**Table 1:** Baseline participant characteristics variables by access site and vessel type in study years 2012-2014 for PCI-CABG procedures

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Graft PCI** | **Native Vessel PCI** |  |
| **Femoral****(n=3721)** | **Radial****(n=1916)** | **p-value** | **Femoral****(n=8160)** | **Radial****(n=5402)** | **p-value** | **p-value\*** |
| Age (years) ±SD | 70.9±9.4 | 71.1±8.9 | 0.235 | 69.4±9.8 | 68.9±9.9 | 0.004 | <0.001 |
| Female gender, no. (%) | 567 (15.3) | 244 (12.8) | 0.012 | 1533 (18.8) | 857 (15.8) | <0.001 | 0.001 |
| BMI (kg/m2) ±SD | 28.3±4.6 | 28.5±5.0 | 0.088 | 28.5±4.7 | 28.9±4.8 | 0.001 | 0.024 |
| CCS class ±SD | 2.62±1.02 | 2.69±1.00 | 0.025 | 2.50±0.97 | 2.45±0.98 | 0.004 | <0.001 |
| NYHA class ±SD | 2.13±0.96 | 2.01±0.90 | <0.001 | 2.07±0.89 | 1.98±0.87 | <0.001 | 0.108 |
| Hypertension, no. (%) | 2,526 (71.9) | 1,276 (71.0) | 0.520 | 5,395 (70.7) | 3,438 (67.8) | <0.001 | 0.012 |
| Diabetes, no. (%) | 1,283 (36.4) | 661 (35.9) | 0.712 | 3,783 (35.9) | 1,623 (31.4) | <0.001 | 0.005 |
| Previous stroke, no. (%) | 267 (7.6) | 140 (7.8) | 0.827 | 471 (6.2) | 330 (6.5) | 0.461 | 0.065 |
| Previous MI, no. (%) | 2,390 (68.2) | 1,247 (69.6) | 0.301 | 4,795 (62.2) | 2,980 (57.7) | <0.001 | <0.001 |
| Q wave, no. (%) | 645 (20.1) | 299 (18.0) | 0.085 | 1,132 (15.9) | 681 (14.1) | 0.008 | <0.001 |
| PVD, no. (%) | 393 (11.2) | 229 (12.7) | 0.095 | 697(9.1) | 514 (10.1) | 0.062 | 0.003 |
| Renal disease, no. (%) | 215 (6.1) | 76 (4.2) | 0.004 | 434 (5.6) | 187 (3.7) | <0.001 | 0.317 |
| Creatinine (µmol/L) ±SD | 109.0±71.1 | 104.6±53.5 | 0.041 | 106.0±77.1 | 99.8±44.6 | <0.001 | 0.003 |
| Previous PCI, no. (%) | 1,704 (46.8) | 834 (44.7) | 0.145 | 3,783 (47.4) | 2,172 (41.1) | <0.001 | 0.007 |
| Stable indication, no. (%) | 1,305 (35.1) | 736 (38.4) | 0.014 | 4,383 (53.7) | 3,221 (59.6) | <0.001 | <0.001 |
| Ejection fraction ±SD | 45.9±17.4 | 44.8±17.3 | 0.185 | 45.7±18.7 | 42.4±15.4 | <0.001 | 0.040 |
| Warfarin, no. (%) | 72 (2.0) | 65 (3.5) | <0.001 | 169 (2.2) | 184 (3.6) | <0.001 | 0.942 |

\*p-value for comparison between radial native vessel PCI and radial graft PCI cohorts

