Developed in 1967, the Ross procedure replaces the diseased aortic valve with the patient’s pulmonary valve, eliminating the need for anticoagulation. A pulmonary allograft is then used to reconstruct the right ventricular outflow tract (RVOT). Though technically challenging, the Ross procedure is associated with long-term durability with physiological hemodynamic function.\(^1\)

**ANTICOAGULATION AVOIDANCE**

The Ross procedure “meets an unambiguous need for a durable valve alternative without the lifestyle restraints and risks inherent to permanent anticoagulation.”\(^2\)

**LOW LONG-TERM MORBIDITY**

Compared to AVR, the Ross procedure has resulted in lower rates of reintervention, anticoagulation-related morbidity, endocarditis, and all-cause mortality with excellent survival of up to 25 years.\(^3\)\(^–\)\(^7\)

**LONG-TERM RESTORED SURVIVAL**

The Ross procedure “restores a normal life expectancy to young and middle-aged adults”, comparable to that of the general population, whereas AVR has been associated with an estimated 30% reduction in life-expectancy.\(^7\)

**TESTIMONIALS**

“Not only was survival better than after biological or mechanical aortic valve replacement, it was also identical to the matched U.S. general population. *To this day, this is the only operation that has ever been shown to restore survival after aortic valve replacement in young adults.*”\(^28\)

— Ismail El-Hamamsy, MD, PhD and Randall B. Griepp, MD, PhD

“Within 15 years after the operation, [on the aortic valve] only about 30% of patients will require a reoperation and on the pulmonary valve, if the operation is done correctly in the way that it was originally described, *less than 2% of patients will require a reoperation.*”\(^29\)

— Michael Ibrahim, MD, PhD

“I really believe [the Ross procedure] is the best way of treating a younger patient with aortic disease.”\(^30\)

— Peter Skillington, MD, PhD

**PUBLISHED CLINICAL EVIDENCE**

The Ross procedure has a long history of success and used in >12,000 adult and pediatric patients (age range 2 days–68 years old) in multiple clinical studies.\(^1\)\(^–\)\(^28\)

*Note: Autograft was used in the aortic position and an allograft pulmonary heart valve (cryopreserved or decellularized) was used in the pulmonary position.*

**Mean freedom from reintervention at 10 years**\(^2\)\(^,\)\(^7\)\(^–\)\(^11\)

- **Autograft**: 88.92%
- **Allograft**: 95.82%
ROSS PROCEDURE CLINICAL EVIDENCE

REFERENCES


