# Supplemental Material to Kikkert et al. “Prognostic value of post-procedural aPTT in patients with ST-elevation myocardial infarction treated with primary PCI” (Thromb Haemost 2013; 109.5)

Suppl. Table 1: Dose Nomogram 1.

| aPTT/control ratio | aPTT (sec) | Bolus dose (IU) | Stop Infusion (Min) | Change infusion rate (IU/hr) | Next aPTT measurement |
|---|---|---|---|---|---|
| < 1.67 | < 70 | 70 IU/kg | 0 | + 200 | 6 hours |
| 1.67 – 2.12 | 70-89 | 0 | 0 | + 200 | 6 hours |
| 2.12 – 2.86 | 90-120 | 0 | 0 | 0 | 6 hours * |
| 2.86 – 3.33 | 121-140 | 0 | 0 | - 100 | 6 hours |
| 3.33 – 4.29 | 141-180 | 0 | 30 | - 100 | 6 hours |
| > 4.29 | > 180 | 0 | 30 | - 200 | 2 hours |

* If 2 sequential measurements within the recommended range, then next measurement after 12 hours.

Suppl. Table 2: Dose Nomogram 2.

| aPTT/control ratio | aPTT (sec) | Bolus dose (IU) | Stop Infusion (Min) | Change infusion rate (IU/hr) | Next aPTT measurement |
|---|---|---|---|---|---|
| < 1.3 | < 55 | 5000 | 0 | + 150 | 6 hours |
| 1.3 – 1.5 | 55 - 65 | 0 | 0 | + 100 | 6 hours |
| 1.5 – 2.0 | 65 - 85 | 0 | 0 | 0 | 6 hours |
| 2.0 – 2.5 | 85 - 105 | 0 | 0 | - 50 | 6 hours |
| 2.5 – 3.0 | 105 - 125 | 0 | 30 | - 100 | 6 hours |
| > 3.0 | > 125 | 0 | 30 | - 150 | 6 hours |

Suppl. Table 3: Dose Nomogram 3.

| aPTT/control ratio | aPTT (sec) | Bolus dose (IU) | Stop Infusion (Min) | Change infusion rate (IU/hr) | Next aPTT measurement |
|---|---|---|---|---|---|
| < 1.3 | < 55 | 5000 | 0 | + 150 | 6 hours |
| 1.3 – 1.5 | 55 - 65 | 0 | 0 | + 100 | 6 hours |
| 1.5 – 2.0 | 65 - 85 | 0 | 0 | 0 | 6 hours |
| 2.0 – 2.5 | 85 - 105 | 0 | 0 | - 50 | 6 hours |
| 2.5 – 3.0 | 105 - 125 | 0 | 30 | - 100 | 6 hours |
| 3.0 – 5.7 | 125 - 240 | 0 | 60 | - 150 | 3 hours |
| > 5.7 | > 240 | 0 | 90 | - 150 | 3 hours |

Suppl. Table 4: Clinical characteristics and outcome of patients included in the study versus those not included in the study.

| **Clinical characteristics for patients in- and excluded in the study** | | | |
|---|---|---|---|
| Characteristic | Patients included (n = 1876) | Patients excluded (n = 1596) | p-value |
| Age | 61 | 62 | 0.41 |
| Male sex | 70.1 | 72.5 | 0.12 |
| BMI | 26.2 | 26.0 | 0.13 |
| Body mass | 80 | 80 | 0.33 |
| Length | 1.75 | 1.75 | 0.97 |
| History of | | | |
| IDDM | 3.7 | 4.1 | 0.12 |
| NIDDM | 9.9 | 7.9 | |
| Hypertension | 37.1 | 31.1 | < 0.001 |
| Dyslipidemia | 22.9 | 22.3 | 0.67 |
| MI | 12.0 | 12.0 | 0.97 |
| Family history CAD | 38.2 | 38.8 | 0.71 |
| Current smoker | 37.6 | 38.7 | 0.51 |
| Previous PCI | 8.7 | 9.2 | 0.59 |
| Previous CABG | 2.2 | 2.9 | 0.17 |
| **Procedural characteristics** | | | |
| Shock | 7.7 | 4.1 | < 0.001 |
| Heart Rate - BPM | 77 | 75 | 0.001 |
| Systolic Blood Pressure - mmHg | 126 | 129 | 0.020 |
| Diastolic Blood Pressure - mmHg | 75 | 75 | 0.75 |
| Glycoprotein IIB/IIIA inhibitors | 26.2 | 30.0 | 0.013 |
| IABP | 12.7 | 3.8 | < 0.001 |
| Thrombosuction performed | 43.0 | 37.6 | 0.001 |
| IRA | | | |
| LM/LAD | 44.1 | 41.2 | 0.096 |
| RCA/RCx | 55.9 | 58.8 | |

