



PROtective ventilation with high versus low PEEP during one-lung ventilation for THORacic surgery – PROTHOR: A randomized controlled trial

- One-lung ventilation (OLV) is commonly performed during thoracic surgery.
- OLV can result in severe hypoxemia, requiring a mechanical ventilation approach that is able to maintain adequate gas change, while protecting the lungs against postoperative pulmonary complications (PPCs).
- During OLV, the use of lower tidal volumes (V_T) is helpful to avoid over-distension, but can result in increased atelectasis and repetitive collapse-and-reopening of lung units, particularly at low levels of positive end-expiratory pressure (PEEP).
- Nevertheless, it is not known if, during OLV with low V_T , high levels of PEEP combined with lung recruitment maneuvers are superior to low to moderate PEEP for protection against PPCs.

<Participation>

Country: Turkey, Germany, Switzerland, UK, US and other countries (81 centers in total)

Design: An international multicenter randomized controlled trial.

Intervention: high PEEP group vs low PEEP group.

Primary endpoints: the proportion of patients developing one or more PPCs.

Estimated sample size: 50 at our center (2378 at all centers)

Juntendo University is the first institution of participation in Asian area.