**Supplemental Table 3. Subgroup-analysis**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Is this general item as heterogeneity factor?** **1.Yes, probably** **2. No** | **I-squared and Heterogeneity-P-value and Effect-P-value respectively** | **WMD (95% CI)** | **Studies (N)** | **Subgroup**  |
| * **Preoperative hematologic indices**
 |
| **Platelet count** |
| All of studies: after 2000 | **Year of Publication**>2000≤2000 |
| * No
 | -62.7% and 0.02 and 0.007---- | --6.61 (-11.44 to -1.78)--14.0 (-32.88 to 4.88)-- | 060100 | **Geographic area**AsianEuropean Africa North AmericanSouth AmericanAustralia  |
| All of studies: cohort | **Design of study**CohortCase-control |
| * Yes, probably
 | 50.4% and 0.08 and 0.001-40.5% and 0.195 and 0.495 | -12.09 (-18.78 to -5.39)--2.77 (-8.81 to 4.26) | 502 | **Type of surgery**CABG aloneValve aloneCABG and Valve  |
| * No
 | 38.3% and 0.15 and 0.001-- | -12.30 (-18.61 to -5.99)--0.68 (-7.64 to 6.28) | 601 | **Using of CPB**On-pumpOff-pumpCombined data |
| All of studies: Elective surgery | **Status of surgery**ElectiveNon-elective  |
| * No
 | -38.8% and 0.14 and 0.322 | -15.0 (-22.96 to -7.03)-2.90 (-8.67 to 2.87) | 16 | **Number of population**>200≤200 |
| All of studies: Age more than 60 years  | **Mean Age**>60 years≤60 years |
| * No
 | 62.7% and 0.02 and 0.007- | -6.61 (-11.44 to -1.78)-14.0 (-32.88 to 4.88) | 61 | **Male**>70%≤70% |
| * Yes, probably
 | 57.1% and 0.07 and 0.0010.0% and 0.92 and 0.86 | -13.07 (-20.02 to -6.21)-0.59 (-7.30 to 6.11) | 42 | **Diabetes mellitus** >30%≤30% |
| * Yes, probably
 | 32.6% and 0.22 and 0.5252.6% and 0.097 and 0.001 | -2.12 (-8.60 to 4.35)-12.44 (-19.20 to -5.69) | 34 | **Hypertension**>70%≤70% |
| * No
 | 69.5% and 0.011 and 0.012- | -6.32 (-11.26 to -1.37)-12.50 (-34.58 to 9.58) | 51 | **Cigarette smoking** >30%≤30% |
| * No
 | 21.8% and 0.258 and 0.287- | 10.06 (-8.45 to 28.57)- | 20 | **Myocardial infarction**>20%≤20% |
| * No
 | -- | --23.3 (-48.27 to 1.67) | -1 | **Medication: Diuretic** >70%≤70% |
| * No
 | -85.8% and 0.008 and 0.010 | -23.3 (-48.27 to 1.67)-6.80 (-12.13 to -1.64) | 12 | **Medication: ACEI** >70%≤70% |
| * Yes, probably
 | 65.8% and 0.087 and 0.4990.0% and 0.921 and 0.001 | -2.31 (-9.02 to 4.39)-14.84 (-22.19 to -7.50) | 22 | **Medication: Statin** >70%≤70% |
| * No
 | 32.6% and 0.222 and 0.5210.0% and 0.921 and 0.001 | -2.12 (-8.60 to 4.35)-14.84 (-22.19 to -7.50) | 32 | **Medication: Beta-Blocker** >70%≤70% |
| All of studies: LVEF more than 50% | **Mean LVEF**>50%≤50% |
| * No
 | -- | -0.68 (-7.64 to 6.28)-15 (-22.96 to -7.03) | 11 | **Cross clamp time**>60 minutes≤60 minutes |
| * No
