

Nowadays, magnetic resonance imaging (MRI) is a useful diagnostic tool for evaluating mediastinal masses considering that several lesions that appear indeterminate on CT can be differentiated on MRI." "In particular, MRI is a useful diagnostic tool for differentiating cystic from solid lesions, evaluating invasiveness into adjacent structures, and characterizing tissue components such as fat or hemorrhage." "When mediastinal masses are observed on CT or MRI, the first step is to localize the lesion into one of the three compartments, each of which has its own list of differential diagnoses." "The next step is to analyze imaging findings in detail." "With a basic knowledge of MRI, radiologists can easily diagnose mediastinal masses (3)." "MRI has excellent contrast resolution." "It is specifically useful for evaluating cystic lesions and identifying fat within mediastinal masses." "Microscopic fat is easily detected on chemical shift imaging, a technique in which in-phase and out-of-phase images are obtained." "If the signal intensity decreases significantly on the out-of-phase image, the lesion is likely to contain microscopic fat." "Different fat-suppression techniques, such as fat saturation imaging, can be utilized to identify macroscopic or gross fat." "This tissue shows a high signal intensity on T1- and T2-weighted images and again shows a signal decrease on fat-suppression sequences (6)." "Diffusion-weighted MRI can provide useful information on tissue cellularity." "MRI has excellent soft tissue resolution; this aids in the evaluation of the origin and extent of lesions and their invasion into adjacent structures (Fig. 1)." "Abutment and the loss of fat plane are important MRI features to consider in the evaluation of local invasiveness (Fig. 2)." "Adherence to adjacent structures can be evaluated with cine imaging such as balanced steady-state free precession