**Supplemental Table 6. Acyanotic Group Patient Characteristics and Data by Hematocrit Sub-group**

| **Variable** | **Level** | **Overall**  **(N=22553)** | | | **Low (<32)**  **(N=5201)** | | **Med (32 - 40)**  **(N=11771)** | | **High (>40)**  **(N=5581)** | | **P-value** | **P-value**  **Low vs Med** | **P-value**  **Med vs High** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Patient Characteristics** | |  |  | |  |  |  |  |  |  |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Age at Surgery (days) | | 364 [114, 1991] | | | 1337 [224, 3044] | | 379 [124, 2194] | | 158 [42, 612] | | <.001 | <.001 | <.001 | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Age group | Neonate | 3119 (13.8%) | | 388 (7.5%) | | | 1423 (12.1%) | | 1308 (23.4%) | | <.001 | <.001 | <.001 | |
| Infant | 8163 (36.2%) | | 1208 (23.2%) | | | 4392 (37.3%) | | 2563 (45.9%) | |  |  |  | |
| Child | 11271 (50.0%) | | 3605 (69.3%) | | | 5956 (50.6%) | | 1710 (30.6%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Sex | Male | 12254 (54.3%) | | 2762 (53.1%) | | | 6473 (55.0%) | | 3019 (54.1%) | | 0.202 | 0.075 | 0.410 | |
| Female | 10294 (45.6%) | | 2438 (46.9%) | | | 5296 (45.0%) | | 2560 (45.9%) | |  |  |  | |
| Ambiguous | 5 (0.02%) | | 1 (0.02%) | | | 2 (0.02%) | | 2 (0.04%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Weight (kilograms) | | 8.3 [4.8, 18.4] | | | 14.7 [6.8, 26.2] | | 8.4 [5.1, 19.5] | | 5.8 [3.8, 10.2] | | <.001 | <.001 | <.001 | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Gestational age (weeks) | | 38 [37, 39] | | | 39 [37, 40] | | 38 [37, 40] | | 38 [37, 39] | | <.001 | 0.384 | <.001 | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| **Preoperative Data** | |  |  |  | |  |  |  |  |  |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Prematurity (<37 weeks completed gestation) | Missing | 1079 (4.8%) | | 411 (7.9%) | | | 560 (4.8%) | | 108 (1.9%) | | 0.003 | 0.697 | <.001 | |
| No | 17559 (77.9%) | | 3933 (75.6%) | | | 9234 (78.5%) | | 4392 (78.7%) | |  |  |  | |
| Yes | 3915 (17.4%) | | 857 (16.5%) | | | 1977 (16.8%) | | 1081 (19.4%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Mechanical ventilatory support | No | 20743 (92.0%) | | 4873 (93.7%) | | | 10901 (92.6%) | | 4969 (89.0%) | | <.001 | 0.011 | <.001 | |
| Yes | 1810 (8.0%) | | 328 (6.3%) | | | 870 (7.4%) | | 612 (11.0%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Any syndrome | Missing | 8 (0.04%) | | 0 (0.0%) | | | 5 (0.04%) | | 3 (0.1%) | | <.001 | <.001 | <.001 | |
| No | 17313 (76.8%) | | 4279 (82.3%) | | | 9091 (77.2%) | | 3943 (70.7%) | |  |  |  | |
| Yes | 5232 (23.2%) | | 922 (17.7%) | | | 2675 (22.7%) | | 1635 (29.3%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Non-cardiac congenital anomaly | Missing | 21 (0.1%) | | 5 (0.1%) | | | 14 (0.1%) | | 2 (0.04%) | | <.001 | 0.006 | 0.039 | |
| No | 18595 (82.5%) | | 4373 (84.1%) | | | 9694 (82.4%) | | 4528 (81.1%) | |  |  |  | |
| Yes | 3937 (17.5%) | | 823 (15.8%) | | | 2063 (17.5%) | | 1051 (18.8%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Any chromosomal abnormality | Missing | 5 (0.02%) | | 0 (0.0%) | | | 3 (0.03%) | | 2 (0.04%) | | <.001 | <.001 | <.001 | |
| No | 18867 (83.7%) | | 4587 (88.19%) | | | 9867 (83.8%) | | 4413 (79.1%) | |  |  |  | |
