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, 199839PURSUIT study | RCTTotal N: 10,948Eptifibatide vs. placeboGood | Age | Age <50Total mortalityEptifibatide: 0.8%Placebo: 0.9%Nonfatal MIEptifibatide: 8.2%Placebo: 9.5%Composite outcome (death or nonfatal MI)Eptifibatide: 8.7%Placebo: 9.6%GUSTO moderate or severe bleedingEptifibatide: 4.6%Placebo: 3.9% |
| Age 50-59Total mortalityEptifibatide: 1.4%Placebo: 01.5%Nonfatal MIEptifibatide: 9.0%Placebo: 12.8%Composite outcome (death or nonfatal MI)Eptifibatide: 9.7%Placebo: 13.8%GUSTO moderate or severe bleedingEptifibatide: 9.2%Placebo: 6.8% |
| Age 60-69Total mortalityEptifibatide: 3.0%Placebo: 3.5%Nonfatal MIEptifibatide: 12.6%Placebo: 13.0%Composite outcome (death or nonfatal MI)Eptifibatide: 14.3%Placebo: 15.0%GUSTO moderate or severe bleedingEptifibatide: 13.9%Placebo: 11.7% |
| Age <65Total mortalityOR (95% CI): 0.785 (0.657-0.939), favoring eptifibatide  |
| Age > 65Total mortalityOR (95% CI): 0.977 (0.840-1.136), favoring eptifibatide |
| Early invasive management | Early invasive managementComposite 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 | MaleComposite outcome (death or MI)OR (95% CI): 0.795 (0.691-0.917) favoring eptifibatide |
| Diabetes | Diabetes vs. no diabetesComposite 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/IIIComposite 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 IComposite 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=0.11Total mortality at 7 days: 1.4%, p=0.16Total mortality at 30 days: 3.0%, p=0.41Total mortality at 6 months: 5.0%, p=0.52Nonfatal MI at 96 hrs: 6.0%, p=0.001Nonfatal MI at 7 days: 8.2%, p=0.008Nonfatal MI at 30 days: 10.2%, p=0.004Nonfatal MI at 6 months: 12.6%, p=0.012Composite outcome (death or nonfatal MI at 96 hrs): 6.4%, p0.005Composite outcome (death or nonfatal MI at 7 days): 9.1%, 0.003Composite outcome (death or nonfatal MI at 30 days): 11.9%, p=0.003Composite outcome (death or nonfatal MI at 6 months): 15.2%, p=0.004TIMI major bleeding: 4.8%, p<0.0001GUSTO severe bleeding: 1.5%, p<0.0001Composite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI): 0.68 (0.44-1.00) |
| UA vs. MI | Unstable AnginaDeath at 30 daysEptifibatide (n=2584): 3.0%Placebo (n=2545): 2.4% (p=0.227)Death at 90 daysEptifibatide: 4.3%Placebo: 3.9% (p=0.440)Death at 180 daysEptifibatide: 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 bleedingEptifibatide: 13.2%Placebo: 10.1% (p=0.001)  |
| MIDeath at 30 daysEptifibatide (n=2124): 4.0%Placebo (n=2184): 5.3% (p=0.043) Death at 90 daysEptifibatide: 5.7%Placebo: 6.5% (p=0.308)Death at 180 daysEptifibatide: 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 bleedingEptifibatide: 12.6%Placebo: 9.6% (p=0.002) |
| PTCA | Patients treated with PTCAComposite outcome (death or MI at 30 days)Eptifibatide (n=555): 12.1%Placebo (n=596): 15.3% p=0.123Composite outcome (death or MI at 180 days)Eptifibatide: 14.0%Placebo: 18.5% p=0.045Death at 30 daysEptifibatide: 2.5%Placebo: 2.3% p=0.851Death 180 daysEptifibatide: 3.8%Placebo: 3.9% p=1.00TIMI major bleedingEptifibatide: 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. UFHComposite outcome (death or MI)RR (95% CI): 0.58 (0.38-0.87)Total mortalityRR (95% CI): 0.53 (0.32-0.89)Nonfatal MIRR (95% CI): 0.65 (0.36-1.15) |
| MI vs. no MI | MI at enrollmentComposite outcome (death or MI)OR (95% CI): 0.930 (0.795-1.09) |
| No MI at enrollmentComposite outcome (death or MI)OR (95% CI): 0.849 (0.715-1.01) |
| Anonymous, 199840PRISM study | RCTTotal N: 3,232Tirofiban vs. UFHGood | 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 TirofibanComposite outcome (death or MI at 30 days)RR (95% CI): 0.58 (0.38-0.87)Total mortality at 30 daysRR (95% CI): 0.53 (0.32-0.89)Nonfatal MI at 30 daysRR (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 daysRR (95% CI): 0.28 (0.06-1.36) |
| Age | Age <65Composite outcome (death, MI, or refractory ischemia within 48 hrs)RR (95% CI): 0.72 (0.41-1.23) |
| Age 65-74Composite outcome (death, MI, or refractory ischemia within 48 hrs)RR (95% CI): 0.55 (0.28-1.01) |
| Age >75Composite outcome (death, MI, or refractory ischemia within 48 hrs)RR (95% CI): 0.57 (0.28-1.11) |
| Age >65Composite outcome (death, MI, or refractory ischemia within 48 hrs)RR (95% CI): 0.57 (0.35-0.88) |
| Sex | FemaleComposite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI): 0.54 (0.30-0.96) |
