Supplementary Fig. 1: An image of a participant being prepped for an MR-scan of their right hip joint. Each participant was positioned supine in the MR-scanner and immobilized using straps across the waist and feet, in order to ensure a comfortable and consistent position.

Supplementary Fig. 2: The subregions of the acetabular cartilage layer in the sagittal (top) and coronal (bottom) image views. In the sagittal image view, the acetabular anterior (AA) and acetabular posterior (AP) regions are demarcated by a vertical line 1cm from the most anterior and posterior aspects of the femoral head, respectively. The acetabular superomedial (ASM) and the acetabular superolateral (ASL) regions are prescribed by a vertical line extending from the center of the femoral head in the coronal view.