**Table G-5.** **Results data for enoxaparin vs. unfractionated heparin vs. fondaparinux: composite and individual outcomes**

| **Study** | **Study Details** | **Outcome(s)****Length of Followup** | **Results Reported by Authors** |
| --- | --- | --- | --- |
| Antman, 199944TIMI 11B | RCTTotal N: 3,910Good quality | Primary Composite at 48 hr:Total mortalityNonfatal MIRevascularization | Enoxaparin | OR (95% CI):0.75 (0.58 to 0.97), reference group UFH |
| Primary Composite at 8 days:Total mortalityNonfatal MIRevascularization | Enoxaparin | OR (95% CI):0.83 (0.69 to 1.00), reference group UFH |
| Primary Composite at 14 days:Total mortalityNonfatal MIRevascularization | Enoxaparin | OR (95% CI):0.82 (0.69 to 0.98), reference group UFH |
| Primary Composite at 43 days:Total mortalityNonfatal MIRevascularization | Enoxaparin | OR (95% CI):0.85 (0.72 to 1.00), reference group UFH |
| Secondary Composite at 48 hr:Total mortalityNonfatal MI | Enoxaparin | OR (95% CI):0.78 (0.49 to 1.24), reference group UFH |
| Secondary Composite at 8 days:Total mortalityNonfatal MI | Enoxaparin | OR (95% CI):0.77 (0.58 to 1.02), reference group UFH |
| Secondary Composite at 14 days:Total mortalityNonfatal MI | Enoxaparin | OR (95% CI):0.81 (0.62 to 1.05), reference group UFH |
| Secondary Composite at 43 days:Total mortalityNonfatal MI | Enoxaparin | OR (95% CI):0.88 (0.70 to 1.11), reference group UFH |
| Total mortality at 48 hr | Enoxaparin | OR (95% CI):1.84 (0.68 to 4.99), reference group UFH |
| Total mortality at 8 days | Enoxaparin | OR (95% CI):0.83 (0.52 to 1.31), reference group UFH |
| Total mortality at 14 days | Enoxaparin | OR (95% CI):0.78 (0.52 to 1.17), reference group UFH |
| Total mortality at 43 days | Enoxaparin | OR (95% CI):0.85 (0.72 to 1.00), reference group UFH |
| Nonfatal MI at 48 hr | Enoxaparin | OR (95% CI):0.68 (0.41 to 1.13), reference group UFH |
| Nonfatal MI at 8 days | Enoxaparin | OR (95% CI):0.70 (0.51 to 0.97), reference group UFH |
| Nonfatal MI at 14 days | Enoxaparin | OR (95% CI):0.78 (0.58 to 1.05), reference group UFH |
| Nonfatal MI at 43 days | Enoxaparin | OR (95% CI):0.82 (0.63 to 1.07), reference group UFH |
| Major bleeding at 72 hr | Enoxaparin | 16/1938 |
| UFH | 14/1936 |
| Major bleeding in hospital | Enoxaparin | 29/1938 |
| UFH | 19/1936 |
| Major bleeding 8-43 days | Enoxaparin | 34/1938 |
| UFH | 18/1936 |
| Minor bleeding 72 hr | Enoxaparin | 99/1938 |
| UFH | 45/1936 |
| Minor bleeding in hospital | Enoxaparin | 176/1938 |
| UFH | 48/1936 |
| Minor bleeding 8-43 days | Enoxaparin | 227/1938 |
| UFH | 62/1936 |
| Bertel, 201045ZEUS | RCTTotal N: 876Fair quality | Primary Composite at 30 days:Total mortalityNonfatal MIMajor bleedingTarget Vessel Revascularization (unplanned) | Enoxaparin | 24/436 |
| UFH | 31/440 |
| Secondary Composite at 30 days:Major bleedingMinor bleedingThrombocytopenia | Enoxaparin | 43/436 |
| UFH | 88/440 |
| Total mortality at 30 days | Enoxaparin | 0/436 |
| UFH | 0/440 |
| Nonfatal MI at 30 days | Enoxaparin | 4/436 |
| UFH | 14/440 |
| Revascularization at 30 days | Enoxaparin | 7/436 |
| UFH | 6/440 |
| Major bleeding at 30 days | Enoxaparin | 16/436 |
| UFH | 27/440 |
| Minor bleeding at 30 days | Enoxaparin | 37/436 |
| UFH | 76/440 |
| Stent thrombosis at 30 days | Enoxaparin | 0/436 |
| UFH | 4/440 |
| Bhatt, 200346CRUISE | RCTTotal N: 261Fair quality | Composite at 30 days:Total mortalityNonfatal MIRevascularization | Enoxaparin | 13/129 |
