**Presenter:** Lisa Vu  
**Title of Abstract:** Spectrum of MR Findings in the Evaluation of Abnormal Placental Implantation  
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**Modality:** MR  
**Organ System:** GU  

**Purpose:** Abnormalities of the placenta are important to detect early as they may lead to higher maternal and fetal morbidity and mortality. With the rising rate of placental implantation abnormalities due to an increase in uterine surgeries, it is important to be able to recognize the associated clinical and imaging features. Although sonography remains the imaging modality of choice, MR has a growing importance in the diagnosis and characterization of these abnormalities. The aim of this exhibit is to describe the various placental implantation abnormalities and review the MR imaging features using case examples. **Content Organization:** This exhibit will review the normal and pathological features of placental implantation. The various subtypes of placenta previa and the range of findings distinguishing placenta accreta, increta, and percreta will be presented. **Major Teaching Points:** In order to better detect placental abnormalities, the observer should be familiar with the normal morphology and position of the placenta, signal characteristics, uterine contours, preservation of the myometrial wall, and preservation of planes between adjacent structures. Through a systematic review of these areas, pathologic findings of the placenta can more readily be recognized and help guide appropriate care of the fetus and mother.