Table H-2. Subgroup results for KQ 2: antiplatelet and anticoagulant medications in the initial conservative treatment of patients with UA/NSTEMI

| **Study** | **Study Details** | **Subgroup** | **Results Reported by Authors** |
| --- | --- | --- | --- |
| Anonymous, 199839  PURSUIT study | RCT  Total N: 10,948  Eptifibatide vs. placebo  Good | Age | Age <50  Total mortality  Eptifibatide: 0.8%  Placebo: 0.9%  Nonfatal MI  Eptifibatide: 8.2%  Placebo: 9.5%  Composite outcome (death or nonfatal MI)  Eptifibatide: 8.7%  Placebo: 9.6%  GUSTO moderate or severe bleeding  Eptifibatide: 4.6%  Placebo: 3.9% |
| Age 50-59  Total mortality  Eptifibatide: 1.4%  Placebo: 01.5%  Nonfatal MI  Eptifibatide: 9.0%  Placebo: 12.8%  Composite outcome (death or nonfatal MI)  Eptifibatide: 9.7%  Placebo: 13.8%  GUSTO moderate or severe bleeding  Eptifibatide: 9.2%  Placebo: 6.8% |
| Age 60-69  Total mortality  Eptifibatide: 3.0%  Placebo: 3.5%  Nonfatal MI  Eptifibatide: 12.6%  Placebo: 13.0%  Composite outcome (death or nonfatal MI)  Eptifibatide: 14.3%  Placebo: 15.0%  GUSTO moderate or severe bleeding  Eptifibatide: 13.9%  Placebo: 11.7% |
| Age <65  Total mortality  OR (95% CI): 0.785 (0.657-0.939), favoring eptifibatide |
| Age > 65  Total mortality  OR (95% CI): 0.977 (0.840-1.136), favoring eptifibatide |
| Early invasive management | Early invasive management  Composite outcome (death or nonfatal MI at 96 hrs)  Eptifibatide (N=606): 9.4%  Placebo (N=622): 15.3%  OR (95% CI): 0.576 (0.406-0.817)  Composite outcome (death or nonfatal MI at 7 days)  Eptifibatide (N=606): 10.2%  Placebo (N=622): 16.1%  OR (95% CI): 0.595 (0.424-0.835)  Composite outcome (death or nonfatal MI at 30 days)  Eptifibatide (N=606): 11.6%  Placebo (N=622): 16.7%  OR (95% CI): 0.650 (0.469-0.901) |
| Sex | Male  Composite outcome (death or MI)  OR (95% CI): 0.795 (0.691-0.917) favoring eptifibatide |
| Diabetes | Diabetes vs. no diabetes  Composite outcome (death or MI)  Diabetes:  OR=0.960 (95% CI, 0.769 to 1.193)  No diabetes:  OR=0.874 (95% CI, 0.763 to 0.997), favoring eptifibatide |
| CHF at presentation (Killip II/III vs. Killip I) | Killip II/III  Composite outcome (death or MI at 7 days)  Eptifibatide:16.9%  Placebo: 18.8%  OR (95% CI): 1.14 (0.8-1.6)  Composite outcome (death or MI at 30 days)  Eptifibatide: 23.5%  Placebo: 25.5%  OR (95% CI): 1.11 (0.8-1.5) |
| Killip I  Composite outcome (death or MI at 7 days)  Eptifibatide: 9.4%  Placebo: 11.0%  OR (95% CI): 1.2 (1.0-1.4)  Composite outcome (death or MI at 30 days)  Eptifibatide: 13.3%  Placebo: 14.8%  OR (95% CI): 1.13 (1.0-1.3) |
| Geography | US (N=1766)  Total mortality at 96 hrs: 1.1%  Total mortality at 7 days: 2.0%  Total mortality at 30 days: 3.5%  Total mortality at 6 months: 5.5%  Nonfatal MI at 96 hrs: 8.9%  Nonfatal MI at 7 days: 10.8%  Nonfatal MI at 30 days: 13.3%  Nonfatal MI at 6 months: 15.5%  Composite outcome (death or nonfatal MI at 96 hrs): 9.6%  Composite outcome (death or nonfatal MI at 7 days): 12.1%  Composite outcome (death or nonfatal MI at 30 days): 15.4%  Composite outcome (death or nonfatal MI at 6 months): 18.9%  TIMI major bleeding: 1.8%  GUSTO severe bleeding: 0.4%  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): 0.53 (0.25-1.05) |
| Non-US (N=1756)  Total mortality at 96 hrs: 0.6%, p=0.11  Total mortality at 7 days: 1.4%, p=0.16  Total mortality at 30 days: 3.0%, p=0.41  Total mortality at 6 months: 5.0%, p=0.52  Nonfatal MI at 96 hrs: 6.0%, p=0.001  Nonfatal MI at 7 days: 8.2%, p=0.008  Nonfatal MI at 30 days: 10.2%, p=0.004  Nonfatal MI at 6 months: 12.6%, p=0.012  Composite outcome (death or nonfatal MI at 96 hrs): 6.4%, p0.005  Composite outcome (death or nonfatal MI at 7 days): 9.1%, 0.003  Composite outcome (death or nonfatal MI at 30 days): 11.9%, p=0.003  Composite outcome (death or nonfatal MI at 6 months): 15.2%, p=0.004  TIMI major bleeding: 4.8%, p<0.0001  GUSTO severe bleeding: 1.5%, p<0.0001  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): 0.68 (0.44-1.00) |
| UA vs. MI | Unstable Angina  Death at 30 days  Eptifibatide (n=2584): 3.0%  Placebo (n=2545): 2.4% (p=0.227)  Death at 90 days  Eptifibatide: 4.3%  Placebo: 3.9% (p=0.440)  Death at 180 days  Eptifibatide: 5.8%  Placebo: 4.9% (p=0.192)  Composite outcome (death or MI at 30 days)  Eptifibatide: 11.2%  Placebo: 13.0%  Composite outcome (death or MI at 90 days)  Eptifibatide: 12.8%  Placebo: 15.0%  Composite outcome (death or MI at 180 days)  Eptifibatide: 14.9%  Placebo: 16.3%  Moderate to severe bleeding  Eptifibatide: 13.2%  Placebo: 10.1% (p=0.001) |
| MI  Death at 30 days  Eptifibatide (n=2124): 4.0%  Placebo (n=2184): 5.3% (p=0.043)  Death at 90 days  Eptifibatide: 5.7%  Placebo: 6.5% (p=0.308)  Death at 180 days  Eptifibatide: 7.1%  Placebo: 7.9% (p=0.519)  Composite outcome (death or MI at 30 days)  Eptifibatide:17.9%  Placebo: 18.9% (p=0.387)  Composite outcome (death or MI at 90 days)  Eptifibatide: 19.9%  Placebo: 20.3% (p=0.732)  Composite outcome (death or MI at 180 days)  Eptifibatide: 21.3%  Placebo: 22.2% (p=0.505)  Moderate to severe bleeding  Eptifibatide: 12.6%  Placebo: 9.6% (p=0.002) |
| PTCA | Patients treated with PTCA  Composite outcome (death or MI at 30 days)  Eptifibatide (n=555): 12.1%  Placebo (n=596): 15.3%  p=0.123  Composite outcome (death or MI at 180 days)  Eptifibatide: 14.0%  Placebo: 18.5%  p=0.045  Death at 30 days  Eptifibatide: 2.5%  Placebo: 2.3%  p=0.851  Death 180 days  Eptifibatide: 3.8%  Placebo: 3.9%  p=1.00  TIMI major bleeding  Eptifibatide: 7.1%  Placebo: 4.5%  p=0.001 |
| Medical management | Patients medically managed (N=992)  Composite outcome (death, MI, refractory ischemia, or readmission for UA at 30 days)  RR (95% CI): 0.84 (0.65-1.10), favoring tirofiban vs. UFH  Composite outcome (death or MI)  RR (95% CI): 0.58 (0.38-0.87)  Total mortality  RR (95% CI): 0.53 (0.32-0.89)  Nonfatal MI  RR (95% CI): 0.65 (0.36-1.15) |
| MI vs. no MI | MI at enrollment  Composite outcome (death or MI)  OR (95% CI): 0.930 (0.795-1.09) |
| No MI at enrollment  Composite outcome (death or MI)  OR (95% CI): 0.849 (0.715-1.01) |
| Anonymous, 199840  PRISM study | RCT  Total N: 3,232  Tirofiban vs. UFH  Good | Medically managed | Tirofiban (N=992) vs. UFH (N=1007)  Composite outcome (death, MI, refractory ischemia, or readmission for UA at 30days)  RR (95% CI): 0.84 (0.65-1.10) with lower risk in Tirofiban  Composite outcome (death or MI at 30 days)  RR (95% CI): 0.58 (0.38-0.87)  Total mortality at 30 days  RR (95% CI): 0.53 (0.32-0.89)  Nonfatal MI at 30 days  RR (95% CI): 0.65 (0.36-1.15) |
| Percutaneous coronary revascularization | Tirofiban (N=348) vs. UFH (N=352)  Composite outcome (death, MI, refractory ischemia, or readmission for UA at 30days)  RR (95% CI): 0.72 (0.53-0.98)  Composite outcome (death or MI at 30 days)  RR (95% CI): 0.76 (0.45-1.69)  Total mortality at 30 days  RR (95% CI): 0.28 (0.06-1.36) |
| Age | Age <65  Composite outcome (death, MI, or refractory ischemia within 48 hrs)  RR (95% CI): 0.72 (0.41-1.23) |
| Age 65-74  Composite outcome (death, MI, or refractory ischemia within 48 hrs)  RR (95% CI): 0.55 (0.28-1.01) |
| Age >75  Composite outcome (death, MI, or refractory ischemia within 48 hrs)  RR (95% CI): 0.57 (0.28-1.11) |
| Age >65  Composite outcome (death, MI, or refractory ischemia within 48 hrs)  RR (95% CI): 0.57 (0.35-0.88) |
| Sex | Female  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): 0.54 (0.30-0.96) |
| Male  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): 0.67 (0.43-1.03) |
| Diabetes | Diabetes  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI) :0.43 (0.20-0.90) |
| No diabetes  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): 0.72 (0.47-1.04) |
