



Figure S1 Sequence of the TAR procedure. (A) Insertion of the stented graft. The stented graft is inserted into the true lumen of the descending aorta. (B) Distal anastomosis. The four-branched graft is anastomosed distally to the stented graft in end-to-end fashion. (C) Left carotid reconstruction. The left 8 mm of the arch branch of the four-branched graft is anastomosed distally to the left carotid artery in an end-to-end fashion. Upon completion, selective cerebral perfusion is continued bilaterally through the right axillary artery and the left common carotid artery and rewarming begins. (D) Proximal anastomosis. The four-branched graft is anastomosed proximally to the ascending aorta (or graft) in an end-to-end fashion. The ascending aorta is then deaired and unclamped to restore coronary perfusion. (E) Left subclavian reconstruction. The middle 8 mm of the arch branch of the four-branched graft is connected distally to the left subclavian artery in end-to-end fashion. (F) Innominate artery reconstruction. The right 10 mm of the arch branch of the four-branched graft is connected distally to the innominate artery in end-to-end fashion. TAR, total arch replacement.