PERIMOUNT THEON pericardial aortic bioprostheses are clearly out in front when it comes to sustained performance.\cite{1,2} By offering surgeons an innovative bioprosthesis incorporating proven long-term durability, hemodynamic stability, ease of implant, and our proprietary Carpentier-Edwards ThermaFix process\textsuperscript{*}, they bring a new dimension of confidence to aortic valve replacement.

**Dual-action performance—the ThermaFix process\textsuperscript{*}**

Calcification can result when calcium in the circulatory system is attracted to phospholipids and glutaraldehyde residuals in the bioprosthetic tissue.\cite{3} Confronting each of these potential calcium binding sites is critical to achieving long-term performance for tissue valves.\cite{3} The ThermaFix process is the only dual-action tissue treatment designed to confront calcific structural valve deterioration resulting from residual glutaraldehydes and phospholipids.\cite{4}

- Proven to reduce the risk of calcification uptake by up to 81\% over glutaraldehyde-fixed controls.\cite{4}
- Not a reversible or degenerative bonding like other tissue treatments.\cite{5}

**CALCIUM CONTENT/LEAFLET STUDIES\textsuperscript{5}**

Bovine Pericardial Tissue – 120-day Small Animal Model

- **Glut only**
- **ThermaFix process**

\textsuperscript{*}Proven to reduce the risk of calcification uptake by up to 81\% over glutaraldehyde-fixed controls.\cite{4}

\textsuperscript{5}Not a reversible or degenerative bonding like other tissue treatments.\cite{5}
Lasting performance

The PERIMOUNT aortic pericardial bioprosthesis platform delivers robust performance with a proven track record of uncompromised durability.

Uncompromised performance has been demonstrated in a multitude of studies

ACTUARIAL FREEDOM FROM STRUCTURAL VALVE DETERIORATION (unless otherwise noted)

More published data than any other tissue valve

PUBLISHED DURABILITY DATA

Unmatched 20-year durability

ACTUARIAL FREEDOM FROM EXPLANT DUE TO STRUCTURAL VALVE DETERIORATION (Patients ≥ 65 Years)

Actuarial freedom at 20 years is 81.5%
Proven performance
To provide confidence in sustained hemodynamics, PERIMOUNT THEON bioprostheses are based on a tissue valve design with proven long-term hemodynamic stability, and reliable function as late as 17 years after implantation.²

Maximum flow area

A large orifice area helps reduce the risk of patient-prosthesis mismatch

PERIMOUNT THEON RSR valve (21 mm)  Porcine valve (21 mm)

EOA²¹ 1.69 cm²  EOA²² 1.0 cm²

The Carpentier-Edwards PERIMOUNT THEON bioprosthesis demonstrates an optimal orifice opening when compared to a competitive porcine valve.

Advanced design results in reduced resistance and minimal turbulence

PERIMOUNT THEON RSR valve (21 mm)  Porcine valve (21 mm)

Comparison of turbulent kinetic energy downstream from a 21 mm PERIMOUNT THEON RSR bioprosthesis versus a competitive porcine valve.²³
Streamlined performance

PERIMOUNT THEON bioprostheses optimize annular conformity and sutureability. Their low aortic protrusion provides sinotubular junction clearance, while a low cusp height maximizes coronary ostia clearance.

Aortic Protrusion for Aortic Valves—Size 21

*No clinical data are available which evaluate the long-term impact of the Edwards Lifesciences tissue treatment in patients.

References

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