

## CLINICAL PROFILE OF THROMBOLYSIS-TREATED ISCHEMIC STROKE PATIENTS AT THE NATIONAL BRAIN CENTER HOSPITAL MAHAR MARDJONO, JAKARTA, INDONESIA

### AUTHORS

Yustiana<sup>1</sup>, F. Dhani Kurniasih<sup>1</sup>

### AFFILIATIONS

<sup>1</sup>Pharmacy Unit, National Brain Center Hospital Mahar Mardjono, Jakarta, Indonesia

### BACKGROUND

In acute ischemic stroke, thrombolysis is a treatment used to disintegrate the thrombus and replenish the brain's blood supply. Although beneficial, there is a risk that thrombolysis may cause bleeding in the brain in some patients.

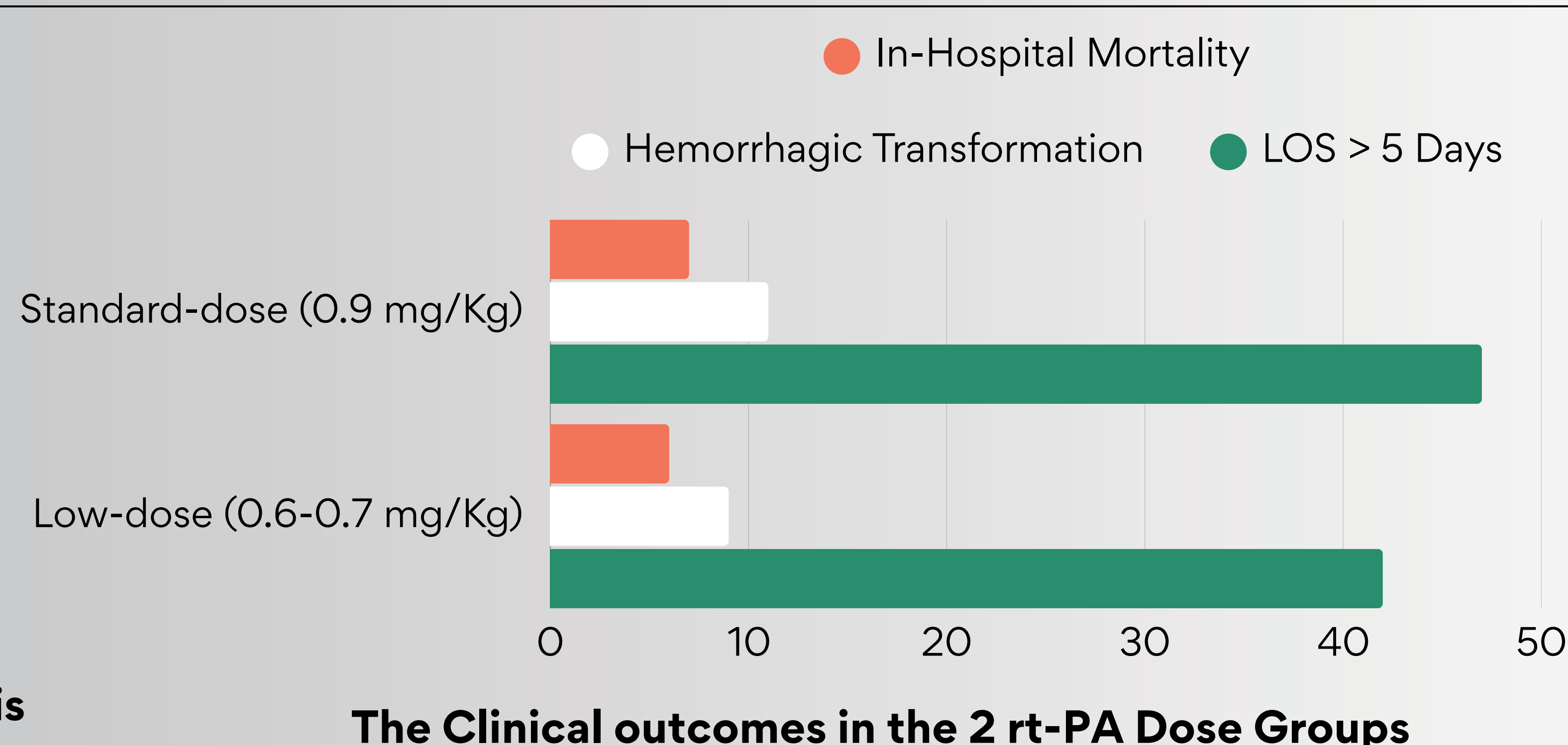
