

A1: Average aneurysm dimensions, RSC diameters, and aorta diameters, for the 90- and 180-day cohorts treated with Flex and Vantage. All dimensions are mean \pm standard deviation (SD).

Device	Study Duration (days)	Aneurysm Height (mm)	Aneurysm Width (mm)	Aneurysm Neck (mm)	RSC diameter (mm)
Flex	90 \pm 2	6.92 \pm 1.28	3.46 \pm 0.56	3.96 \pm 1.92	3.30 \pm 0.25
Vantage	90 \pm 2	7.12 \pm 2.15	3.22 \pm 0.59	3.29 \pm 1.08	3.12 \pm 0.29
Flex	180 \pm 2	6.39 \pm 1.72	2.82 \pm 0.43	3.57 \pm 1.73	3.28 \pm 0.44
Vantage	180 \pm 2	5.34 \pm 1.13	2.66 \pm 0.40	2.85 \pm 1.04	3.00 \pm 0.39

Device	Study Duration (days)	Aorta diameter (mm)
Flex	90 \pm 2	3.08 \pm 0.30
Vantage	90 \pm 2	2.86 \pm 0.25
Flex	180 \pm 2	3.18 \pm 0.28
Vantage	180 \pm 2	3.27 \pm 0.21

A2: Histopathology attributes and grading scale for the tissue sections from Flex and Vantage implanted vessels for 90- and 180- day cohorts. Grading was performed by an independent pathologist blinded to device.

Luminal/Mural Thrombus

Grade 0: No luminal thrombus

Grade 1 (Minimal): Occupies ~ <5% of the lumen area

Grade 2 (Mild): Occupies ~5-35% of the lumen area

Grade 3 (Moderate): Occupies ~ 35-70% of the lumen area

Grade 4 (Marked/Severe): Occupies ~ >70% of the lumen area

Endothelial Cell Coverage

Grade 0 (Absent): ~ <5% of the luminal surface covered

Grade 1 (Minimal): ~ 5-25% of the luminal surface covered

Grade 2 (Mild): ~ 25-50% of the luminal surface covered

Grade 3 (Moderate): ~ 50-90% of the luminal surface covered

Grade 4 (Complete): ~ >90% of the luminal surface covered

Inflammation (neointimal, medial, and adventitial)

Grade 0: No inflammatory response

Grade 1: Minimal response

Grade 2: Mild response

Grade 3: Moderate response

Grade 4: Marked/Severe response

Fibrin

Grade 0: Not present

Grade 1: Minimal

Grade 2: Mild

Grade 3: Moderate

Grade 4: Marked/Severe

Medial Smooth Muscle Cell (SMC) Loss

Grade 0: No medial SMC loss

Grade 1: Minimal ~ <5% medial SMC loss

Grade 2: Mild ~ 5-25% medial SMC loss

Grade 3: Moderate ~ 25-50% medial SMC loss

Grade 4: Marked/Severe ~>50% medial SMC loss

Disruption of the Internal Elastic Lamina (IEL) and External Elastic Lamina (EEL)

Grade 0: No disruption

Grade 1: Minimal ~ <5% disruption

Grade 2: Mild ~ 5-25% disruption

Grade 3: Moderate ~ 25-50% disruption

Grade 4: Marked/Severe ~ >50% disruption

Adventitia

Grade 0: No changes present

Grade 1: Minimal ~<5% affected

Grade 2: Mild ~5-25% affected

Grade 3: Moderate ~26-50% affected

Grade 4: Marked/Severe ~>50% affected

A3: Raymond Roy Occlusion Classification (RROC) for the 90- and 180-day cohorts treated with Flex and Vantage devices.