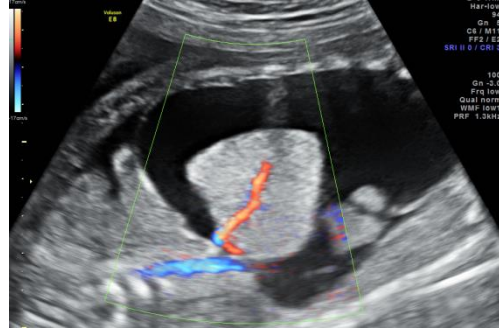


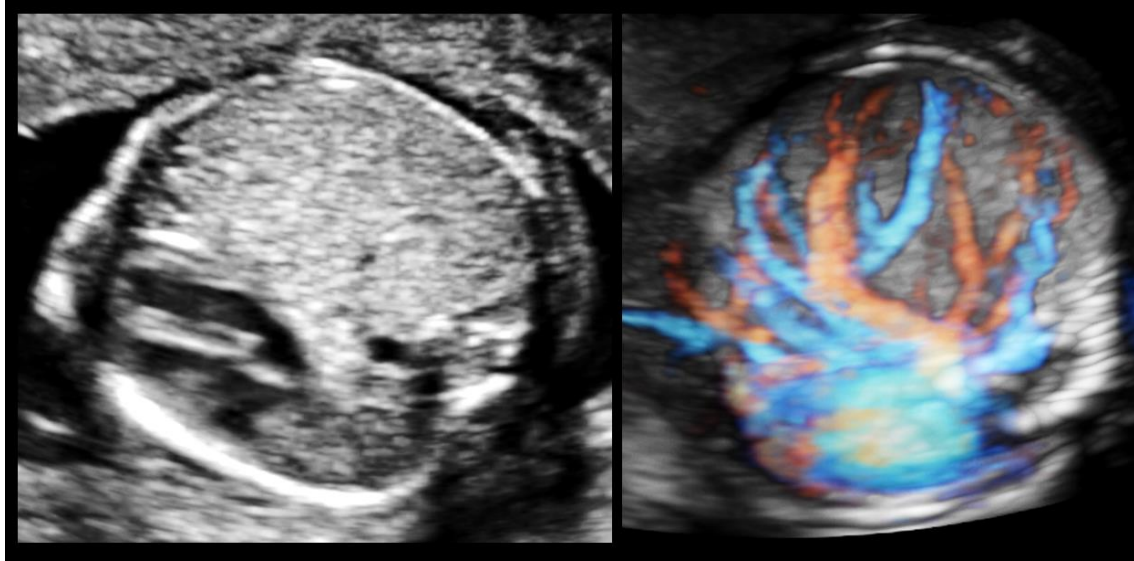
Echogenic lungs



The most common fetal hyperechoic lung lesions are microcystic congenital cystic adenomatoid malformations (CCAM), bronchopulmonary sequestrations (BPS), and Bronchial atresias (BA). Prenatal diagnosis is based on the demonstration of a uniformly hyperechoic mass that appears as a solid lesion usually unilateral and involving one lobe of the lung. Differential diagnosis between these three conditions depends on color Doppler. BPS receives its blood supply from the aorta while CCAM and BA do so from the pulmonary artery. Prognosis depends on the size of the thoracic mass, the presence of hydrops or massive pleural effusion and the presence or absence of polyhydramnios and mediastinal shift. For BPS cases at risk of perinatal death, prenatal therapy with laser coagulation of the feeding artery have shown an improvement in survival rate and a decreased need for postnatal surgery. Microcystic CCAM or bronchial atresia may benefit from fetal bronchoscopy.

