

**Table S1** Fenestration strategy

Strategy	N (%)
Single fenestration	106 (90.6)
1 small fenestration for LSA (LCCA-LSA bypass or chimney for LCCA)	2 (1.7)
1 small fenestration for LSA	84 (71.8)
1 small fenestration for LCCA	2 (1.7)
1 large fenestration for LCCA and LSA	11 (9.4)
1 large fenestration for IA and LCCA	1 (0.85)
1 large fenestration for IA, LCCA and LSA	2 (1.7)
1 large fenestration for aberrant RCCA and LCCA (LCCA-LSA bypass)	1 (0.85)
1 large fenestration for LSA and LVA	1 (0.85)
1 large fenestration for LCCA, LVA and LSA	1 (0.85)
1 large fenestration for aberrant RSA	1 (0.85)
Double fenestrations	9 (7.7)
2 small fenestrations for LCCA and LSA	7 (6)
2 small fenestrations for IA and LCCA	1 (0.85)
2 small fenestrations for LSA and aberrant RSA	1 (0.85)
Triple fenestrations	2 (1.7)
3 small fenestrations for IA, LCCA, and LSA	2 (1.7)

**Table S2** Details about patients with RTAD

Fenestration Strategy	Affected area	Time of onset	Proximal landing zone	Location of new entry tear	Oversizing of stent graft
2 small fenestrations for LCCA and LSA	Z3, Z4	During the surgery	N/A	Undisclosed	N/A
1 large fenestration for LCCA and LSA	Z2, Z3	One month after surgery	1	Front	7%
1 large fenestration for LCCA and LSA	Z2	One month after surgery	1	Front	0%
1 large fenestration for LCCA and LSA	Z2; Z3	One month after surgery	1	Front	3%
1 large fenestration for LCCA and LSA	Z2; Z3	One month after surgery	1	Front	3%