| UFH | 10/132 |
| Total mortality at 30 days | Enoxaparin | 0/129 |
| UFH | 0/132 |
| Nonfatal MI at 30 days | Enoxaparin | 11/129 |
| UFH | 10/132 |
| Revascularization at 30 days | Enoxaparin | 2/129 |
| UFH | 1/132 |
| Major bleeding at 30 days | Enoxaparin | 3/129 |
| UFH | 2/132 |
| Minor bleeding at 30 days | Enoxaparin | 18/129 |
| UFH | 19/132 |
| Blazing, 200447A to Z Study | RCTTotal N: 3,987Good quality | Primary Composite at 7 days:Total mortalityNonfatal MIRefractory ischemia | Enoxaparin | 98/1111 |
| UFH | 92/1080 |
| Secondary Composite at 7 days:Total mortalityNonfatal MIRevascularizationRefractory ischemiaClinical ischemia | Enoxaparin | HR (95% CI): 0.89 (0.75-1.05), reference group UFH |
| Total mortality at 7 days | Enoxaparin | HR (95% CI): 1.26 (0.67-2.38), reference group UFH |
| Nonfatal MI at 7 days | Enoxaparin | HR (95% CI): 0.82 (0.60-1.13), reference group UFH |
| Revascularization at 7 days | Enoxaparin | HR (95% CI): 0.98 (0.74-1.29), reference group UFH |
| Refractory ischemia at 7 days | Enoxaparin | HR (95% CI): 0.82 (0.61-1.10), reference group UFH |
| Major bleeding at 7 days | Enoxaparin | 0.9% |
| UFH | 0.4% |
| Major or minor bleeding at 7 days | Enoxaparin | 3% |
| UFH | 2.2% |
| Brieger, 200748 | ObservationalTotal N: 17,659Fair quality | Total mortality in hospital | LMWH | 293/10839 |
| UFH | 326/7959 |
| Major bleeding in hospital | LMWH | 195/10839 |
| UFH | 215/7959 |
| Chen, 200649 | RCTTotal N: 455Poor quality | Composite outcome in hospital:Total mortalityNonfatal MIRevascularization | Enoxaparin | 1/227 |
| UFH | 0/228 |
| Composite outcome from hospital discharge:Total mortalityNonfatal MIRevascularization | Enoxaparin | 0/227 |
| UFH | 1/228 |
| Total mortality in hospital | Enoxaparin | 0/227 |
| UFH | 0/228 |
| Total mortality from hospital discharge | Enoxaparin | 0/227 |
| UFH | 0/228 |
| Ferguson, 200450SYNERGY | RCTTotal N: 10,027Good quality | Primary Composite at 30 days:Total mortalityNonfatal MI | Enoxaparin | 699/4993 |
| UFH | 773/4985 |
| Primary Composite at 14 days:Total mortalityNonfatal MI | Enoxaparin | 639/4993 |
| UFH | 668/4985 |
| Primary Composite at 48 hrs:Total mortalityNonfatal MI | Enoxaparin | 285/4993 |
| UFH | 324/4985 |
| Total mortality at 30 days | Enoxaparin | 160/4993 |
| UFH | 155/4985 |
| Total mortality at 14 days | Enoxaparin | 559/4993 |
| UFH | 588/4985 |
| Total mortality at 48 hrs | Enoxaparin | 270/4993 |
| UFH | 299/4985 |
| Nonfatal MI at 30 days | Enoxaparin | 584/4993 |
| UFH | 633/4985 |
| Nonfatal MI at 14 days | Enoxaparin | 120/4993 |
| UFH | 120/4985 |
| Nonfatal MI at 48 hrs | Enoxaparin | 20/4993 |
| UFH | 26/4985 |
| GUSTO severe bleeding pre-catheterization | Enoxaparin | 135/4993 |
| UFH | 110/4983 |
| TIMI major bleeding pre-catheterization | Enoxaparin | 454/4993 |
| UFH | 379/4983 |
| Recurrent ischemia pre-catheterization | Enoxaparin | 200/4993 |
| UFH | 214/4985 |
| Stroke pre-catheterization | Enoxaparin | 50/4993 |
| UFH | 45/4985 |
| Goodman, 200351INTERACT | RCTTotal N: 746Good quality | Secondary Composite at 30 days:Total mortalityNonfatal MIRevascularization | Enoxaparin | 53/380 |
| UFH | 59/366 |
| Secondary Composite at 30 days:Total mortalityNonfatal MI | Enoxaparin | 19/380 |
| UFH | 33/366 |
| Secondary Composite at 300 days:Total mortalityNonfatal MI | Enoxaparin | 19/380 |
| UFH | 26/366 |