 | -- | --15 (-22.96 to -7.03) | 01 | **CPB time**>100 minutes≤ 100 minutes  |
| **Mean Platelet Volume**  |
| All of studies: after 2000 | **Year of Publication**>2000≤2000 |
| All of studies: European  | **Geographic area**AsianEuropean Africa North AmericanSouth AmericanAustralia  |
| All of studies: cohort  | **Design of study**CohortCase-control |
| * No
 | 84.1% and 0.001 and 0.001-- | 0.646 (0.559 to 0.732)-0.07 (-0.10 to 0.241) | 501 | **Type of surgery**CABG aloneValve aloneCABG and Valve  |
| * No
 | 84.1% and 0.001 and 0.001-- | 0.646 (0.559 to 0.732)-0.07 (-0.10 to 0.241) | 501 | **Using of CPB**On-pumpOff-pumpCombined data |
| All of studies: Elective surgery | **Status of surgery**ElectiveNon-elective  |
| * No
 | -72.5% and 0.006 and 0.043 | 0.710 (0.616 to 0.804)0.140 (0.004 to 0.276) | 15 | **Number of population**>200≤200 |
| All of studies: age more than 60 years | **Mean Age**>60 years≤60 years |
| * No
 | 72.5% and 0.006 and 0.043- | 0.140 (0.004 to 0.276)0.710 (0.616 to 0.804) | 51 | **Male**>70%≤70% |
| * Yes, probably
 | 80.8% and 0.001 and 0.00124.5% and 0.250 and 0.604 | 0.665 (0.578 to 0.735)0.043 (-1.20 to 0.206) | 42 | **Diabetes mellitus** >30%≤30% |
| * Yes, probably
 | 0.0% and 0.407 and 0.40981.2% and 0.005 and 0.001 | 0.064 (-0.088 to 0.216)0.687 (0.597 to 0.777) | 33 | **Hypertension**>70%≤70% |
| * No
 | 92.9% and 0.001 and 0.001- | 0.514 (0.436 to 0.593)1.00 (0.508 to 1.492) | 51 | **Cigarette smoking** >30%≤30% |
| * No
 | -- | 0.100 (-0.287 to 0.487)- | 10 | **Myocardial infarction**>20%≤20% |
| * No
 | -- | 0.200 (-0.217 to 0.617)- | 10 | **Medication: Diuretic** >70%≤70% |
| * No
 | -24.5% and 0.250 and 0.604 | 0.200 (-0.217 to 0.617)0.043 (-0.120 to 0.206) | 12 | **Medication: ACEI** >70%≤70% |
| * No
 | 0.0% and 0.571 and 0.269- | 0.088 (-0.069 to 0.245)-0.300 (-0.907 to 0.307) | 21 | **Medication: Statin** >70%≤70% |
| * No
 | 0.0% and 0.407 and 0.409- | 0.064 (-0.088 to 0.216)- | 30 | **Medication: Beta-Blocker** >70%≤70% |
| * No
 | 92.5% and 0.001 and 0.001- | 0.540 (0.462 to 0.618)-0.300 (-0.907 to 0.307) | 51 | **Mean LVEF**>50%≤50% |
| * No
 | -90.4% and 0.001 and 0.001 | 0.070 (-0.100 to 0.240)0.686 (0.594 to 0.779) | 12 | **Cross clamp time**>60 minutes≤60 minutes |
| * No
 | -- | -0.300 (-0.907 to 0.307)0.710 (0.616 to 0.804) | 11 | **CPB time**>100 minutes≤ 100 minutes  |
| **White blood cell count** |
| All of studies: after 2000 | **Year of Publication**>2000≤2000 |
| * No
 | -51.8% and 0.008 and 0.001-71.8% and 0.060 and 0.012-- | -0.200 (-0.764 to 0.364)0.133 (0.080 to 0.185)-0.780 (0.173 to 1.387)-0.500 (-1.116 to 0.116)- | 1160210 | **Geographic area**AsianEuropean Africa North AmericanSouth AmericanAustralia  |
