

Radiology has become an important part of the diagnosis and management of many orthopaedic and sports medicine problems. A radiologist is a physician who is trained to interpret images that provide information about the body and how it functions. The radiological images may be produced by an x-ray machine, ultrasound, CT scanner (computed tomography), or MRI (magnetic resonance imaging). A *musculoskeletal* radiologist has completed additional training, called a fellowship that is highly specialized in orthopaedic injuries and diseases. The musculoskeletal radiologist will work with your orthopaedic physician to provide the best care possible.

The physical examination performed by your orthopaedic physician remains the most important step in diagnosing any injury or disease process. However, with the remarkable advances in radiological technology, it is now possible for your doctor to see inside the body without using invasive or surgical procedures. The musculoskeletal radiologist can help your doctor fine tune treatment and avoid unnecessary, painful, and costly procedures. At times, finding the problem can be done with a simple x-ray; unfortunately, it is not always so easy.

The musculoskeletal radiologist is your doctor's resource for the most current and advanced diagnostic procedures that will provide the information needed for proper care. Choosing the type of imaging to obtain this information is the first step. Many people think ultrasound is only used for questions related to pregnancy, i.e. "is it a boy or a girl"? In orthopaedics, ultrasound may be used to guide aspirations, injections, and biopsies or to evaluate tendons and ligaments. MRI also provides very useful information about the soft tissues. This type of imaging is ideal for looking at cartilage, muscles and tendons, ligaments, and bones. Some patients cannot have an MRI because they have a pacemaker, heart valve replacement, or various other reasons that can be affected by the magnets used in this technology. The CT scanner will provide valuable information without putting these patients at risk. A CT scan can also be helpful in many other ways including getting specific details of a fracture or bone tumor. Another method of getting information is a nuclear medicine study. In this procedure a very tiny amount of radioactive material is injected into the body. The radiologist uses a specialized camera to take images that may help determine whether a problem is caused by a fracture too small to be seen on an x-ray, a tumor, or an infection. The musculoskeletal radiologist is an expert at understanding all of these types of studies, and your doctor will rely on that expertise to determine the best course for your treatment.

Healthcare is becoming more and more specialized. Because of the increase in physician specialties and subspecialties, a team approach is necessary to provide the best patient care. Utilizing each individual's expertise will greatly improve the overall quality of care. It is very important that you have confidence in your orthopaedic physician's care. It is also important to be confident in the expertise of his or her team members. The musculoskeletal fellowship trained radiologists at Gaston Radiology work closely with the physicians at Carolina Orthopaedic and Sports Medicine Center, and we are proud to be a part of this excellent team. Having the latest state-of-the-art equipment at our disposal, including the only high field strength Open MRI in the area, we strive to provide the best care in the Piedmont region.