

## FETAL/NEONATAL IMAGING SESSION: DEVELOPMENTAL NEUROANATOMY

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### Highlights:

- MRI can be used to identify aspects of normal in utero brain development
- The appearance of the fetal brain on MRI changes on a weekly basis
- Familiarity with the normal appearance of the brain on fetal MRI is the key to being able to accurately diagnose brain abnormalities.

Target audience: Clinicians and researchers interested in learning how MRI can be used to image the developing fetal brain

Objectives: To be familiar with the normal aspects of brain development which can be imaged with MRI. To be able to recognize how the appearance of the fetal brain differs depending on the gestational age.

Summary: The development of the fetal brain is a dynamic process which can be imaged with MRI. This talk will review key aspects of brain development and will highlight normal structures that can be imaged with fetal MRI. It will also focus on how these structures normally change during gestation, as deviations from normal appearance can be an indication of pathology. Examples of normal brain structures that will be discussed include germinal matrix, ventricular system, sulcation, supratentorial parenchyma, cerebellum, vermis and brainstem. Both conventional 2D T2 weighted imaging and more advanced techniques will be used to illustrate the normal developmental neuroanatomy. A structured approach to interpreting fetal MR images will also be discussed, and this approach can be helpful in the clinical setting.