| MaleComposite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI): 0.67 (0.43-1.03) |
| Diabetes | DiabetesComposite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI) :0.43 (0.20-0.90) |
| No diabetesComposite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI): 0.72 (0.47-1.04) |
| Geography | USComposite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI): 0.53 (0.25-1.05) |
| Non-USComposite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI): 0.68 (0.44-1.00) |
| Prior ASA  | Prior ASAComposite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI): 0.82 (0.52-1.26) |
| No prior ASAComposite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI): (0.42-0.23-0.74) |
| Prior heparin | Prior heparinComposite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI): 0.65 (0.43-0.95)No prior heparinComposite outcome (death, MI, or refractory ischemia at 48 hrs)RR (95% CI): 0.60 (0.29-1.17) |
| Anonymous, 199841PRISM-PLUS study | RCTTotal N:1,875Tirofiban 0.4 + UFH vs. placebo + UFHGood | Age | Age <65 yrs (N=402)Composite outcome (death, MI, refractory ischemia at 7 days)Heparin: 50Tirofiban + heparin: 34 |
| Age ≥65 yrs (N=395)Composite outcome (death, MI, refractory ischemia at 7 days)Heparin: 93Tirofiban + heparin: 66 |
| Sex | FemaleComposite 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=0.47Composite outcome (death, MI, refractory ischemia at 7 days)Heparin: 48Tirofiban + heparin: 34RR (95% CI): 0.67 (0.43-1.04)p=0.08Composite 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=0.56Composite 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=0.86Composite outcome (death or MI at 48 hrs)Heparin: 1.6%Tirofiban + heparin: 5.9%RR (95% CI): 0.73 (0.16-3.3)p=0.69Composite outcome (death or MI at 7 days)Heparin: 6.3%Tirofiban + heparin: 5.5%RR (95% CI): 0.86 (0.42-1.78)p=0.69Composite outcome (death or MI at 30 days)Heparin: 9.9%Tirofiban + heparin: 10.2%RR (95% CI): 1.02 (0.59-1.77) p=0.94Composite outcome (death or MI at 180 days)Heparin: 12.7%Tirofiban + heparin: 14.2%RR (95% CI): 1.11 (0.69-1.78)p=0.68TIMI major bleedingHeparin: 0.8%Tirofiban + heparin: 2.4%RR (95% CI): 2.98 (0.61-14.61)p=0.16 |
| MaleComposite outcome (death, MI, refractory ischemia at 48 hrs)Heparin (N=545): 95Tirofiban + heparin (N=519): 55TIMI major bleedingHeparin: 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): 101Tirofiban + heparin (N=604): 75TIMI major bleedingHeparin (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): 42Tirofiban + heparin (N=169): 25Composite outcome (death, MI, refractory ischemia, rehospitalization for ischemia at 30 days)Heparin (N=193): 39.9%Tirofiban + heparin (N=169): 32.0%P=0.11TIMI major bleedingHeparin (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 | UAComposite outcome ( death, MI, refractory ischemia at 7 days)Heparin (N=428): 78Tirofiban + heparin (N=428): 61 |
| Any MIComposite outcome ( death, MI, refractory ischemia at 7 days) Heparin (N=369): 65Tirofiban + heparin (N=345): 39 |
| PCI | No PCIComposite 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) |
| PCIComposite 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=0.035Composite 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=0.015Composite 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=0.134Composite 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 bleedingHeparin + 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 bleedingHeparin + 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 bleedingHeparin + 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 bleedingHeparin + tirofiban: 1.7%Heparin:0.7% |
| Troponin positive | Troponin positiveComposite outcome (death or MI)Heparin + tirofiban (N=28): 3.6%Heparin (N=34): 20.6%p=0.06  |
| Troponin negativeComposite outcome (death or MI) Heparin + tirofiban (N=27): 9.5%Heparin (N=21): 11.1%p=1.00 |
| Antman, 1999 2TIMI 11B study | RCTTotal N: 3,910Enoxaparin vs. UFHGood | 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 | RCTTotal N: 3,987Enoxaparin vs. UFHGood | Early invasive vs. conservative management | Early invasiveComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=1111): 8.8%UFH (N=1080): 8.5% |
| Initial conservativeComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=904): 7.7%UFH (N=869): 10.6% |
| Age | <65 yrsComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=1213): 6.4%UFH (N=1155): 7.4% |