| Geography | US  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): 0.53 (0.25-1.05) |
| Non-US  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): 0.68 (0.44-1.00) |
| Prior ASA | Prior ASA  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): 0.82 (0.52-1.26) |
| No prior ASA  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): (0.42-0.23-0.74) |
| Prior heparin | Prior heparin  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): 0.65 (0.43-0.95)  No prior heparin  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  RR (95% CI): 0.60 (0.29-1.17) |
| Anonymous, 199841  PRISM-PLUS study | RCT  Total N:1,875  Tirofiban 0.4 + UFH vs. placebo + UFH  Good | Age | Age <65 yrs (N=402)  Composite outcome (death, MI, refractory ischemia at 7 days)  Heparin: 50  Tirofiban + heparin: 34 |
| Age ≥65 yrs (N=395)  Composite outcome (death, MI, refractory ischemia at 7 days)  Heparin: 93  Tirofiban + heparin: 66 |
| Sex | Female  Composite outcome (death, MI, refractory ischemia at 48 hrs)  Heparin (N=252): 7.5%  Tirofiban + heparin (N=254): 5.9%  RR (95% CI): 0.78 (0.40-1.53)  p=0.47  Composite outcome (death, MI, refractory ischemia at 7 days)  Heparin: 48  Tirofiban + heparin: 34  RR (95% CI): 0.67 (0.43-1.04)  p=0.08  Composite outcome (death, MI, refractory ischemia at 30 days)  Heparin: 21.4%  Tirofiban + heparin: 20.1%  RR (95% CI): 0.89 (0.61-1.31)  p=0.56  Composite outcome (death, MI, refractory ischemia at 180 days)  Heparin: 31.3%  Tirofiban + heparin: 33.5%  RR (95% CI): 1.02 (0.76-1.40)  p=0.86  Composite outcome (death or MI at 48 hrs)  Heparin: 1.6%  Tirofiban + heparin: 5.9%  RR (95% CI): 0.73 (0.16-3.3)  p=0.69  Composite outcome (death or MI at 7 days)  Heparin: 6.3%  Tirofiban + heparin: 5.5%  RR (95% CI): 0.86 (0.42-1.78)  p=0.69  Composite outcome (death or MI at 30 days)  Heparin: 9.9%  Tirofiban + heparin: 10.2%  RR (95% CI): 1.02 (0.59-1.77)  p=0.94  Composite outcome (death or MI at 180 days)  Heparin: 12.7%  Tirofiban + heparin: 14.2%  RR (95% CI): 1.11 (0.69-1.78)  p=0.68  TIMI major bleeding  Heparin: 0.8%  Tirofiban + heparin: 2.4%  RR (95% CI): 2.98 (0.61-14.61)  p=0.16 |
| Male  Composite outcome (death, MI, refractory ischemia at 48 hrs)  Heparin (N=545): 95  Tirofiban + heparin (N=519): 55  TIMI major bleeding  Heparin: 0.7%  Tirofiban + heparin: 1.0%  RR (95% CI): 1.31 (0.35-4.86)  p=0.68 |
| Diabetes | No diabetes (N=1208)  Composite outcome ( death, MI, refractory ischemia at 7 days)  Heparin (N=604): 101  Tirofiban + heparin (N=604): 75  TIMI major bleeding  Heparin (N=604): 0.8%  Tirofiban + heparin (N=604): 1.7% |
| Diabetes (N=362)  Composite outcome ( death, MI, refractory ischemia at 7 days)  Heparin (N=193): 42  Tirofiban + heparin (N=169): 25  Composite outcome (death, MI, refractory ischemia, rehospitalization for ischemia at 30 days)  Heparin (N=193): 39.9%  Tirofiban + heparin (N=169): 32.0%  P=0.11  TIMI major bleeding  Heparin (N=193): 0.5%  Tirofiban + heparin (N=169): 0.6%  Composite outcome (death or MI at 30 days)  Heparin (N=193): 19.2%  Tirofiban + heparin (N=169): 11.2%  p=0.03 |
| UA vs. MI | UA  Composite outcome ( death, MI, refractory ischemia at 7 days)  Heparin (N=428): 78  Tirofiban + heparin (N=428): 61 |
| Any MI  Composite outcome ( death, MI, refractory ischemia at 7 days)  Heparin (N=369): 65  Tirofiban + heparin (N=345): 39 |
| PCI | No PCI  Composite outcome (death, MI, refractory ischemia at 30 days)  Tirofiban: 21.3%  Tirofiban + heparin : 18.7%  RR (95% CI): 12% (0.63-1.15)  Composite outcome (death or MI at 30 days)  Tirofiban: 11.6%  Tirofiban + heparin : 8.9%  RR (95% CI): 23% (0.50-1.12) |
| PCI  Composite outcome (death, MI, refractory ischemia at 30 days)  Tirofiban: 24.7%  Tirofiban + heparin : 18.15%  RR (95% CI): 27% (0.44-1.04)  Composite outcome (death or MI at 30 days)  Tirofiban: 13%  Tirofiban + heparin : 8.3%  RR (95% CI): 36% (0.34-1.08) |
| Prior CABG | Composite outcome (death, MI, refractory ischemia at 7 days)  Heparin (N=107): 29%  Tirofiban + heparin (N=124): 16.9%  HR (95% CI): HR 0.548 (0.314-0.957)  p=0.035  Composite outcome (death, MI, refractory ischemia at 30 days)  Heparin (N=107): 40.2%  Tirofiban + heparin (N=124): 25%  HR (95% CI): 0.563 (0.354-0.895)  p=0.015  Composite outcome (death or MI at 7 days)  Heparin (N=107): 12.1%  Tirofiban + heparin (N=124): 6.5%  HR (95% CI): 0.508 (0.210-1.230)  p=0.134  Composite outcome (death or MI at 30 days)  Heparin (N=107): 17.8%  Tirofiban + heparin (N=124): 12.1%  HR (95% CI): 0.645 (0.327-1.272)  p=0.206 |
| Renal insufficiency | Creatinine clearance <30 mL/min (N=40)  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  Heparin + tirofiban: 10%  Heparin: 15%  Composite outcome (death, MI, or refractory ischemia at 7 days)  Heparin + tirofiban: 35%  Heparin: 45%  Composite outcome (death, MI, or refractory ischemia at 30 days)  Heparin + tirofiban: 50%  Heparin: 50%  Composite outcome (death or MI at 7 days)  Heparin + tirofiban: 5%  Heparin: 20%  Composite outcome (death or MI at 30 days)  Heparin + tirofiban: 15%  Heparin: 25%  TIMI major bleeding  Heparin + tirofiban: 0%  Heparin: 0% |
| Creatinine clearance 30-60 mL/min (N=571)  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  Heparin + tirofiban: 6.1%  Heparin: 11.9%  Composite outcome (death, MI, or refractory ischemia at 7 days)  Heparin + tirofiban: 17.9%  Heparin: 23.8%  Composite outcome (death, MI, or refractory ischemia at 30 days)  Heparin + tirofiban: 24.8%  Heparin: 29.7%  Composite outcome (death or MI at 7 days)  Heparin + tirofiban: 4.6%  Heparin: 8.6%  Composite outcome (death or MI at 30 days)  Heparin + tirofiban: 13%  Heparin: 15.2%  TIMI major bleeding  Heparin + tirofiban: 1.8%  Heparin: 1.4% |
| Creatinine clearance 60-75 mL/min (N=354)  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  Heparin + tirofiban: 10%  Heparin: 7.5%  Composite outcome (death, MI, or refractory ischemia at 7 days)  Heparin + tirofiban: 13.9%  Heparin: 15.5%  Composite outcome (death, MI, or refractory ischemia at 30 days)  Heparin + tirofiban: 19%  Heparin: 19%  Composite outcome (death or MI at 7 days)  Heparin + tirofiban: 0.6%  Heparin: 8.0%  Composite outcome (death or MI at 30 days)  Heparin + tirofiban: 8.9%  Heparin: 9.8%  TIMI major bleeding  Heparin + tirofiban: 0.6%  Heparin: 0% |
| Creatinine clearance >75 mL/min (N=572)  Composite outcome (death, MI, or refractory ischemia at 48 hrs)  Heparin + tirofiban: 4.7%  Heparin: 4.1%  Composite outcome (death, MI, or refractory ischemia at 7 days)  Heparin + tirofiban: 6.8%  Heparin: 12.3%  Composite outcome (death, MI, or refractory ischemia at 30 days)  Heparin + tirofiban: 11.1%  Heparin: 16.0%  Composite outcome (death or MI at 7 days)  Heparin + tirofiban: 0.4%  Heparin: 7.4%  Composite outcome (death or MI at 30 days)  Heparin + tirofiban: 4.3%  Heparin: 9.7%  TIMI major bleeding  Heparin + tirofiban: 1.7%  Heparin:0.7% |
| Troponin positive | Troponin positive  Composite outcome (death or MI)  Heparin + tirofiban (N=28): 3.6%  Heparin (N=34): 20.6%  p=0.06 |
| Troponin negative  Composite outcome (death or MI)  Heparin + tirofiban (N=27): 9.5%  Heparin (N=21): 11.1%  p=1.00 |
| Antman, 1999 2  TIMI 11B study | RCT  Total N: 3,910  Enoxaparin vs. UFH  Good | UA or MI | UA (N=2289)  Composite outcome (death, MI, urgent revasc at 14 days)  UFH: 15.3%  Enoxaparin: 12.8% |
| Non-Q Wave MI (N=1334)  Composite outcome (death, MI, urgent revasc at 14 days)  UFH: 18.6%  Enoxaparin: 17.2% |
| Q Wave MI (N=143)  Composite outcome (death, MI, urgent revasc at 14 days)  UFH: 23.4%  Enoxaparin: 20.3% |
