

Supplementary information:

Tables

Table 1S: List of evaluated emergency department laboratory examinations.

Albumin-Blood	Di-Dimer	Lipase, pancreatic	Potassium-Blood
Alkaline Phosphatase-Blood	EOS abs.	MCV	Protein-Blood, total
Amylase-Blood	gamma GT-Blood	NEUTRO abs.	SGOT(AST)-Blood
Bilirubin-Blood, total	Glucose-Blood	Osmolality(calc.)	SGPT(ALT)-Blood
CK-MB%	HCO ₃	PCO ₂ ,Ar	Sodium-Blood
CPK-Blood, total	HDL-Cholesterol, direct	PCO ₂ ,V	T3,free
CPK-MB	HGB	pH	T4,free
CRP	INR	PLT	TSH
Calcium-Blood, total	LDH-Blood	PO ₂	Triglycerides
Chloride-Blood	LDL Cholesterol, direct	PT	Troponin-I
Cholesterol, total	LYMPHO abs.	PTT	BUN
Creatinine-Blood	Lactate	Phosphorus-Blood	WBC

EOS- eosinophils; **MCV**-Mean Corpuscular Volume; **SGOT(AST)**- Aspartate aminotransferase; **SGPT(ALT)**- Alanine transaminase; **HGB** - Hemoglobin; **CPK**- Creatine Phospho Kinase; **INR**- International Normalized Ratio; **PLT**- Platelets; **TSH**-Thyroid Stimulating Hormone; **PT** – Prothrombin Time; **PTT**-Partial Prothrombin Time; **WBC**- White blood cells; **CRP** – C-reactive protein, **BUN** – blood urea nitrogen; **Cr** – creatinine; **Glu** – Glucose; **LDH** – lactate Dehydrogenase

Table 2S: Comparison between non-short-term and short-term hospitalization and patients who were discharged from the emergency department.

	Non short hospitalization (n = 73132, 11.1%)	Short hospitalization (n = 59994, 9.1%)	Discharged from ED (n = 524302, 79.8%)	P value
Demographics				
Age, (years) mean (SD)	71.4 (15.9)	69.3 (17.0)	49.2 (20.9)	<0.001
Female, N. (%)	33695 (46.1)	28581 (47.6)	261953 (50.0)	<0.001
Arrival mode				
Walk-in, N. (%)	36007 (49.2)	32560 (54.3)	437616 (83.5)	<0.001
Ambulance, N. (%)	35234 (48.2)	25869 (43.1)	77629 (14.8)	<0.001
Intensive care ambulance, N. (%)	1668 (2.3)	1443 (2.4)	2111 (0.4)	<0.001
Unknown, N. (%)	223 (0.3)	122 (0.2)	1574 (0.3)	<0.001
Comorbidities				
IHD, N. (%)	19126 (26.2)	15576 (26.0)	34772 (6.6)	<0.001
CHF, N. (%)	18668 (25.5)	13573 (22.6)	21217 (4.0)	<0.001
DM, N. (%)	23818 (32.6)	17444 (29.1)	43208 (8.2)	<0.001
CRF, N. (%)	10721 (14.7)	6695 (11.2)	11143 (2.1)	<0.001
COPD, N. (%)	6782 (9.3)	4800 (8.0)	8513 (1.6)	<0.001
Oncological patients, N. (%)	17417 (23.8)	12685 (21.1)	52454 (10.0)	<0.001
Triage measurements				
ESI, mean (SD)	2.9 (0.4)	3.0 (0.4)	3.3 (0.6)	<0.001
SBP (mm Hg) mean (SD)	133.9 (49.7)	137.5 (27.2)	131.6 (22.6)	<0.001
DBP (mm Hg) mean (SD)	72.7 (17.1)	75.0 (16.1)	76.5 (13.5)	<0.001