| ≥65 yrsComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=805): 11.3%UFH (N=794): 12.5% |
| Sex | MaleComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=1438): 8.3%UFH (N=1388): 9.4% |
| FemaleComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=580): 8.6%UFH (N=52): 9.3% |
| Diabetes | DiabetesComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=1395): 8.4%UFH (N=356): 10.7% |
| No diabetesComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=1620): 8.3%UFH (N=1593): 9.2% |
| Geography | USComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=420): 6.7%UFH (N=378): 7.7% |
| Non-USComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=1598): 8.8%UFH (N=155): 9.8% |
| Troponin level | Normal troponin levelComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=334): 8.1%UFH (N=323): 8.0% |
| Elevated troponin levelComposite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=1072): 8.3%UFH (N=100): 9.5% |
| TIMI risk score | TIMI 0-2Composite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=846): 6.4%UFH (N=752): 5.7% |
| TIMI 3-4Composite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=888): 8.1%UFH (N=945): 10.2% |
| TIMI 5-7Composite outcome (death, MI, recurrent ischemia within 7 days)Enoxaparin (N=284): 15.1%UFH (N=45): 17.9% |
| Conservative strategy | Conservative strategyUFH (N=872)Enoxaparin (N=906)Total mortality at 7 daysHR 1.32 (0.61-2.82), p=0.49Total mortality at 30 daysHR 1.51 (0.81-2.83), p=0.20Nonfatal MI at 7 daysHR 0.50 (0.26-0.98)Nonfatal MI at 30 daysHR 0.67 (0.41-1.08), p=0.10Refractory ischemia at 7 daysHR 0.69 (0.47-1.00), p=0.05Refractory ischemia at 30 daysHR 0.77 (0.54-1.08), p=0.13Urgent revascularization at 7 daysHR 0.66 (0.39-1.14), p=0.14Urgent revascularization at 30 daysHR 0.90 (0.59-1.37)Composite outcome (death, MI, and refractory ischemia at 7 days)HR 0.72 (0.53-0.99), p=0.04Composite outcome (death, MI, and refractory ischemia at 30 days)HR 0.80 (0.61-1.05), p=0.10Composite outcome (death, MI, refractory ischemia, urgent revascularization, and documented myocardial ischemia at 7 days)HR 0.73 (0.56-0.96), p=0.03Composite outcome (death, MI, refractory ischemia, urgent revascularization, and documented myocardial ischemia at 30 days)HR 0.78 (0.62-0.99), p=0.04TIMI major or minor bleeding within 24 hours of tirofiban infusionUFH: 0.8%Enoxaparin: 1.5% |
| Brieger, 20078 | ObservationalTotal N: 2,874LMWH vs. UFHFair | Use of PCI and IIb/IIIa inhibitors | Patients who did not get PCI and did not receive GPIsMortality in-hospitalLMWH (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 LMWHMajor bleed in-hospitalLMWH (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 GPIsMortality in-hospitalLMWH (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 LMWHMajor bleed in-hospitalLMWH (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 GPIsMortality in-hospitalLMWH (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 LMWHMajor bleed in-hospitalLMWH (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 GPIsMortality in-hospitalLMWH (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 LMWHMajor bleed in-hospitalLMWH (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 9ESSENCE study | RCTTotal N: 3,171Enoxaparin vs. UFHGood | Age | <65 yrsComposite outcome (death, MI, recurrent angina at 30 days)UFH (N=798): 23.2%Enoxaparin (N=785): 17.6%OR 1.05 |
| ≥65 yrsComposite outcome (death, MI, recurrent angina at 30 days)UFH (N=776): 124Enoxaparin (N=128): 128OR 1.4 |
| Diabetes | DiabetesComposite outcome (death, MI, recurrent angina at 30 days)UFH (N=399): 79Enoxaparin (N=360): 66OR 1.35 |
| No diabetesComposite outcome (death, MI, recurrent angina at 30 days)UFH (N=1225): 230Enoxaparin (N=1247): 200OR 1.21 |
| Prior MI | Prior MIComposite outcome (death, MI, recurrent angina at 30 days)Heparin (N=745): 149Enoxaparin (N=723): 118OR 1.28 |
| No prior MIComposite outcome (death, MI, recurrent angina at 30 days)UFH (N=791): 154Enoxaparin (N=850): 144OR 1.19 |
| In-hospital PCI | In-hospital PCIComposite outcome (death, MI at 43 days)UFH (N=3028): 244Enoxaparin (N=3129): 210OR 0.82 (0.68-0.99), p=0.044 Composite outcome (death, MI at 1 yr)UFH (N=3028): 387Enoxaparin (N=3129): 384OR 0.95 (0.82-1.11, p=0.547)Major hemorrhage at 43 daysUFH (N=2982): 148Enoxaparin (3091): 185OR 1.22 (0.8-1.52)Major hemorrhage at 1 yrUFH (N=2982): 30Enoxaparin (N=3091): 5555/3091, OR 1.78 (1.14-2.79), p=0.011 |
