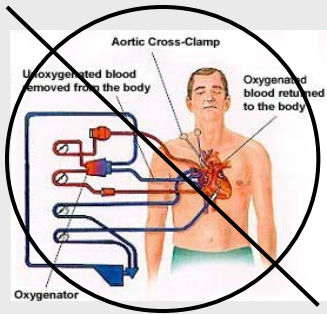
Animation



AvA Valve Bypass System – Animal Study



Competitive Advantages



Eliminates Heart-Lung Bypass

- Minimize Incision
- Reduce Complications
- Reduce Costs
- Reduce Hospital Stay

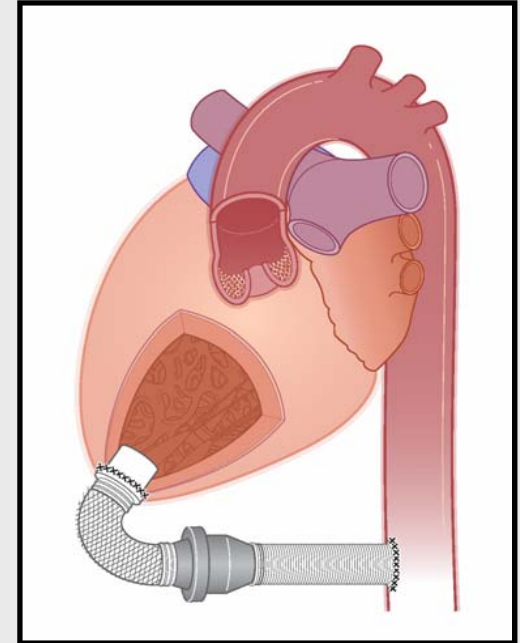


Uses Established Heart Valve

- Long Implant History
- Surgeon Acceptance

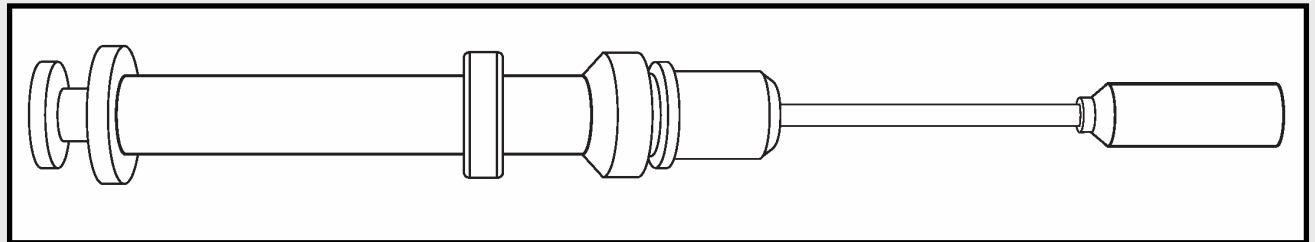
Broad Clinical Application

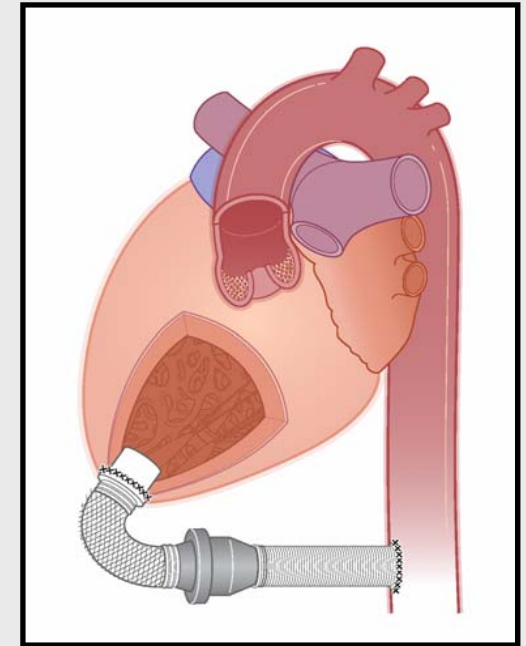
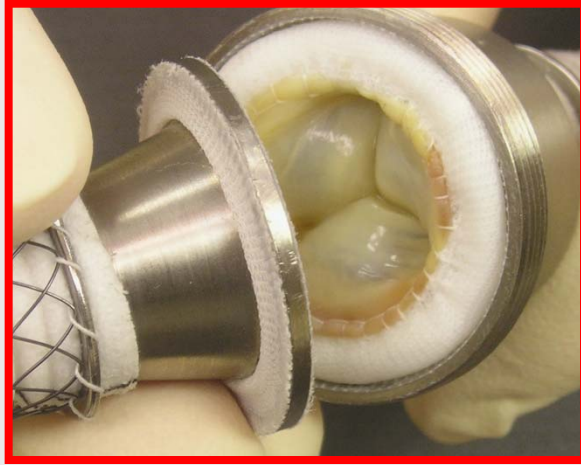
- Bicuspid or Tricuspid
- Coronary Artery Disease



Current Development Status

- Design Control Established
- Pilot Mfg. Facility Operational
- Patents Filed
- Chronic Animal Studies Underway
- Preparing for Human Studies in 2009





AvA™ Valve Bypass System

Something **NEW** combined with something **PROVEN**

A **reasonable next step** in aortic valve therapy

A **SAFER** alternative for high risk aortic valve patients

Thank You



LifeScience Alley™

Coming together to collaborate, innovate, succeed.

CARDIOUS
A Heart Technology Company