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Predictors of in-hospital mortality after mechanical thrombectomy for acute ischemic stroke – a single-center cohort study

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SUMMARY

Introduction/Objective In-hospital mortality after mechanical thrombectomy (MT) for anterior-circulation large vessel occlusion (LVO) remains insufficiently characterized. We aimed to identify independent predictors and to test whether complete recanalization (mTICI 3) rather than successful recanalization (mTICI 2b–3) carries independent prognostic weight for this interventional radiological procedure.

Methods In a single-center retrospective cohort, 100 consecutive patients with acute ischemic stroke due to anterior-circulation LVO treated with MT were analyzed. The primary outcome was in-hospital mortality estimation (modified Rankin Scale [mRS] score of 6 at discharge). Independent predictors were identified by binary logistic regression using three pre-specified variables: pre-stroke mRS, complete recanalization (mTICI 3), and ASPECTS. Sensitivity analyses and bootstrap validation were performed.

Results In-hospital mortality was 30% (95% CI 21.9–39.6). Independent predictors were a higher pre-stroke mRS (aOR 4.33; 95% CI 1.85–10.13; p < 0.001) and complete recanalization (aOR 0.21; 95% CI 0.07–0.62; p = 0.004), whereas a higher ASPECTS showed a protective direction of borderline significance (aOR 0.63; 95% CI 0.39–1.02; p = 0.059). Among successfully reperfused patients, mTICI 3 remained independently associated with lower mortality than mTICI 2b–2c (aOR 0.17; 95% CI 0.05–0.60), an exploratory subgroup finding. The model showed good discrimination (AUC 0.82; optimism-corrected 0.80) and satisfactory calibration (Hosmer–Lemeshow p = 0.89).

Conclusion In-hospital mortality was high despite successful reperfusion. A simple model based on premorbid status, ASPECTS, and completeness of recanalization may enable post-procedural risk stratification and warrants external validation.

Keywords: ischemic stroke; thrombectomy; hospital mortality; reperfusion; computed tomography

САЖЕТАК

Увод/Циљ Интрахоспитални морталитет након механичке тромбектомије (*MT*) због оклузије великог крвног суда предње мождане циркулације (*OVKS*) и даље није довољно испитан. Циљ је био идентификација независних предиктора и процена да ли потпуна реканализација (*mTICI* 3), за разлику од успешне (*mTICI* 2*b*–3), има независни прогностички значај.

Методе У једноцентричној ретроспективној кохорти анализирано је 100 узастопних болесника са акутним исхемијским можданим ударом услед *OVKS*, лечених *MT*. Примарни исход био је интрахоспитални морталитет (скор 6 на модификованој Ранкин скали [*mRS*] при отпусту). Независни предиктори идентификовани су логистичком регресијом уз три унапред дефинисане варијабле: преморбидни *mRS*, потпуна реканализација (*mTICI* 3) и *ASPECTS*. Спроведене су анализе осетљивости и *bootstrap* валидација.

Резултати Интрахоспитални морталитет након спроведене интервенције износио је 30% (95% *IP* 21,9–39,6). Независни предиктори били су виши преморбидни *mRS* (прилагођени *OR* 4,33; 95% *IP* 1,85–10,13; *p* < 0,001) и потпуна реканализација (прилагођени *OR* 0,21; 95% *IP* 0,07–0,62; *p* = 0,004), док је виши *ASPECTS* показао протективан смер граничне значајности (прилагођени *OR* 0,63; 95% *IP* 0,39–1,02; *p* = 0,059). Међу успешно реперфундованим болесницима, *mTICI* 3 је остао независно повезан са нижим морталитетом него *mTICI* 2*b*–2*c* (прилагођени *OR* 0,17; 95% *IP* 0,05–0,6), што представља експлоративни налаз у подгрупи. Модел је показао добру дискриминацију (*AUC* 0,82; кориговано 0,8) и задовољавајућу калибрацију (Хосмер–Лемешов *p* = 0,89).

Закључак Интрахоспитални морталитет био је висок и поред успешне реперфузије. Једноставан модел заснован на преморбидном статусу, *ASPECTS* скору и потпуности реканализације могао би да омогући постпроцедуралну стратификацију ризика и захтева спољашњу валидацију.