| No in-hospital PCIComposite outcome (death, MI at 43 days)UFH (N=493): 29Enoxaparin (N=431): 14OR 0.54 (0.28-1.03), p=0.062Composite outcome (death, MI at 1 yr)UFH (N=493): 59Enoxaparin (N=431): 27OR 0.49 (0.31-0.79 ), p=0.003Major hemorrhage at 43 daysUFH (N=483): 30Enoxaparin (N=425): 23OR 0.86, p=0.49-1.51, p=0.608Major hemorrhage at 1 yrUFH (N=483): 11Enoxaparin (N=425): 2OR 0.20 (0.04-0.92), p=0.039 |
| Ferguson, 200413SYNERGY Study | RCTTotal N: 10,027Enoxaparin vs. UFH vs. FondaparinuxGood | Sex | MaleComposite outcome (death or MI at 30 days)Enoxaparin (N=3296): 14.2%UFH (N=3299): 15.4%p=0.16 |
| FemaleComposite outcome (death or MI at 30 days)Enoxaparin: 13.5%UFH: 12.9%p=0.59 |
| Diabetes | DiabetesComposite outcome (death or MI at 30 days)Enoxaparin (N=1422): 15.6%UFH (N=1500): 15.7%p=0.94 |
| No diabetesComposite outcome (death or MI at 30 days)Enoxaparin (N=3568): 13.3%UFH (N=3482): 14.0%p=0.36 |
| Geography | Australia/New ZealandComposite outcome (death or MI at 30 days)Enoxaparin (N=206): 11.2%UFH (N=208): 10.6%p=0.91 |
| EuropeComposite outcome (death or MI at 30 days)Enoxaparin (N=908): 13.0%UFH (N=904): 13.2%p=0.91 |
| North AmericaComposite outcome (death or MI at 30 days)Enoxaparin (N=242): 27.3%UFH (N=239): 29.7%p=0.45 |
| South AmericaComposite outcome (death or MI at 30 days)Enoxaparin (N=3636): 13.5%UFH (N=3632): 14.1%p=0.47 |
| History of smoking | Smoking currentComposite outcome (death or MI at 30 days)Enoxaparin (N=1178): 12.3%UFH (N=1225): 15.9%p=0.009 |
| Smoking priorComposite outcome (death or MI at 30 days)Enoxaparin (N=1756): 15.2%UFH (N=1735): 14.9%p=0.82 |
| Smoking neverComposite outcome (death or MI at 30 days)Enoxaparin (N=2056): 13.9%UFH (N=2018): 13.4%p=0.065 |
| Prior revascularization | Prior PCIComposite outcome (death or MI at 30 days)Enoxaparin (N=1044): 13.9%UFH (N=964): 14.1%p=0.92 |
| No prior PCIComposite outcome (death or MI at 30 days)Enoxaparin (N=3947): 14.0%UFH (N=4017): 14.6%p=0.37 |
| Prior CABGComposite outcome (death or MI at 30 days)Enoxaparin (N=805): 13.2%UFH (N=853): 15.8%p=0.15 |
| No prior CABGComposite 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 therapyComposite 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 onlyComposite 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 onlyComposite 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 agentsComposite 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 crossoverComposite outcome (death or MI at 30 days)Enoxaparin (N=4400): 13.5% UFH (N=4780): 14.2%  |
| CrossoverComposite 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 therapyComposite 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=0.289Total mortality at 30 daysEnoxaparin: 1.7%UFH: 1.8%HR 0.95 (0.62-1.46), p=0.804Nonfatal MI at 30 daysEnoxaparin: 11.8%UFH: 13.2%HR 0.89 (0.76-1.05), p=0.172GUSTO severe bleeding at 30 daysEnoxaparin: 1.5%UFH: 1.6%HR 0.92 (0.57-1.45), p=0.688 |
| PCI patients without crossover antithrombotic strategyTIMI Major bleeding at 30 daysEnoxaparin: 3.7%UFH: 2.5% HR 1.46 (1.04-2.04), p=0.028TIMI minor bleeding at 30 daysEnoxaparin: 11.2%UFH: 11.6%HR 0.97 (0.80-1.16), p=0.699Any transfusion at 30 daysEnox: 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=0.265Total mortality at 30 daysEnoxaparin: 1.3%UFH: 1.7%HR 0.76 (0.47-1.24), p=0.276Nonfatal MI at 30 daysEnoxaparin: 11.5%UFH: 12.8%HR 0.90 (0.76-1.07), p=0.222GUSTO severe bleeding at 30 daysEnoxaparin: 1.1%UFH: 1.6 %HR 0.70 (0.41-1.18), p=0.181TIMI Major bleeding at 30 daysEnoxaparin: 3.1%UFH: 2.4%HR 1.31 (0.90-1.90), p=0.154TIMI minor bleeding at 30 daysEnoxaparin 10.4%UFH: 11.4% HR 0.90 (0.75-1.10), p=0.309 Any transfusion at 30 daysEnoxaparin: 5.8%UFH 5.0%HR 1.17 (0.90-1.53), p=0.243 |
| Patients receiving no antithrombotic before randomizationComposite 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 surgeryDeath or MI at 30 daysEnoxaparin (N=855): 27.3%UFH (N=921): 30.9%adjusted HR 0.90 (0.75-1.07), p=0.239Adjusted stroke rate at 6 monthsEnoxaparin: 2.58% (95% CI 1.54-3.63)UFH: 3.16% (95% CI 1.96-4.35), p=0.476TIMI major bleeding at 30 daysEnoxaparin: 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 administrationTIMI major bleeding at 30 daysAdjusted HR 1.19 (0.99-1.43), p=0.053Stroke at 30 daysAdjusted HR 0.87 (0.66-1.12, p=0.322)Death or MI at 30 daysClopidogrel: 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 antithrombinTotal mortality at 48 hrs: 15/2438Total mortality at 30 days: 81/2438Nonfatal MI at 48 hrs: 133/2440Nonfatal MI at 30 days: 274/2440Death or MI at 48 hrs: 146/2438Death or MI at 30 days: 333/2438Stroke at 30 days: 18/2440GUSTO severe bleeding at 30 days: 58/2439TIMI major bleeding (including CABG related) at 30 days: 203/2440 |
