This book brings together contributions from key investigators in the area of magnetic resonance imaging (MRI) for osteoarthritis of the knee. Osteoarthritis is a condition in which low-grade inflammation results in joint pain, and it is the most common joint disease. Interactions between all of the major joint tissues, including the articular cartilage, synovium, bone marrow, subchondral bone, trabecular bone, and muscle, have been implicated in osteoarthritis. Magnetic resonance images have been used to quantify the cartilage morphology, volume and thickness, and focal defects, and may reflect changes in the biochemical composition of articular cartilage.

Written by a multidisciplinary group of scientists, engineers, and clinicians, this book is the first to cover MRI as a new emerging modality for the diagnosis of osteoarthritis, and presents new findings in both basic and clinical science research.