

Radiological correlation of MRI findings with histopathological diagnosis in Diagnosing Ovarian Masses

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Abstract: Background: Ovarian masses present a diagnostic challenge due to their diverse etiology and overlapping radiological features. Magnetic resonance imaging (MRI) has emerged as a valuable imaging modality for evaluating ovarian masses, offering detailed anatomical and functional information. However, the correlation between MRI findings and histopathological diagnosis remains essential for accurate characterization and management of ovarian masses. **Methods:** In this study, we conducted a retrospective analysis of patients with ovarian masses who underwent MRI followed by histopathological examination. The MRI images were reviewed by experienced radiologists, and a standardized imaging protocol was employed. Histopathological diagnoses were established by expert pathologists using established criteria. The MRI findings were then correlated with the histopathological diagnoses to determine the accuracy of MRI in diagnosing ovarian masses. **Results:** A total of 50 patients with ovarian masses were included in the study. MRI accurately characterized 85% of the ovarian masses, demonstrating a high sensitivity and specificity in distinguishing benign from malignant lesions. The most common MRI features associated with malignancy included solid components, irregular margins, and enhancement patterns, while smooth borders and homogeneous enhancement were indicative of benign masses. Furthermore, the presence of ascites and peritoneal implants on MRI was significantly associated with advanced stage and high-grade histopathological subtypes. These correlations between MRI findings and histopathological diagnoses provide valuable insights for clinical decision-making and treatment planning. **Conclusion:** Our study demonstrates the importance of radiological correlation with histopathological diagnosis in accurately characterizing ovarian masses. MRI serves as a reliable imaging modality for assessing ovarian masses, aiding in the differentiation between benign and malignant lesions. Understanding the MRI features associated with specific histopathological subtypes can further enhance diagnostic accuracy and guide appropriate management strategies.

Keywords: Ovarian masses, MRI, Histopathological diagnosis.