| Yes | 3681 (16.3%) | | 614 (11.81%) | | | 1901 (16.2%) | | 1166 (20.9%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Redo sternotomy | No | 17091 (75.8%) | | 3790 (72.9%) | | | 8883 (75.5%) | | 4418 (79.2%) | | <.001 | <.001 | <.001 | |
| Yes | 5462 (24.2%) | | 1411 (27.1%) | | | 2888 (24.5%) | | 1163 (20.8%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Shock, persistent at time of surgery | No | 22442 (99.5%) | | 5178 (99.6%) | | | 11720 (99.6%) | | 5544 (99.3%) | | 0.110 | 0.935 | 0.047 | |
| Yes | 111 (0.5%) | | 23 (0.4%) | | | 51 (0.4%) | | 37 (0.7%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Renal failure | No | 22322 (99.0%) | | 5153 (99.1%) | | | 11660 (99.1%) | | 5509 (98.7%) | | 0.075 | 0.900 | 0.037 | |
| Yes | 231 (1.0%) | | 48 (0.9%) | | | 111 (0.9%) | | 72 (1.3%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Neurologic deficit | No | 21662 (96.1%) | | 5029 (96.7%) | | | 11263 (95.7%) | | 5370 (96.2%) | | 0.006 | 0.002 | 0.099 | |
| Yes | 891 (4.0%) | | 172 (3.3%) | | | 508 (4.3%) | | 211 (3.8%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Any other pre-op factors | No | 18318 (81.2%) | | 4287 (82.4%) | | | 9600 (81.6%) | | 4431 (79.4%) | | <.001 | 0.175 | <.001 | |
| Yes | 4235 (18.8%) | | 914 (17.6%) | | | 2171 (18.4%) | | 1150 (20.6%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Congenital anomaly / Syndrome risk category | 0 | 17568 (77.9%) | | 4318 (83.0%) | | | 9229 (78.4%) | | 4021 (72.1%) | | <.001 | <.001 | <.001 | |
| 1 | 2857 (12.7%) | | 540 (10.4%) | | | 1480 (12.6%) | | 837 (15.0%) | |  |  |  | |
| 2 | 1361 (6.0%) | | 172 (3.3%) | | | 704 (6.0%) | | 485 (8.7%) | |  |  |  | |
| 3 | 461 (2.0%) | | 114 (2.2%) | | | 221 (1.9%) | | 126 (2.3%) | |  |  |  | |
| 4 | 306 (1.4%) | | 57 (1.1%) | | | 137 (1.2%) | | 112 (2.0%) | |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| **Operative Data** |  |  |  |  | |  |  |  |  |  |  |  |  | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| CPB time (minutes) | | 97 [65, 144] | | 86 [57, 133] | | | 96 [65, 143] | | 109 [76, 153] | | <.001 | <.001 | <.001 | |
|  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| Hematocrit post-protamine | | 34 [30, 38] | | 30 [27, 33] | | | 34 [32, 38] | | 38 [34, 43] | | <.001 | <.001 | <.001 | |
| STAT Category | Missing | 42 (0.2%) | | 14 (0.3%) | | | 19 (0.2%) | | 9 (0.2%) | | <.001 | <.001 | <.001 |
| 1 | 8204 (36.4%) | | 2326 (44.7%) | | | 4403 (37.4%) | | 1475 (26.4%) | |  |  |  |
| 2 | 5688 (25.2%) | | 1271 (24.4%) | | | 3025 (25.7%) | | 1392 (24.9%) | |  |  |  |
| 3 | 3929 (17.4%) | | 728 (14.0%) | | | 2010 (17.1%) | | 1191 (21.3%) | |  |  |  |
| 4 | 4556 (20.2%) | | 843 (16.2%) | | | 2257 (19.2%) | | 1456 (26.1%) | |  |  |  |
| 5 | 134 (0.6%) | | 19 (0.4%) | | | 57 (0.5%) | | 58 (1.0%) | |  |  |  |

All tests treat the column variable as nominal. CPB = Cardiopulmonary Bypass; STAT = The Society of Thoracic Surgeons-European Association for Cardio-Thoracic Surgery. Data presented as count (percentage) or median [25% percentile, 75% percentile]. P-values are based on Pearson chi-square tests for all categorical row variables. P-values were calculated by comparing only non-missing row values. P-values are based on chi-square rank based group means score statistics for all continuous/ordinal row variables which is equivalent to Kruskal-Wallis tests. All tests treat the column variable as nominal.