Supplementary Table 2: Explanation of diagnostic criterion

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| **Diagnostic criteria** | **Scoring** | **Brief explanation** | **Feature** | **Mild and above** | **Definite and above** |
| Kellgren and Lawrence | 0-4 | 0 = No narrowing of joint and osteophytes;  1 = Doubtful narrowing of joint space and possible osteophytic lipping;  2 = definite osteophytes and possible narrowing of joint space;  3 = Moderate multiple osteophytes, definite narrowing of joint space, some sclerosis and possible deformity of bone contour;  4 = large osteophytes, marked narrowing of joint space, severe sclerosis, and definite deformity of bone contour | Osteophytes, JSN, sclerosis, bone contour | ≥1 | ≥2 |
| International Knee Documentation Committee | A-D | A = normal;  B = remodelling;  C = narrowing of the joint by less than 50%;  D = Narrowing of the joint by more 50% | JSN | ≥B | ≥C |
| Fairbank | 0-3 | 0 = Normal;  1 = Mild changes;  2 = moderate changes;  3 = severe changes | JSN, flattening of femoral articular surface, ridge from the femoral condyle margin | ≥1 | ≥2 |
| OARSI/Altman | 0-3 | 0= No features of osteoarthritis (none);  1= definite osteophytes, possible narrowing of joint space (minimal);  2= Moderate multiple osteophytes, definite narrowing of joint space, some subchondral sclerosis (moderate);  3= large osteophytes, marked narrowing of joint space, severe subchondral sclerosis (severe) | Osteophytes, JSN, subchondral sclerosis | ≥1 | ≥2 |
| Ahlback | 0-4 | 0 = Normal  1 = Joint space narrowing of less than 50%;  2 = joint space obliteration;  3 = bone-bone attrition;  4 = moderate bone attrition | JSN, bone attrition | ≥1 | ≥2 |
| Modified Ahlback | 0-6 | 0 = Normal;  1 = Minimal but definite JSN;  2 = Moderate JSN (50% JSN);  3 = Severe JSN (75% JSN);  4 = Obliteration of the joint space but no attrition;  5 = <5mm attrition;  6 = ≥5mm bone attrition | JSN, bone attrition | ≥1 | ≥2 |
| Line drawing atlas | 0-3 | *JSN*  0 = No JSN,  1 = 33% JSN (2/3 of the normal);  2 = 66% JSN (1/3 the normal);  3 = 99% JSN (bone on bone)  *Osteophytes*  0 = no osteophytes;  1 = 1/3 the length and width of the grade 3 osteophytes;  2 = 2/3 length and width of the grade 3 osteophytes  3 = grade 3 osteophytes | JSN, osteophytes | ≥1 | ≥2 |
| American College of Rheumatology |  | Knee pain on most days of the previous month, demonstrated osteophytes on x-ray, experienced pain or difficulty in getting up from sitting or climbing stairs | Pain and osteophytes |  |  |

Abbreviations as follows: JSN, Joint space narrowing; OARSI, Osteoarthritis Research Society International