

## Innovative excellence in osteoarthritis global clinical studies

Synarc scientists developed many of the imaging and biochemical-marker applications used in osteoarthritis clinical trials today. Our osteoarthritis services have been employed at hundreds of clinical-trial sites worldwide and used to evaluate thousands of research subjects.



### Renowned leadership in osteoarthritis imaging

Synarc leads the way in imaging assessment of osteoarthritis in multicenter clinical trials. Our services integrate all aspects of the design and execution of these studies, and provide a broad panel of imaging and biochemical markers for quantifying disease severity and progression at multiple sites in the body. Several of these techniques are unique applications developed by our dedicated scientific team.

The expertise and experience we bring to your osteoarthritis trial can improve clinical-trial efficiency, reduce uncertainty and costs, and shorten product time to market. Contact us to learn more.



### Optimized image acquisition and analysis

#### SynaFlexer™ Digital X-ray Positioning Frame and Phantom

Controls and corrects leading sources of measurement error, including left-right mislabeling and variations in joint flexion, magnification, and x-ray beam angulation.



#### Syn-X-RA™ Digital X-ray Positioning Frame and Phantom

Ensures reproducible positioning of the hands and prevents left-right mislabeling and variations in x-ray beam centering.

#### SynaVu™ Digital X-ray Reading System

Provides 21 CFR Part 11 compliant measurement of joint-space width and joint alignment.

#### SynaVu™ MRI Reading System



Provides 21 CFR Part 11 compliant scoring (WORMS) and quantitative measurement of articular structures.

WORMS for the knee was developed by Synarc founding scientists. WORMS combines semiquantitative assessments of 11 structural features with high inter-reader reproducibility and sensitivity to change. Our in-house radiologists have more experience than anyone else in evaluating MRI images of the knee for clinical research.

### Imaging-Marker Services

- X-ray
  - Semiquantitative scoring of knees, hips, hands, and spine
  - Computer-assisted measurement of joint-space width
  - Computer-assisted measurement of knee alignment
- MRI
  - Whole-organ MRI scoring (WORMS)
  - Articular cartilage
  - Menisci
  - Bone-marrow edema
  - Osteophytes
  - Synovial effusion
  - Cruciate and collateral ligaments
  - Regional articular cartilage volume and thickness quantification
  - Quantitative assessment of synovitis

### Biochemical-Marker Services

- Bone degradation
- Bone formation
- Regulators of osteoclastic and osteoblastic activity
- Cartilage degradation
- Cartilage synthesis and turnover
- Synovial activity
- Matrix-metalloproteases
- Serum ultrasensitive C-reactive protein
- Cytokines/chemokines

For a complete list of biochemical-marker services, please contact your Synarc account executive.



