

# Tidal Volume Challenge During Neurosurgery for Assessing Fluid Responsiveness. A Interventional Prospective Trial

ACTRN12618000351213

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**Status** RECRUITING  
**Sponsor** Azienda Ospedaliero Universitaria Maggiore della Carita  
**Enrollment** 50 participants

## Plain Language Summary

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This study is testing a bedside method called the Tidal Volume Challenge (TVC) to help doctors figure out whether a patient having brain surgery (neurosurgery) needs extra IV fluids during the operation. Getting fluid management right during surgery is important — too little or too much fluid can cause complications. The TVC involves briefly increasing the breathing rate of the patient's ventilator for one minute and measuring how the heart responds. This approach has been tested in ICU patients but never before in surgical patients.

You may be eligible if:

- You are 18 years or older
- You are having planned (elective) neurosurgery and require direct blood pressure monitoring (arterial line)
- Your anaesthesiologist has determined you need fluid during surgery

You may NOT be eligible if:

- You have any heart rhythm irregularity (arrhythmia)
- You have unstable pressure in your brain (intracranial pressure) or are having emergency surgery
- You have spinal shock
- You have not given consent

Talk to your doctor about whether this trial might be right for you.

## Key Eligibility Criteria

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### Inclusion (2)

- Elective neurosurgical patients requiring invasive arterial monitoring
- Need of fluid challenge as required by the attending anesthetist

### Exclusion (4)

- Any cardiac arrhythmia
- Consent denied
- Instable intracranial pressure or emergency surgical treatment
- Spinal shock

## Locations (1 total)

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Italy

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<https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?ACTRN=ACTRN12618000351213>

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