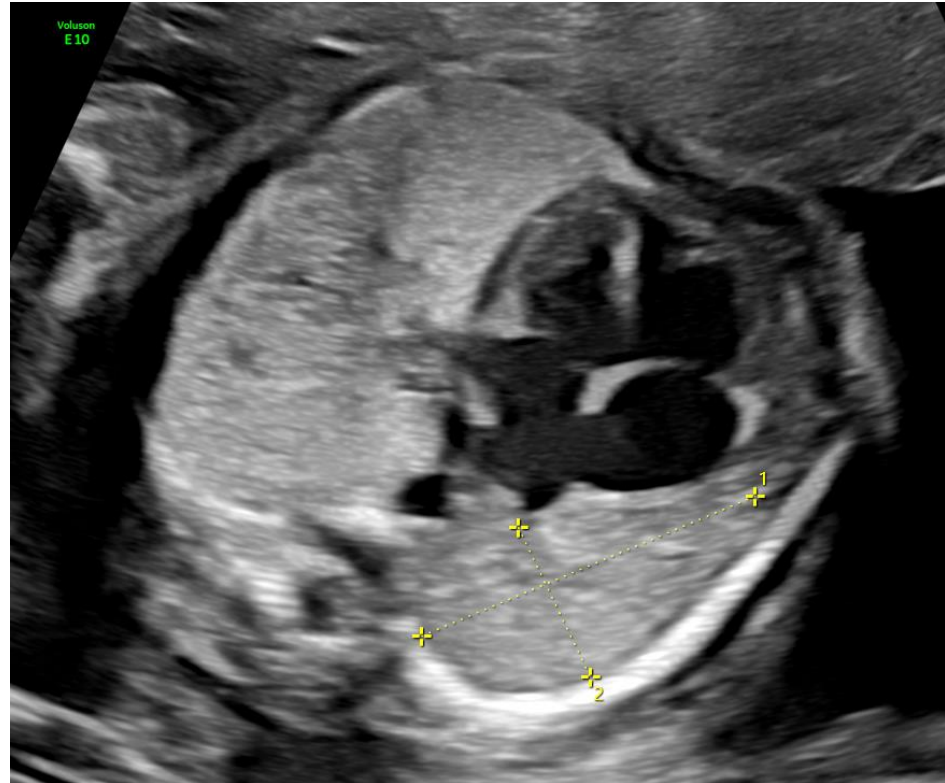
Microcystic CCAM

These images illustrate a transversal view of the fetal thorax in a fetus with microcystic CCAM at 25 weeks of gestation. The affected lung (left side) appears increase in size and echogenicity, and the heart is deviated to the right side (mediastinal shift). The right lung is also compressed. Color Doppler ultrasound demonstrates the feeding vessels arising from the pulmonary artery.



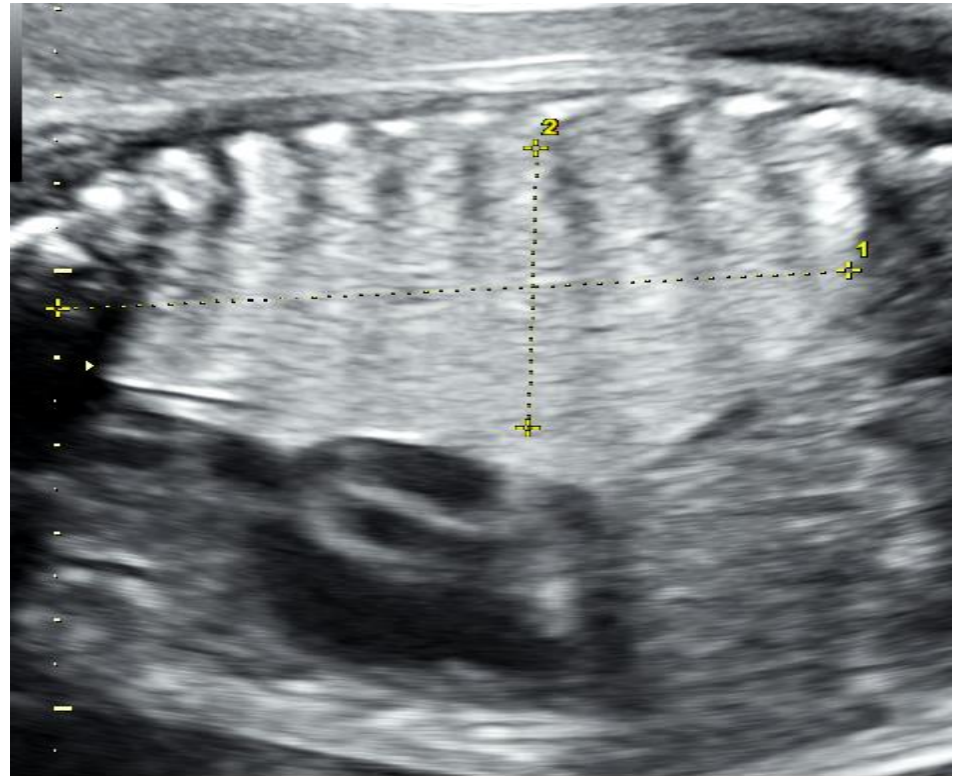
Bronchial atresia

Bronchial atresia is characterized by an uniformly hyperechogenic and enlarged lung.