| * Yes, probably
 | 29.9% and 0.118 and 0.00177.8% and 0.011 and 0.003 | 0.140 (0.089 to 0.192)-0.709 (-1.176 to -0.242) | 173 | **Design of study**CohortCase-control |
| * No
 | 65.3% and 0.001 and 0.001-0.0% and 0.513 and 0.001 | 0.156 (0.077 to 0.236)-0.111 (0.043 to 0.179) | 1505 | **Type of surgery**CABG aloneValve aloneCABG and Valve  |
| * No
 | 59.9% and 0.001 and 0.002-0.0% and 0.509 and 0.001 | 0.100 (0.038 to 0.163)-0.200 (-0.764 to 0.364)0.202 (0.109 to 0.295) | 1513 | **Using of CPB**On-pumpOff-pumpCombined data |
| * No
 | 58.5% and 0.001 and 0.001- | 0.163 (0.088 to 0.237)- | 170 | **Status of surgery**ElectiveNon-elective  |
| * Yes, probably
 | 23.6% and 0.249 and 0.00166.8% and 0.001 and 0.550 | 0.134 (0.081 to 0.188)0.063 (-0.145 to 0.271) | 713 | **Number of population**>200≤200 |
| All of studies: age more than 60 years  | **Mean Age**>60 years≤60 years |
| * Yes, probably
 | 39.8% and 0.051 and 0.00186.4% and 0.001 and 0.200 | 0.139 (0.086 to 0.191)-0.212 (-0.536 to 0.112) | 163 | **Male**>70%≤70% |
| * Yes, probably
 | 71.8% and 0.001 and 0.6700.0% and 0.572 and 0.001 | 0.031 (-0.111 to 0.173)0.138 (0.082 to 0.194) | 88 | **Diabetes mellitus** >30%≤30% |
| * Yes, probably
 | 72% and 0.001 and 0.63410.3% and 0.349 and 0.001 | -0.052 (-0.265 to 0.162)0.140 (0.087 to 0.193) | 99 | **Hypertension**>70%≤70% |
| * No
 | 0.0% and 0.515 and 0.00784.9% and 0.001 and 0.001 | 0.192 (0.052 to 0.332)0.123 (0.066 to 0.181) | 84 | **Cigarette smoking** >30%≤30% |
| * No
 | 50.8% and 0.071 and 0.001- | 0.192 (0.098 to 0.285)- | 60 | **Myocardial infarction**>20%11≤20% |
| * No
 | -65.6% and 0.055 and 0.004 | --0.613 (-1.034 to -0.192) | 03 | **Medication: Diuretic** >70%≤70% |
| * Yes, probably
 | 0.0% and 0.453 and 0.92173.2% and 0.001 and 0.001 | -0.033 (-0.684 to 0.618)0.167 (0.087 to 0.247) | 28 | **Medication: ACEI** >70%≤70% |
| * Yes, probably
 | 0.0% and 0.517 and 0.00177.2% and 0.001 and 0.090 | 0.191 (0.100 to 0.283)0.122 (-0.019 to 0.264) | 58 | **Medication: Statin** >70%≤70% |
| * No
 | 69% and 0.002 and 0.00162.5% and 0.014 and 0.031 | 0.165 (0.076 to 0.254)0.161 (0.015 to 0.307) | 87 | **Medication: Beta-Blocker** >70%≤70% |
| * Yes, probably
 | 7.4% and 0.372 and 0.00178.8% and 0.009 and 0.649 | 0.144 (0.091 to 0.197)-0.128 (-0.677 to 0.422) | 133 | **Mean LVEF**>50%≤50% |
| * Yes, probably
 | 42.4% and 0.157 and 0.38181.8% and 0.001 and 0.001 | 0.105 (-0.130 to 0.339)0.167 (0.085 to 0.249) | 45 | **Cross clamp time**>60 minutes≤60 minutes |
| * Yes, probably
 | 33.2% and 0.224 and 0.81079% and 0.001 and 0.001 | -0.038 (-0.344 to 0.268)0.168 (0.086 to 0.249) | 37 | **CPB time**>100 minutes≤ 100 minutes  |
