**Supplementary Table 1.**

The Modified Osteoarthritis Research Society International (OARSI) scoring system for assessment of macroscopic changes in articular cartilage using India ink.

|  |  |
| --- | --- |
| Articular cartilage macroscopic score | Structure |
| 1 | Intact surfacea |
| 2 | 0 mm < Fissure ≤ 2 mm |
| 3 | 2 mm < Fissure ≤ 4 mm |
| 4 | 4 mm < Fissure ≤ 6 mm |
| 5 | 6 mm < Fissure ≤ 8 mm |
| 6 | 8 mm < Fissure ≤ 10 mm |
| 7 | 10 mm < Fissureb |
| 8 | 0 mm < Erosion ≤ 2 mm |
| 9 | 2 mm < Erosion ≤ 4 mm |
| 10 | 4 mm < Erosion ≤ 6 mm |
| 11 | 6 mm < Erosion ≤ 8 mm |
| 12 | 8 mm < Erosion ≤ 10 mm |
| 13 | 10 mm < Erosionc  |

The measurements represent the length of a lesion.

aIntact surface: surface normal in appearance and not retaining India ink.

bFissure: surface retains India ink as elongated specks or light grey patches.

cErosion: loss of cartilage exposing the underlying bone.