Bronchial atresia

This parasagittal section of the fetal thorax demonstrates a hyperechogenic and hyperexpanded lung with inversion of the normal shape of the diaphragm.



Small Bronchopulmonary Sequestration

BPS is a bronchopulmonary segment and is identified as a uniformly echogenic lesion that usually involves one lobe of the lungs and is located mainly in the inferior lobe. In the absence of hydrothorax, mediastinal shift or hydrops, the prognosis is good.



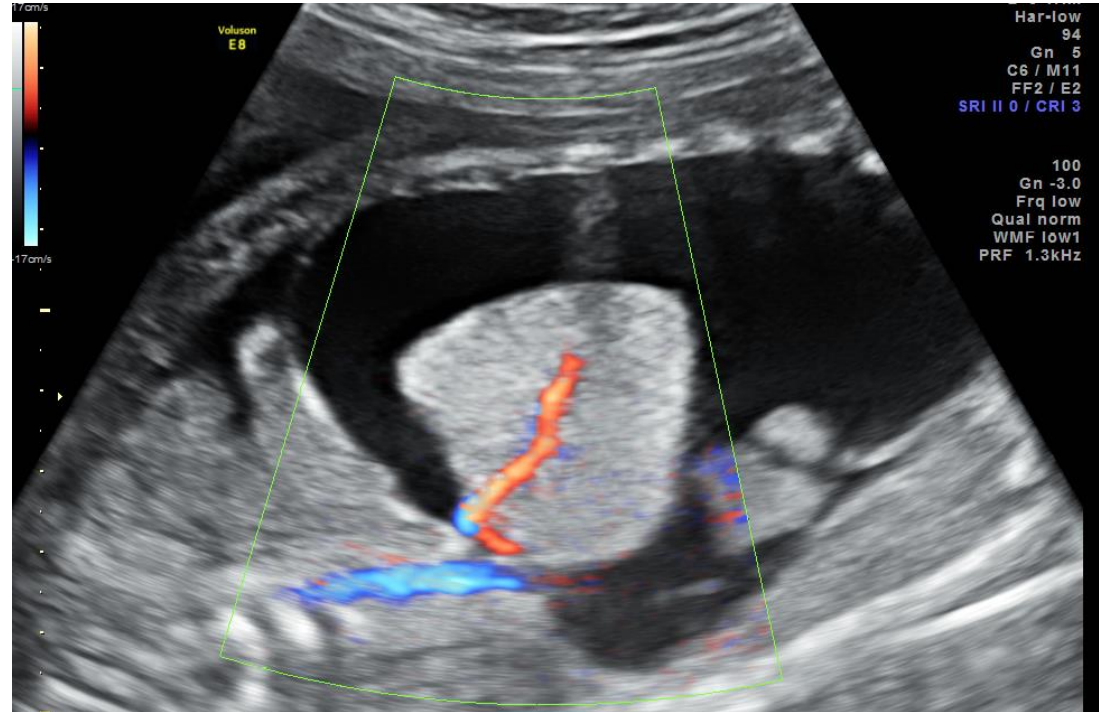
BPS with hydrothorax

A solid lung mass is observed into the left thorax with ipsilateral massive pleural effusion, mediastinal shift and severe compression of both lungs.



BPS with hydrops

Parasagittal section of a solid thoracic tumor with hydrops (massive pleural effusion, ascitis and subcutaneous edema). The diagnosis relies upon the demonstration of an aberrant systemic artery arising from the descending aorta and supplying the intrathoracic mass.



BPS after fetal surgery

The same fetus 4 weeks after fetal intervention (laser coagulation of the feeding artery). Note the decrease in the lung mass size (*) in combination with the increase in both lung dimensions and a decrease in the fetal pleural effusion.

