**Supplementary Table 1.** Multivariable logistic regression examining association of patient characteristics with types of thoracic aortic disease

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Ascending aortic aneurysms** | | | **Descending aortic aneurysms** | | | **Type A aortic dissection** | | | **Type B aortic dissection** | | |
| OR | 95% CI | P value | OR | 95% CI | P value | OR | 95% CI | P value | OR | 95% CI | P value |
| **SRC** | **2.49** | 2.19-2.83 | 2.6 x 10-43 | **3.09** | 2.51-3.81 | 2.1 x 10-26 | **2.41** | 1.55-3.72 | 0.000082 | **2.90** | 2.08-4.06 | 4.1 x 10-10 |
| **BAA** | **8.25** | 5.36-13.18 | 2.6 x 10-20 | **3.38** | 1.92-6.23 | 0.000045 | 3.1 | 1.0-11.0 | 0.057 | **3.70** | 1.52-10.38 | 0.0066 |
| **Female sex** | **0.39** | 0.34-0.44 | 2.4 x 10-44 | 0.85 | 0.69-1.04 | 0.11 | **0.60** | 0.39-0.91 | 0.017 | 0.94 | 0.68-1.29 | 0.70 |
| **Age** | **1.02** | 1.02-1.03 | 2.4 x 10-22 | **1.02** | 1.01-1.03 | 1.4 x 10-8 | 0.99 | 0.97-1.00 | 0.065 | 1.01 | 0.99-1.02 | 0.32 |
| **Hypertension** | **2.11** | 1.77-2.53 | 4.7 x 10-16 | **3.20** | 2.30-4.55 | 2.2 x 10-11 | **4.07** | 2.23-7.87 | 0.00001 | **2.86** | 1.80-4.70 | 0.00002 |
| **Hyperlipidemia** | **1.33** | 1.16-1.52 | 4.1 x 10-5 | 1.18 | 0.95-1.46 | 0.13 | 1.23 | 0.79-1.90 | 0.36 | 1.28 | 0.91-1.80 | 0.16 |
| **Diabetes mellitus** | **0.62** | 0.53-0.72 | 1.7 x 10-10 | **0.44** | 0.34-0.57 | 4.1 x 10-10 | **0.45** | 0.26-0.75 | 0.003 | **0.36** | 0.22-0.55 | 5.0 x 10-6 |
| **Chronic kidney disease** | 1.07 | 0.91-1.25 | 0.44 | **1.43** | 1.12-1.82 | 0.0034 | 1.20 | 0.68-2.01 | 0.51 | 0.94 | 0.60-1.44 | 0.8 |

**Supplementary Table 2.** Multivariable logistic regression examining association of bovine aortic arch with aortic disease

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Dependent variable** | **Bovine Aortic Arch (N = 1,678)** | | | **Bovine Aortic Arch (N = 35,498)** | | |
| Odds Ratio | 95% Confidence Interval | P value | Odds Ratio | 95% Confidence Interval | P value |
| **Thoracic aortic disease** | **7.33** | 5.01-10.98 | 1.8 x 10-23 | **7.69** | 6.42-9.17 | 3.2 x 10-111 |
| **Ascending aneurysm** | **8.25** | 5.36-13.18 | 2.6 x 10-20 | **7.90** | 6.52-9.54 | 2.1 x 10-43 |
| **Descending aneurysm** | **3.38** | 1.92-6.23 | 0.000045 | **6.29** | 4.65-8.37 | 8.4 x 10-35 |
| **Type A dissection** | 3.1 | 1.0-11.0 | 0.057 | **4.84** | 2.55-8.46 | 2.0 x 10-7 |
| **Type B dissection** | **3.70** | 1.52-10.38 | 0.0066 | **5.37** | 3.30-8.35 | 1.0 x 10-12 |
| **Abdominal aortic aneurysm** | **2.95** | 1.7-5.2 | 0.00009 | **2.56** | 1.91-3.37 | 7.3 x 10-11 |