Кључне речи: исхемијски мождани удар; тромбектомија; болнички морталитет; реперфузија; компјутеризована томографија

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INTRODUCTION

Stroke is a leading cause of death and disability worldwide and according the Global Burden of Disease Study 2021 it ranks third for mortality, with ischemic stroke as the leading cause of death [1, 2]. Anterior-circulation large vessel occlusion (LVO) contributes disproportionately to death and severe disability [3].

Mechanical thrombectomy (MT) is the treatment of choice for anterior-circulation LVO and its supremacy over medical therapy is established by the HERMES individual-patient-data meta-analysis [4] and endorsed by current guidelines [5, 6]. The benefit of this treatment is time-dependent extending to 6–24 hours with perfusion-based selection [7–9]. Recent trials show benefit even with a large infarct core and

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low Alberta Stroke Program Early CT Score (ASPECTS) [10, 11] now reflected in dedicated recommendations [12].

Despite high recanalization rates in-hospital mortality after MT remains insufficiently studied [13, 14]. Successful reperfusion does not guarantee survival: futile recanalization (a poor outcome despite reperfusion) affects roughly a half of treated patients [15]. Unlike 90-day functional outcome, in-hospital death is unequivocal and of immediate importance for families and resource allocation, and warrants separate analysis.

Among admission predictors, premorbid functional status (pre-stroke modified Rankin Scale [mRS]) is among the most consistent while premorbid disability raises the probability of death after MT but should not be an absolute contraindication [16–18]. Recanalization grade (modified Thrombolysis in Cerebral Infarction [mTICI] scale) is a key procedural determinant and complete recanalization (mTICI 3) carries lower mortality than partial recanalization [19], though this may not be uniform with a large core [20] comparing to the lower ASPECTS which is consistently linked to poor outcome and higher mortality [21, 22]. Existing in-hospital mortality models largely rely on heterogeneous cohorts and complex algorithms or nomograms [13, 14, 23, 24] whereas single-center data in imaging-selected anterior-circulation LVO, particularly regional, remain limited [25, 26]. Our aim was to identify independent predictors of in-hospital mortality in consecutive anterior-circulation LVO patients treated with MT and to test indipendent prognostic weight of two recanalization treatments, mTICI 3 and mTICI 2b–3).

METHODS

Performed single-center, retrospective and observational cohort study included 100 consecutive patients with acute anterior-circulation ischemic stroke treated with MT at the Special Hospital for Cerebrovascular Diseases “Sveti Sava”, Belgrade, between March 1, 2025 and March 1, 2026, and it was performed according the STROBE guidelines. The institutional Ethics Committee approved this study (Decision number 03/5708 from December 4, 2025) and it was conducted following the Declaration of Helsinki and Good Clinical Practice. Given the emergent nature of stroke, which precluded prior informed consent, the Committee granted a waiver of consent.

Inclusion criteria were angiographically confirmed LVO of the internal carotid artery (ICA; terminal segment or tandem occlusion) or the M1, M2, or M3 segment of the middle cerebral artery (MCA). MT was initiated within 24 hours of onset (time last known well in wake-up stroke); penumbra-to-core mismatch ratio ≥ 1.8 and ischemic core volume ≤ 100 mL on CT perfusion; ASPECTS ≥ 3; and pre-stroke mRS 0–2. Exclusion criteria were intracranial hemorrhage, absent LVO, M4 segment or more distal occlusion, isolated anterior cerebral artery or vertebrobasilar occlusion, age < 18 years, terminal-stage malignancy, severe renal insufficiency, platelet count < 40 × 10^9/L, and intraprocedural spontaneous recanalization. Perfusion criteria were applied to the 90% of cases who underwent CT perfusion; in the

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remainder, predominantly early-window, eligibility rested on non-contrast CT (ASPECTS ≥ 3) and CT angiography.

Data were collected by retrospective review of records, angiographic findings and CT perfusion. Variables included demographics, admission National Institutes of Health Stroke Scale (NIHSS), premorbid mRS, comorbidities, radiological findings (ASPECTS, early ischemic and hyperdense-artery signs, occlusion site and side, core and penumbra volumes, mismatch ratio) and procedural parameters (anesthesia, passes, stent-retriever and aspiration use, intra-arterial medication, intraprocedural blood-pressure [BP] variability, final mTICI grade). Complete recanalization was defined as mTICI 3. Perfusion parameters were available in 89 patients while the three model variables (pre-stroke mRS, mTICI 3, ASPECTS) were complete for all 100. The primary outcome was in-hospital mortality (mRS 6 at discharge) counting deaths at any point during the index hospitalization. Discharge NIHSS was analyzed only in survivors, as deceased patients were coded with the maximum value, precluding its use as a predictor.