| Blazing, 2004 6  A to Z study | RCT  Total N: 3,987  Enoxaparin vs. UFH  Good | Early invasive vs. conservative management | Early invasive  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=1111): 8.8%  UFH (N=1080): 8.5% |
| Initial conservative  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=904): 7.7%  UFH (N=869): 10.6% |
| Age | <65 yrs  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=1213): 6.4%  UFH (N=1155): 7.4% |
| ≥65 yrs  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=805): 11.3%  UFH (N=794): 12.5% |
| Sex | Male  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=1438): 8.3%  UFH (N=1388): 9.4% |
| Female  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=580): 8.6%  UFH (N=52): 9.3% |
| Diabetes | Diabetes  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=1395): 8.4%  UFH (N=356): 10.7% |
| No diabetes  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=1620): 8.3%  UFH (N=1593): 9.2% |
| Geography | US  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=420): 6.7%  UFH (N=378): 7.7% |
| Non-US  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=1598): 8.8%  UFH (N=155): 9.8% |
| Troponin level | Normal troponin level  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=334): 8.1%  UFH (N=323): 8.0% |
| Elevated troponin level  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=1072): 8.3%  UFH (N=100): 9.5% |
| TIMI risk score | TIMI 0-2  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=846): 6.4%  UFH (N=752): 5.7% |
| TIMI 3-4  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=888): 8.1%  UFH (N=945): 10.2% |
| TIMI 5-7  Composite outcome (death, MI, recurrent ischemia within 7 days)  Enoxaparin (N=284): 15.1%  UFH (N=45): 17.9% |
| Conservative strategy | Conservative strategy  UFH (N=872)  Enoxaparin (N=906)  Total mortality at 7 days  HR 1.32 (0.61-2.82), p=0.49  Total mortality at 30 days  HR 1.51 (0.81-2.83), p=0.20  Nonfatal MI at 7 days  HR 0.50 (0.26-0.98)  Nonfatal MI at 30 days  HR 0.67 (0.41-1.08), p=0.10  Refractory ischemia at 7 days  HR 0.69 (0.47-1.00), p=0.05  Refractory ischemia at 30 days  HR 0.77 (0.54-1.08), p=0.13  Urgent revascularization at 7 days  HR 0.66 (0.39-1.14), p=0.14  Urgent revascularization at 30 days  HR 0.90 (0.59-1.37)  Composite outcome (death, MI, and refractory ischemia at 7 days)  HR 0.72 (0.53-0.99), p=0.04  Composite outcome (death, MI, and refractory ischemia at 30 days)  HR 0.80 (0.61-1.05), p=0.10  Composite outcome (death, MI, refractory ischemia, urgent revascularization, and documented myocardial ischemia at 7 days)  HR 0.73 (0.56-0.96), p=0.03  Composite outcome (death, MI, refractory ischemia, urgent revascularization, and documented myocardial ischemia at 30 days)  HR 0.78 (0.62-0.99), p=0.04  TIMI major or minor bleeding within 24 hours of tirofiban infusion  UFH: 0.8%  Enoxaparin: 1.5% |
| Brieger, 20078 | Observational  Total N: 2,874  LMWH vs. UFH  Fair | Use of PCI and IIb/IIIa inhibitors | Patients who did not get PCI and did not receive GPIs  Mortality in-hospital  LMWH (N=7957)  UFH (N=4271)  OR (95%CI) 0.74 (0.62-0.88), Adjusted OR (95%CI) 0.77 (0.63-0.94) favoring LMWH  Major bleed in-hospital  LMWH (N=7957)  UFH (N=4271)  OR (95%CI) 0.62(0.48-0.80), Adjusted OR (95%CI) 0.80 (0.60-1.10) favoring LMWH |
| Patients who did get PCI and did not receive GPIs  Mortality in-hospital  LMWH (N=1468)  UFH (N=728)  OR (95%CI) 0.41 (0.22-0.78), Adjusted OR (95%CI) 0.45 (0.21-0.98), favoring LMWH  Major bleed in-hospital  LMWH (N=1468)  UFH (N=728)  OR (95% CI) 1.04 (0.62-1.73), Adjusted OR (95%CI) 1.48 (0.84-2.60). favoring increased bleeding with LMWH |
| Patients who did get PCI and did receive GPIs  Mortality in-hospital  LMWH (N=928)  UFH (N=1091)  OR (95% CI) 0.80 (0.40-1.42), Adjusted OR (95%CI) 0.83 (0.40-1.76), favoring LMWH  Major bleed in-hospital  LMWH (N=928)  UFH (N=1091)  OR (95% CI) 0.64 (0.39-1.02), Adjusted OR (95%CI) 0.64 (0.38-1.08), favoring LMWH |
| Patients who did not get PCI but did receive GPIs  Mortality in-hospital  LMWH (N=390)  UFH (N=617)  OR (95% CI) 0.73 (0.40-1.35), Adjusted OR (95%CI) 0.83 (0.42-1.63) favoring LMWH  Major bleed in-hospital  LMWH (N=390)  UFH (N=617)  OR (95% CI) 1.45 (0.87-2.41), Adjusted OR (95%CI) 1.90 (1.09-3.29) favoring increased bleeding with LMWH |
| Cohen, 1997 9  ESSENCE study | RCT  Total N: 3,171  Enoxaparin vs. UFH  Good | Age | <65 yrs  Composite outcome (death, MI, recurrent angina at 30 days)  UFH (N=798): 23.2%  Enoxaparin (N=785): 17.6%  OR 1.05 |
| ≥65 yrs  Composite outcome (death, MI, recurrent angina at 30 days)  UFH (N=776): 124  Enoxaparin (N=128): 128  OR 1.4 |
| Diabetes | Diabetes  Composite outcome (death, MI, recurrent angina at 30 days)  UFH (N=399): 79  Enoxaparin (N=360): 66  OR 1.35 |
| No diabetes  Composite outcome (death, MI, recurrent angina at 30 days)  UFH (N=1225): 230  Enoxaparin (N=1247): 200  OR 1.21 |
| Prior MI | Prior MI  Composite outcome (death, MI, recurrent angina at 30 days)  Heparin (N=745): 149  Enoxaparin (N=723): 118  OR 1.28 |
| No prior MI  Composite outcome (death, MI, recurrent angina at 30 days)  UFH (N=791): 154  Enoxaparin (N=850): 144  OR 1.19 |
| In-hospital PCI | In-hospital PCI  Composite outcome (death, MI at 43 days)  UFH (N=3028): 244  Enoxaparin (N=3129): 210  OR 0.82 (0.68-0.99), p=0.044  Composite outcome (death, MI at 1 yr)  UFH (N=3028): 387  Enoxaparin (N=3129): 384  OR 0.95 (0.82-1.11, p=0.547)  Major hemorrhage at 43 days  UFH (N=2982): 148  Enoxaparin (3091): 185  OR 1.22 (0.8-1.52)  Major hemorrhage at 1 yr  UFH (N=2982): 30  Enoxaparin (N=3091): 55  55/3091, OR 1.78 (1.14-2.79), p=0.011 |
| No in-hospital PCI  Composite outcome (death, MI at 43 days)  UFH (N=493): 29  Enoxaparin (N=431): 14  OR 0.54 (0.28-1.03), p=0.062  Composite outcome (death, MI at 1 yr)  UFH (N=493): 59  Enoxaparin (N=431): 27  OR 0.49 (0.31-0.79 ), p=0.003  Major hemorrhage at 43 days  UFH (N=483): 30  Enoxaparin (N=425): 23  OR 0.86, p=0.49-1.51, p=0.608  Major hemorrhage at 1 yr  UFH (N=483): 11  Enoxaparin (N=425): 2  OR 0.20 (0.04-0.92), p=0.039 |
| Ferguson, 200413  SYNERGY Study | RCT  Total N: 10,027  Enoxaparin vs. UFH vs. Fondaparinux  Good | Sex | Male  Composite outcome (death or MI at 30 days)  Enoxaparin (N=3296): 14.2%  UFH (N=3299): 15.4%  p=0.16 |
| Female  Composite outcome (death or MI at 30 days)  Enoxaparin: 13.5%  UFH: 12.9%  p=0.59 |
| Diabetes | Diabetes  Composite outcome (death or MI at 30 days)  Enoxaparin (N=1422): 15.6%  UFH (N=1500): 15.7%  p=0.94 |
| No diabetes  Composite outcome (death or MI at 30 days)  Enoxaparin (N=3568): 13.3%  UFH (N=3482): 14.0%  p=0.36 |
| Geography | Australia/New Zealand  Composite outcome (death or MI at 30 days)  Enoxaparin (N=206): 11.2%  UFH (N=208): 10.6%  p=0.91 |
| Europe  Composite outcome (death or MI at 30 days)  Enoxaparin (N=908): 13.0%  UFH (N=904): 13.2%  p=0.91 |
| North America  Composite outcome (death or MI at 30 days)  Enoxaparin (N=242): 27.3%  UFH (N=239): 29.7%  p=0.45 |
| South America  Composite outcome (death or MI at 30 days)  Enoxaparin (N=3636): 13.5%  UFH (N=3632): 14.1%  p=0.47 |
| History of smoking | Smoking current  Composite outcome (death or MI at 30 days)  Enoxaparin (N=1178): 12.3%  UFH (N=1225): 15.9%  p=0.009 |
| Smoking prior  Composite outcome (death or MI at 30 days)  Enoxaparin (N=1756): 15.2%  UFH (N=1735): 14.9%  p=0.82 |
| Smoking never  Composite outcome (death or MI at 30 days)  Enoxaparin (N=2056): 13.9%  UFH (N=2018): 13.4%  p=0.065 |
| Prior revascularization | Prior PCI  Composite outcome (death or MI at 30 days)  Enoxaparin (N=1044): 13.9%  UFH (N=964): 14.1%  p=0.92 |
| No prior PCI  Composite outcome (death or MI at 30 days)  Enoxaparin (N=3947): 14.0%  UFH (N=4017): 14.6%  p=0.37 |
