**Supplemental Table 2. Procedures Classified as Expected Acyanotic Postoperatively**

| **Primary Procedure** | **Frequency (n)** | **Percent (%)** |
| --- | --- | --- |
| PFO, Primary closure | 123 | 0.55 |
| ASD repair, Primary closure | 313 | 1.39 |
| ASD repair, Patch | 1255 | 5.56 |
| ASD, Common atrium (single atrium), Septation | 35 | 0.16 |
| ASD partial closure | 16 | 0.07 |
| Atrial fenestration closure | 11 | 0.05 |
| VSD repair, Primary closure | 246 | 1.09 |
| VSD repair, Patch | 2875 | 12.75 |
| VSD repair, Device | 6 | 0.03 |
| VSD, Multiple, Repair | 110 | 0.49 |
| VSD creation/enlargement | 97 | 0.43 |
| Ventricular septal fenestration | 22 | 0.10 |
| AVC (AVSD) repair, Complete (CAVSD) | 1278 | 5.67 |
| AVC (AVSD) repair, Intermediate (Transitional) | 202 | 0.90 |
| AVC (AVSD) repair, Partial (Incomplete) (PAVSD) | 261 | 1.16 |
| AP window repair | 43 | 0.19 |
| Pulmonary artery origin from ascending aorta (hemitruncus) repair | 20 | 0.09 |
| Truncus arteriosus repair | 218 | 0.97 |
| Valvuloplasty, Truncal valve | 21 | 0.09 |
| Valve replacement, Truncal valve | 17 | 0.08 |
| PAPVC repair | 158 | 0.70 |
| PAPVC, Scimitar, Repair | 35 | 0.16 |
| TAPVC repair | 552 | 2.45 |
| Cor triatriatum repair | 66 | 0.29 |
| Pulmonary venous stenosis repair | 167 | 0.74 |
| Atrial baffle procedure (non-Mustard, non-Senning) | 7 | 0.03 |
| Anomalous systemic venous connection repair | 45 | 0.20 |
| Systemic venous stenosis repair | 30 | 0.13 |
| TOF repair, No ventriculotomy | 492 | 2.18 |
| TOF repair, Ventriculotomy, Nontransanular patch | 547 | 2.43 |
| TOF repair, Ventriculotomy, Transanular patch | 941 | 4.17 |
| TOF repair, RV-PA conduit | 161 | 0.71 |
| TOF - AVC (AVSD) repair | 122 | 0.54 |
| TOF - Absent pulmonary valve repair | 65 | 0.29 |
| Pulmonary atresia - VSD (including TOF, PA) repair | 142 | 0.63 |
| Valvuloplasty, Tricuspid | 292 | 1.29 |
| Ebstein's repair | 115 | 0.51 |
| Valve replacement, Tricuspid (TVR) | 37 | 0.16 |
| Valve excision, Tricuspid (without replacement) | 1 | 0.00 |
| RVOT procedure | 729 | 3.23 |
| PA, reconstruction (plasty), Main (trunk) | 168 | 0.74 |
| PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation) | 619 | 2.74 |
| PA, reconstruction (plasty), Branch, Peripheral (at or beyond the hilar bifurcation) | 77 | 0.34 |
| DCRV repair | 70 | 0.31 |
| Conduit reoperation | 302 | 1.34 |
| Valvuloplasty, Pulmonic | 223 | 0.99 |
| Valve replacement, Pulmonic (PVR) | 317 | 1.41 |
| Conduit placement, RV to PA | 588 | 2.61 |
| Conduit placement, LV to PA | 4 | 0.02 |
| Valve excision, Pulmonary (without replacement) | 1 | 0.00 |
| Valvuloplasty, Aortic | 299 | 1.33 |
| Valve replacement, Aortic (AVR) | 6 | 0.03 |
| Valve replacement, Aortic (AVR), Mechanical | 83 | 0.37 |
| Valve replacement, Aortic (AVR), Bioprosthetic | 23 | 0.10 |
| Valve replacement, Aortic (AVR), Homograft | 4 | 0.02 |
| Aortic root replacement, Bioprosthetic | 9 | 0.04 |
| Aortic root replacement, Mechanical | 29 | 0.13 |
| Aortic root replacement, Homograft | 33 | 0.15 |
| Aortic root replacement, Valve sparing | 82 | 0.36 |
| Ross procedure | 138 | 0.61 |
| Konno procedure | 48 | 0.21 |
| Ross-Konno procedure | 141 | 0.63 |
| Aortic stenosis, Subvalvar, Repair | 490 | 2.17 |
| Aortic stenosis, Supravalvar, Repair | 183 | 0.81 |
| Valve surgery, Other, Aortic | 2 | 0.01 |
| Sinus of Valsalva, Aneurysm repair | 6 | 0.03 |
| LV to aorta tunnel repair | 7 | 0.03 |
| Valvuloplasty, Mitral | 606 | 2.69 |
| Mitral stenosis, Supravalvar mitral ring repair | 56 | 0.25 |
| Valve replacement, Mitral (MVR) | 304 | 1.35 |
| Valve surgery, Other, Mitral | 8 | 0.04 |
| HLHS biventricular repair | 22 | 0.10 |
| Transplant, Heart | 423 | 1.88 |
| Transplant, Heart and lung | 3 | 0.01 |
| Fontan, TCPC, Lateral tunnel, Nonfenestrated | 49 | 0.22 |
| Fontan, TCPC, External conduit, Nonfenestrated | 503 | 2.23 |
| Congenitally corrected TGA repair, Atrial switch and ASO (double switch) | 40 | 0.18 |
| Congenitally corrected TGA repair, Atrial switch and Rastelli | 29 | 0.13 |
