Liver metastases are the most frequently encountered malignant liver lesions in the Western countries, including the United States. In addition, hepatocellular carcinoma (HCC) is a 6th common malignancy worldwide, typically associated with chronic liver disease, and is a leading cause of mortality among these patients. Prognosis is improved when HCC or colorectal liver metastases are detected early. Furthermore, with the increased use of cross-sectional imaging modalities, focal liver lesions are more often detected incidentally or seen on surveillance scans, especially in patients with underlying oncologic diseases. MRI is the best imaging examination for accurate diagnosis of them. Although primary and secondary liver malignancies frequently show typical MR imaging features, not all lesions demonstrate these findings. The radiologist must be familiar with these typical imaging characteristics, and less common appearances and associated findings of HCC, and metastases and must be able to differentiate them from those of lesions that mimic HCC. Because the noninvasive characterization of these focal liver lesions is largely based on their morphologic appearance or enhancement patterns on contrast-enhanced dynamic imaging, the use of various nonspecific and liver-specific contrast agents has significantly expanded the role of MR imaging in the diagnosis of focal liver lesions. Furthermore, the introduction of new MR imaging pulse sequences, such as diffusion-weighted imaging (DWI), into routine clinical practice may further improve the noninvasive diagnostic workup of focal liver lesions. This presentation will address typical and atypical appearance of the most commonly encountered benign and malignant focal liver lesions, and how a confident noninvasive diagnosis can be achieved using the above-mentioned MR imaging techniques in combination with various available contrast agents is explained.