Numerical variables are presented by the mean, standard deviation ($\bar{X}$ and SD), median (interquartile range [IQR]) per distribution (Shapiro–Wilk test) and categorical variables as frequencies. Confidence intervals for proportions were calculated using the Wilson score method; and baseline and procedural comparisons were considered exploratory without correction for multiple comparisons. Groups were compared with the Student t test (age), Mann–Whitney U test; and χ^2 or Fisher's exact test. Independent predictors were identified by binary logistic regression. In order to respect roughly ten events per variable given 30 deaths, three predictors (pre-stroke mRS, complete recanalization (mTICI 3), and ASPECTS) were pre-specified on clinical grounds rather than data-driven selection while no a priori sample-size calculation was performed. Complete recanalization was included as the procedural exposure of interest; downstream characteristics on the causal pathway to death (number of passes, intraprocedural blood-pressure variability) were treated as potential mediators and not entered, yielding a post-procedural rather than admission-based prognostic model, applicable once the final recanalization grade is known. Pre-stroke mRS and ASPECTS were modeled as continuous, mTICI 3 as binary. Linearity of the log-odds for continuous ASPECTS was confirmed (Box–Tidwell test, $p = 0.90$). Discrimination was assessed by the area under the receiver operating characteristic curve (AUC), calibration by the Hosmer–Lemeshow test and McFadden pseudo-R^2. Pre-planned sensitivity analyses comprised a dichotomized pre-stroke mRS model (0 *vs.* ≥ 1), Firth penalized regression bootstrap internal validation with optimism correction (1,000 samples) and a model refitted within successfully reperfused patients (mTICI 2b–3) contrasting mTICI 3 with mTICI 2b–2c. As a supplementary analysis, admission NIHSS was added to the main model. Analyses used IBM SPSS Statistics 21.0 (IBM Corp., Armonk, NY, USA) and Python (statsmodels, scipy); $p < 0.05$ value was significant.

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RESULTS

The 100 patients were included (mean age of 72.1 ± 11.8 years, age range 33–93 and predominantly female - 63%); mean admission NIHSS was 15.4 ± 4.8 and median ASPECTS 9 (IQR 8–9). The most frequent occlusion site was the MCA M1 segment (63%). CT perfusion was performed in 90 patients yielding analyzable maps in 89 patients. Complete recanalization (mTICI 3) was achieved in 74% of cases.

In-hospital mortality was 30% (n = 30; 95% CI 21.9–39.6), giving 70 survivors and 30 non-survivors. Median time to death was 7 days (IQR 6–11; range 2–30) including 57% within the first seven days. Among survivors, median discharge NIHSS was 7 (IQR 4–13).

Among baseline characteristics (Table 1) only premorbid mRS differed significantly ($p < 0.001$). Analyzing further collected data we found that 87% of survivors were free of premorbid symptoms (mRS 0) *vs.* 53% of non-survivors and pre-stroke mRS 2 was more frequent among non-survivors (23% *vs.* 1%). ASPECTS was lower in non-survivors (median 8 *vs.* 9) at the margin of significance level ($p = 0.057$). Age, sex, admission NIHSS, blood pressure, perfusion parameters, and examined comorbidities did not differ significantly.

Several procedural variables differed (Table 2) on the following way: complete recanalization (mTICI 3) was more frequent in survivors (84% *vs.* 50%; $p < 0.001$) whereas non-survivors had more passes, more stent-retriever use, and greater intraprocedural BP variability. Notably, at the conventional successful-reperfusion threshold (mTICI 2b–3) the groups did not differ significantly (94.3% *vs.* 86.7%; $p = 0.24$), unlike the marked difference at mTICI 3. In-hospital complications, infections and perioperative complications were more frequent among non-survivors while the hemorrhagic transformation was occurred exclusively as the hemorrhagic infarction with no parenchymal hematoma.

