**Table S1** Physician rating scores of the cardiac substructure auto-contours for 20 thoracic patients. A score with 2 or 3 is considered as clinically acceptable.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Heart | LA | RA | LV | RV | SVC | IVC | PA | PV | AA | DA |
| 1 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 |
| 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 3 |
| 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| 4 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 1 |
| 5 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 |
| 6 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 |
| 7 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 |
| 8 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| 9 | 1 | 3 | 3 | 1 | 2 | 3 | 2 | 3 | 2 | 2 | 3 |
| 10 | 2 | 3 | 2 | 3 | 2 | 3 | 1 | 2 | 2 | 2 | 3 |
| 11 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2 |
| 12 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 |
| 13 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 14 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 15 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 |
| 16 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 17 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| 18 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| 19 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 |
| 20 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mean | 1.9 | 2.3 | 2.4 | 2.3 | 2.2 | 2.6 | 2.2 | 2.2 | 2.1 | 2.1 | 2.0 |
| SD | 0.3 | 0.4 | 0.5 | 0.7 | 0.5 | 0.5 | 0.5 | 0.5 | 0.2 | 0.2 | 0.7 |

*Abbreviations*: LA, left atrium; RA, right atrium; LV, left ventricle; RV, right ventricle; SVC, superior vena cava; IVC, inferior vena cava; PA, pulmonary artery; PV, pulmonary vein; AA, ascending aorta and aortic arch; DA, descending aorta; SD, standard deviation.