

## EP05-05 - Improving parental spatial perception of fetal malformations in a case of LBWC using segmentation of 3D fetal MRI images

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### Objective:

To enhance parental tridimensional perception of fetal malformations in a case of limb body wall complex (LBWC) by using segmented 3D images of the fetal malformations derived from MRI images.

### Methods:

Fetal MRI images were exported as DICOM files and processed by manual segmentation using the software 3DSlicer. The main fetal malformations in a case of LBWC were segmented into 3D image representations. The head, limbs, thorax, abdomen, intestines, and liver were segmented in three dimensions to aid parental comprehension of the extent of the fetal malformations.

### Conclusion:

In a case of LBWC, 3D fetal MRI segmentation can demonstrate multiple malformations and their anatomical relationships in three dimensions, improving parental perception of fetal malformations and having an important impact on parental counseling.

### Results:

The fetal malformations were successfully segmented, resulting in a 3D virtual model that allowed visualization of various anatomic structures and their spatial relationships. Scoliosis and the hypoplastic thorax were demonstrated, along with the absence of abdominal closure and gastroschisis. The 3D virtual model enabled visualization of the fetus from different orientations, illustrating the impact of the malformations on fetal anatomy and their tridimensional relationships.

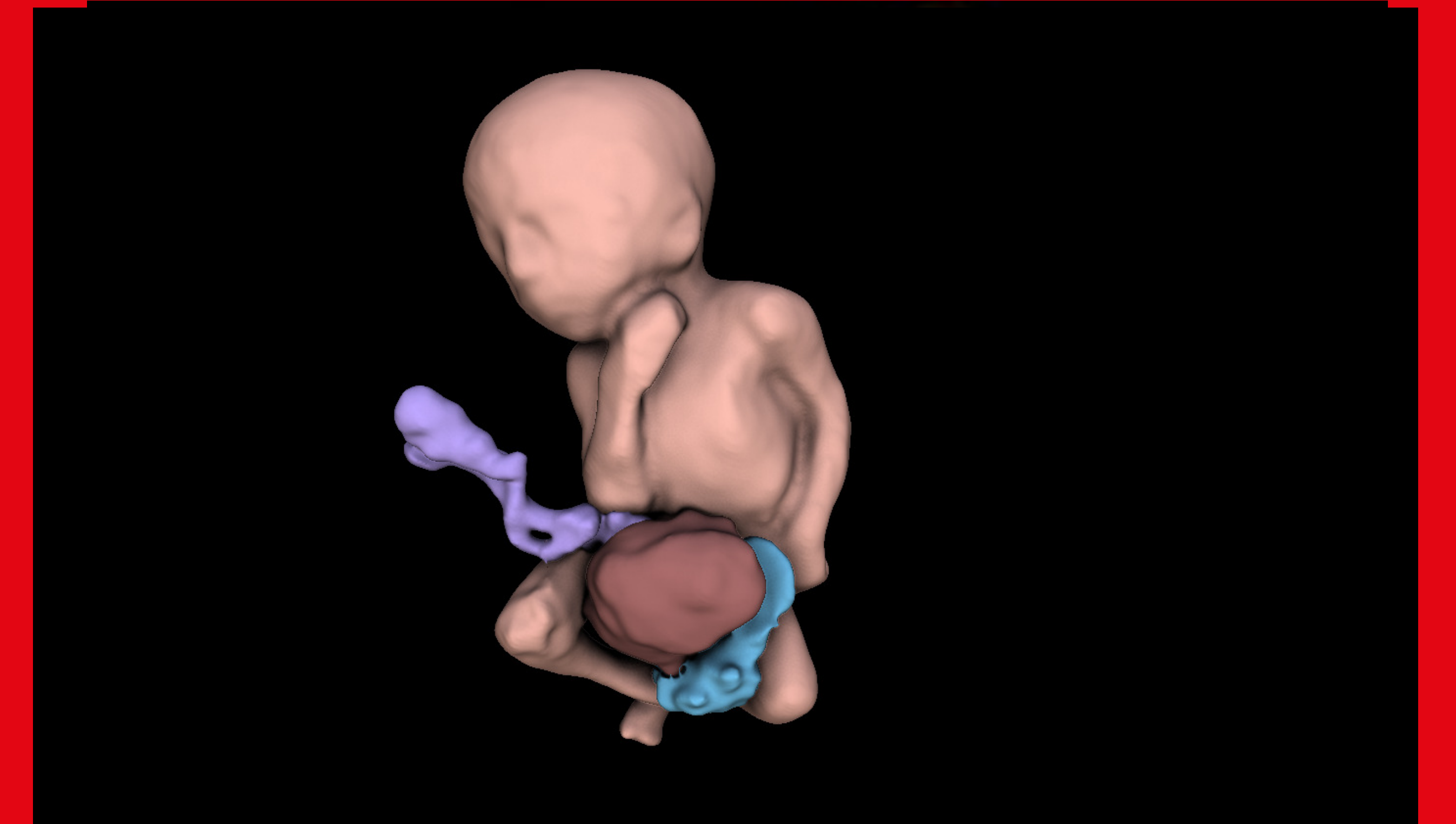


*Figure 1: 3D reconstruction of the fetus with LBWC. The fetal surface was reconstructed and the abdominal organs were segmented*



*Figure 2: 3D reconstruction of the fetus with LBWC. The opacity of the fetal surface was reduced to demonstrate the relationship between intrathoracic organs and the eviscerated organs.*