Univariably, the higher pre-stroke mRS was associated with death comparing to complete recanalization and higher ASPECTS associated with survival (Table 3). In the multivariable model, pre-stroke mRS (aOR 4.33; 95% CI 1.85–10.13; $p < 0.001$) and complete recanalization (aOR 0.21; 95% CI 0.07–0.62; $p = 0.004$) remained independent predictors while ASPECTS retained a protective direction of borderline significance (aOR 0.63; 95% CI 0.39–1.02; $p = 0.059$). The model was showing good discrimination (AUC 0.82; optimism-corrected 0.80) and satisfactory calibration (Hosmer–Lemeshow $p = 0.89$; McFadden pseudo-R^2 0.24) with consistent findings across all sensitivity analyses, including dichotomized pre-stroke mRS and Firth regression. Among the 92 successfully reperfused patients, mortality fell stepwise across mTICI 2b (83.3%, 5/6), 2c (50.0%, 6/12), and 3 (20.3%, 15/74), and complete recanalization remained independently protective (aOR 0.17; 95% CI 0.05–0.60; $p = 0.006$; AUC 0.83). Adding admission NIHSS left the three predictors materially unchanged and yielded no independent association for NIHSS (aOR 1.05; 95% CI 0.93–1.20; $p = 0.417$) without discrimination improval (AUC 0.82).

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DISCUSSION

In a group of 100 consecutive anterior-circulation LVO patients treated with MT we found in-hospital mortality of 30%. Two independent predictors emerged including the higher pre-stroke mRS and complete recanalization (mTICI 3). While ASPECTS showed a borderline protective direction a three-variable model achieved good discrimination (AUC 0.82).

The 30% rate of in-hospital mortality is higher comparing to 22–23% of previously reported in-hospital or early mortality after MT [13, 14]. Present difference may be due to the single-center design of the study, smaller sample and mortality follow-up period. In non-survivors death occurred early (in 7 days) with almost absent severe procedural hemorrhage (exclusively hemorrhagic infarction, no parenchymal hematoma) comparing to the frequent in-hospital complications (53%) and infections (50%, exclusively pneumonias). This suggests that early death reflects the natural evolution of a large infarct in a form of malignant cerebral edema recognized even after reperfusion [27] with systemic rather than procedural complications.

The strongest predictor in our study was a higher pre-stroke mRS. Although inclusion was restricted to pre-stroke mRS 0–2 even subtle differences within this preserved range strongly discriminated the outcome. This suggests that pre-stroke mRS carries prognostic rather than exclusionary information, likely reflecting reduced physiological reserve and supports treating premorbid status as an independent prognostic axis rather than a contraindication [16–18].

Complete recanalization (mTICI 3) was independently associated with lower mortality (aOR 0.21) what is consistent with evidence that complete reperfusion yields lower mortality than partial recanalization [19] and lower symptomatic intracranial hemorrhage risk than successful recanalization broadly defined [28]. This advantage need not be uniform across subgroups [20]; the pronounced benefit found here reflects the favorable radiological profile and it may partly reflect the greater complexity of cases where mTICI 3 is not achieved. Critically, in this group of patient the discriminative signal tracked with complete rather than merely successful reperfusion showed that among successfully reperfused patients (mTICI 2b–3) complete recanalization remained independently protective (aOR 0.17) whereas dichotomizing at mTICI 2b–3 was uninformative. This finding must be interpreted cautiously as it partly reflects cohort composition on the way that 92 of 100 patients reached mTICI 2b–3 leaving minimal variance below this threshold, so the absence of an association may reflect a lack of contrast rather than a genuine lack of prognostic value. In regard to this, our data suggest that in a group with high successful-reperfusion rates only complete recanalization retains discriminative value and a distinction lost when recanalization is dichotomized at mTICI 2b–3 as it was found in a comparable machine-learning study where recanalization made no significant contribution [13].

ASPECTS retained a protective direction at the margin of significance consistent with its established value [21, 22] and the borderline result most likely reflects the limited events and narrow ASPECTS distribution. The absence of differences across the age, admission NIHSS, perfusion parameters, and

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comorbidities likely reflects the cohort's homogeneity and limited power rather than absence of prognostic value. The NIHSS remained non-contributory in the model, plausibly reflecting the uniformly severe, imaging-selected cohort.

More passes and greater blood-pressure variability differed univariately but were not modeled misleading about the causal pathway to death [29, 30]. As these baseline and procedural comparisons were exploratory and uncorrected for multiple testing, individual differences near the 0.05 threshold warrant cautious interpretation. This three-variable model's discrimination (AUC 0.82) is comparable to more complex machine-learning models (AUC 0.79–0.84) and nomograms [13, 23].

