# Blood Pressure Variability in INTERACT2: An Important Determinant of Outcome Following Acute Intracerebral Hemorrhage

**Purpose/Background of the Study:** Some evidence suggests that blood pressure variability (BPV) in the early stages of stroke might be associated with poorer prognosis, but these data are limited.

**Question to answer:** To assess the association of systolic blood pressure (SBP) variability and maximum systolic blood pressure (SBP) on outcome in the INTERACT2 trial.

## Trial Design

| Trial Design | International, multicenter, blinded clinical trial of early rapid BP reduction. n=2839 acute hypertensive (SBP = 150-220 mm/Hg ICH patients. The relationship of SBPV was defined by SD-SBP of 5 measurements in the hyperacute phase (< 24 hours) (n=2645 and 12 measurements in the acute phase (days 2-7, n=2347 using logistic regression.) |

## Primary Endpoint

| Primary Endpoint | Death or dependency (mRan 3-6) at 90 days. |

## Results

| Results | Day 1 - (hyperacute) SD-SBP (expressed as 5th’s, highest here) and poor outcome OR for highest 5th = SD-SBP 1.41, 95% CI (1.05-1.90, p for trend = 0.017) Max SBP was significantly associated with outcome P=0.03 for trend) | Days 2-7 – (acute) SD-SBP and poor outcome, OR highest 5th SD-SBP 1.57, 95% (CI, 1.14-2.17; p for trend = 0.012). Max SBP was significantly associated with outcome P=0.02 for trend) |

## Take Away

BPV (intra-individual) in the hyperacute and acute phases after ICH is significantly associated with death or dependency, apart of mean BP. Lowering of BP (frequency and intensity) must be targeted, with consistency and sustained to be effective within the first 7 days after ICH. The therapeutic effects of modulating BPV in patients with ICH needs further study.