Aim
To assess the visualisation of post-mortem fetal anatomy with two-dimensional (2D) and three-dimensional (3D) ultrasound (US) and ascertain if 3DUS with rendering can improve anatomical assessment.

Methods
2DUS (excluding heart) and 3DUS with Crystal Vue and Realistic Vue™ rendering was performed on 40 formalin-fixed fetuses (10-24 weeks gestation) in a degassed water bath to mimic in-utero US. The confidence of visualisation (CoV) of anatomical structures in 2D+3D and 2DUS alone was scored on a 3-point Likert scale.

Results
The mean CoV of fetal anatomy improved by 0.076 (p=<0.001) for a combined 2D+3DUS approach compared with 2DUS alone. This was most marked from 10 to 15 weeks gestation and the CoV score improved most with the addition of 3DUS for the ventricles, bladder, kidneys and lips.

Conclusion
This study confirms the feasibility of post-mortem US on stored specimens as early as 10 weeks gestation. 2D+3DUS allows more thorough PM anatomical assessment than 2DUS alone; it may help to improve anomaly diagnosis, particularly in the first trimester, and may be a useful tool in post-mortem imaging as well as to obtain reference images of post-mortem pathology for use in clinical practice and teaching.