| Pre-randomization treatment with UFH onlyTotal mortality at 48 hrs: 12/2939Total mortality at 30 days: 95/2939Nonfatal MI at 48 hrs: 189/2940Nonfatal MI at 30 days: 411/2940Death or MI at 48 hrs: 198/2939Death or MI at 30 days: 468/2939Stroke at 30 days: 23/2940GUSTO severe bleeding at 30 days: 72/2939TIMI major bleeding (including CABG related) at 30 days: 255/2939 |
| Pre-randomization treatment with enoxaparin onlyTotal mortality at 48 hrs: 17/4294Total mortality at 30 days: 125/4294Nonfatal MI at 48 hrs: 234/4294Nonfatal MI at 30 days: 488/4294Death or MI at 48 hrs: 248/4294Death or MI at 30 days: 574/4293Stroke at 30 days: 47/4294GUSTO severe bleeding at 30 days: 109/4294TIMI major bleeding (including CABG related) at 30 days: 354/4294 |
| Pre-randomization treatment with both UFH and enoxaparinTotal mortality at 48 hrs: 3/304, unadjusted p-value 0.312Total mortality at 30 days: 12/304, unadjusted p-value 0.628Nonfatal MI at 48 hrs: 13/304, unadjusted p value 0.185Nonfatal MI at 30 days: 34/304, unadjusted p-value 0.003Death or MI at 48 hrs: 15/304, unadjusted p-value 0.302Death or MI at 30 days: 43/304, unadjusted p-value 0.017Stroke at 30 days: 4/304 , unadjusted p-value 0.327GUSTO severe bleeding at 30 days: 6/304TIMI major bleeding (including CABG related) at 30 days: 20/304 |
| Consistent therapy vs. no consistent therapy | Consistent therapyComposite outcome (death or MI at 48 hrs): 374/6135Composite outcome (death or MI at 30 days): 883/6135Composite outcome (death, MI, or ischemia requiring revascularization at 30 days): 1024/6135 |
| No consistent therapyComposite outcome (death or MI at 30 days): 221/3840, unadjusted p-value=0.858Composite outcome (death, MI, or ischemia requiring revascularization at 30 days): 641/3838, unadjusted p-value=0.989 |
| Prerandomization antithrombotic therapy | Prerandomization UFH onlyComposite 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 enoxaparinComposite 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 enoxaparinComposite 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 randomizationComposite 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-randomizationComposite outcome (death or MI at 30 days)Adjusted OR 0.86 (0.74-0.99), favoring EnoxaparinTIMI bleeding at 30 daysAdjusted Or 1.23 (1.02-1.48), favoring Enoxaparin |
| No consistent therapy pre-randomizationComposite outcome (death or MI at 30 days)Adjusted OR 1.15 ((0.95-1.39), favoring EnoxaparinTIMI bleeding at 30 daysAdjusted OR 1.13 (0.88-1.44), favoring Enoxaparin |
| Roe, 201242 | RCTTotal N: 7243Prasugrel vs. ClopidogrelGood | Age | Patients < 65 yearsComposite of CV death, nonfatal MI, strokeN=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 bleedN=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 yearsComposite of CV death, nonfatal MI, strokeN=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 bleedN=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 | FemaleComposite of CV death, nonfatal MI, strokeN=2599; KM rate at 30 months was 14.7% in prasugrel group vs. 14.8% in clopidogrel groupComposite of non CABG TIMI major bleedN=2576; KM rate at 30 months was 1.8% in prasugrel group vs. 1.1% in clopidogrel group |
| MaleComposite of CV death, nonfatal MI, strokeN=4644; KM rate at 30 months was 13.4% in prasugrel group vs. 16.6% in clopidogrel groupComposite of non CABG TIMI major bleedN=4604; KM rate at 30 months was 2.3% in prasugrel group vs. 1.6% in clopidogrel group |
| Diabetes | DiabeticComposite of CV death, nonfatal MI, strokeN=2811; KM rate at 30 months was 17.8% in prasugrel group vs. 20.4% in clopidogrel groupNon CABG related TIMI major bleedN=2783; KM rate at 30 months was 1.4% in prasugrel group vs. 1.0% in clopidogrel group |
| Not diabeticComposite of CV death, nonfatal MI, strokeN=4414; KM rate at 30 months was 11.5% in prasugrel group vs. 13.2% in clopidogrel groupNon CABG related TIMI major bleedN=4381; KM rate at 30 months was 2.5% in prasugrel group vs. 1.7% in clopidogrel group |