| **Neutrophil to lymphocyte ratio (NLR)** |
| All od studies: after 2000 | **Year of Publication**>2000≤2000 |
| All of studies: European  | **Geographic area**AsianEuropean Africa North AmericanSouth AmericanAustralia  |
| All of studies: cohort  | **Design of study**CohortCase-control |
| * No
 | 3.2% and 0.376 and 0.001-- | 0.527 (0.471 to 0.584)-0.240 (0.199 to 0.281) | 401 | **Type of surgery**CABG aloneValve aloneCABG and Valve  |
| * No
 | 25.4% and 0.259 and 0.001-- | 0.243 (0.202 to 0.283)-0.530 (0.473 to 0.587) | 301 | **Using of CPB**On-pumpOff-pumpCombined data |
| All of studies: Elective surgery | **Status of surgery**ElectiveNon-elective  |
| * No
 | 97% and 0.001 and 0.001- | 0.338 (0.304 to 0.371)0.694 (0.228 to 1.159) | 31 | **Number of population**>200≤200 |
| All of studies: age more than 60 years  | **Mean Age**>60 years≤60 years |
| All of studies: percentage of male more than 70% | **Male**>70%≤70% |
| * No
 | 28.9% and 0.245 and 0.01398.5% and 0.001 and 0.001 | 0.435 (0.090 to 0.779)0.339 (0.305 to 0.372) | 32 | **Diabetes mellitus** >30%≤30% |
| * No
 | -95.5% and 0.001 and 0.001 | 0.800 (0.120 to 1.480)0.338 (0.305 to 0.371) | 14 | **Hypertension**>70%≤70% |
| * Yes, probably
 | 59.2% and 0.117 and 0.0790.0% and 0.831 and 0.001 | 0.367 (-0.043 to 0.776)0.531 (0.474 to 0.587) | 22 | **Cigarette smoking** >30%≤30% |
| * No
 | -- | 0.530 (0.473 to 0.587)- | 10 | **Myocardial infarction**>20%≤20% |
| * No
 | -- | -0.800 (0.120 to 1.480) | 01 | **Medication: Diuretic** >70%≤70% |
| * No
 | -- | 0.800 (0.120 to 1.480)0.530 (0.473 to 0.587) | 11 | **Medication: ACEI** >70%≤70% |
| * No
 | 0.0% and 0.438 and 0.001- | 0.532 (0.475 to 0.589)0.240 (0.199 to 0.281) | 21 | **Medication: Statin** >70%≤70% |
| * No
 | 0.0% and 0.438 and 0.001- | 0.532 (0.475 to 0.589)0.120 (-0.393 to 0.633) | 21 | **Medication: Beta-Blocker** >70%≤70% |
| * No
 | 3.2% and 0.376 and 0.001- | 0.527 (0.471 to 0.584)- | 40 | **Mean LVEF**>50%≤50% |
| * No
 | -58.8% and 0.119 and 0.001 | 0.240 (0.199 to 0.281)0.525 (0.468 to 0.582) | 12 | **Cross clamp time**>60 minutes≤60 minutes |
| * No
 | -58.8% and 0.119 and 0.001 | 0.240 (0.199 to 0.281)0.525 (0.468 to 0.582) | 12 | **CPB time**>100 minutes≤ 100 minutes  |
| * **Preoperative hematologic indices**
 |
| **White blood cell count** |
| All of studies: after 2000 | **Year of Publication**>2000≤2000 |
| * No
 | -88.2% and 0.001 and 0.001-77.8% and 0.011 and 0.001-- | 1.100 (-0.011 to 2.211)1.349 (1.228 to 1.471)-1.800 (1.144 to 2.456)-- | 1703-- | **Geographic area**AsianEuropean Africa North AmericanSouth AmericanAustralia  |
| * No
