

## PROFESSIONAL ADVISORY BOARD STATEMENT PERSONALIZED EXTERNAL AORTIC ROOT SUPPORT (PEARS)

Prophylactic aortic root replacement surgery for Marfan aortic aneurysms has saved many lives by prevention of aortic dissection and rupture. It is a safe and reproducible operation, both in original valve replacement version (the Bentall procedure) and its more recent aortic valvesparing version (the David procedure). The Marfan Foundation recognizes that alternate operations that reinforce rather than replace the aortic aneurysm wall have been introduced and have had encouraging results. The two most common forms of these operations (the PEARS procedure, or personalized external aortic root support and the "Florida Sleeve") are simpler to perform, and in the case of PEARS may avoid use of the heart-lung machine and minimize the surgical incision. The Marfan Foundation applauds the innovation and dedication of the teams behind these newer operations. However, given the few Marfan syndrome patients who have had these operations, the small number of centers performing them, and the limited follow -up on those patients, the Foundation cannot as yet endorse these operations as clinically validated. We look forward to future updates on the safety and efficacy of these novel operations.

## References

Izgi C, Newsome S, Alpendurada F, Nyktari E, Boutsikou M, Pepper J, Treasure T, Mohiaddin R. External Aortic Root Support to Prevent Aortic Dilatation in Patients With Marfan Syndrome. J Am Coll Cardiol. 2018 Sep 4;72(10):1095-1105. doi: 10.1016/j.jacc.2018.06.053.

Treasure T, Petrou M, Rosendahl U, Austin C, Rega F, Pirk J, Pepper J. Personalized external aortic root support: a review of the current status. Eur J Cardiothorac Surg. 2016 Sep;50(3):400-4. doi: 10.1093/ejcts/ezw078. Epub 2016 Mar 31.

Treasure T, Takkenberg JJ, Golesworthy T, Rega F, Petrou M, Rosendahl U, Mohiaddin R, Rubens M, Thornton W, Lees B, Pepper J. Personalised external aortic root support (PEARS) in Marfan syndrome: analysis of 1–9 year outcomes by intention-to-treat in a cohort of the first 30 consecutive patients to receive a novel tissue and valve-conserving procedure, compared with the published results of aortic root replacement. Heart 2014 Jun;100(12):969-75

Hess PJ Jr, Harman PK, Klodell CT, Beaver TM, Bologna MT, Mikhail P, Tribble CG, Martin TD.Early outcomes using the Florida sleeve repair for correction of aortic insufficiency due to root aneurysms. Ann Thorac Surg. 2009 Apr;87(4):1161-8.