| Unstable Angina | Unstable AnginaComposite of CV death, nonfatal MI, strokeN=2356; Km rates at 30 months were 9.7% in prasugrel group vs. 11.1% in clopidogrel groupNon CABG related TIMI major bleedN=2342; Km rates at 30 months were 1.7% in prasugrel group vs. 0.9% in clopidogrel group |
| NSTEMIComposite of CV death, nonfatal MI, strokeN=4887; Km rates at 30 months were 15.7% in prasugrel group vs. 18.2% in clopidogrel groupNon CABG related TIMI major bleedN=4838; Km rates at 30 months were 2.2% in prasugrel group vs. 1.7% in clopidogrel group |
| Weight >60 kg | > 60 kgComposite of CV death, nonfatal MI, strokeN=939; KM rates at 30 months were 15.5% in prasugrel group and 22.4% in clopidogrel groupNon CABG related TIMI major bleedN=934; KM rates at 30 months were 1.0% in prasugrel group and 2.0% in clopidogrel group |
| 60kg or greaterComposite of CV death, nonfatal MI, strokeN=6300; KM rates at 30 months were 13.6% in prasugrel group and 15.1% in clopidogrel groupNon CABG related TIMI major bleedN=6244; KM rates at 30 months were 2.3% in prasugrel group and 1.4% in clopidogrel group |
| Smoker | SmokerComposite of CV death, nonfatal MI, strokeN=1566; KM rates at 30 months were 11.7% in prasugrel group vs. 20.8% in clopidogrel groupNon CABG related TIMI major bleedN=1555; KM rates at 30 months were 3.1% in prasugrel group vs. 1.5% in clopidogrel group |
| Not smokerComposite of CV death, nonfatal MI, strokeN=5614; KM rates at 30 months were 14.6% in prasugrel group vs. 14.6% in clopidogrel groupNon CABG related TIMI major bleedN=5567; KM rates at 30 months were 1.9% in prasugrel group vs. 1.5% in clopidogrel group |
| <100 mg/day aspirin | < 100mg/dayComposite of CV death, nonfatal MI, strokeN=2365; estimated KM rates at 30 months were 13.4% in prasugrel group and 15.9% in clopidogrel groupNon CABG related TIMI major bleedN=2354; estimated KM rates at 30 months were 1.6% in prasugrel group and 0.3% in clopidogrel group |
| 100mg/day or greaterComposite of CV death, nonfatal MI, strokeN=4295; estimated KM rates at 30 months were 13.7% in prasugrel group and 15.8% in clopidogrel groupNon CABG related TIMI major bleedN=4258; estimated KM rates at 30 months were 2.4% in prasugrel group and 2.2% in clopidogrel group |
| PPI | On PPI at randomizationComposite of CV death, nonfatal MI, strokeN=1666; estimated KM rates at 30 months were 14.6% in prasugrel group and 23.8% in clopidogrel groupNon CABG related TIMI major bleedN=1651; estimated KM rates at 30 months were 1.0% in prasugrel group and 1.6% in clopidogrel group |
| No PPI at randomizationComposite of CV death, nonfatal MI, strokeN=5577; estimated KM rates at 30 months were 13.7% in prasugrel group and 13.6% in clopidogrel groupNon 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/minComposite of CV death, nonfatal MI, strokeN=105; estimated KM rates at 30 months were 28.1% in prasugrel group and 47.5% in clopidogrel groupNon CABG related TIMI major bleedN=102; estimated KM rates at 30 months were 5.0% in prasugrel group and 4.3% in clopidogrel group |
| CrCl 30-60 ml/minComposite of CV death, nonfatal MI, strokeN=1407; estimated KM rates at 30 months were 22.7% in prasugrel group and 23.7% in clopidogrel groupNon CABG related TIMI major bleedN=1397; estimated KM rates at 30 months were 1.1% in prasugrel group and 2.6% in clopidogrel group |
| CrCl > 60 ml/minComposite of CV death, nonfatal MI, strokeN=5432; estimated KM rates at 30 months were 11.9% in prasugrel group and 13.6% in clopidogrel groupNon CABG related TIMI major bleedN=5388; estimated KM rates at 30 months were 2.3% in prasugrel group and 1.2% in clopidogrel group |
| Simoons, 2001 43GUSTO-IV study | RCTTotal N: 1,875Abciximab vs. placeboGood | Sex | MaleComposite 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% |
| FemaleComposite 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 yrsComposite outcome (death or MI at 30 days)Placebo: 4.2%Abciximab 24 hrs: 5.1%Abciximab 48 hrs: 4.9% |
| Age ≥65 yrsComposite outcome (death or MI at 30 days)Placebo: 11.1%Abciximab 24 hrs: 10.6%Abciximab 48 hrs: 12.4% |
| Diabetes | DiabetesComposite 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 diabetesComposite 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 AmericaComposite outcome (death or MI at 30 days)Placebo: 11.7%Abciximab 24 hrs: 9.6%Abciximab 48 hrs: 9.6% |
