

Introduction:

Patients with acute GIB are at risk of developing PE due to various factors like immobilisation and endothelial dysfunction. However, the prevalence of PE in this population and its impact on outcomes remains unclear. Moreover, the management of venous thromboembolism prophylaxis in these patients presents a clinical dilemma, as the risk of bleeding must be balanced against the risk of thrombosis.

Methods:

We analysed the National Inpatient Sample from 2016-2020, identifying adults with GIB and PE using ICD-10 codes. Univariate and multivariate logistic regression analyses identified outcomes and adjusted for confounders. Survival analysis was conducted using Cox proportional hazards regression. Statistical significance was set at $p < 0.05$ and 95% confidence intervals were reported.

Results

A total of 263890 patients with GIB were analysed of whom 3272 (1.24%) developed PE. Of these, 54% were male, 46% female, with mean age 66. Significant association with various complications was noted among patients with PE including cardiac arrest at rate of 2.1% without PE vs 5.3% with PE (OR 2.6 [95% CI 2.3- 3.0] $p < 0.001$) Significant differences were also seen in vasopressor requirement with 2.4% in those without PE and 6.3% with PE (OR 2.7 [95% CI 2.4 - 3.0] $p < 0.001$) as well as need for intubation during admission with 10.4% in those without PE vs 22.4% with PE (OR 2.5 [95% CI 2.3 - 2.6] $p < 0.001$) (Table1). Overall mortality was 6.8% in those without PE vs 16.8% with PE (OR 2.7 [95% CI 2.5 - 2.9] $p < 0.001$) with increased risk of mortality compared to without PE (HR 1.20 [95% CI: 1.12 - 1.29] $p < 0.001$) (Figure1).

Kaplan–Meier survival estimates

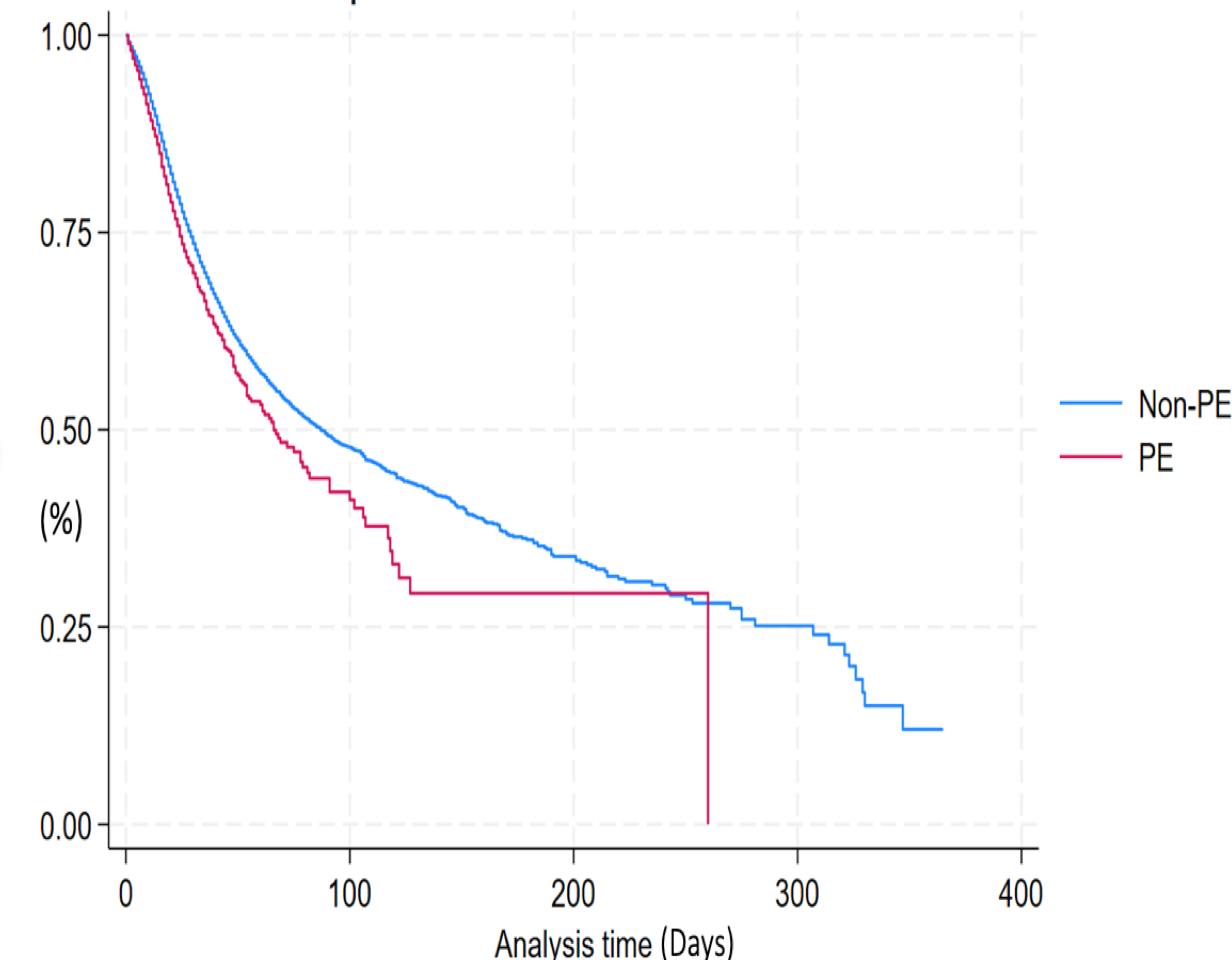


Chart 1. Label in 24pt Calibri.

	PE (%)	No PE (%)	OR	95% CI	p-value
Shock of any origin	11.20%	6.40%	1.8	1.7 - 2.0	<0.001
Cardiac arrest	5.30%	2.10%	2.6	2.3- 3.0	<0.001
Mortality	16.80%	6.80%	2.7	2.5 - 2.9	<0.001
Vasopressor use	6.30%	2.40%	2.7	2.4 - 3.0	<0.001
Intubation	22.40%	10.40%	2.5	2.3 - 2.6	<0.001

Table 1: Clinical Outcomes in GIB patients with PE vs no PE.

Conclusions

The development of PE is a potentially life-threatening complication in patients with GIB with significant treatment dilemmas. We noted significantly increased adverse outcomes including higher rates of cardiac arrest, mortality and need for intubation compared to those without PE.

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