| Prior CABG  Composite outcome (death or MI at 30 days)  Enoxaparin (N=805): 13.2%  UFH (N=853): 15.8%  p=0.15 |
| No prior CABG  Composite outcome (death or MI at 30 days)  Enoxaparin (N=4186): 14.1%  UFH (N=4124): 14.3%  p=0.77 |
| Prerandomization antithrombin therapy | No prerandomization antithrombin therapy  Composite outcome (death or MI at 30 days)  Enoxaparin (N=1212): 12.6%  UFH(N=1228): 14.8%  HR 0.84 (0.68-1.05) |
| Prerandomization enoxaparin only  Composite outcome (death or MI at 30 days)  Enoxaparin (N=2186): 13.6%  UFH (N=2108): 13.1%  HR 1.04 (0.88-1.23) |
| Prerandomization UFH only  Composite outcome (death or MI at 30 days)  Enoxaparin (N=1428): 15.2%  UFH (N=1512): 16.7%  HR 0.89 (0.74-1.08) |
| Prerandomization both agents  Composite outcome (death or MI at 30 days)  Enoxaparin (N=167): 18.1%  UFH (N=137): 9.5%  HR 2.0 (1.03-3.90) |
| Postrandomization crossovers | No crossover  Composite outcome (death or MI at 30 days)  Enoxaparin (N=4400): 13.5%  UFH (N=4780): 14.2% |
| Crossover  Composite outcome (death or MI at 30 days)  Enoxaparin(N=593): 17.4%  UFH (N=205): 22.0% |
| Patients who underwent PCI | PCI patients with and without crossover to alternative antithrombotic therapy  Composite outcome (death or MI at 30 days)  Enoxaparin (N=2323): 13.1%  UFH (N=2363): 14.2%  HR 0.92 (0.79-1.07), p=0.289  Total mortality at 30 days  Enoxaparin: 1.7%  UFH: 1.8%  HR 0.95 (0.62-1.46), p=0.804  Nonfatal MI at 30 days  Enoxaparin: 11.8%  UFH: 13.2%  HR 0.89 (0.76-1.05), p=0.172  GUSTO severe bleeding at 30 days  Enoxaparin: 1.5%  UFH: 1.6%  HR 0.92 (0.57-1.45), p=0.688 |
| PCI patients without crossover antithrombotic strategy  TIMI Major bleeding at 30 days  Enoxaparin: 3.7%  UFH: 2.5%  HR 1.46 (1.04-2.04), p=0.028  TIMI minor bleeding at 30 days  Enoxaparin: 11.2%  UFH: 11.6%  HR 0.97 (0.80-1.16), p=0.699  Any transfusion at 30 days  Enox: 5.8%  UFH: 5.4%  HR 1.28 (1.00-1.63), p=0.047 |
| Composite outcome (death or MI at 30 days)  Enoxaparin (N=2028): 12.5%  UFH (N=2293): 13.7%,  HR 0.91 (0.77-1.07), p=0.265  Total mortality at 30 days  Enoxaparin: 1.3%  UFH: 1.7%  HR 0.76 (0.47-1.24), p=0.276  Nonfatal MI at 30 days  Enoxaparin: 11.5%  UFH: 12.8%  HR 0.90 (0.76-1.07), p=0.222  GUSTO severe bleeding at 30 days  Enoxaparin: 1.1%  UFH: 1.6 %  HR 0.70 (0.41-1.18), p=0.181  TIMI Major bleeding at 30 days  Enoxaparin: 3.1%  UFH: 2.4%  HR 1.31 (0.90-1.90), p=0.154  TIMI minor bleeding at 30 days  Enoxaparin 10.4%  UFH: 11.4%  HR 0.90 (0.75-1.10), p=0.309 Any transfusion at 30 days  Enoxaparin: 5.8%  UFH 5.0%  HR 1.17 (0.90-1.53), p=0.243 |
| Patients receiving no antithrombotic before randomization  Composite outcome (death or MI at 30 days)  Enoxaparin (N=499): 12.0%  UFH (N=524): 16.3%,  HR 0.727 (0.523-1.012), p=0.053 |
| Patients undergoing CABG surgery | Patients undergoing CABG surgery  Death or MI at 30 days  Enoxaparin (N=855): 27.3%  UFH (N=921): 30.9%  adjusted HR 0.90 (0.75-1.07), p=0.239  Adjusted stroke rate at 6 months  Enoxaparin: 2.58% (95% CI 1.54-3.63)  UFH: 3.16% (95% CI 1.96-4.35), p=0.476  TIMI major bleeding at 30 days  Enoxaparin: 36.1%  UFH: 34.2%, adjusted HR 1.10 (0.94-1.38), p=0.229 |
| Timing of clopidogrel among CABG patients | Clopidogrel administration among CABG patients at baseline vs. no clopidogrel administration  TIMI major bleeding at 30 days  Adjusted HR 1.19 (0.99-1.43), p=0.053  Stroke at 30 days  Adjusted HR 0.87 (0.66-1.12, p=0.322)  Death or MI at 30 days  Clopidogrel: 24.1%  No clopidogrel: 29.0%  Adjusted HR 0.94, CI 0.83-1.06) p=0.332 |
| Prerandomization antithrombin therapy | No pre-treatment with antithrombin  Total mortality at 48 hrs: 15/2438  Total mortality at 30 days: 81/2438  Nonfatal MI at 48 hrs: 133/2440  Nonfatal MI at 30 days: 274/2440  Death or MI at 48 hrs: 146/2438  Death or MI at 30 days: 333/2438  Stroke at 30 days: 18/2440  GUSTO severe bleeding at 30 days: 58/2439  TIMI major bleeding (including CABG related) at 30 days: 203/2440 |
| Pre-randomization treatment with UFH only  Total mortality at 48 hrs: 12/2939  Total mortality at 30 days: 95/2939  Nonfatal MI at 48 hrs: 189/2940  Nonfatal MI at 30 days: 411/2940  Death or MI at 48 hrs: 198/2939  Death or MI at 30 days: 468/2939  Stroke at 30 days: 23/2940  GUSTO severe bleeding at 30 days: 72/2939  TIMI major bleeding (including CABG related) at 30 days: 255/2939 |
| Pre-randomization treatment with enoxaparin only  Total mortality at 48 hrs: 17/4294  Total mortality at 30 days: 125/4294  Nonfatal MI at 48 hrs: 234/4294  Nonfatal MI at 30 days: 488/4294  Death or MI at 48 hrs: 248/4294  Death or MI at 30 days: 574/4293  Stroke at 30 days: 47/4294  GUSTO severe bleeding at 30 days: 109/4294  TIMI major bleeding (including CABG related) at 30 days: 354/4294 |
| Pre-randomization treatment with both UFH and enoxaparin  Total mortality at 48 hrs: 3/304, unadjusted p-value 0.312  Total mortality at 30 days: 12/304, unadjusted p-value 0.628  Nonfatal MI at 48 hrs: 13/304, unadjusted p value 0.185  Nonfatal MI at 30 days: 34/304, unadjusted p-value 0.003  Death or MI at 48 hrs: 15/304, unadjusted p-value 0.302  Death or MI at 30 days: 43/304, unadjusted p-value 0.017  Stroke at 30 days: 4/304 , unadjusted p-value 0.327  GUSTO severe bleeding at 30 days: 6/304  TIMI major bleeding (including CABG related) at 30 days: 20/304 |
| Consistent therapy vs. no consistent therapy | Consistent therapy  Composite outcome (death or MI at 48 hrs): 374/6135  Composite outcome (death or MI at 30 days): 883/6135  Composite outcome (death, MI, or ischemia requiring revascularization at 30 days): 1024/6135 |
| No consistent therapy  Composite outcome (death or MI at 30 days): 221/3840, unadjusted p-value=0.858  Composite outcome (death, MI, or ischemia requiring revascularization at 30 days): 641/3838, unadjusted p-value=0.989 |
| Prerandomization antithrombotic therapy | Prerandomization UFH only  Composite outcome (adjusted death or MI at 30 days): Adjusted OR: 0.93 (0.75-1.14)  GUSTO severe bleeding at 30 days: Adjusted OR 1.04 (0.64-1.70)  TIMI bleeding at 30 days: Adjusted OR 1.00 (0.77-1.31) |
| Prerandomization enoxaparin only  Composite outcome (adjusted death or MI at 30 days): Adjusted OR 1.04 (0.87 (1.26)  GUSTO severe bleeding at 30 days: Adjusted OR 1.23 (0.84-1.81)  TIMI bleeding at 30 days: Adjusted OR 1.23 (0.98-1.53) |
| Prerandomization both UFH and enoxaparin  Composite outcome (adjusted death or MI at 30 days): Adjusted OR (1.97 (0.96-3.98)  GUSTO severe bleeding at 30 days: Adjusted OR 0.39 (0.07-2.21)  TIMI bleeding at 30 days |
| Neither UFH nor enoxaparin  Composite outcome (adjusted death or MI at 30 days): Adjusted OR 0.78 (0.62-1.00)  GUSTO severe bleeding at 30 days: Adjusted OR 1.88 (1.08-3.27)  TIMI bleeding at 30 days: Adjusted OR 1.40 (1.05-1.89) |
| Same pretreatment as randomization  Composite outcome (adjusted death or MI at 30 days): Adjusted OR 0.88 (0.73-1.06)  GUSTO severe bleeding at 30 days: Adjusted OR 1.25 (0.82-1.93)  TIMI bleeding at 30 days: Adjusted OR 1.11 (0.88-1.41) |
| Consistent therapy vs. no consistent therapy pre-randomization | Consistent therapy pre-randomization  Composite outcome (death or MI at 30 days)  Adjusted OR 0.86 (0.74-0.99), favoring Enoxaparin  TIMI bleeding at 30 days  Adjusted Or 1.23 (1.02-1.48), favoring Enoxaparin |
| No consistent therapy pre-randomization  Composite outcome (death or MI at 30 days)  Adjusted OR 1.15 ((0.95-1.39), favoring Enoxaparin  TIMI bleeding at 30 days  Adjusted OR 1.13 (0.88-1.44), favoring Enoxaparin |