| Secondary Composite at 600 days:Total mortalityNonfatal MI | Enoxaparin | 23/380 |
| UFH | 36/366 |
| Secondary Composite at 900 days:Total mortalityNonfatal MI | Enoxaparin | 31/380 |
| UFH | 51/366 |
| Total mortality at 30 days | Enoxaparin | 9/380 |
| UFH | 15/366 |
| Nonfatal MI at 30 days | Enoxaparin | 15/380 |
| UFH | 21/366 |
| Revascularization at 30 days | Enoxaparin | 28/380 |
| UFH | 20/366 |
| Major bleeding at 48 hr | Enoxaparin | 4/380 |
| UFH | 14/366 |
| Recurrent ischemia at 48 hr | Enoxaparin | 3/379 |
| UFH | 1/365 |
| Korovesis, 200552 | ObservationalTotal N: 333Fair quality | Composite outcome at 30 days:Total mortalityNonfatal MIRevascularization | UFH | 0/217 |
| Enoxaparin | 0/116 |
| Total mortality at 30 days | UFH | 0/217 |
| Enoxaparin | 0/116 |
| Nonfatal MI at 30 days | UFH | 0/217 |
| Enoxaparin | 0/116 |
| Stroke at 30 days | UFH | 0/217 |
| Enoxaparin | 1/116 |
| Major hematoma at 30 days | UFH | 0/217 |
| Enoxaparin | 1/116 |
| Stable, non-deteriorating hematoma at 30 days | UFH | 108/217 |
| Enoxaparin | 96/116 |
| Mehta, 200553ASPIRE | RCTTotal N: 350Fair quality | Primary Composite at 48 hr:Total mortalityNonfatal MIRevascularizationBailout GPI use | UFH | 7/117 |
| Fondaparinux 2.5mg | 5/118 |
| Fondaparinux 5 mg | 9/115 |
| Total mortality at 48 hr | UFH | 0/117 |
| Fondaparinux 2.5mg | 0/118 |
| Fondaparinux 5 mg | 1/115 |
| Nonfatal MI at 48 hr | UFH | 7/117 |
| Fondaparinux 2.5mg | 4/118 |
| Fondaparinux 5 mg | 9/115 |
| Revascularization at 48 hr | UFH | 1/117 |
| Fondaparinux 2.5mg | 0/118 |
| Fondaparinux 5 mg | 2/115 |
| Major bleeding at 48 hr | UFH | 0/117 |
| Fondaparinux 2.5mg | 1/118 |
| Fondaparinux 5 mg | 3/115 |
| Minor bleeding at 48 hr | UFH | 9/117 |
| Fondaparinux 2.5mg | 3/118 |
| Fondaparinux 5 mg | 8/115 |
| Singh, 200654 | ObservationalTotal N: 11,358Fair quality | Composite outcome in hospital:Total mortalityNonfatal MI | LMWH | 210/4477 |
| UFH | 396/6881 |
| Total mortality in hospital | LMWH | 126/4477 |
| UFH | 196/6881 |
| RBC transfusion (all) in hospital | LMWH | 595/4477 |
| UFH | 846/6881 |
| RBC transfusion (non-CABG) in hospital | LMWH | 300/4477 |
| UFH | 482/6881 |
| Steg, 201055FUTURA/OASIS-8 | RCTTotal N: 2,026Good quality | Primary Composite at 48 hr:Peri-PCI major and minor bleedsMajor vascular access site complications | UFH | 58/1002 |
| UFH (low dose) | 48/1024 |
| Secondary Composite at 30 days:Total mortalityNonfatal MITarget vessel revascularization | UFH | 29/1002 |
| UFH (low dose) | 46/1024 |
| Secondary Composite at 30 days:Total mortalityNonfatal MIPeri-PCI major bleedTarget vessel revascularization | UFH | 39/1002 |
| UFH (low dose) | 59/1024 |
| Stent thrombosis at 30 days | UFH | 5/1002 |
| UFH (low dose) | 11/1024 |
| Target vessel revascularization at 30 days | UFH | 3/1002 |
| UFH (low dose) | 9/1024 |
| Minor bleeding at 30 days | UFH | 21/1002 |
| UFH (low dose) | 9/1024 |
| Major bleeding at 30 days | UFH | 18/1002 |
| UFH (low dose) | 22/1024 |
| Nonfatal MI at 30 days | UFH | 25/1002 |
| UFH (low dose) | 31/1024 |
| Total mortality at 30 days | UFH | 6/1002 |
| UFH (low dose) | 8/1024 |
| Stroke at 30 days | UFH | 5/1002 |
| UFH (low dose) | 5/1024 |
| Major PCI related procedural complications at 30 days | UFH | 44/1002 |
| UFH (low dose) | 44/1024 |
| Yusuf, 200656OASIS-5 | RCTTotal N: 20,078Good quality | Primary Composite at 9 days:Total mortalityNonfatal MIRefractory ischemia | Fondaparinux | HR (95% CI): 1.01 (0.9-1.13), reference group enoxaparin |
