

## IN BRIEF

**DEVICE THERAPY****Interatrial shunt device for HFpEF**

The interatrial shunt device (IASD) from Corvia Medical is designed to unload the right atrium and reduce pulmonary venous pressure, which is hypothesized to be beneficial in patients with heart failure with preserved ejection fraction (HFpEF). In the phase II REDUCE LAP-HF I trial, investigators randomly assigned 44 patients with HFpEF to receive an IASD or to undergo a sham procedure (femoral venous access with intracardiac echocardiography, but no IASD placement). After 1 month, pulmonary capillary wedge pressure during exercise was reduced more in the treatment group than in the control group. No major adverse cardiac, cerebrovascular, or renal events occurred in the IASD group, and only one event occurred in the control group. "These findings suggest that the IASD could have beneficial effects in patients with HFpEF ... setting the stage for a larger-scale randomized clinical trial powered to examine the effects of the IASD on ... clinical outcomes," conclude the investigators.

**ORIGINAL ARTICLE** Feldman, T. *et al.* A transcatheter interatrial shunt device for the treatment of heart failure with preserved ejection fraction (REDUCE LAP-HF I): a phase 2, randomized, sham-controlled trial. *Circulation* <http://dx.doi.org/10.1161/CIRCULATIONAHA.117.032094> (2017)

**VALVULAR DISEASE****Mechanical versus biological valve prostheses**

Over the past 20 years, the use of biological prostheses has increasingly been favoured over the use of mechanical prostheses for both aortic and mitral valve replacement, despite a lack of evidence to support this preference. Goldstone *et al.* reviewed the long-term outcomes of patients who received a prosthetic valve in California, USA, between 1996 and 2013. In 9,942 patients who underwent aortic valve replacement, use of a biological valve was associated with higher 15-year mortality than use of a mechanical valve in patients aged 45–54 years (HR 1.23), but not in those aged 55–64 years. In 15,503 patients who underwent mitral valve replacement, use of a biological valve was associated with higher 15-year mortality than use of a mechanical valve in patients aged 40–49 years (HR 1.88) and in those aged 50–69 years (HR 1.16). Reoperation rates were higher with a biological valve, but mechanical valves were associated with higher rates of bleeding and, in some age groups, stroke.

**ORIGINAL ARTICLE** Goldstone, A. B. *et al.* Mechanical or biologic prostheses for aortic-valve and mitral-valve replacement. *N. Engl. J. Med.* **377**, 1847–1857 (2017)

**RISK FACTORS****Nuts reduce risk of cardiovascular disease**

Nuts are a good source of unsaturated fatty acids, dietary fibre, vitamins, and minerals, but their association with cardiovascular disease is uncertain. Guasch-Ferré and colleagues analysed data from three large, prospective cohort studies involving 169,310 women from the Nurses' Health Study and Nurses' Health Study II and 41,526 men from the Health Professionals Follow-Up Study. Higher overall consumption of nuts was associated with a reduced risk of cardiovascular disease and coronary heart disease, but no difference in stroke. Specifically, eating more peanuts, tree nuts, or walnuts was inversely associated with risk of cardiovascular disease and coronary heart disease. "Our findings support recommendations of increasing the intake of a variety of nuts as part of healthy dietary patterns," conclude the investigators.

**ORIGINAL ARTICLE** Guasch-Ferré, M. *et al.* Nut consumption and risk of cardiovascular disease. *J. Am. Coll. Cardiol.* **70**, 2519–2532 (2017)