| Roe, 201242 | RCT  Total N: 7243  Prasugrel vs. Clopidogrel  Good | Age | Patients < 65 years  Composite of CV death, nonfatal MI, stroke  N=4327; KM rates at 30 months were 11% in the prasugrel group compared to 14.7% in the clopidogrel group; HR 0.82 (0.67-1.01)  Non CABG related TIMI major bleed  N=4298; KM rates at 30 months were 1.9% vs. 0.9% in clopidogrel group; HR 1.84 (0.96-3.52) |
| Patients 65 years to 74 years  Composite of CV death, nonfatal MI, stroke  N=2916; KM rates at 30 months were 18.2% in prasugrel group vs. 18% in clopidogrel group; HR 1.02 (0.84-1.24)  Non CABG related TIMI major bleed  N=2882; KM rate at 30 months were 2.4% in prasugrel group vs. 2.3% in clopidogrel group; HR 0.84 (0.4-1.75) |
| Sex | Female  Composite of CV death, nonfatal MI, stroke  N=2599; KM rate at 30 months was 14.7% in prasugrel group vs. 14.8% in clopidogrel group  Composite of non CABG TIMI major bleed  N=2576; KM rate at 30 months was 1.8% in prasugrel group vs. 1.1% in clopidogrel group |
| Male  Composite of CV death, nonfatal MI, stroke  N=4644; KM rate at 30 months was 13.4% in prasugrel group vs. 16.6% in clopidogrel group  Composite of non CABG TIMI major bleed  N=4604; KM rate at 30 months was 2.3% in prasugrel group vs. 1.6% in clopidogrel group |
| Diabetes | Diabetic  Composite of CV death, nonfatal MI, stroke  N=2811; KM rate at 30 months was 17.8% in prasugrel group vs. 20.4% in clopidogrel group  Non CABG related TIMI major bleed  N=2783; KM rate at 30 months was 1.4% in prasugrel group vs. 1.0% in clopidogrel group |
| Not diabetic  Composite of CV death, nonfatal MI, stroke  N=4414; KM rate at 30 months was 11.5% in prasugrel group vs. 13.2% in clopidogrel group  Non CABG related TIMI major bleed  N=4381; KM rate at 30 months was 2.5% in prasugrel group vs. 1.7% in clopidogrel group |
| Unstable Angina | Unstable Angina  Composite of CV death, nonfatal MI, stroke  N=2356; Km rates at 30 months were 9.7% in prasugrel group vs. 11.1% in clopidogrel group  Non CABG related TIMI major bleed  N=2342; Km rates at 30 months were 1.7% in prasugrel group vs. 0.9% in clopidogrel group |
| NSTEMI  Composite of CV death, nonfatal MI, stroke  N=4887; Km rates at 30 months were 15.7% in prasugrel group vs. 18.2% in clopidogrel group  Non CABG related TIMI major bleed  N=4838; Km rates at 30 months were 2.2% in prasugrel group vs. 1.7% in clopidogrel group |
| Weight >60 kg | > 60 kg  Composite of CV death, nonfatal MI, stroke  N=939; KM rates at 30 months were 15.5% in prasugrel group and 22.4% in clopidogrel group  Non CABG related TIMI major bleed  N=934; KM rates at 30 months were 1.0% in prasugrel group and 2.0% in clopidogrel group |
| 60kg or greater  Composite of CV death, nonfatal MI, stroke  N=6300; KM rates at 30 months were 13.6% in prasugrel group and 15.1% in clopidogrel group  Non CABG related TIMI major bleed  N=6244; KM rates at 30 months were 2.3% in prasugrel group and 1.4% in clopidogrel group |
| Smoker | Smoker  Composite of CV death, nonfatal MI, stroke  N=1566; KM rates at 30 months were 11.7% in prasugrel group vs. 20.8% in clopidogrel group  Non CABG related TIMI major bleed  N=1555; KM rates at 30 months were 3.1% in prasugrel group vs. 1.5% in clopidogrel group |
| Not smoker  Composite of CV death, nonfatal MI, stroke  N=5614; KM rates at 30 months were 14.6% in prasugrel group vs. 14.6% in clopidogrel group  Non CABG related TIMI major bleed  N=5567; KM rates at 30 months were 1.9% in prasugrel group vs. 1.5% in clopidogrel group |
| <100 mg/day aspirin | < 100mg/day  Composite of CV death, nonfatal MI, stroke  N=2365; estimated KM rates at 30 months were 13.4% in prasugrel group and 15.9% in clopidogrel group  Non CABG related TIMI major bleed  N=2354; estimated KM rates at 30 months were 1.6% in prasugrel group and 0.3% in clopidogrel group |
| 100mg/day or greater  Composite of CV death, nonfatal MI, stroke  N=4295; estimated KM rates at 30 months were 13.7% in prasugrel group and 15.8% in clopidogrel group  Non CABG related TIMI major bleed  N=4258; estimated KM rates at 30 months were 2.4% in prasugrel group and 2.2% in clopidogrel group |
| PPI | On PPI at randomization  Composite of CV death, nonfatal MI, stroke  N=1666; estimated KM rates at 30 months were 14.6% in prasugrel group and 23.8% in clopidogrel group  Non CABG related TIMI major bleed  N=1651; estimated KM rates at 30 months were 1.0% in prasugrel group and 1.6% in clopidogrel group |
| No PPI at randomization  Composite of CV death, nonfatal MI, stroke  N=5577; estimated KM rates at 30 months were 13.7% in prasugrel group and 13.6% in clopidogrel group  Non CABG related TIMI major bleed N=5529; estimated KM rates at 30 months were 2.4% in prasugrel group and 1.4% in clopidogrel group |
| CrCl <30 ml/min | CrCl < 30 ml/min  Composite of CV death, nonfatal MI, stroke  N=105; estimated KM rates at 30 months were 28.1% in prasugrel group and 47.5% in clopidogrel group  Non CABG related TIMI major bleed  N=102; estimated KM rates at 30 months were 5.0% in prasugrel group and 4.3% in clopidogrel group |
| CrCl 30-60 ml/min  Composite of CV death, nonfatal MI, stroke  N=1407; estimated KM rates at 30 months were 22.7% in prasugrel group and 23.7% in clopidogrel group  Non CABG related TIMI major bleed  N=1397; estimated KM rates at 30 months were 1.1% in prasugrel group and 2.6% in clopidogrel group |
| CrCl > 60 ml/min  Composite of CV death, nonfatal MI, stroke  N=5432; estimated KM rates at 30 months were 11.9% in prasugrel group and 13.6% in clopidogrel group  Non CABG related TIMI major bleed  N=5388; estimated KM rates at 30 months were 2.3% in prasugrel group and 1.2% in clopidogrel group |
| Simoons, 2001 43  GUSTO-IV study | RCT  Total N: 1,875  Abciximab vs. placebo  Good | Sex | Male  Composite outcome (death or MI at 30 days)  Placebo: 8.6%  Abciximab 24 hrs: 8.5%  Abciximab 48 hrs: 8.6%  Total mortality at 1 yr  Placebo: 7.7%  Abciximab 24 hrs: 7.4%  Abciximab 48 hrs: 8.6% |
| Female  Composite outcome (death or MI at 30 days)  Placebo: 7.2%  Abciximab 24 hrs: 7.7%  Abciximab 48 hrs: 10.1%  Total mortality at 1 yr  Placebo: 8.0%  Abciximab 24 hrs: 9.4%  Abciximab 48 hrs: 9.6% |
| Age | Age <65 yrs  Composite outcome (death or MI at 30 days)  Placebo: 4.2%  Abciximab 24 hrs: 5.1%  Abciximab 48 hrs: 4.9% |
| Age ≥65 yrs  Composite outcome (death or MI at 30 days)  Placebo: 11.1%  Abciximab 24 hrs: 10.6%  Abciximab 48 hrs: 12.4% |
| Diabetes | Diabetes  Composite outcome (death or MI at 30 days)  Placebo: 11.4%  Abciximab 24 hrs: 9.6%  Abciximab 48 hrs: 11.0%  Total mortality at 1 yr  Placebo: 13.7%  Abciximab 24 hrs: 12.2%  Abciximab 48 hrs: 14.7% |
| No diabetes  Composite outcome (death or MI at 30 days)  Placebo: 7.1%  Abciximab 24 hrs: 7.8%  Abciximab 48 hrs: 8.6%  Total mortality at 1 yr  Placebo: 6.1%  Abciximab 24 hrs: 7.0%  Abciximab 48 hrs: 7.4% |
| Geography | North America  Composite outcome (death or MI at 30 days)  Placebo: 11.7%  Abciximab 24 hrs: 9.6%  Abciximab 48 hrs: 9.6% |
| Eastern Europe  Composite outcome (death or MI at 30 days)  Placebo: 7.7%  Abciximab 24 hrs: 6.8%  Abciximab 48 hrs: 8.7% |
| Other  Composite outcome (death or MI at 30 days)  Placebo: 7.3%  Abciximab 24 hrs: 9.0%  Abciximab 48 hrs: 9.2% |
| Singh, 200626 |  | Timing of PCI | PCI within 48 hrs of admission  Total mortality  LMWH (N=1970): 1.57%  UFH (N=4029): 1.49%  Adjusted OR (95%CI): 1.14 (0.71-0.85)  Composite outcome (death or reinfarction)  LMWH (N=1970): 3.45%  UFH (N=4029): 3.97%  Adjusted OR (95%CI): 0.93 (0.67-1.31)  RBC transfusion (all)  LMWH (N=1970): 5.63%  UFH (N=4029): 5.21%  Adjusted OR (95%CI): 1.16 (0.89-1.50) |
| No PCI within 48 hrs of admission  Total mortality  LMWH (N=1882): 3.88%  UFH (N=1989): 5.23%  Adjusted OR (95%CI): 0.64 (0.46-0.88)  Composite outcome (death or re-infarction)  LMWH (N=1882): 5.42%  UFH (N=1989): 8.70%  Adjusted OR (95%CI): 0.57 (0.44-0.73)  RBC transfusion (all)  LMWH (N=1882): 7.76%  UFH (N=1989): 10.71%  Adjusted OR (95%CI): 0.66 (0.52-0.84) |