Clinically, early identification of high-risk patients may support family counseling, care planning and resource allocation. Limitations include the single-center design and limited events (30) reducing power and widening confidence intervals (the within-subgroup contrast rested on only 18 incompletely-but-successfully reperfused patients). As the analysis was not pre-registered, the a priori specification of predictors cannot be independently verified. The model underwent only internal bootstrap validation and is hypothesis-generating. Further prospective, multicenter studies are needed to confirm and externally validate our findings.

CONCLUSION

In this single-center group of 100 anterior-circulation LVO patients treated with MT we founf in-hospital mortality of 30% confirming the hypothesis that technically successful reperfusion does not guarantee survival. Two independent predictors were identified and those were thehigher pre-stroke mRS and complete recanalization (mTICI 3) with additional finding that ASPECTS showed a consistent protective direction of borderline significance. A model of these three readily available variables achieved good discrimination (AUC 0.82) suggesting a role for post-procedural risk stratification without complex algorithms, pending further external validation. The mTICI 3 association supports complete reperfusion as the angiographic goal while the prognostic weight of pre-stroke mRS even within the preserved 0–2 range indicates that premorbid status should update prognosis and care planning rather than serve merely as an eligibility threshold. Further prospective and multicenter studies need to be performed in order to confirm and externally validate the model presented here.

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Use of artificial intelligence: During the preparation of this manuscript, the authors used a large language model–based assistant (Claude, Anthropic) for language editing, formatting and manuscript prep-

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aration. The tool was not used to generate the underlying clinical data or to formulate the study's conclusions. All authors reviewed and edited the output as needed and take full responsibility for the content and integrity of the article.

Ethics: The research was approved by the Sveti Sava Special Hospital for Cerebrovascular Diseases, Belgrade (Serbia) Ethics Committee (Decision number 03/5708 from December 4, 2025).

Conflict of interest: None declared.

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Table 1. Baseline demographic, clinical and radiological characteristics in relation to hospital outcome

Characteristic	Survivors (n = 70)	Non-survivors (n = 30)	p
Age (years), $\bar{X}$ ± SD	71.0 ± 11.9	74.9 ± 11.2	0.125
Female sex, N (%)	40 (57%)	23 (77%)	0.064
Smoking status, N (%)			
non-smoker	33 (47%)	16 (53%)	0.776
smoker	11 (16%)	4 (13%)	
former smoker	2 (3%)	0 (0%)	
unknown	24 (34%)	10 (33%)	
Admission NIHSS, median (IQR)	16 (11–20)	16 (14–18)	0.827
Systolic BP (mmHg), median (IQR)	140 (130–160)	155 (130–170)	0.117
Diastolic BP (mmHg), median (IQR)	80 (80–90)	80 (73–98)	0.637
ASPECTS, median (IQR)	9 (8–9)	8 (7–9)	0.057
Wake-up stroke, N (%)	12 (17%)	7 (23%)	0.470
Early ischemic signs, N (%)	44 (63%)	24 (80%)	0.092
Hyperdense artery sign, N (%)	46 (66%)	19 (63%)	0.819
Side of occlusion – right, N (%)	36 (51%)	19 (63%)	0.273
Occlusion site, N (%)			
tandem	6 (9%)	0 (0%)	0.430
ICA-T	9 (13%)	4 (13%)	
M1	43 (61%)	20 (67%)	
M2 and M3	12 (17%)	6 (20%)	
CT perfusion performed, N (%)	63 (90%)	27 (90%)	1.000
Ischemic core volume (mL), median (IQR)	7 (2–14)	10 (4–18)	0.463
Penumbra volume (mL), median (IQR)	126 (95–164)	134 (101–155)	0.568
Mismatch ratio, median (IQR)	18.1 (11.6–42.0)	16.5 (8.6–32.7)	0.617
Pre-stroke mRS, N (%)			
0	61 (87%)	16 (53%)	**< 0.001**
1	8 (11%)	7 (23%)	
2	1 (1%)	7 (23%)	
Hypertension, N (%)	53 (76%)	26 (87%)	0.218
Atrial fibrillation, N (%)	29 (41%)	14 (47%)	0.628
Cardiomyopathy, N (%)	19 (27%)	10 (33%)	0.532
Diabetes mellitus, N (%)	12 (17%)	6 (20%)	0.733
Hyperlipidemia, N (%)	15 (21%)	7 (23%)	0.833
Prior antiplatelet therapy, N (%)	12 (17%)	7 (23%)	0.470
Prior anticoagulant therapy, N (%)	16 (23%)	7 (23%)	0.959
Prior statin therapy, N (%)	11 (16%)	2 (7%)	0.334