| Eastern EuropeComposite outcome (death or MI at 30 days)Placebo: 7.7%Abciximab 24 hrs: 6.8%Abciximab 48 hrs: 8.7% |
| OtherComposite 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 admissionTotal mortalityLMWH (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 admissionTotal mortalityLMWH (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 yrsComposite 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 yrsComposite 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 | FemaleComposite 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) |
| MaleComposite 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 | DiabetesComposite 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 | RevascularizationComposite 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 revascularizationComposite 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 | ObservationalTotal N: 7,081Enoxaparin vs. UFHFair | Weight/BMI | BMI ≥30 kg/m2Total mortality at 43 daysUFH: 2.5%Enoxaparin: 2.6%Adjusted OR (95% CI): 1.07 (0.60-1.92)p=0.81MI at 43 days UFH: 6.1%Enoxaparin: 4.9%Adjusted OR (95% CI): 0.81 (0.55-1.23)p=0.35Composite 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=0.05Major 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/minTotal mortality at 43 daysUFH: 24.3%Enoxaparin: 11.6%Adjusted OR (95% CI): 0.43 (0.17-1.12)p=0.09MI at 43 days UFH: 8.1%Enoxaparin: 8.7%Adjusted OR (95% CI): 1.45 (0.39-5.40)p=0.58Composite 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=0.12Major bleeding at 43 daysUFH: 5.8%Enoxaparin: 7.5%Adjusted OR (95% CI): 1.53 (0.37-6.32)p=0.56 |
| Stone, 2006 29ACUITY study | RCTTotal N: 13,819 Bivalirudin vs. UFH or enoxaparin + GPI vs. bivalirudin + GPIGood | 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=0.054Composite outcome (ischemia, total death, MI, revascularization at 1 yr)Bival alone: 16.0% Heparin + GPI: 16.3HR: 0.98 (0.86-1.11)Total mortality at 1 yrBival alone: 3.4Heparin + 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=0.82Composite outcome (ischemia, total death, MI, revascularization at 1 yr)Bival alone: 19.4% Heparin + GPI: 17.9HR: 1.09 (0.96-1.23)Total mortality at 1 yrBival 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: 15.1RR: 1.06 (0.80-1.41), p=0.82Composite 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 yrBival 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: 3.4Heparin + GPI: 2.7% RR: 1.24 (0.83-1.85), p=0.82Composite 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 yrBival 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 yrBival alone: 3.8% Heparin + GPI: 4.1HR: 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 yrBival 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 yrBival 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 yrBival 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: 5.8RR: 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 yrBival 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 yrBival 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 yrBival 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 yrBival 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 yrBival 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 yrBival 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 yrBival alone: 2.8% Heparin + GPI: 3.9% HR: 0.71 (0.47-1.08) |
| Diabetes | DiabetesComposite 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 yrBival alone: 5.5%Heparin + GPI: 5.4% HR 0.99 (0.71-1.38) |
| No diabetesComposite 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 yrBival alone: 3.1% Heparin + GPI: 3.2% HR: 0.93 (0.71-1.22) |
| Creatinine clearance | Creatinine clearance ≥60Composite 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 yrBival alone: 2.9% Heparin + GPI: 3.0% HR: 0.96 (0.73-1.26) |
| Creatinine clearance <60Composite 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 yrBival 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 yrBival 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 yrBival 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 yrBival 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 yrBival 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 yrBival 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=0.23Nonfatal MI at 30 days: 6.9%p<0.0001Revascularization at 30 days: 2.4%p<0.0001Non-CABG major bleeding at 30 days: 6.0%p=0.13 |