Heart rate (b/min), mean (SD)	90.2 (491.4)	83.7 (37.2)	82.5 (297.8)	<0.001
Temperature (Celsius), mean (SD)	37.0 (1.1)	36.9 (0.9)	36.8 (1.5)	<0.001
Saturation (%), mean (SD)	95.1 (41.2)	95.9 (11.2)	97.9 (30.0)	<0.001
Laboratory tests				
HGB (g/dl), mean (SD)	11.8 (2.2)	12.3 (2.1)	13.1 (1.8)	<0.001
WBC (10 ⁹ /L), mean (SD)	10.9 (9.4)	9.8 (7.7)	8.9 (4.5)	<0.001
CRP (mg/L), mean (SD)	68.3 (83.8)	38.2 (62.3)	18.9 (37.2)	<0.001
Creatinine (mg/dL), mean (SD)	1.4 (1.3)	1.2 (1.0)	0.9 (0.6)	<0.001
Glucose (mg/dL), mean (SD)	152.1 (87.4)	143.4 (76.7)	117.0 (47.3)	<0.001
LDH (mg/dL), mean (SD)	334.8 (346.6)	297.8 (293.9)	237.3 (170.8)	<0.001
Lactate, (mg/dL) mean (SD)	22.2 (13.3)	21.0 (12.2)	18.7 (9.6)	<0.001
Albumin (mg/dL), mean (SD)	3.6 (0.6)	3.8 (0.6)	4.1 (0.5)	<0.001
Outcome measures				
72 hours revisit to ED, N. (%)	3199 (4.4)	2224 (3.7)	28690 (5.5)	<0.001
30 days mortality, N. (%)	5144 (7.0)	2594 (4.3)	4844 (0.9)	<0.001

The table presents the differences between the parameters of non-short and the short hospitalizations, and those who were discharged from the ED.

Abbreviations: ED = Emergency department, SD – Standard deviation; IHD – ischemic heart disease; CHF – Congestive heart failure; DM – Diabetes mellitus; CKD – chronic kidney disease; COPD – Chronic obstructive pulmonary disease, ESI = Emergency Severity index, SBP = Systolic blood pressure, DBP = Diastolic blood pressure, HGB = Hemoglobin, WBC = White blood cells, CRP = C reactive protein, LDH = Lactic dehydrogenase.

Table 3S: The single variables with the highest area under the curve for predicting short hospitalization.

	Not short vs. short hospitalizations	Area Under the Curve
CRP (mg/L)	68.3 ± 83.8 vs. 38.2 ± 62.3	0.63 (95% CI:0.62 - 0.63)
ED diagnosis		0.62 (95% CI:0.61 - 0.62)
Troponin-I (micg/L)	0.2 ± 1.5 vs. 0.1 ± 0.6	0.61 (95% CI:0.60 - 0.62)
Albumin –Blood (g/L)	3.6 ± 0.6 vs. 3.8 ± 0.6	0.61 (95% CI:0.60 - 0.62)
ED shift		0.60 (95% CI:0.60 - 0.61)
Chief complaint		0.60 (95% CI:0.59 - 0.61)

CRP - C-reactive protein; ED- emergency department.

Supplemented figures

Figure 1S: Distribution of hospitalization days for patients admitted to the medical wards. The graph is limited to 10 or less days.

Figure 2S: Short hospitalization rate (%) stratified by the admission shift (8:00-16:00, 16:00-24:00 and 24:00-8:00).

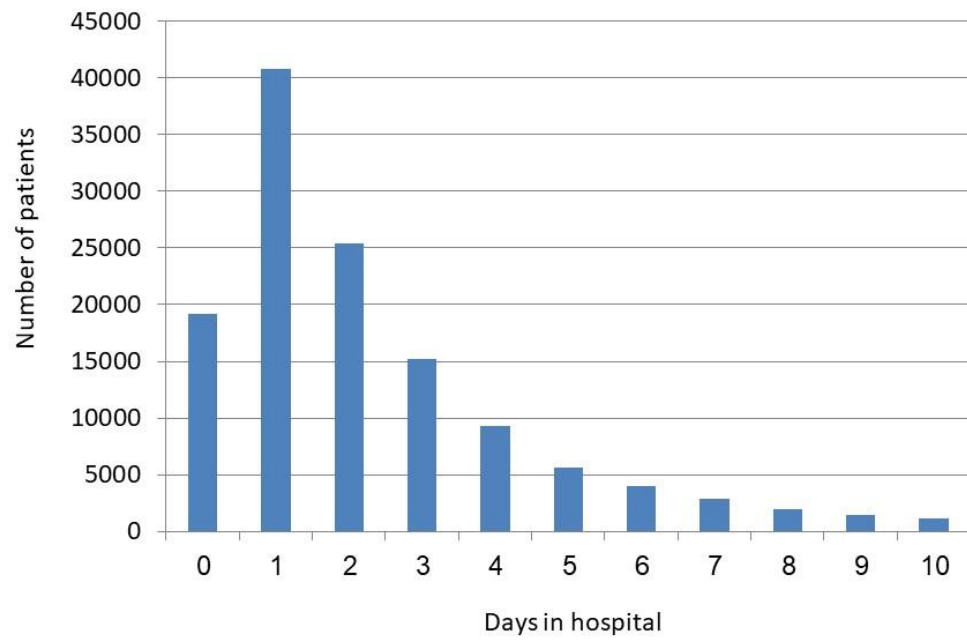
Figure 1S

Figure 2S