Data are presented as mean ± standard deviation ($\bar{X}$ ± SD), median with interquartile range (IQR), or absolute and relative frequency (N (%)); numerical variables were compared with the Student t-test (age) or the Mann–Whitney U test; categorical variables, with the χ^2 or Fisher's exact test; bold p-values are statistically significant ($p < 0.05$); perfusion parameters (ischemic core volume, penumbra volume, and mismatch ratio) were available in 89 patients (survivors, n = 62; non-survivors, n = 27);

BP – blood pressure; NIHSS – National Institutes of Health Stroke Scale; ASPECTS – Alberta Stroke Program Early CT Score; mRS – modified Rankin Scale; ICA-T – terminal internal carotid artery; MCA – middle cerebral artery

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Table 2. Procedural characteristics and treatment outcomes in relation to hospital outcome

Characteristic	Survivors (n = 70)	Non-survivors (n = 30)	p
Mechanical thrombectomy and thrombolysis, N (%)	4 (6%)	2 (7%)	1.000
General endotracheal anesthesia, N (%)	63 (90%)	28 (93%)	0.720
Stent retriever use, N (%)	52 (74%)	29 (97%)	**0.012**
Aspiration use, N (%)	69 (99%)	30 (100%)	1.000
Number of passes, median (IQR)	1 (1–2)	2 (1–2)	**0.003**
Final mTICI, N (%)			
1	3 (4%)	4 (13%)	**0.002**
2A	1 (1%)	0 (0%)	
2B	1 (1%)	5 (17%)	
2C	6 (9%)	6 (20%)	
3	59 (84%)	15 (50%)	
Complete recanalization (mTICI 3), N (%)	59 (84%)	15 (50%)	**< 0.001**
Intraprocedural BP variability, N (%)	12 (17%)	12 (40%)	**0.014**
Thrombectomy duration (min), median (IQR)	41 (28–57)	48 (32–65)	0.092
Arrival-to-puncture time (min), median (IQR)	116 (85–133)	108 (74–134)	0.555
Arrival-to-recanalization time (min), median (IQR)	160 (123–187)	160 (126–188)	0.907
Hemorrhagic transformation, N (%) a	12 (17%)	10 (33%)	0.073
Perioperative complications, N (%) a	0 (0%)	4 (13%)	**0.007**
In-hospital complications, N (%) a	7 (10%)	16 (53%)	**< 0.001**
Infection, N (%) a	13 (19%)	15 (50%)	**0.001**
Length of hospitalization (days), median (IQR)	11 (8–15)	7 (6–11)	**0.003**

These represent consequences or events during treatment; they are presented descriptively and were not considered as predictors of mortality available at admission; data are presented as median (IQR) or N (%); tests as in Table 1; bold p-values are statistically significant ($p < 0.05$);

BP – blood pressure; MT – mechanical thrombectomy. IQR – interquartile range; mTICI – modified Thrombolysis in Cerebral Infarction

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Table 3. Univariable and multivariable predictors of in-hospital mortality (binary logistic regression).

Predictor	Unadjusted OR (95% CI)	p	Adjusted OR (95% CI)	p
Pre-stroke mRS	4.29 (1.96–9.39)	**< 0.001**	4.33 (1.85–10.13)	**< 0.001**
Complete recanalization (mTICI 3)	0.19 (0.07–0.49)	**< 0.001**	0.21 (0.07–0.62)	**0.004**
ASPECTS	0.66 (0.45–0.98)	**0.037**	0.63 (0.39–1.02)	0.059

Outcome: in-hospital mortality (mRS at discharge = 6; N = 100, 30 events); the multivariable model included all three predictors simultaneously; pre-stroke mRS and ASPECTS were analyzed as continuous variables, and complete recanalization as binary (mTICI 3 *vs*. mTICI < 3); model fit indices: AUC 0.82 (95% CI 0.72–0.91; optimism-corrected 0.80); Hosmer–Lemeshow test p = 0.89; McFadden pseudo-R^2 0.24 (values of 0.2–0.4 indicate good fit); bold p-values are statistically significant ($p < 0.05$); OR – odds ratio; aOR – adjusted OR; CI – confidence interval; mRS – modified Rankin Scale; mTICI – modified Thrombolysis in Cerebral Infarction; ASPECTS – Alberta Stroke Program Early CT Score; AUC – area under the receiver operating characteristic curve

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