**Supplemental Table 3. Subgroup-analysis**

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| --- | --- | --- | --- | --- |
| **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)  -  - | 0  6  0  1  0  0 | **Geographic area**  Asian  European  Africa  North American  South American  Australia |
| All of studies: cohort | | | | **Design of study**  Cohort  Case-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) | 5  0  2 | **Type of surgery**  CABG alone  Valve alone  CABG 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) | 6  0  1 | **Using of CPB**  On-pump  Off-pump  Combined data |
| All of studies: Elective surgery | | | | **Status of surgery**  Elective  Non-elective |
| * No | -  38.8% and 0.14 and 0.322 | -15.0 (-22.96 to -7.03)  -2.90 (-8.67 to 2.87) | 1  6 | **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) | 6  1 | **Male**  >70%  ≤70% |
| * Yes, probably | 57.1% and 0.07 and 0.001  0.0% and 0.92 and 0.86 | -13.07 (-20.02 to -6.21)  -0.59 (-7.30 to 6.11) | 4  2 | **Diabetes mellitus**  >30%  ≤30% |
| * Yes, probably | 32.6% and 0.22 and 0.52  52.6% and 0.097 and 0.001 | -2.12 (-8.60 to 4.35)  -12.44 (-19.20 to -5.69) | 3  4 | **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) | 5  1 | **Cigarette smoking**  >30%  ≤30% |
| * No | 21.8% and 0.258 and 0.287  - | 10.06 (-8.45 to 28.57)  - | 2  0 | **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) | 1  2 | **Medication: ACEI**  >70%  ≤70% |
| * Yes, probably | 65.8% and 0.087 and 0.499  0.0% and 0.921 and 0.001 | -2.31 (-9.02 to 4.39)  -14.84 (-22.19 to -7.50) | 2  2 | **Medication: Statin**  >70%  ≤70% |
| * No | 32.6% and 0.222 and 0.521  0.0% and 0.921 and 0.001 | -2.12 (-8.60 to 4.35)  -14.84 (-22.19 to -7.50) | 3  2 | **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) | 1  1 | **Cross clamp time**  >60 minutes  ≤60 minutes |
| * No | -  - | -  -15 (-22.96 to -7.03) | 0  1 | **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**  Asian  European  Africa  North American  South American  Australia |
| All of studies: cohort | | | | **Design of study**  Cohort  Case-control |
| * No | 84.1% and 0.001 and 0.001  -  - | 0.646 (0.559 to 0.732)  -  0.07 (-0.10 to 0.241) | 5  0  1 | **Type of surgery**  CABG alone  Valve alone  CABG 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) | 5  0  1 | **Using of CPB**  On-pump  Off-pump  Combined data |
| All of studies: Elective surgery | | | | **Status of surgery**  Elective  Non-elective |
| * No | -  72.5% and 0.006 and 0.043 | 0.710 (0.616 to 0.804)  0.140 (0.004 to 0.276) | 1  5 | **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) | 5  1 | **Male**  >70%  ≤70% |
| * Yes, probably | 80.8% and 0.001 and 0.001  24.5% and 0.250 and 0.604 | 0.665 (0.578 to 0.735)  0.043 (-1.20 to 0.206) | 4  2 | **Diabetes mellitus**  >30%  ≤30% |
| * Yes, probably | 0.0% and 0.407 and 0.409  81.2% and 0.005 and 0.001 | 0.064 (-0.088 to 0.216)  0.687 (0.597 to 0.777) | 3  3 | **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) | 5  1 | **Cigarette smoking**  >30%  ≤30% |
| * No | -  - | 0.100 (-0.287 to 0.487)  - | 1  0 | **Myocardial infarction**  >20%  ≤20% |
| * No | -  - | 0.200 (-0.217 to 0.617)  - | 1  0 | **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) | 1  2 | **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) | 2  1 | **Medication: Statin**  >70%  ≤70% |
| * No | 0.0% and 0.407 and 0.409  - | 0.064 (-0.088 to 0.216)  - | 3  0 | **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) | 5  1 | **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) | 1  2 | **Cross clamp time**  >60 minutes  ≤60 minutes |