| Congenitally corrected TGA repair, VSD closure and LV to PA conduit | 4 | 0.02 |
| Arterial switch operation (ASO) | 716 | 3.17 |
| Arterial switch operation (ASO) and VSD repair | 332 | 1.47 |
| Arterial switch procedure + Aortic arch repair | 34 | 0.15 |
| Arterial switch procedure and VSD repair + Aortic arch repair | 124 | 0.55 |
| Senning | 9 | 0.04 |
| Mustard | 7 | 0.03 |
| Atrial baffle procedure, Mustard or Senning revision | 5 | 0.02 |
| Rastelli | 113 | 0.50 |
| REV | 3 | 0.01 |
| DORV, Intraventricular tunnel repair | 286 | 1.27 |
| DOLV repair | 5 | 0.02 |
| Coarctation repair, End to end | 8 | 0.04 |
| Coarctation repair, End to end, Extended | 22 | 0.10 |
| Coarctation repair, Subclavian flap | 1 | 0.00 |
| Coarctation repair, Patch aortoplasty | 39 | 0.17 |
| Coarctation repair, Interposition graft | 3 | 0.01 |
| Coarctation repair, Other | 4 | 0.02 |
| Coarctation repair + VSD repair | 46 | 0.20 |
| Aortic arch repair | 627 | 2.78 |
| Aortic arch repair + VSD repair | 360 | 1.60 |
| Coronary artery fistula ligation | 6 | 0.03 |
| Anomalous origin of coronary artery from pulmonary artery repair | 120 | 0.53 |
| Coronary artery bypass | 17 | 0.08 |
| Anomalous aortic origin of coronary artery from aorta (AAOCA) repair | 242 | 1.07 |
| Coronary artery procedure, Other | 14 | 0.06 |
| Interrupted aortic arch repair | 202 | 0.90 |
| PDA closure, Surgical | 16 | 0.07 |
| Vascular ring repair | 17 | 0.08 |
| Aortopexy | 13 | 0.06 |
| Pulmonary artery sling repair | 38 | 0.17 |
| Aortic aneurysm repair | 80 | 0.35 |
| Aortic dissection repair | 10 | 0.04 |
| Transplant, lung(s) | 62 | 0.27 |
| Arrhythmia surgery - atrial, Surgical Ablation | 17 | 0.08 |
| Arrhythmia surgery - ventricular, Surgical Ablation | 3 | 0.01 |
| PA debanding | 13 | 0.06 |
| Aneurysm, Ventricular, Right, Repair | 26 | 0.12 |
| Aneurysm, Ventricular, Left, Repair | 11 | 0.05 |
| Aneurysm, Pulmonary artery, Repair | 12 | 0.05 |
| Cardiac tumor resection | 116 | 0.51 |
| Conduit placement, Other | 9 | 0.04 |
| Conduit placement, Ventricle to aorta | 1 | 0.00 |
| Pulmonary AV fistula repair/occlusion | 1 | 0.00 |
| Pulmonary embolectomy, Acute pulmonary embolus | 8 | 0.04 |
| Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS | 151 | 0.67 |
| ASD repair, Patch + PAPVC repair | 290 | 1.29 |
| PAPVC repair, Baffle redirection to left atrium with systemic vein translocation (Warden) (SVC sewn to right atrial appendage) | 123 | 0.55 |
| Aortic root translocation over left ventricle (Including Nikaidoh procedure) | 28 | 0.12 |
| Truncus + Interrupted aortic arch repair (IAA) repair | 28 | 0.12 |
| Valve replacement, Common atrioventricular valve | 6 | 0.03 |
| Valvuloplasty converted to valve replacement in the same operation, Aortic | 10 | 0.04 |
| Valvuloplasty converted to valve replacement in the same operation, Mitral | 32 | 0.14 |
| Valvuloplasty converted to valve replacement in the same operation, Tricuspid | 4 | 0.02 |
| Valvuloplasty converted to valve replacement in the same operation, Truncal valve | 2 | 0.01 |
| Valvuloplasty, Common atrioventricular valve | 22 | 0.10 |
| Valvuloplasty converted to valve replacement in the same operation, Aortic with Ross procedure | 10 | 0.04 |
| Valvuloplasty converted to valve replacement in the same operation, Aortic with Ross-Konno procedure | 3 | 0.01 |
| Fontan + Atrioventricular valvuloplasty | 54 | 0.24 |
| Pulmonary atresia - VSD - MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit]) | 42 | 0.19 |
| Pulmonary atresia - VSD - MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit]) | 17 | 0.08 |
| Pulmonary atresia - VSD - MAPCA repair, Status post prior incomplete unifocalization (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit]) | 7 | 0.03 |
| Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neoaorta + Arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui) | 34 | 0.15 |
| Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated | 20 | 0.09 |
| **Total** | **22553** | **100** |