 | 69.1% and 0.002 and 0.00153.9% and 0.114 and 0.007 | 1.411 (1.292 to 1.531)-1.176 (-2.029 to -0.323) | 83 | **Design of study**CohortCase-control |
| * No
 | 88.2% and 0.001 and 0.001-72% and 0.013 and 0.001 | 1.341 (1.156 to 1.527)-1.375 (1.221 to 1.529) | 704 | **Type of surgery**CABG aloneValve aloneCABG and Valve  |
| * No
 | 88.9% and 0.001 and 0.001-- | 1.269 (1.119 to 1.418)1.100 (-0.011 to 2.211)1.529 (1.332 to 1.726) | 711 | **Using of CPB**On-pumpOff-pumpCombined data |
| * No
 | 89.9% and 0.001 and 0.001- | 1.393 (1.209 to 1.577)- | 70 | **Status of surgery**ElectiveNon-elective  |
| * Yes, probably
 | 59.3% and 0.031 and 0.00189.5% and 0.001 and 0.588 | 1.396 (1.276 to 1.517)0.192 (-0.502 to 0.885) | 65 | **Number of population**>200≤200 |
| All of studies: age more than 60 years | **Mean Age**>60 years≤60 years |
| * Yes, probably
 | 52.4% and 0.040 and 0.00194.9% and 0.001 and 0.384 | 1.390 (1.270 to 1.510)0.322 (-0.403 to 1.047) | 83 | **Male**>70%≤70% |
| * Yes, probably
 | 85.7% and 0.001 and 0.32438.5% and 0.181 and 0.001 | -0.293 (-0.874 to 0.289)1.420 (1.297 to 1.543) | 34 | **Diabetes mellitus** >30%≤30% |
| * No
 | 83.9% and 0.001 and 0.09482% and 0.001 and 0.001 | 0.425 (-0.072 to 0.922)1.417 (1.296 to 1.539) | 55 | **Hypertension**>70%≤70% |
| * No
 | 64% and 0.062 and 0.01894.9% and 0.001 and 0.001 | 0.682 (0.118 to 1.246)1.381 (1.258 to 1.504) | 33 | **Cigarette smoking** >30%≤30% |
| * No
 | 0.0% and 0.440 and 0.001- | 1.503 (1.316 to 1.691)- | 50 | **Myocardial infarction**>20%≤20% |
| * No
 | -70.6% and 0.065 and 0.005 | --1.227 (-2.087 to -0.368) | 02 | **Medication: Diuretic** >70%≤70% |
| * No
 | 43.3% and 0.184 and 0.00294.9% and 0.001 and 0.001 | 1.111 (0.400 to 1.821)1.418 (1.226 to 1.610) | 23 | **Medication: ACEI** >70%≤70% |
| * Yes, probably
 | 18% and 0.301 and 0.00194.7% and 0.001 and 0.634 | 1.506 (1.318 to 1.694)0.187 (-0.582 to 0.955) | 43 | **Medication: Statin** >70%≤70% |
| * No
 | 90.4% and 0.001 and 0.00184.2% and 0.001 and 0.001 | 1.397 (1.212 to 1.582)1.099 (0.447 to 1.752) | 54 | **Medication: Beta-Blocker** >70%≤70% |
| * No
 | 80.0% and 0.001 and 0.001- | 1.407 (1.286 to 1.529)1.200 (-0.709 to 3.109) | 61 | **Mean LVEF**>50%≤50% |
| * No
 | -95.9% and 0.001 and 0.001 | -1.365 (1.175 to 1.556) | 03 | **Cross clamp time**>60 minutes≤60 minutes |
| * No
 | -91.7% and 0.001 and 0.001 | -1.363 (1.175 to 1.551) | 05 | **CPB time**>100 minutes≤ 100 minutes  |
| **Abbreviation:** N: Number, WMD: Weight Mean Difference, CI: Confidence Interval, CABG: Coronary Artery Bypass Graft, CPB: Cardiopulmonary Bypass, ACEI: Angiotensin Converting Enzyme Inhibitor, LVEF: Left Ventricle Ejection Fraction. |