| | | | | |
|---|---|---|---|---|
| MVD | | 37.1 | 36.5 | 0.71 |
| CTO in a non-IRA | | 14.1 | 13.4 | 0.56 |
| TIMI flow pre procedure | | | | |
| | 0/1 | 72.7 | 68.5 | 0.014 |
| | 2/3 | 27.3 | 31.5 | |
| Intracoronary thrombus | | 58.2 | 55.8 | 0.18 |
| | | | | |
| **Outcome** | | | | |
| TIMI Flow post Procedure | | | | |
| | 0/1 | 3.0 | 3.3 | 0.62 |
| | 2/3 | 97.0 | 96.7 | |
| 30 day All Cause Mortality | | 8.2 | 8.3 | 0.82 |

**Suppl. Table 5: 30 day outcome according to mean aPTT measured within the first 24 hours after pPCI in patients not pretreated with LMWH**

| | Event rate (%)[†] - n/N | | Unadjusted[‡] HR | 95 % CI | p-value | Adjusted[§] HR | 95 % CI | p-value | Adjusted[‖] HR | 95 % CI | p-value |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MACE | | | | | | | | | | | |
| aPTT ratio[*] < 1.5 | 8.5 | 23/271 | 0.81 | 0.48 - 1.37 | 0.43 | 0.86 | 0.51 - 1.45 | 0.56 | 0.83 | 0.46 - 1.49 | 0.53 |
| aPTT ratio 1.5 - 2.0 | 10.4 | 36/348 | - | - | - | - | - | - | - | - | - |
| aPTT ratio 2.0 - 4.0 | 13.1 | 111/849 | 1.29 | 0.89 – 1.88 | 0.19 | 1.12 | 0.76 - 1.63 | 0.58 | 0.90 | 0.57 - 1.44 | 0.67 |
| aPTT ratio > 4.0 | 22.2 | 52/235 | 2.32 | 1.52 - 3.55 | < 0.001 | 1.76 | 1.13 – 2.74 | 0.012 | 1.48 | 0.87 - 2.51 | 0.15 |
| Death of all causes | | | | | | | | | | | |
| aPTT ratio < 1.5 | 3.6 | 10/277 | 0.60 | 0.28 - 1.27 | 0.18 | 0.65 | 0.30 - 1.37 | 0.25 | 0.62 | 0.26 - 1.45 | 0.27 |
| aPTT ratio 1.5 - 2.0 | 6.0 | 21/350 | - | - | - | - | - | - | - | - | - |
| aPTT ratio 2.0 - 4.0 | 8.2 | 70/858 | 1.38 | 0.85 - 2.25 | 0.19 | 1.12 | 0.69 - 1.85 | 0.64 | 0.81 | 0.43 - 1.52 | 0.51 |
| aPTT ratio > 4.0 | 16.0 | 38/238 | 2.82 | 1.66 – 4.81 | < 0.001 | 1.94 | 1.11 - 3.37 | 0.020 | 1.37 | 0.70 - 2.71 | 0.36 |
| MI | | | | | | | | | | | |
| aPTT ratio < 1.5 | 3.7 | 10/277 | 1.24 | 0.52 – 2.98 | 0.63 | 1.30 | 0.54 - 3.14 | 0.55 | 1.22 | 0.51 – 2.92 | 0.66 |
| aPTT ratio 1.5 - 2.0 | 3.0 | 10/350 | - | - | - | - | - | - | - | - | - |
| aPTT ratio 2.0 - 4.0 | 3.7 | 30/858 | 1.25 | 0.61 – 2.56 | 0.54 | 1.19 | 0.58 - 2.47 | 0.63 | 1.07 | 0.52 - 2.21 | 0.85 |
| aPTT ratio > 4.0 | 6.0 | 13/238 | 2.07 | 0.91 – 4.72 | 0.084 | 1.87 | 0.80 – 4.37 | 0.15 | 1.76 | 0.77 - 4.03 | 0.18 |
| Stroke | | | | | | | | | | | |
| aPTT ratio < 1.5 | 1.1 | 3/276 | 3.754 | 0.39 - 36.1 | 0.25 | 3.92 | 0.41 – 37.7 | 0.24 | 3.76 | 0.39 – 36.4 | 0.25 |
| aPTT ratio 1.5 - 2.0 | 0.3 | 1/348 | - | - | - | - | - | - | - | - | - |
| aPTT ratio 2.0 - 4.0 | 1.1 | 9/857 | 3.73 | 0.47- 29.4 | 0.21 | 3.42 | 0.43 - 27.3 | 0.25 | 3.21 | 0.40 – 25.8 | 0.27 |
| aPTT ratio > 4.0 | 2.3 | 5/235 | 7.91 | 0.92 - 67.7 | 0.059 | 6.68 | 0.75 - 59.4 | 0.088 | 7.71 | 0.89 – 66.9 | 0.064 |
| Stentthrombosis | | | | | | | | | | | |
| aPTT ratio < 1.5 | 1.1 | 3/272 | 0.95 | 0.21 - 4.26 | 0.95 | 0.95 | 0.21 - 4.23 | 0.94 | 0.94 | 0.21 - 4.21 | 0.94 |