| Age | Age <75 yrs  Composite outcome (death or re-infarction)  Adjusted OR (95% CI): 0.87 (0.69-1.09)  RBC Transfusions (All)  Adjusted OR (95% CI): 1.04 (0.91- 1.27)  RBC Transfusions (Non-CABG)  Adjusted OR (95% CI): 0.91 (0.74-1.15) |
| Age ≥75 yrs  Composite outcome (death or re-infarction)  Adjusted OR (95% CI): 0.78 (0.55- 1.01)  RBC Transfusions (All)  Adjusted OR (95% CI): 0.98 (0.81-1.27)  RBC Transfusions (Non-CABG)  Adjusted OR (95% CI): 0.72 (0.69-1.21) |
| Sex | Female  Composite outcome (death or re-infarction)  Adjusted OR (95% CI): 0.77 (0.57- 0.98)  RBC Transfusions (All)  Adjusted OR (95% CI): 1.04 (0.90- 1.30)  RBC Transfusions (Non-CABG)  Adjusted OR (95% CI): 1.00 (0.85- 1.30) |
| Male  Composite outcome (death or re-infarction)  Adjusted OR (95% CI): 0.87 (0.69- 1.12)  RBC Transfusions (All)  Adjusted OR (95% CI): 1.00 (0.87- 1.28)  RBC Transfusions (Non-CABG)  Adjusted OR (95% CI): 0.80 (0.59-1.03) |
| Diabetes | Diabetes  Composite outcome (death or re-infarction)  Adjusted OR (95%CI): 0.96 (0.72-1.38)  RBC transfusions (all)  Adjusted OR (95%CI): 1.05 (0.87-1.38)  RBC transfusions (non-CABG)  Adjusted OR (95%CI): 0.89 (0.7-1.17) |
| Revascularization | Revascularization  Composite outcome (death or re-infarction)  Adjusted OR (95% CI): 0.94 (0.75-1.25)  RBC transfusions (all)  Adjusted OR (95% CI): 1.31 (1.09-1.52)  RBC transfusions (non-CABG)  Adjusted OR (95% CI): 1.16 (0.92-1.49) |
| No revascularization  Composite outcome (death or re-infarction)  Adjusted OR (95% CI): 0.61 (0.50-0.82)  RBC transfusions (all)  Adjusted OR (95% CI): 0.67 (0.50-0.87)  RBC transfusions (non-CABG)  Adjusted OR (95% CI): 0.67 (0.50-0.87) |
| Spinler, 200344 | Observational  Total N: 7,081  Enoxaparin vs. UFH  Fair | Weight/BMI | BMI ≥30 kg/m2  Total mortality at 43 days  UFH: 2.5%  Enoxaparin: 2.6%  Adjusted OR (95% CI): 1.07 (0.60-1.92)  p=0.81  MI at 43 days  UFH: 6.1%  Enoxaparin: 4.9%  Adjusted OR (95% CI): 0.81 (0.55-1.23)  p=0.35  Composite outcome (death, MI or revascularization at 43 days)  UFH: 18.0%  Enoxaparin: 14.3%  Adjusted OR (95% CI): 0.78 (0.61, 1.0)  p=0.05  Major bleeding at 43 days  UFH: 1.2%  Enoxaparin: 0.4%  Adjusted OR (95% CI): 0.38 (0.11-1.14)  p=0.08 |
| Renal impairment | Creatinine clearance ≤30 mL/min  Total mortality at 43 days  UFH: 24.3%  Enoxaparin: 11.6%  Adjusted OR (95% CI): 0.43 (0.17-1.12)  p=0.09  MI at 43 days  UFH: 8.1%  Enoxaparin: 8.7%  Adjusted OR (95% CI): 1.45 (0.39-5.40)  p=0.58  Composite outcome (death, MI or revascularization at 43 days)  UFH: 32.4%  Enoxaparin: 18.8%  Adjusted OR (95% CI): 0.52 (0.23, 1.19)  p=0.12  Major bleeding at 43 days  UFH: 5.8%  Enoxaparin: 7.5%  Adjusted OR (95% CI): 1.53 (0.37-6.32)  p=0.56 |
| Stone, 2006 29  ACUITY study | RCT  Total N: 13,819 Bivalirudin vs. UFH or enoxaparin + GPI vs. bivalirudin + GPI  Good | Thienopyridine before angiography or PCI | Thienopyridine before angiography or PCI (N=5753)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 7.0%  Heparin + GPI: 7.3%  RR: 0.97 (0.80-1.17), p=0.054  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 16.0%  Heparin + GPI: 16.3  HR: 0.98 (0.86-1.11)  Total mortality at 1 yr  Bival alone: 3.4  Heparin + GPI: 3.7%  HR: 0.90 (0.68-1.18) |
| No thienopyridine before angiography or PCI (N=3304)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 9.1%  Heparin + GPI: 7.1%  RR: 1.29 (1.03-1.63), p=0.054 |
| Treatment strategy | PCI (N=5180)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 8.8% for bival alone, 8.2% for hep + GPI, RR 1.07 (0.90-1.28), p=0.82  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 19.4%  Heparin + GPI: 17.9  HR: 1.09 (0.96-1.23)  Total mortality at 1 yr  Bival alone: 3.1%  Heparin + GPI: 3.1%  HR: 0.90 (0.68-1.18) |
| CABG (N=1040)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 16.1%  Heparin + GPI: 15.1  RR: 1.06 (0.80-1.41), p=0.82  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 21.1%  Heparin + GPI: 20.7%  HR: 1.04 (0.80-1.36)  Total mortality at 1 yr  Bival alone: 6.8%  Heparin + GPI: 6.7%  HR: 1.03 (0.65-1.66) |
| Medical therapy (N=2995)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 3.4  Heparin + GPI: 2.7%  RR: 1.24 (0.83-1.85), p=0.82  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 9.1%  Heparin + GPI: 9.2%  HR: 0.98 (0.77-1.25)  Total mortality at 1 yr  Bival alone: 4.0%  Heparin + GPI: 4.1%  HR: 0.95 (0.66-1.37) |
| GPI use | GP IIb/IIIa upstream (N=6906)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 7.8%  Heparin + GPI: 6.9%  RR: 1.13 (0.95-1.36)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 16.2%  Heparin + GPI: 15.5%  HR: 1.05 (0.93-1.20)  Total mortality at 1 yr  Bival alone: 3.8%  Heparin + GPI: 4.1  HR: 0.90 (0.70-1.16) |
| GP IIb/IIIa deferred (N=6921)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 7.8%  Heparin + GPI: 7.6%  RR: 1.02 (0.86-1.22)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 16.2%  Heparin + GPI: 15.4%  HR: 1.06 (0.93-1.20)  Total mortality at 1 yr  Bival alone: 8%  Heparin + GPI: 3.6%  HR: 1.02 (0.78-1.32) |
| CKMB/troponin levels | Elevated biomarkers (N=5073)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 9.4%  Heparin + GPI: 8.4%  RR: 1.12 (0.94-1.34)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 17.7%  Heparin + GPI: 15.6%  HR: 1.14 (0.99-1.3)  Total mortality at 1 yr  Bival alone: 4.7%  Heparin + GPI: 4.5%  HR: 1.04 (0.80-1.34) |
| Normal biomarkers (N=3403)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 5.7%  Heparin + GPI: 5.4%  RR: 1.04 (0.79-1.38)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 14.2%  Heparin + GPI: 14.8%  HR: 0.96 (0.80-1.14)  Total mortality at 1 yr  Bival alone: 2.4%  Heparin + GPI: 2.8%  HR: 0.84 (0.55-1.28) |
| Randomization to angiography or intervention | Early (<3.0 hours) (N=2918)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 6.0%  Heparin + GPI: 5.8  RR: 1.04 (0.78-1.39)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 14.6%  Heparin + GPI: 14.7%  HR: 1.00 (0.83-1.21)  Total mortality at 1 yr  Bival alone: 2.0%  Heparin + GPI: 2.7%  HR: 0.72-0.44-1.15) |
| Intermediate (3.0-19.7 hours) (N=2925)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 7.0%  Heparin + GPI: 5.5%  RR: 1.26 (0.95-1.67)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 14.8%  Heparin + GPI: 13.9%  HR: 1.06 (0.87-1.28)  Total mortality at 1 yr  Bival alone: 3.0%  Heparin + GPI: 2.9%  HR: 0.95 (0.62-1.44) |
| Late (>19.7 hours) (N=2982)  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Bival alone: 10.0%  Heparin + GPI: 9.9%  RR: 1.01 (0.81-1.25)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 18.5%  Heparin + GPI: 17.1%  HR: 1.09 (0.92-1.29)  Total mortality at 1 yr  Bival alone: 5.8%  Heparin + GPI: 4.9%  HR: 1.17 (0.86-1.60) |
| Age | <65 yrs (N=5051)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 14.2%  Heparin + GPI: 15.4%  HR: 1.06 (0.95, 1.17)  Total mortality at 1 yr  Bival alone: 1.9%  Heparin + GPI: 2.0%  HR: 0.91 (0.61-1.35) |
| ≥ 65 yrs (B=4164)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 18.7%  Heparin + GPI: 17.6%  HR: 1.07 (0.93-1.23)  Total mortality at 1 yr  Bival alone: 6.0%  Heparin + GPI: 6.0%  HR: 0.98 (0.77-1.26) |
| Sex | Male (N=6444)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 17.1%  Heparin + GPI: 16.2%  HR: 1.06 (0.94-1.20)  Total mortality at 1 yr  Bival alone: 4.2%  Heparin + GPI: 3.9%  HR: 1.06 (0.83-1.36) |
| Female (N=2771)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 14.3%  Heparin + GPI: 13.7%  HR: 1.05 (0.86-1.29)  Total mortality at 1 yr  Bival alone: 2.8%  Heparin + GPI: 3.9%  HR: 0.71 (0.47-1.08) |
