



MEET 2008
MULTIDISCIPLINARY EUROPEAN
ENDOASCULAR THERAPY
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PERSPECTIVES FOR PERCUTANEOUS VALVE THERAPY

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MEET 2008
26-29 June 2008
Cannes, France

BACKGROUND



- ➔ **Transluminal therapy** has gained popularity and cardiac diseases are being also concerned
- ➔ The population ages and there are some critical situations such **emergency**, **reoperations** or **associated severe comorbidities** that might benefit from a less invasive approach
- ➔ Percutaneous treatment of cardiac valve diseases is under evaluation for High Risk Patients (HRP)
- ➔ There are patients excluded from surgery : **33 %** of patients in NYHA Class III / IV (euro heart survey 2003)

Current status of cardiac surgery



- **STS Database** reports a 30 Day mortality of **5 %** for elective valve surgery and **13 %** for emergency operations

➔ Mortality for **AVR** is : **2 – 7 %**

➔ Mortality for **HVR** is : **1 – 5 %**

Current status of percutaneous AVR

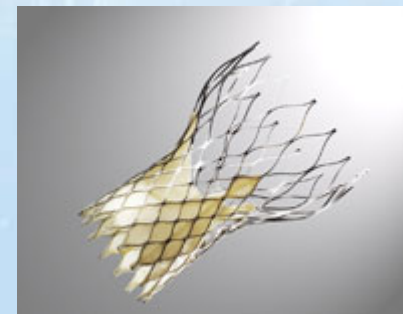


- Percutaneous and trans Apical AVR has proved feasibility with an acceptable safety for both :

BE Cribier Edwards valve



SE Core valve



Technical success \approx **90 %**

Mortality up to **20 %**

Major bleeding up to **25 %** (CPB)

Current status of percutaneous MVR



- **Type I** = Ring annuloplasty through coronary sinus
- **Type II** = Alfieri edge to edge repair (Mitra clip,...)
 - ➔ EVEREST I & II trials are running
 - ➔ Feasibility is $\approx 85\%$
- **Complications** = MI, pericardial effusion , Tamponade and strokes up to 32%

Perspectives for future development



- Size reduction **24** ⇔ **18** F or less
- **Retrievable** valves
- **New valve designs** more deliverable, more precise
- **Magnetic clips** and others for Mitral regurgitation

- **New applications such Redo surgery** after previous Bioprosthesis deterioration
- The investment of Major Medical device companies and start up companies will undoubtedly drive this technology forward rapidly

Unknown issues

BUILDING
ENDOVASCULAR
SYNERGIES

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- Tissue valve durability
- Perivalvular leaks
- Questionable Retrograde access for small calcified arteries, trans apical access
- Circumflex Artery damage
- Long term results

➔ Randomized trials with minimal bias are mandatory



**THANK YOU
FOR YOUR ATTENTION**