Supplementary Material

Chart-based validation of individual outcome definitions

Outcome	Code-positive	Code-negative	Positive/Reviewed	PPV	Negative/Reviewed	NPV
Acute myocardial infarction	349	81,055	89/100	0.89	99/100	0.99
Ischemic stroke	392	81,012	87/100	0.87	99/100	0.99
Hemorrhagic stroke	596	80,808	84/100	0.84	99/100	0.99
Gastrointestinal bleeding	803	80,601	93/100	0.93	98/100	0.98

Method: As described in 6.4.1 Outcome Definition Validation section in the main protocol, individual outcomes were validated via manual chart review. In the Yonsei University Health System (YUHS) common data model (CDM) database, code-based search based on outcome cohort definitions described in the protocol was done from a sample year 2024. Discharge notes closest to the event date were extracted from 100 randomly sampled code-positive patients, and the most recent discharge or outpatient notes from 100 randomly sampled code-negative patients. Then they were manually reviewed by a physician to estimate PPV and NPV. This strategy adheres to the validation method described by Bikdeli,[1] and follows the previous study by You.[2]

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[1] Bikdeli B, Khairani CD, Bejjani A, et al. Validating International Classification of Diseases Code 10th Revision algorithms for accurate identification of pulmonary embolism. *J Thromb Haemost*. 2025;23(2):556-564. doi:10.1016/j.jtha.2024.10.013

[2] You SC, Rho Y, Bikdeli B, et al. Association of Ticagrelor vs Clopidogrel With Net Adverse Clinical Events in Patients With Acute Coronary Syndrome Undergoing Percutaneous Coronary Intervention. *JAMA*. 2020;324(16):1640-1650. doi:10.1001/jama.2020.16167