Magnetic resonance imaging (MRI) play critical roles in the diagnosis and staging of hepatocellular carcinoma (HCC). In this lecture, I am going to discuss key concepts of hepatocarcinogenesis, emphasizing those pathologic changes occurring the process with imaging correlates and the imaging appearance of precursor nodules that eventually may transform into overt HCC. In addition, the major imaging features as well as ancillary imaging features of HCC will be addressed. Finally, advantages and pitfalls of hepatobiliary contrast agents for diagnosis of HCC will be discussed.