**Table 2:** Procedural variables by access site and vessel type 2012-2014 for PCI-CABG procedures

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Graft PCI** | **Native Vessel PCI** |  |
| **Femoral****(n=3721)** | **Radial****(n=1916)** | **p-value** | **Femoral****(n=8160)** | **Radial****(n=5402)** | **p-value** | **p-value\*** |
| No. grafts patent ±SD | 2.11±0.98 | 2.06±0.96 | 0.066 | 1.57±0.99 | 1.39±105 | <0.001 | <0.001 |
| CTO present, no. (%) | 2,345 (76.3) | 1,195 (75.2) | 0.405 | 4,543 (61.1) | 2,682 (54.5) | <0.001 | <0.001 |
| CTO attempted, no. (%) | 233 (6.9) | 107 (5.9) | 0.176 | 1,351 (18.0) | 556 (10.8) | <0.001 | <0.001 |
| No. CTO attempted ±SD | 0.08±0.32 | 0.07±0.30 | 0.171 | 0.19±0.43 | 0.12±0.35 | <0.001 | <0.001 |
| Trainee first operator, no. (%) | 858 (25.6) | 564 (32.2) | <0.001 | 1,662 (22.5) | 1,519 (30.0) | <0.001 | 0.086 |
| Ad-hoc PCI, no. (%) | 1,744 (52.3) | 948 (52.8) | 0.743 | 2,980 (43.7) | 2,054 (40.1) | <0.001 | <0.001 |
| IVUS use, no. (%) | 750 (21.6) | 476 (25.9) | <0.001 | 2,054 (26.7) | 1,551 (30.3) | <0.001 | <0.001 |
| Rotablation use, no. (%) | 23 (0.7) | 9 (0.5) | 0.464 | 486 (6.3) | 296 (5.7) | 0.168 | <0.001 |
| Laser atherectomy, no. (%) | 19 (0.5) | 25 (1.4) | 0.004 | 33 (0.4) | 35 (0.7) | 0.077 | 0.011 |
| Micro-catheter use, no. (%) | 44 (1.3) | 19 (1.0) | 0.507 | 404 (5.2) | 163 (3.1) | <0.001 | <0.001 |
| Penetration catheter, no. (%) | 22 (0.6) | 8 (0.4) | 0.443 | 143 (1.9) | 61 (1.2) | 0.003 | 0.005 |
| CrossBoss use, no. (%) | 5 (0.1) | 3 (0.1) | 1.000 | 53 (0.7) | 8 (0.1) | <0.001 | 1.000 |
| Vessel intervention, no. (%)GraftLeft mainLeft anterior descendingCircumflex Right coronary | 3721 (100)---- | 1916 (100)---- | ----- | 0 (0)2,006 (25.7)1,785 (22.9)2,734 (35.0)2,659 (34.1) | 0 (0)1,477 (27.3)1,379 (25.5)1,934 (35.8)1,550 (28.6) | -0.039<0.0010.604<0.001 | ----- |
| Aspiration, no. (%) | 431 (12.2) | 176 (9.5) | 0.003 | 389 (5.0) | 301 (5.8) | 0.0625 | <0.001 |
| Distal protection, no. (%) | 552 (15.6) | 367 (19.8) | <0.001 | 56 (0.7) | 25 (0.5) | 0.473 | <0.001 |
| No. of stents used ±SD | 1.47±1.11 | 1.45±1.07 | 0.180 | 1.50±1.19 | 1.48±1.10 | 0.178 | 0.110 |
| GPI use, no. (%) | 638 (18.7) | 331 (18.2) | 0.206 | 604 (8.1) | 467 (9.3) | 0.016 | <0.001 |

\*p-value for comparison between radial native vessel PCI and radial graft PCI cohorts

**Table 3:** Centre and operator volume and femoral access between 2012-14 for PCI-CABG procedures

|  |  |  |
| --- | --- | --- |
| **Variable** | **Femoral access %** | **p-value** |
| **Centre volume** |
| Upper tertile (182-594) | 58.3 | <0.001 |
| Intermediate tertile (85-18) | 63.7 |
| Lower tertile (0-84) | 67.0 |
| **Operator volume** |
| Upper tertile (29-187) | 58.2 | <0.001 |
| Intermediate tertile (13-28) | 64.2 |
| Lower tertile (0-12) | 67.1 |

**Table 4:** Multivariate model of the significant associations between covariates and femoral access for PCI-CABG procedures in 2012-14.

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Adjusted Odds Ratio** |  **[95% CI]** | **p-value** |
| CTO attempted  | 4.68 | [3.35-6.00] | <0.001 |
| CrossBoss use | 1.87 | [1.16-3.03] | 0.012 |
| Chronic renal failure | 1.46 | [1.25-1.71] | <0.001 |
| Graft PCI | 1.38 | [1.28-1.48] | <0.001 |
| Previous PCI attempt | 1.22 | [1.15-1.39] | <0.001 |
| Acute coronary syndrome | 1.41 | [1.32-1.51] | <0.001 |
| Female sex | 1.18 | [1.08-1.39] | <0.001 |
| Operator volume (2nd tertile vs. 1st tertile) | 0.81 | [0.74-0.88] | <0.001 |
| Operator volume (3rd tertile vs. 1st tertile) | 0.68 | [0.56-0.82] | <0.001 |
| Chronic anticoagulation | 0.57 | [0.46-0.67] | <0.001 |
| Laser atherectomy | 0.45 | [0.28-0.71] | 0.001 |

**Table 5:** Adjusted clinical outcomes of femoral access vs. radial access during 2012-2014 after PCI-CABG procedures

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Unadjusted OR [95% CI]** |  **p-value** | **Adjusted OR [95% CI]** | **p-value** |
| Arterial complication | 3.22 [2.08-5.00] | <0.001 | 3.70 [2.13-6.67] | <0.001 |
| Transfusion | 5.00 [1.52-16.67]  | 0.008 | 3.44 [1.01-12.5] | 0.049 |
| In-hospital major bleed | 3.23 [2.17-4.76] | <0.001 | 3.57 [2.13-5.88] | <0.001 |
| In-hospital death | 1.79 [1.27-2.56] | 0.001 | 1.33 [0.86-2.04] | 0.199 |
| Mortality at 30 days | 1.45 [1.08-1.96] | 0.016 | 0.93 [0.65-1.35] | 0.709 |
| Mortality at 1 year | 1.23 [1.05-1.44 | 0.009 | 1.04 [0.85-1.26] | 0.711 |