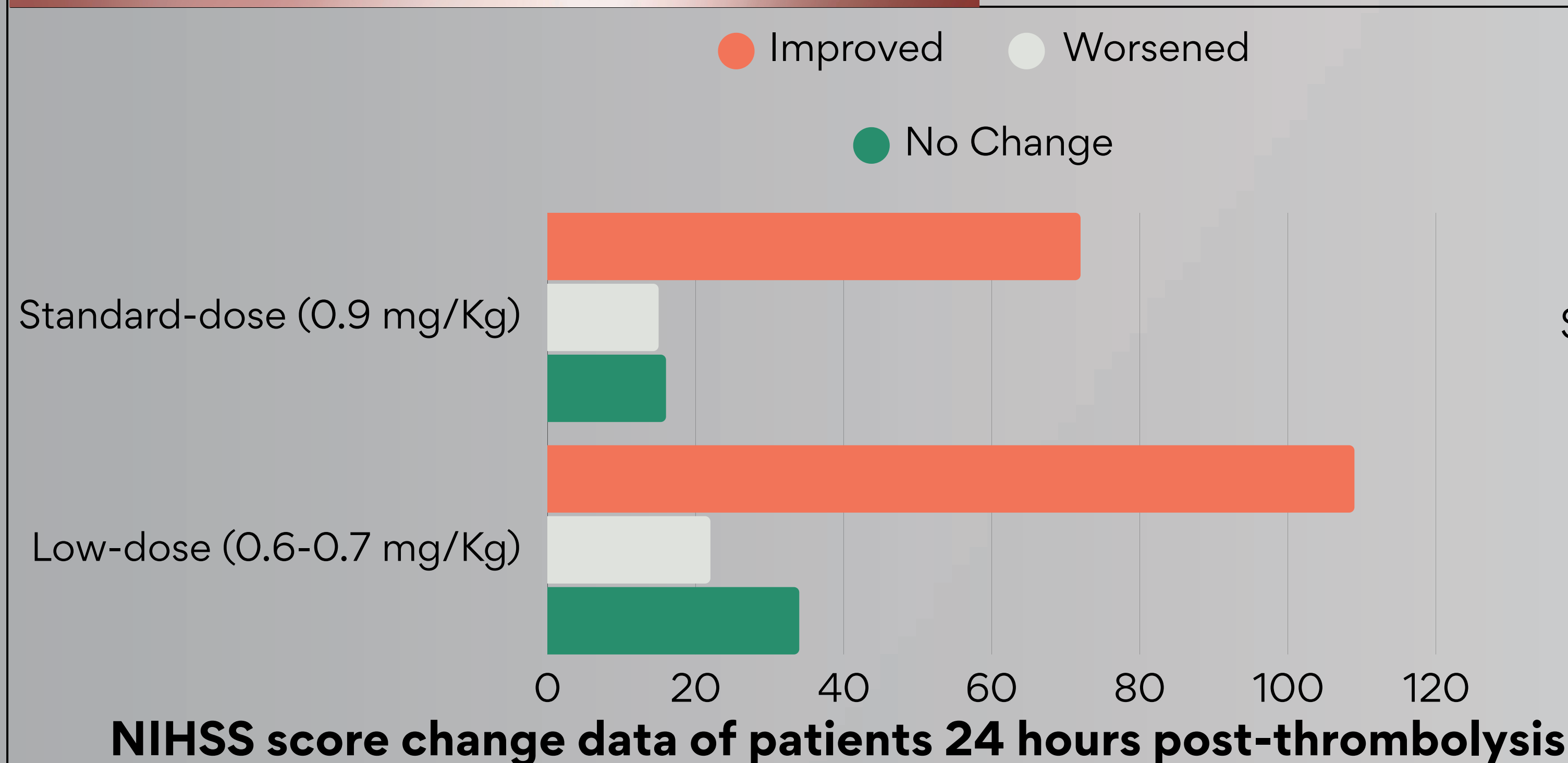
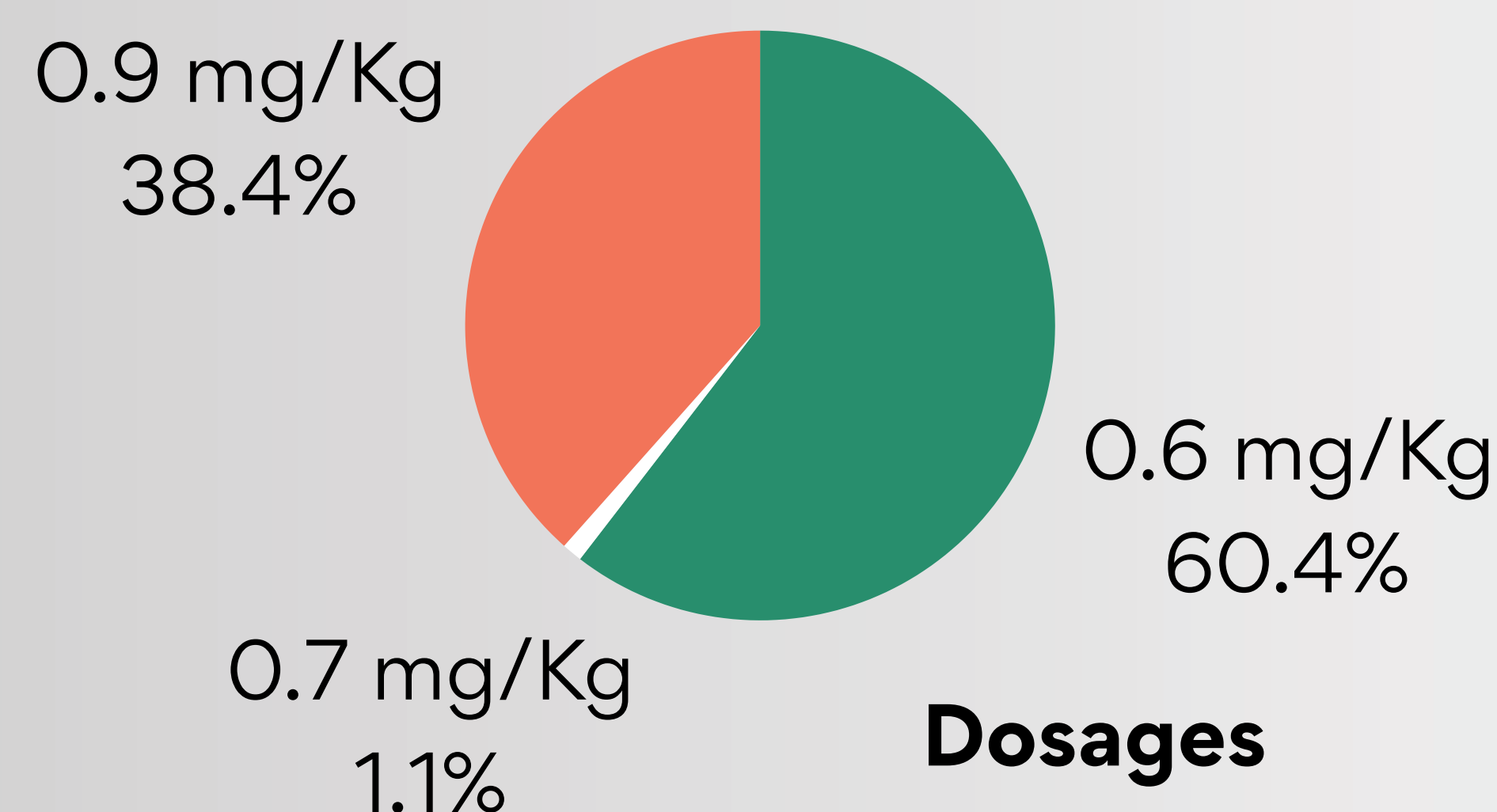
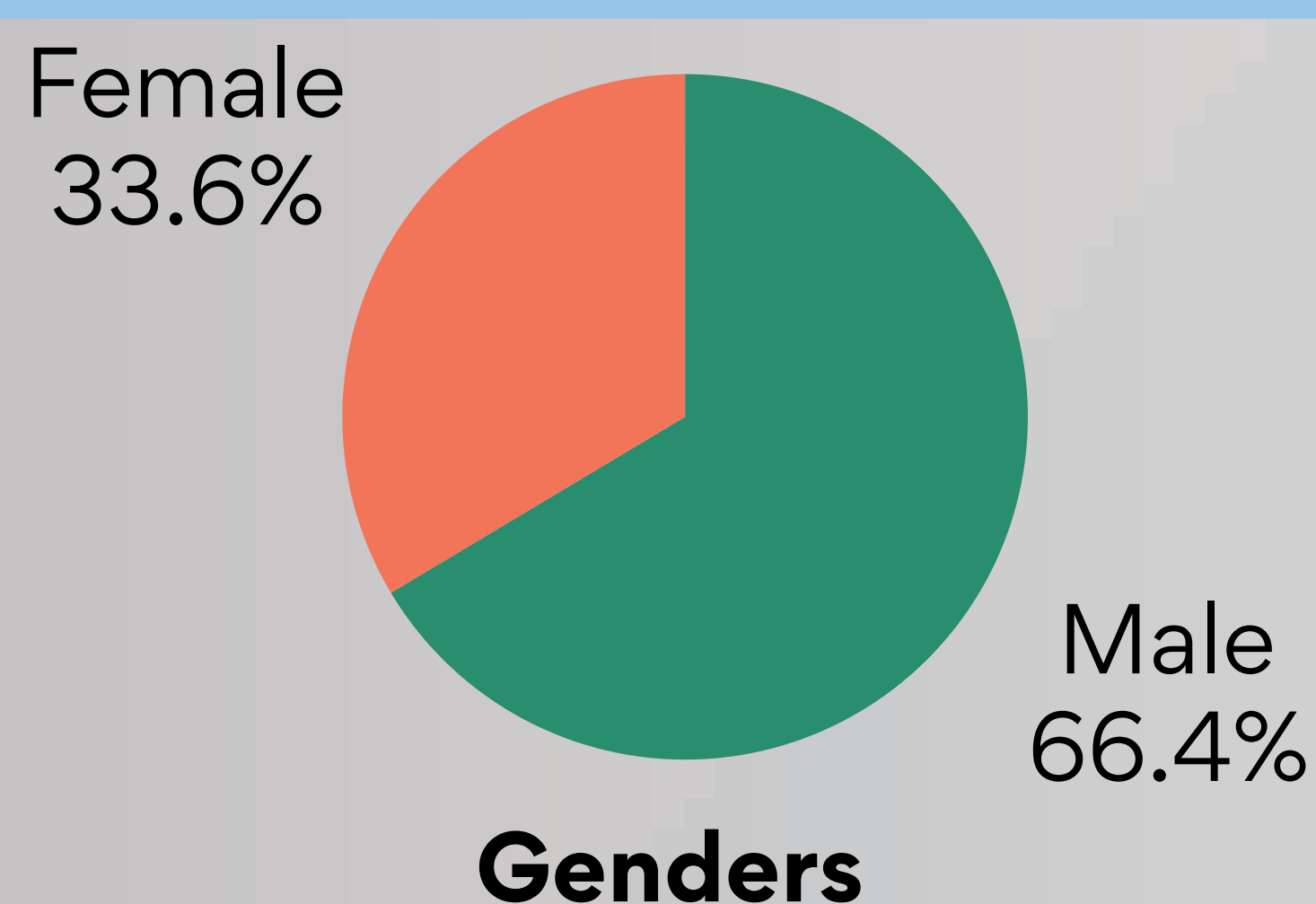
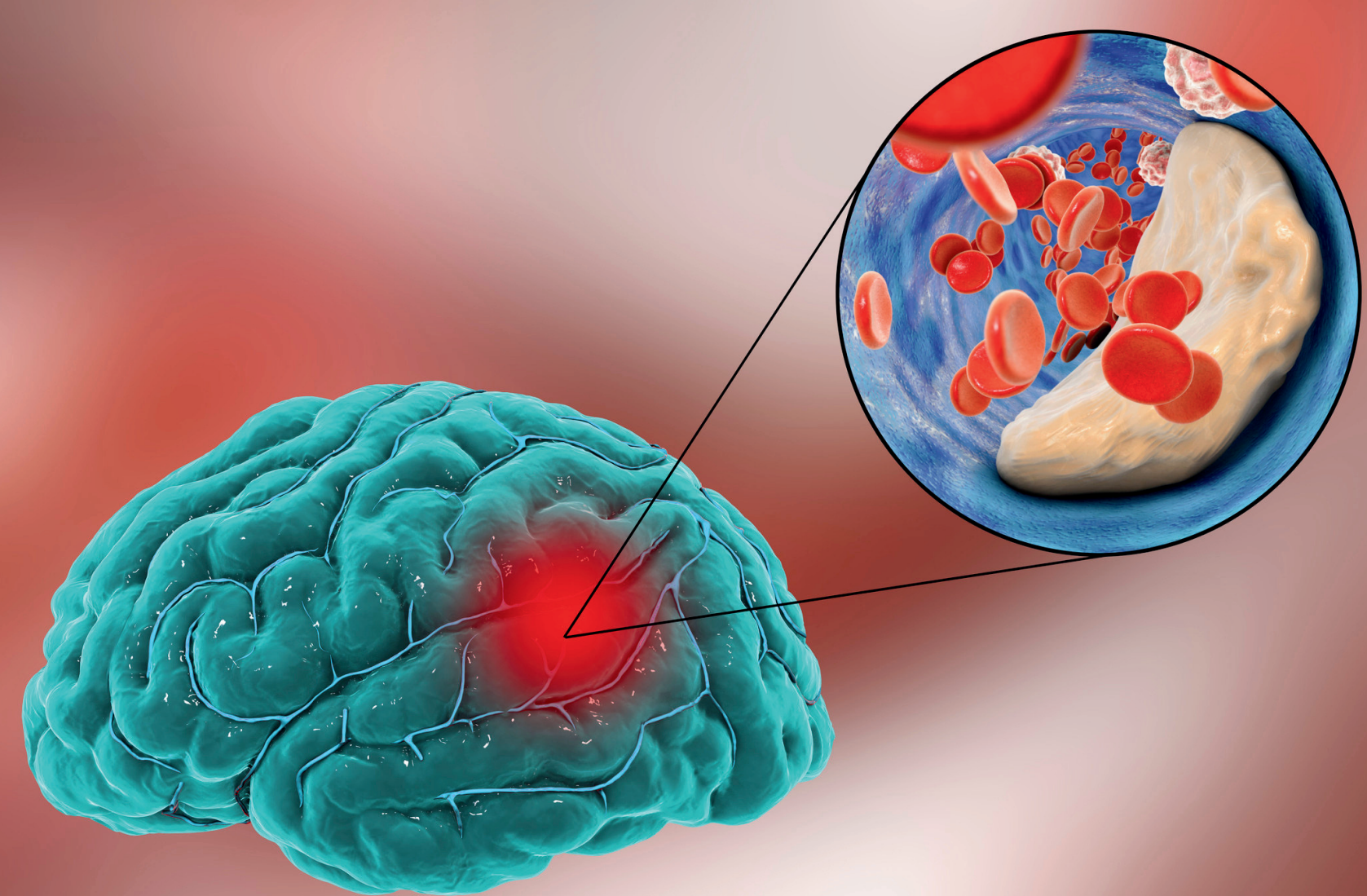
### OBJECTIVE