| Diabetes | Diabetes  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 19.5%  Heparin + GPI: 17.9%  HR: 1.08 (0.90-1.30)  Total mortality at 1 yr  Bival alone: 5.5%  Heparin + GPI: 5.4%  HR 0.99 (0.71-1.38) |
| No diabetes  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 14.9%  Heparin + GPI: 14.3%  HR: 1.05 (0.92-1.19)  Total mortality at 1 yr  Bival alone: 3.1%  Heparin + GPI: 3.2%  HR: 0.93 (0.71-1.22) |
| Creatinine clearance | Creatinine clearance ≥60  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 14.7%  Heparin + GPI: 14.7%  HR: 1.00 (0.89-1.13)  Total mortality at 1 yr  Bival alone: 2.9%  Heparin + GPI: 3.0%  HR: 0.96 (0.73-1.26) |
| Creatinine clearance <60  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 22.2%  Heparin + GPI: 18.8%  HR: 1.19 (0.96-1.48)  Total mortality at 1 yr  Bival alone: 7.1%  Heparin + GPI: 7.2%  HR: 0.99 (0.69-1.42) |
| Geography | US (N=5224)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 16.5%  Heparin + GPI: 16.6%  HR: 1.00 (0.87-1.14)  Total mortality at 1 yr  Bival alone: 3.6%  Heparin + GPI: 3.6%  HR: 1.00(0.74-1.34) |
| Non-US (N=3991)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 15.9%  Heparin + GPI: 13.9%  HR: 1.15 (0.98-1.34)  Total mortality at 1 yr  Bival alone: 4.1%  Heparin + GPI: 4.3%  HR: 0.91 (0.68-1.23) |
| Antithrombin crossovers | No prior antithrombin (N=3100)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 16.2%  Heparin + GPI: 13.8%  HR: 1.16 (0.96-1.39)  Total mortality at 1 yr  Bival alone: 3.4%  Heparin + GPI: 3.1%  HR: 1.03 (0.70-1.52) |
| Consistent therapy (N=5419)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 16.2%  Heparin + GPI: 15.6%  HR: 1.02 (0.88-1.19)  Total mortality at 1 yr  Bival alone: 3.4%  Heparin + GPI: 3.7%  HR: 0.91 (0.66-1.24) |
| Crossover (N=3255)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Bival alone: 16.0%  Heparin + GPI: 14.0%  HR: 1.16 (0.89-1.50)  Total mortality at 1 yr  Bival alone: 3.7%  Heparin + GPI: 4.7%  HR: 0.74 (0.47-1.18) |
| Thrombocytopenia | Acquired thrombocytopenia (N=760)  Composite outcome (ischemia, total death, MI, revascularization at 30 days): 12.5%  Composite outcome (ischemia, total death, MI, revascularization at 1 yr): 22.8%  Total mortality at 30 days: 3.1%  Total mortality at 1 yr: 6.5%  Nonfatal MI at 30 days: 7.5%  Nonfatal MI at 1 yr: 10.0%  Revascularization at 30 days: 5.3%  Revascularization at 1 yr: 13.8%  Non-CABG major bleeding at 30 days: 14.0%  Non-CABG minor bleeding at 30 days: 30.25%  Composite outcome (ischemia or major bleeding at 30 days): 21.7% |
| No thrombocytopenia (N=10096)  Composite outcome (ischemia, total death, MI, revascularization at 30 days): 6.3%  Composite outcome (ischemia, total death, MI, revascularization at 1 yr): 15.1%  Total mortality at 30 days: 1.1%  Total mortality at 1 yr: 3.4%  Nonfatal MI at 30 days: 4.1%  Nonfatal MI at 1 yr: 6.4%  Revascularization at 30 days: 2.4%  Revascularization at 1 yr: 9.1%  Non-CABG major bleeding at 30 days: 4.3%  Non-CABG minor bleeding: 18.7%  Composite outcome (ischemia or major bleeding at 30 days): 9.7% |
| Stent thrombosis | Stent thrombosis (N=32)  Total mortality at 30 days: 3.1%  Nonfatal MI at 30 days: 93.8%  Revascularization at 30 days: 96.9%  Non-CABG major bleeding at 30 days: 12.5% |
| No stent thrombosis (N=3373)  Total mortality at 30 days: 0.8%  p=0.23  Nonfatal MI at 30 days: 6.9%  p<0.0001  Revascularization at 30 days: 2.4%  p<0.0001  Non-CABG major bleeding at 30 days: 6.0%  p=0.13 |
| Patients who underwent PCI | PCI  Composite outcome (ischemia, total death, MI, revascularization at 30 days)  Heparin + GPI (N=2561): 8%  Bival + GPI (N=2609): 9%  compared with group 1, p=0.16, RR 1.14 (0.95-1.36)  Bival alone (N=2619): 9%  compared with group 1, p=0.45, RR 1.07 (0.89-1.28)  Composite outcome (ischemia, total death, MI, revascularization at 1 yr)  Heparin + GPI: 17.8%  Bival + GPI: 19.4%  compared with group 1, p=0.11, HR 1.11 (0.98-1.26)  Bival alone: 19.2% (502/2619), (compared with group 1, p=0.19, HR 1.09 (0.96-1.23)  Total mortality at 30 days  Heparin + GPI: 0.9%  Bival + GPI: 1%  compared with group 1, p=0.37  Bival alone: 1%  compared with group 1, p=0.53  Total mortality at 1 yr  Heparin + GPI: 3.2%  Bival + GPI: 3.3%,  compared with group 1, p=0.19, HR 1.02 (0.75-1.38)  Bival alone: 3.1%,  compared with group 1, p=0.76, HR 0.95 (0.70-1.3)  Nonfatal MI at 30 days  Heparin + GPI: 6%  Bival + GPI: 7%  compared with group 1, p=0.16  Bival alone: 6%  compared with group 1, p=0.19  Nonfatal MI at 1 yr  Heparin + GPI: 7.8%  Bival + GPI: 9.1%,  compared with group 1, p=0.10, HR 1.17 (0.97-1.41)  Bival alone: 9.3% (compared with group 1, p=0.06, HR 1.19 (0.99-1.44) |
| Revascularization at 30 days  Heparin + GPI: 3%  Bival + GPI: 4%  compared with group 1, p=0.31  Bival alone: 3%  compared with group 1, p=0.87  Revascularization at 1 yr  Heparin + GPI: 11.4%  Bival + GPI: 12.5%  compared with group 1, p=0.21, HR 1.11 (0.94-1.29)  Bival alone: 11.8%  compared with group 1, p=0.63, HR 1.04 (0.89-1.22)  Composite outcome (death, MI, revasc, major bleed at 30 days)  Heparin + GPI: 13%  Bival + GPI: 15%  compared with group 1, p=0.10, RR 1.12 (0.98-1.28)  Bival alone: 12%  compared with group 1, p=0.057, RR 0.87 (0.75-1.00)  Non-CABG major bleeding at 30 days  Heparin + GPI: 7%  Bival + GPI: 8%  compared with group 1, p=0.32, RR 1.11 (0.91-1.35)  Bival alone: 4%  compared with group 1, p<0.0001, RR 0.52 (0.0-0.66)  Minor bleeding at 30 days  Heparin + GPI: 26%  Bival + GPI: 28%  compared with group 1, p=0.053  Bival alone: 15%  compared with group 1, p<0.0001 |
| Timing of Clopidogrel in Patients receiving bival alone or heparin+GPI | Clopidogrel initiated before angiography or within 30 min after PCI  Composite outcome (ischemia death, MI, or revascularization at 30 days)  Heparin + GPI (N=2189): 8.3%  Bivalirudin (N=2284): 8.2%, RR 0.98 (0.81-1.20), p=0.88 compared to group 1  Composite outcome (ischemia death, MI, or revascularization at 1 yr)  Heparin + GPI: 17.9%  Bivalirudin: 18.75, RR 1.05 (0.93-1.10), p=0.45 compared to group 1  Total mortality at 30 days  Heparin + GPI: 0.8%  Bivalirudin: 1.0%, RR 1.22 (0.66-2.26), p=0.52 compared to group 1  Total mortality at 1 yr  Heparin + GPI: 3.0%  Bivalirudin: 3.1%, RR 1.05 (0.75-1.46), p=0.79 compared to group 1  Nonfatal MI at 30 days  Heparin + GPI: 5.8%  Bivalirudin: 6.0%, RR 1.05 (0.83-1.33), p=0.69  Revascularization at 30 days  Heparin + GPI: 3.3%  Bivalirudin: 2.8%, RR 0.87 (0.62-1.20), p=0.39  Non-CABG major bleeding at 30 days  Heparin + GPI: 6.6%  Bivalirudin: 3.5% (RR 0.53 (0.41-0.69), p<0.0001 |
| Clopidogrel initiated >30 minutes after PCI  Composite outcome (ischemia death, MI, or revascularization at 30 days)  Heparin + GPI (N=317): 8.5%  Bivalirudin (N=290): 14.1%, RR 1.66 (1.05-2.63), p=0.03 compared to group 1  Composite outcome (ischemia death, MI, or revascularization at 1 yr)  Heparin + GPI: 18.0%  Bivalirudin: 21.7%, RR 1.21 (0.88-1.67)  Total mortality at 30 days  Heparin + GPI: 1.0%  Bivalirudin: 1.7%, RR 0.91 (0.28-2.95), p=0.88 compared to group 1  Total mortality at 1 yr  Heparin + GPI: 5.0%  Bivalirudin: 3.1%, RR 0.61 (0.28-1.37), p=0.23 compared to group 1  Nonfatal MI at 30 days  Heparin + GPI: 5.0%  Bivalirudin: 10.3%, RR 2.05 (1.14-3.68), p=0.02 compared to group 1  Revascularization at 30 days  Heparin + GPI: 3.2%  Bivalirudin: 6.6%, RR 2.08 (0.98-4.39), p=0.06 compared to group 1  Non-CABG major bleeding at 30 days  Heparin + GPI: 7.3%  Bivalirudin: 3.4%, RR 0.48 (0.23-0.98), p=0.04 compared to group 1 |