| aPTT ratio 1.5 - 2.0 | 1.2 | 4/350 | - | - | - | - | - | - | - | - | - |
| aPTT ratio 2.0 - 4.0 | 1.6 | 13/849 | 1.37 | 0.45 - 4.21 | 0.58 | 1.43 | 0.46 - 4.45 | 0.54 | 1.41 | 0.46 - 4.32 | 0.55 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| aPTT ratio > 4.0 | 2.2 | 5/238 | 1.97 | 0.53 – 7.34 | 0.31 | 2.13 | 0.55 – 8.29 | 0.27 | 2.06 | 0.55 – 7.68 | 0.28 |
| Gusto severe or moderate bleeding | | | | | | | | | | | |
| aPTT ratio < 1.5 | 5.8 | 16/277 | 1.45 | 0.71 - 2.97 | 0.31 | 1.56 | 0.76 – 3.20 | 0.22 | 1.99 | 0.86 – 4.58 | 0.11 |
| aPTT ratio 1.5 – 2.0 | 4.1 | 14/350 | - | - | - | - | - | - | - | - | - |
| aPTT ratio 2.0 – 4.0 | 9.5 | 80/858 | 2.39 | 1.36 - 4.22 | 0.003 | 1.77 | 0.99 – 3.14 | 0.052 | 2.02 | 1.00 – 4.09 | 0.049 |
| aPTT ratio > 4.0 | 22.9 | 53/238 | 6.16 | 3.42 – 11.1 | < 0.001 | 3.66 | 2.00 – 6.71 | < 0.001 | 3.23 | 1.53 – 6.82 | 0.002 |
| Gusto severe bleeding | | | | | | | | | | | |
| aPTT ratio < 1.5 | 2.5 | 7/277 | 1.47 | 0.50 – 4.38 | 0.49 | 1.54 | 0.52 - 4.60 | 0.44 | 2.58 | 0.69 – 10.4 | 0.16 |
| aPTT ratio 1.5 - 2.0 | 1.8 | 6/350 | - | - | - | - | - | - | - | - | - |
| aPTT ratio 2.0 - 4.0 | 2.4 | 20/858 | 1.37 | 0.55 – 3.42 | 0.50 | 1.15 | 0.46 - 2.89 | 0.77 | 1.80 | 0.52 – 6.25 | 0.36 |
| aPTT ratio > 4.0 | 8.6 | 20/238 | 5.19 | 2.08 – 12.9 | 0.001 | 3.74 | 1.45 – 9.64 | 0.006 | 4.63 | 0.86 – 16.5 | 0.018 |
| Gusto moderate bleeding | | | | | | | | | | | |
| aPTT ratio < 1.5 | 3.3 | 9/277 | 1.42 | 0.55 – 3.68 | 0.47 | 1.53 | 0.59 - 3.97 | 0.38 | 1.67 | 0.58 – 4.86 | 0.35 |
| aPTT ratio 1.5 - 2.0 | 2.3 | 8/350 | - | - | - | - | - | - | - | - | - |
| aPTT ratio 2.0 - 4.0 | 7.5 | 63/858 | 3.29 | 1.58 – 6.86 | 0.002 | 2.30 | 1.09 – 4.84 | 0.028 | 2.21 | 0.94 – 5.18 | 0.068 |
| aPTT ratio > 4.0 | 14.3 | 33/238 | 6.53 | 3.02 - 14.1 | < 0.001 | 3.56 | 1.62 – 7.86 | 0.002 | 2.63 | 1.05 – 6.60 | 0.040 |

[*]aPTT ratio was calculated as the mean of all aPTTs determined between the start of pPCI and 24 hours thereafter in relation to the center specific upper limit of normal (ULN). [†] Kaplan Meier estimates. [‡] Unadjusted HRs and corresponding confidence intervals and p-values were calculated using Cox regression analysis. [§] Adjusted HRs and corresponding confidence intervals and p-values were calculated using Cox regression analysis adjusting for age and sex. [||] Adjusted HRs and corresponding confidence intervals and p-values were calculated using Cox regression analysis adjusting for relevant predictors of these endpoints. HR: hazard ratio; CI: confidence interval; MACE: major adverse cardiac events (the composite of death, MI, stroke or target lesion revascularization); MI: myocardial infarction; GUSTO: Global Utilization of Streptokinase and Tissue Plasminogen Activator for Occluded Arteries.