

**Supplementary Table 1.** Characteristics of the subjects included or not for radiograph

| Variable  | Included   | Not-included |
|---|------------|--------------|
| Age (years, mean±SD)                            | 59.0±3.8   | 54.2±2.8     |
| Female (%)                                      | 1138(56.9) | 1182(54.1)   |
| Body mass index (kg/m <sup>2</sup> , mean ± SD) | 24.1±4.6   | 24.5±3.4     |
| Previous or current smoker                      | 370 (18.5) | 458 (20.9)   |
| Alcohol   | 880(44.0)  | 1067(48.9)   |
| Diabetes mellitus                               | 402(20.1)  | 346(15.9)    |
| Hypertension                                    | 364(18.2)  | 362(16.6)    |
| Self-reported hand or knee arthritis            | 922(46.1)  | 1010(46.3)   |
| Presence of LBP                                 | 696(34.9)  | 702(32.9)    |

Values are presented as mean±SD or number (%). SD : standard deviation, LBP : lower back pain