Chang Gung Arthritis Database

Articular capsules exist in most joint structures, which consist of two parts cartilage and synovial fluid. They serve as a bridge to connect two bones. Cartilage covers the end of long bones and provides cushioning, and the synovial fluid is mainly for lubrication, allowing the bones to move smoothly. When cartilage wears excessively due to various reasons, or abnormal synovial fluid secretion occurs, symptoms of pain and discomfort may appear, and simple behaviors such as walking, sitting, bending, and turning may also be affected. The types of arthritis can be roughly divided into: degenerative arthritis, rheumatoid arthritis, gouty arthritis, and ankylosing spondylitis, although the causes and locations of arthritis varies, but most of the symptoms are similar. Therefore, in addition to listening to the patient’s statement, clinical diagnosis will be based on X-ray images, where the joint imaging features and structures providing the evidence for further evaluation. These clinical features include (but not limited to) the proliferation of bone spurs, smaller space between joints compared to normal, and the cartilage produces cysts or calcification. Each patient could take about 1 to 2 X-ray images with different views for one examination, and the number of X-ray examinations varies according to different treatment methods.

The Chang Gung Arthritis Database contains patients’ X-ray images with knee, hip and hand degenerative arthritis (Osteoarthritis) and rheumatoid arthritis from 2009 to 2019 at Linkou Chang Gung Memorial Hospital (CGMH). Table below shows a summary for the number of X-ray images corresponding to each type of disease and counts of patients’ gender. All patients’ information has been de-identified for its privacy. For those who want to use the database for their researches could gain access rights by requesting from the Medical Artificial Intelligence department in CGMH.

Requesting Datasets

To request a dataset, please contact the Center of Artificial Intelligence in Medicine at cgmhailab@gmail.com



