

SUPPLEMENTAL MATERIAL

Table S1. 30 day mortality according to ECG2sheath time over/under 90 minutes and age group.

Whole group				
<i>ECG2Sheath time</i>	<i>Alive</i>	<i>Dead</i>	<i>Total</i>	<i>Percentage</i>
<90 min	4017	173	4190	4.1 %
90 min+	2351	170	2521	6.7 %
<i>Total</i>	6368	343		
Age <80yo				
<i>ECG2Sheath time</i>	<i>Alive</i>	<i>Dead</i>	<i>Total</i>	
<90 min	2057	30	2087	1.4 %
90 min+	3598	123	3721	3.3 %
<i>Total</i>	5655	153		
Age >80yo				
<i>ECG2Sheath time</i>	<i>Alive</i>	<i>Dead</i>	<i>Total</i>	
<90 min	294	64	358	17.9 %
90 min+	419	50	469	10.7 %
<i>Total</i>	713	114		

2x2 table showing survival at 30 days for all patients, and divided by age over/under 80 years according to ECG2sheath insertion time over/under 90 minutes.

Table S2. Regularized Cox PH model using LASSO for variable selection (n = 4 919 patients).

Model 1 including ECG2Sheath time* (AIC 5844.77)	Hazard ratio (95% CI)	p-value
Age continuous (per 10 years)	2.16 (1.96 - 2.38)	<0.0001
Sex (male)	0.81 (0.65 - 1.00)	0.05
Diabetes mellitus	1.53 (1.17 - 1.98)	0.002
Peripheral artery disease	1.65 (1.19 - 2.28)	0.003
Cardiogenic shock at admittance	3.88 (2.79 - 5.38)	<0.0001
Cardiac arrest	2.72 (1.87 - 3.96)	<0.0001
No history of reduced LVEF	0.56 (0.42 - 0.76)	0.0001
Fluro time (per minute)	1.002 (0.993 - 1.011)	0.64
MCS use (any device)	1.73 (1.09 - 2.73)	0.02
Radial access	0.55 (0.43 - 0.71)	<0.0001
In-lab complications (any)	2.78 (1.83 - 4.23)	<0.0001
Complete revascularization at index procedure	0.91 (0.74 - 1.12)	0.36
Ecg2sheath time (per 10 min)	1.007 (1.001 - 1.013)	0.03
Model 2 excluding ECG2Sheath time † (AIC 5846.474 ‡)		
Age continuous (per 10 years)	2.16 (1.95 - 2.38)	<0.0001
Sex (male)	0.80 (0.65 - 1.00)	0.05
Diabetes mellitus	1.53 (1.18 - 1.99)	0.001
Peripheral artery disease	1.69 (1.22 - 2.33)	0.002
Cardiogenic shock at admittance	3.97 (2.86 - 5.50)	<0.0001
Cardiac arrest	2.69 (1.85 - 3.92)	<0.0001
No history of reduced LVEF	0.56 (0.42 - 0.75)	<0.0001
Fluoro time (per minute)	1.002 (0.993 - 1.011)	0.64
MCS use (any device)	1.71 (1.09 - 2.70)	0.02
Radial access	0.56 (0.43 - 0.72)	<0.0001
In-lab complications (any)	2.77 (1.82 - 4.21)	<0.0001
Complete revascularization at index procedure	0.90 (0.73 - 1.11)	0.35

Analyses using the Cox Proportional Hazards model estimating hazard ratio and associated 95% confidence interval. Variable selection and regularization using LASSO with penalized maximum likelihood. Input variables was patient age, sex, smoking, diabetes, hypertension, peripheral artery disease, history of prior revascularization, cardiogenic shock, cardiac arrest, contrast use, fluoro time, admittance outside of office hours (1600-0800h), use of intracoronary imaging, history of heart failure, no. of disease coronary vessels, use of mechanical circulatory support, arterial access site, ECG2sheath time, in-lab complications and complete revascularization at index procedure (n = 20). The method needs complete data and due to row wise deletion, the number of patients was reduced to 4919. LASSO, least absolute shrinkage and selection operator; ECG, electrocardiogram; AIC, Akaike information criterion; LVEF, left ventricular ejection fraction; MCS, mechanical circulatory support.

*Model using all 20 variables as input.

†Model using all variables except ECG2sheath time.

‡AIC of model 2 is higher indicating poorer model fit.

Table S3. Missing observations according to variables (total n = 11 226).

Time points	Median (IQR)	Present - no. (%)	Missing - no. (%)
Onset of symptoms	NA	9730 (86.7)	1496 (13.3)
ECG	NA	8320 (74.1)	2906 (25.9)
Admittance	NA	10567 (94.1)	659 (5.9)
Sheath insertion	NA	8842 (78.8)	2384 (21.2)
Flow	NA	7401 (65.9)	3825 (34.1)
Time intervals			
Symptoms2ECG	90 (149) minutes	7413 (66.0)	3813 (34.0)
Symptoms2flow	187 (179) minutes	6348 (56.5)	4878 (43.5)
ECG2sheath	75 (53) minutes	6832 (60.9)	4394 (39.1)
ECG2flow	87 (55) minutes	5527 (49.2)	5699 (50.8)
Door2flow	27 (23) minutes	6746 (60.1)	4480 (39.9)
Sheath2flow	11 (8) minutes	5231 (46.6)	5995 (53.4)

Data completeness regarding logistical time points and subsequently derived intervals as well as median and interquartile range values for the latter. NA, not applicable; ECG, electrocardiogram.

Table S4. Door-to-flow time and mortality.

Cox Proportional Hazard Ratio	Whole population (n = 6,737)	
	<i>Hazard ratio (95% CI)</i>	<i>p-value</i>
HR per 10 min increase in door2flow time (min)*	1.034 (1.017 - 1.052)	<0.0001
HR per quartile of door2flow time (min)*	1.22 (1.15 - 1.29)	<0.0001
	<80 y.o. age (n = 6,015)	
	<i>Hazard ratio (95% CI)</i>	<i>p-value</i>
HR per 10 min increase in door2flow time (min)*	1.039 (1.018 - 1.061)	<0.0001
HR per quartile of door2flow time (min)*	1.22 (1.13 - 1.31)	<0.0001
	Age ≥ 80 y.o. age (n = 722)	
	<i>Hazard ratio (95% CI)</i>	<i>p-value</i>
HR per 10 min increase in door2flow time (min)*	1.002 (0.971 - 1.033)	0.92
HR per quartile of door2flow time (min)*	1.08 (0.97 - 1.20)	0.16

*Sex-adjusted hazard ratio estimates.