| Patients who underwent PCI | PCIComposite 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=0.37Bival alone: 1% compared with group 1, p=0.53Total 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=0.16Bival alone: 6% compared with group 1, p=0.19Nonfatal 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=0.31Bival alone: 3% compared with group 1, p=0.87Revascularization 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=0.053Bival 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 PCIComposite 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 1Composite 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 1Total mortality at 30 daysHeparin + GPI: 0.8%Bivalirudin: 1.0%, RR 1.22 (0.66-2.26), p=0.52 compared to group 1Total mortality at 1 yrHeparin + GPI: 3.0%Bivalirudin: 3.1%, RR 1.05 (0.75-1.46), p=0.79 compared to group 1Nonfatal MI at 30 daysHeparin + GPI: 5.8%Bivalirudin: 6.0%, RR 1.05 (0.83-1.33), p=0.69Revascularization at 30 daysHeparin + GPI: 3.3%Bivalirudin: 2.8%, RR 0.87 (0.62-1.20), p=0.39Non-CABG major bleeding at 30 daysHeparin + GPI: 6.6%Bivalirudin: 3.5% (RR 0.53 (0.41-0.69), p<0.0001 |
| Clopidogrel initiated >30 minutes after PCIComposite 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 1Composite 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 daysHeparin + GPI: 1.0%Bivalirudin: 1.7%, RR 0.91 (0.28-2.95), p=0.88 compared to group 1Total mortality at 1 yrHeparin + GPI: 5.0%Bivalirudin: 3.1%, RR 0.61 (0.28-1.37), p=0.23 compared to group 1Nonfatal MI at 30 daysHeparin + GPI: 5.0%Bivalirudin: 10.3%, RR 2.05 (1.14-3.68), p=0.02 compared to group 1Revascularization at 30 daysHeparin + GPI: 3.2%Bivalirudin: 6.6%, RR 2.08 (0.98-4.39), p=0.06 compared to group 1Non-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 30ACUITY TIMING study | RCTTotal N: 9,207Upstream GPI vs. in-lab GPIGood | 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 daysDeferred: 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 daysDeferred 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 daysDeferred 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 daysDeferred 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 daysDeferred 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 daysDeferred GPI: 4.4%Upstream GPI: 5.6% |
| Creatinine clearance | Creatinine clearance ≥60Composite outcome (death MI or revascularization at 30 days)Deferred GPI 7.1%Upstream 6.6%Major bleeding at 30 daysDeferred GPI: 3.9%Upstream GPI: 4.6% |
| Creatinine clearance <60Composite outcome (death MI or revascularization at 30 days)Deferred GPI: 11.8%Upstream 9.2%Major bleeding at 30 daysDeferred 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 daysDeferred 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 daysDeferred 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 daysDeferred 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=0.04Major bleeding at 30 daysCovariate adjusted stratified by propensity score: OR 0.58 (0.34-1.00), p=0.051Composite 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, 200638OASIS-5 study | RCTTotal N: 20,078Enoxaparin 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 bleedingEnoxaparin: 5.5%Fondaparinux: 2.7% |
| Sex | Male (N=12,379)Composite outcome (death, MI or refractory ischemia)Enoxaparin: 6%Fondaparinux: 5.8%Major bleedingEnoxaparin: 3.3%Fondaparinux: 2% |
| Female (N=7699)Composite outcome (death, MI or refractory ischemia)Enoxaparin: 5.3%Fondaparinux: 5.7%Major bleedingEnoxaparin: 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 bleedingEnoxaparin: 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 bleedingEnoxaparin: 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 daysEnoxaparin: 6.4%Fondaparinux: 2.8%HR (95%CI): 0.42 (0.32-0.56)Major bleeding at 30 daysEnoxaparin: 7.6%Fondaparinux: 4.2%HR (95%CI) 0.54(0.42-0.68)Major bleeding at 180 daysEnoxaparin: 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 daysEnoxaparin (N=3072): 5.1%Fondaparinux (N=3105): 2.4%HR (95%CI): 0.46 (0.35-0.61)Major bleeding at 30 daysEnoxaparin (N=3072): 5.4%Fondaparinux (N=3105): 2.9%HR (95%CI): 0.52 (0.4-0.67)Major bleeding at 180 daysEnoxaparin (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