The aim of this study was to identify the clinical outcome profile of ischemic stroke patients with thrombolysis therapy.

### METHODOLOGY

This study was performed with retrospective study method. Data was taken from the medical records of the patients. Patients who met the inclusion criteria and received thrombolysis therapy with rt-PA between January and December 2024 served as the study's samples.

### RESULTS



### DISCUSSION

This study provides valuable information on the effectiveness and safety of thrombolytic therapy using recombinant tissue plasminogen activator (rtPA) in patients with acute ischemic stroke in Indonesia, especially at the National Brain Center Hospital Mahar Mardjono, Jakarta. This study shows that the administration of rt-PA at a low-dose (0.6-0.7 mg/kg) provides favorable clinical outcomes. Among patients with a dose of 0.6 mg/kg, 65.43% exhibited an enhancement in their NIHSS score, 58.02% experienced a hospitalization period of less than 5 days, and 96.91% were discharged. This indicates that the administration of low-dose rt-PA in acute ischemic stroke patients yields clinical outcomes comparable to those achieved with the standard dose (0.9 mg/kg) concerning efficacy and safety. Additionally, our study found that bleeding complications were more frequent in patients given a standard-dose (10.68%), indicating a higher risk related to the amount of the drug used. This study serves as a reference for hospitals to contemplate adopting a standard dose of 0.6 mg/kg rt-PA for patients experiencing acute ischemic stroke. Besides the clinical benefits, low-dose rt-PA is a cost-efficient alternative, since it typically necessitates only a single vial, hence substantially lowering medication expenses.

### CONCLUSION

Dosing 0.6 mg/KgBB is able to provide a good outcome profile for ischemic stroke patients with thrombolysis therapy, increasing the dose increases the risk of bleeding stroke transformation in patients.

### CITE KEY REFERENCES USED IN THE STUDY

1. Powers, William J et al. (2019) 'Guidelines for the Early Management of Patients With Acute Ischemic Stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association.' Stroke vol. 50,12: e344-e418
2. Toyoda, K. et al. (2019) 'Guidelines for intravenous thrombolysis (Recombinant tissue-type plasminogen activator), the third edition, march 2019: A guideline from the Japan stroke society', Neurologia Medico-Chirurgica, 59(12), pp. 449-491.
3. Wang, X. et al. (2019) 'Low-dose versus standard-dose alteplase in acute ischemic stroke in Asian stroke registries: an individual patient data pooling study', International Journal of Stroke. SAGE Publications Inc., pp. 670-677.
4. Yang, J. et al. (2016) 'A Retrospective Study of thrombolysis with 0.6 mg/kg Recombinant Tissue Plasminogen Activator (rt-PA) in Mild Stroke', Scientific Reports, 6. Available at: <https://doi.org/10.1038/srep31344>.