

## Mid- to Long-term Outcomes of Cardiovascular Tissue Replacements Utilizing Homografts Harvested and Stored at Japanese Institutional Tissue Banks

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### Key Words

1. Homograft (Allograft) Valve

2. Endocarditis

3. Aortic Root Replacement

### Purpose:

We reviewed our clinical experiences with cardiovascular homografts harvested and preserved at our institutional tissue banks.

### Methods:

Since our bank was first established in Japan in 1990, 74 patients have undergone various surgical procedures using homografts. We classified them into 5 groups according to the procedure: Group I<sub>1</sub> subcoronary implantation of a homograft aortic valve; Group II<sub>1</sub> homograft aortic root replacement for active native or prosthetic endocarditis; Group III<sub>1</sub> homograft aortic replacement for mycotic aortic aneurysms or infected grafts; Group IV<sub>1</sub> pulmonary homografts in the Ross operation; and Group V<sub>1</sub> pulmonary homograft conduits for complex congenital heart diseases.

### Results:

The 9 to 10-year survival rates were good and acceptable, respectively, for the patients in all 5 groups. The infection recurrence rate was low (8%). Cardiac event-free rates, including deaths, were 0.57 in group I, 0.58 in II, 0.75 in III, 0.81 in IV and 0.69 in group V operations. The rates of structural homograft deterioration suggest that homografts deteriorate more rapidly after subcoronary implantation than aortic root replacements ( $p=0.058$ ).

### Conclusions:

Subcoronary implantation should probably be abandoned for routine aortic valve replacement, but the continued use of homografts will provide valuable alternatives for patients with active infectious cardiovascular diseases. For the Ross operation, pulmonary valve homografts showed good durability.