

# Intensive Care Unit Admission for Patients in the INTERACT2 ICH Blood Pressure Treatment Trial: Characteristics, Predictors, and Outcomes.

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## Abstract

### BACKGROUND:

Wide variation exists in criteria for accessing intensive care unit (ICU) facilities for managing patients with critical illnesses such as acute intracerebral hemorrhage (ICH). We aimed to determine the predictors of admission, length of stay, and outcome for ICU among participants of the main Intensive Blood Pressure Reduction in Acute Cerebral Hemorrhage Trial (INTERACT2).

### METHODS:

INTERACT2 was an international, open, blinded endpoint, randomized controlled trial of 2839 ICH patients (<6 h) and elevated systolic blood pressure (SBP) allocated to receive intensive (target SBP <140 mmHg within 1 h) or guideline-recommended (target SBP <180 mmHg) BP-lowering treatment. The primary outcome was death or major disability, defined by modified Rankin scale scores 3-6 at 90 days. Logistic regression and propensity score analyses were used to determine independent associations.

### MAIN RESULTS:

Predictors of ICU admission included younger age, recruitment in China, prior ischemic/undetermined stroke, high SBP, severe stroke [National Institute of Health stroke scale (NIHSS) score  $\geq 15$ ], large ICH volume ( $\geq 15$  mL), intraventricular hemorrhage (IVH) extension, early neurological deterioration, intubation and surgery. Determinants of prolonged ICU stay ( $\geq 5$  days) were prior antihypertensive use, NIHSS  $\geq 15$ , large ICH volume, lobar ICH location, IVH, early neurological deterioration, intubation and surgery. ICU admission was associated with higher-risk major disability at 90-day assessment compared to those without ICU admission.

### CONCLUSIONS:

This study presents prognostic variables for ICU management and outcome of ICH patients included in a large international cohort. These data may assist in the selection and counseling of patients and families concerning ICU admission.