| Primary Composite at 30 days:Total mortalityNonfatal MIRefractory ischemia | Fondaparinux | HR (95% CI): 0.93 (0.84-1.02), reference group enoxaparin |
| Primary Composite at 6 mo:Total mortalityNonfatal MIRefractory ischemia | Fondaparinux | HR (95% CI): 0.93 (0.86-1.00), reference group enoxaparin |
| Secondary Composite at 9 days:Total mortalityNonfatal MI | Fondaparinux | HR (95% CI): 0.99 (0.86-1.13), reference group enoxaparin |
| Secondary Composite at 30 days:Total mortalityNonfatal MI | Fondaparinux | HR (95% CI): 0.9 (0.81-1.01), reference group enoxaparin |
| Secondary Composite at 6 mo:Total mortalityNonfatal MI | Fondaparinux | HR (95% CI): 0.92 (0.84-1.00), reference group enoxaparin |
| Secondary Composite at 9 days:Total mortalityNonfatal MIRefractory ischemiaMajor bleeding | Fondaparinux | HR (95% CI): 0.81 (0.73-0.89), reference group enoxaparin |
| Secondary Composite at 30 days:Total mortalityNonfatal MIRefractory ischemiaMajor bleeding | Fondaparinux | HR (95% CI): 0.92 (0.84-1.00), reference group enoxaparin |
| Secondary Composite at 6 mo:Total mortalityNonfatal MIRefractory ischemiaMajor bleeding | Fondaparinux | HR (95% CI): 0.82 (0.75-0.89), reference group enoxaparin |
| Total mortality at 9 days | Fondaparinux | HR (95% CI): 0.95 (0.77-1.17), reference group enoxaparin |
| Total mortality at 30 days | Fondaparinux | HR (95% CI): 0.83 (0.71-0.97), reference group enoxaparin |
| Total mortality at 6 mo | Fondaparinux | HR (95% CI): 0.89 (0.8-1.00), reference group enoxaparin |
| Nonfatal MI at 9 days | Fondaparinux | HR (95% CI): 0.99 (0.84-1.18), reference group enoxaparin |
| Nonfatal MI at 30 days | Fondaparinux | HR (95% CI): 0.94 (0.82-1.08), reference group enoxaparin |
| Nonfatal MI at 6 mo | Fondaparinux | HR (95% CI): 0.95 (0.85-1.06), reference group enoxaparin |
| Stroke at 9 days | Fondaparinux | HR (95% CI): 0.82 (0.53-1.27) , reference group enoxaparin |
| Stroke at 30 days | Fondaparinux  | HR (95% CI): 0.77 (0.57-1.05) , reference group enoxaparin |
| Stroke at 180 days | Fondaparinux | HR (95% CI): 0.78 (0.62-0.99) , reference group enoxaparin |
| Refractory ischemia at 9 days | Fondaparinux | HR (95% CI): 1.03 (0.84-1.26), reference group enoxaparin |
| Refractory ischemia at 30 days | Fondaparinux | HR (95% CI): 0.99 (0.82-1.19), reference group enoxaparin |
| Refractory ischemia at 6 mo | Fondaparinux | HR (95% CI): 0.97 (0.81-1.16), reference group enoxaparin |
| Major bleeding at 9 days | Fondaparinux | HR (95% CI): 0.52 (0.44-0.61) , reference group enoxaparin |
| Major bleeding at 30 days | Fondaparinux | HR (95% CI): 0.62 (0.54-0.72) , reference group enoxaparin |
| Major bleeding at 180 days | Fondaparinux | HR (95% CI): 0.72 (0.64 -0.82) , reference group enoxaparin |

Abbreviations: CABG=coronary artery bypass grafting; CI=confidence interval; GPI=glycoprotein IIb/IIIa inhibitor; GUSTO=global utilization of streptokinase and t-PA for occluded arteries; HR=hazard ratio; hr=hour/hours; LMWH=low molecular weight heparin; mg=milligram/milligrams; MI=myocardial infarction; mo=month/months; N=number of patients; OR=odds ratio; PCI=percutaneous coronary intervention; RBC=red blood cell; RCT=randomized controlled trial; SD=standard deviation; TIMI= thrombolysis in myocardial infarction; UFH=unfractionated heparin; vs=versus