| * No | -  - | -0.300 (-0.907 to 0.307)  0.710 (0.616 to 0.804) | 1  1 | **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)  - | 1  16  0  2  1  0 | **Geographic area**  Asian  European  Africa  North American  South American  Australia |
| * Yes, probably | 29.9% and 0.118 and 0.001  77.8% and 0.011 and 0.003 | 0.140 (0.089 to 0.192)  -0.709 (-1.176 to -0.242) | 17  3 | **Design of study**  Cohort  Case-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) | 15  0  5 | **Type of surgery**  CABG alone  Valve alone  CABG 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) | 15  1  3 | **Using of CPB**  On-pump  Off-pump  Combined data |
| * No | 58.5% and 0.001 and 0.001  - | 0.163 (0.088 to 0.237)  - | 17  0 | **Status of surgery**  Elective  Non-elective |
| * Yes, probably | 23.6% and 0.249 and 0.001  66.8% and 0.001 and 0.550 | 0.134 (0.081 to 0.188)  0.063 (-0.145 to 0.271) | 7  13 | **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 0.001  86.4% and 0.001 and 0.200 | 0.139 (0.086 to 0.191)  -0.212 (-0.536 to 0.112) | 16  3 | **Male**  >70%  ≤70% |
| * Yes, probably | 71.8% and 0.001 and 0.670  0.0% and 0.572 and 0.001 | 0.031 (-0.111 to 0.173)  0.138 (0.082 to 0.194) | 8  8 | **Diabetes mellitus**  >30%  ≤30% |
| * Yes, probably | 72% and 0.001 and 0.634  10.3% and 0.349 and 0.001 | -0.052 (-0.265 to 0.162)  0.140 (0.087 to 0.193) | 9  9 | **Hypertension**  >70%  ≤70% |
| * No | 0.0% and 0.515 and 0.007  84.9% and 0.001 and 0.001 | 0.192 (0.052 to 0.332)  0.123 (0.066 to 0.181) | 8  4 | **Cigarette smoking**  >30%  ≤30% |
| * No | 50.8% and 0.071 and 0.001  - | 0.192 (0.098 to 0.285)  - | 6  0 | **Myocardial infarction**  >20%  11≤20% |
| * No | -  65.6% and 0.055 and 0.004 | -  -0.613 (-1.034 to -0.192) | 0  3 | **Medication: Diuretic**  >70%  ≤70% |
| * Yes, probably | 0.0% and 0.453 and 0.921  73.2% and 0.001 and 0.001 | -0.033 (-0.684 to 0.618)  0.167 (0.087 to 0.247) | 2  8 | **Medication: ACEI**  >70%  ≤70% |
| * Yes, probably | 0.0% and 0.517 and 0.001  77.2% and 0.001 and 0.090 | 0.191 (0.100 to 0.283)  0.122 (-0.019 to 0.264) | 5  8 | **Medication: Statin**  >70%  ≤70% |
| * No | 69% and 0.002 and 0.001  62.5% and 0.014 and 0.031 | 0.165 (0.076 to 0.254)  0.161 (0.015 to 0.307) | 8  7 | **Medication: Beta-Blocker**  >70%  ≤70% |
| * Yes, probably | 7.4% and 0.372 and 0.001  78.8% and 0.009 and 0.649 | 0.144 (0.091 to 0.197)  -0.128 (-0.677 to 0.422) | 13  3 | **Mean LVEF**  >50%  ≤50% |
| * Yes, probably | 42.4% and 0.157 and 0.381  81.8% and 0.001 and 0.001 | 0.105 (-0.130 to 0.339)  0.167 (0.085 to 0.249) | 4  5 | **Cross clamp time**  >60 minutes  ≤60 minutes |
| * Yes, probably | 33.2% and 0.224 and 0.810  79% and 0.001 and 0.001 | -0.038 (-0.344 to 0.268)  0.168 (0.086 to 0.249) | 3  7 | **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**  Asian  European  Africa  North American  South American  Australia |
| All of studies: cohort | | | | **Design of study**  Cohort  Case-control |
| * No | 3.2% and 0.376 and 0.001  -  - | 0.527 (0.471 to 0.584)  -  0.240 (0.199 to 0.281) | 4  0  1 | **Type of surgery**  CABG alone  Valve alone  CABG 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) | 3  0  1 | **Using of CPB**  On-pump  Off-pump  Combined data |
| All of studies: Elective surgery | | | | **Status of surgery**  Elective  Non-elective |
