In this article the authors discuss the following:

1. The measurement of extravascular lung water may aid the assessment and guide the management of potential lung donors following brain death. The authors sought to validate PiCCO extravascular lung water index (EVLWI) measurement against gravimetry and to assess the impact of elevated PiCCO EVLWI in potential lung donors and transplant recipients.

2. EVLWI and haemodynamic and oxygenation data in 60 potential lung donors was collected. To validate the PiCCO EVLWI donor lungs rejected for transplant were also measured gravimetrically (20 lungs from 11 donors).

3. Mean PiCCO EVLWI for all donors (n = 60) was 9.7ml/kg. Donor lungs with EVLWI >10 ml/kg were more likely to be receiving norepinephrine, be unsuitable for transplantation and, if transplanted, have worse survival.

4. Lungs submitted to gravimetric analysis had a PiCCO EVLWI of 10.8 and EVLWI 10.1 gravimetrically. On average PiCCO EVLWI was found to over-predict the gravimetric EVLWI by approximately 1 ml/kg.

5. In conclusion elevated lung water is found in >50% of potential lung donors, predicts lung suitability for transplant and may adversely affect recipient outcome. Although PiCCO EVLWI overestimated gravimetric lung water, its measurement may aid the assessment of organ suitability. Raised lung water may be a target for modifying therapy.