| Specific timing of clopidogrel exposure among those with PCI | Pre-PCI clopidogrel among those with PCI (N=5131)  Composite outcome (ischemia death, MI, or revascularization at 30 days)  Heparin + GPI: 8.8%  Bivalirudin + GPI: 8.9%  Bivalirudin: 8.1%  p=0.46 between heparin +GPI and bivalirudin alone |
| Peri-PCI clopidogrel among those with PCI (N=1572)  Composite outcome (ischemia death, MI, or revascularization at 30 days)  Heparin + GPI: 6.9%  Bivalirudin + GPI: 9.5%  Bivalirudin: 8.6%  p=0.29 between heparin +GPI and bivalirudin alone |
| Post-PCI clopidogrel among those with PCI  Heparin + GPI: 8.5%  Bivalirudin + GPI: 10.8%  Bivalirudin: 12.6%  p=0.13 between heparin +GPI and bivalirudin alone |
| No clopidogrel among those with PCI (N=129)  Heparin + GPI: 8.8%  Bivalirudin + GPI: 19.5%  Bivalirudin: 23.3%  p=0.08 between heparin +GPI and bivalirudin alone |
| Stone, 2007 30  ACUITY TIMING study | RCT  Total N: 9,207  Upstream GPI vs. in-lab GPI  Good | Age | Age <65 (N=5054)  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI: 6.4%  Upstream GPI 6.6%  Major bleeding at 30 days  Deferred: 3.7%  Upstream 4.1% |
| Age ≥65 (N=4153)  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI: 9.8%  Upstream GPI 7.7%  Major bleeding at 30 days  Deferred GPI 6.3%  Upstream GPI 8.5% |
| Sex | Male (N=6467)  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI 8.5%  Upstream 7.0%  Major bleeding at 30 days  Deferred GPI 3.4%  Upstream GPI: 4.6% |
| Female (N=2740)  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI 6.5%  Upstream 7.2%  Major bleeding at 30 days  Deferred GPI: 8.3%  Upstream GPI: 9.7% |
| Diabetes | Diabetes (N=2565)  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI 9.7%  Upstream 8.4%  Major bleeding at 30 days  Deferred GPI: 6.1%  Upstream GPI: 7.4% |
| No diabetes (N=6567)  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI 7.2%  Upstream 6.6%  Major bleeding at 30 days  Deferred GPI: 4.4%  Upstream GPI: 5.6% |
| Creatinine clearance | Creatinine clearance ≥60  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI 7.1%  Upstream 6.6%  Major bleeding at 30 days  Deferred GPI: 3.9%  Upstream GPI: 4.6% |
| Creatinine clearance <60  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI: 11.8%  Upstream 9.2%  Major bleeding at 30 days  Deferred GPI: 8.5%  Upstream GPI: 12.8% |
| Treatment strategy | PCI (N=5170)  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI: 9.5%  Upstream 8.0%  Major bleeding at 30 days  Deferred GPI: 6.5%  Upstream GPI: 7.8% |
| CABG (N=1048)  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI: 13.5%  Upstream 15.3%  Major bleeding at 30 days  Deferred GPI: 3.3%  Upstream GPI: 4.5% |
| Medical therapy (N=2989)  Composite outcome (death MI or revascularization at 30 days)  Deferred GPI: 3.3%  Upstream 2.4%  Major bleeding at 30 days  Deferred GPI: 2.6%  Upstream GPI: 3.7% |
| Downstream abciximab vs. eptifibatide | Abciximab (N=835) vs. eptifibatide (N=1376)  Composite outcome (death, MI, or revascularization at 30 days)  Covariate adjusted stratified by propensity score: OR 0.61 (0.38-0.98), p=0.04  Major bleeding at 30 days  Covariate adjusted stratified by propensity score: OR 0.58 (0.34-1.00), p=0.051  Composite outcome (death, MI, revascularization, or major bleeding at 30 days)  Covariate adjusted stratified by propensity score: OR 0.61 (0.42-0.90), p=0.01 |
| Yusuf, 200638  OASIS-5 study | RCT  Total N: 20,078  Enoxaparin vs. Fondaparinux + fondaparinux  Good | Age | Age ≥65 yrs (N=12,261)  Composite outcome (death, MI or refractory ischemia)  Enoxaparin: 6.8%  Fondaparinux: 6.6%  Major bleeding  Enoxaparin: 5.5%  Fondaparinux: 2.7% |
| Sex | Male (N=12,379)  Composite outcome (death, MI or refractory ischemia)  Enoxaparin: 6%  Fondaparinux: 5.8%  Major bleeding  Enoxaparin: 3.3%  Fondaparinux: 2% |
| Female (N=7699)  Composite outcome (death, MI or refractory ischemia)  Enoxaparin: 5.3%  Fondaparinux: 5.7%  Major bleeding  Enoxaparin: 5.5%  Fondaparinux: 2.5% |
| Revascularization | Revascularization in 9 days (N=7372)  Composite outcome (death, MI or refractory ischemia)  Enoxaparin: 9.6%  Fondaparinux: 9.9%  Major bleeding  Enoxaparin: 6%  Fondaparinux: 4.2% |
| No revascularization in 9 days (N=12,706)  Composite outcome (death, MI or refractory ischemia)  Enoxaparin: 3.5%  Fondaparinux: 3.3%  Major bleeding  Enoxaparin: 3%  Fondaparinux: 1% |
| Diabetes | Diabetes (GFR <58 ml/min/1.73 m2) (N=5141)  Composite outcome (death, MI or refractory ischemia at 9 days)  Enoxaparin: 7.4%  Fondaparinux: 6.7%  HR (95%CI): 0.9 (0.73-1.11)  Composite outcome (death, MI or refractory ischemia at 30 days)  Enoxaparin: 12.2%  Fondaparinux: 10%  HR (95%CI): 0.81 (0.69-0.96)  Composite outcome (death, MI or refractory ischemia at 180 days)  Enoxaparin: 19.6%  Fondaparinux: 17.96%  HR (95%CI): 0.9 (0.79-1.03)  Major bleeding at 9 days  Enoxaparin: 6.4%  Fondaparinux: 2.8%  HR (95%CI): 0.42 (0.32-0.56)  Major bleeding at 30 days  Enoxaparin: 7.6%  Fondaparinux: 4.2%  HR (95%CI) 0.54(0.42-0.68)  Major bleeding at 180 days  Enoxaparin: 8.7%  Fondaparinux: 5.8%  HR (95%CI) 0.65 (0.52-0.8) |
| PCI | PCI during index hospitalization  Composite outcome (death, MI or refractory ischemia at 9 days)  Enoxaparin (N=3072): 6.2%  Fondaparinux (N=3105): 6.3%  HR (95%CI): 1.03 (0.84-1.25)  Composite outcome (death, MI or refractory ischemia at 30 days)  Enoxaparin (N=3072): 7.4%  Fondaparinux (N=3105): 7.4%  HR (95%CI): 1.00 (0.83-1.20)  Composite outcome (death, MI or refractory ischemia at 180 days)  Enoxaparin (N=3072): 10.2%  Fondaparinux (N=3105): 10.1%  HR (95%CI): 0.99 (0.85-1.16)  Major bleeding at 9 days  Enoxaparin (N=3072): 5.1%  Fondaparinux (N=3105): 2.4%  HR (95%CI): 0.46 (0.35-0.61)  Major bleeding at 30 days  Enoxaparin (N=3072): 5.4%  Fondaparinux (N=3105): 2.9%  HR (95%CI): 0.52 (0.4-0.67)  Major bleeding at 180 days  Enoxaparin (N=3072): 6.3%  Fondaparinux (N=3105): 3.4%  HR (95%CI): 0.53 (0.42-0.68) |
| Use of GPI and thienopyridines during index hospitalization | Thienopyridine (N=13532)  Composite outcome (death, MI or refractory ischemia at 30 days)  Enoxaparin: 9.1%  Fondaparinux: 8.6%  Adjusted HR (95%CI): 0.94 (0.84-1.06)  Major bleeding  Enoxaparin: 5.4%  Fondaparinux: 3.4%  Adjusted HR (95%CI): 0.62 (0.52-0.73) |
| GPI (N=3630)  Composite outcome (death, MI or refractory ischemia at 30 days)  Enoxaparin: 13.2%  Fondaparinux: 11.8%  Adjusted HR (95%CI): 0.87 (0.72-1.06)  Major bleeding  Enoxaparin: 8.3%  Fondaparinux: 5.2%  Adjusted HR (95%CI): 0.60 (0.46-0.78) |
| Thienopyridine + GPI (N=3246)  Composite outcome (death, MI or refractory ischemia at 30 days)  Enoxaparin: 12.8%  Fondaparinux: 11.8%  Major bleeding  Enoxaparin: 7.6%  Fondaparinux: 4.9% |

Abbreviations: ASA=aspirin; Bival=bivalirudin; CABG=coronary artery bypass grafting; CHF=congestive heart failure; CI=confidence interval; CKMB=creatine kinase major bleeding; CrCl=Creatinine Clearance; CV=cardiovascular; GFR=glomerular filtration rate; GP=glycoprotein; GPI=glycoprotein IIb/IIIa inhibitor; GUSTO=global utilization of streptokinase and t-PA for occluded arteries; HR=hazard ratio; hr=hour/hours; KM=Kaplan-Meier; LMWH=low molecular weight heparin; m=meter/meters; MI=myocardial infarction; mg=milligram/milligrams; mL=milliliter/milliliters; min=minute/minutes; N=number of patients; OR=odds ratio; PCI=percutaneous coronary intervention; PPI=proton pump inhibitor; PTCA=percutaneous transluminal coronary angioplasty; RBC=red blood cells; RCT=randomized controlled trial; RR=relative risk; TIMI=thrombolysis in myocardial infarction; UA=unstable angina; UA/NSTEMI=unstable angina/non-ST elevation myocardial infarction; UFH=unfractionated heparin; US=United States; vs=versus; yr=year/years