| * No | 97% and 0.001 and 0.001  - | 0.338 (0.304 to 0.371)  0.694 (0.228 to 1.159) | 3  1 | **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 0.013  98.5% and 0.001 and 0.001 | 0.435 (0.090 to 0.779)  0.339 (0.305 to 0.372) | 3  2 | **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) | 1  4 | **Hypertension**  >70%  ≤70% |
| * Yes, probably | 59.2% and 0.117 and 0.079  0.0% and 0.831 and 0.001 | 0.367 (-0.043 to 0.776)  0.531 (0.474 to 0.587) | 2  2 | **Cigarette smoking**  >30%  ≤30% |
| * No | -  - | 0.530 (0.473 to 0.587)  - | 1  0 | **Myocardial infarction**  >20%  ≤20% |
| * No | -  - | -  0.800 (0.120 to 1.480) | 0  1 | **Medication: Diuretic**  >70%  ≤70% |
| * No | -  - | 0.800 (0.120 to 1.480)  0.530 (0.473 to 0.587) | 1  1 | **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) | 2  1 | **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) | 2  1 | **Medication: Beta-Blocker**  >70%  ≤70% |
| * No | 3.2% and 0.376 and 0.001  - | 0.527 (0.471 to 0.584)  - | 4  0 | **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) | 1  2 | **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) | 1  2 | **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)  -  - | 1  7  0  3  -  - | **Geographic area**  Asian  European  Africa  North American  South American  Australia |
| * No | 69.1% and 0.002 and 0.001  53.9% and 0.114 and 0.007 | 1.411 (1.292 to 1.531)  -1.176 (-2.029 to -0.323) | 8  3 | **Design of study**  Cohort  Case-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) | 7  0  4 | **Type of surgery**  CABG alone  Valve alone  CABG 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) | 7  1  1 | **Using of CPB**  On-pump  Off-pump  Combined data |
| * No | 89.9% and 0.001 and 0.001  - | 1.393 (1.209 to 1.577)  - | 7  0 | **Status of surgery**  Elective  Non-elective |
| * Yes, probably | 59.3% and 0.031 and 0.001  89.5% and 0.001 and 0.588 | 1.396 (1.276 to 1.517)  0.192 (-0.502 to 0.885) | 6  5 | **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 0.001  94.9% and 0.001 and 0.384 | 1.390 (1.270 to 1.510)  0.322 (-0.403 to 1.047) | 8  3 | **Male**  >70%  ≤70% |
| * Yes, probably | 85.7% and 0.001 and 0.324  38.5% and 0.181 and 0.001 | -0.293 (-0.874 to 0.289)  1.420 (1.297 to 1.543) | 3  4 | **Diabetes mellitus**  >30%  ≤30% |
| * No | 83.9% and 0.001 and 0.094  82% and 0.001 and 0.001 | 0.425 (-0.072 to 0.922)  1.417 (1.296 to 1.539) | 5  5 | **Hypertension**  >70%  ≤70% |
| * No | 64% and 0.062 and 0.018  94.9% and 0.001 and 0.001 | 0.682 (0.118 to 1.246)  1.381 (1.258 to 1.504) | 3  3 | **Cigarette smoking**  >30%  ≤30% |
| * No | 0.0% and 0.440 and 0.001  - | 1.503 (1.316 to 1.691)  - | 5  0 | **Myocardial infarction**  >20%  ≤20% |
| * No | -  70.6% and 0.065 and 0.005 | -  -1.227 (-2.087 to -0.368) | 0  2 | **Medication: Diuretic**  >70%  ≤70% |
| * No | 43.3% and 0.184 and 0.002  94.9% and 0.001 and 0.001 | 1.111 (0.400 to 1.821)  1.418 (1.226 to 1.610) | 2  3 | **Medication: ACEI**  >70%  ≤70% |
| * Yes, probably | 18% and 0.301 and 0.001  94.7% and 0.001 and 0.634 | 1.506 (1.318 to 1.694)  0.187 (-0.582 to 0.955) | 4  3 | **Medication: Statin**  >70%  ≤70% |
| * No | 90.4% and 0.001 and 0.001  84.2% and 0.001 and 0.001 | 1.397 (1.212 to 1.582)  1.099 (0.447 to 1.752) | 5  4 | **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) | 6  1 | **Mean LVEF**  >50%  ≤50% |
| * No | -  95.9% and 0.001 and 0.001 | -  1.365 (1.175 to 1.556) | 0  3 | **Cross clamp time**  >60 minutes  ≤60 minutes |
| * No | -  91.7% and 0.001 and 0.001 | -  1.363 (1.175 to 1.551) | 0  5 | **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. | | | | |