**Table S1.** Mesh sensitivity analysis

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Element size | Cells (×106 ) | $∆P$ error (%) | Mass flow error (%) | WSS error (%) | Left WSS error (%) |
| Coarse | 1.48 | 16.42 | 16.70 | 14.61 | 28.06 |
| Middle | 2.72 | 2.07 | 2.82 | 5.94 | 6.78 |
| Fine | 4.06 | - | - | - | - |

WSS = wall shear stress.



**Figure S1.** Slices at the upstream area, the area of sVAD or midstream area of healthy VAs, and the downstream area.

sVAD = spontaneous vertebral artery dissection; VAs = vertebral arteries.