**Appendix A. Associations between demographics, clinical and OA factors with spine degeneration phenotypes.**

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| --- | --- | --- | --- |
|  | FOA only  RRR (95% CI) | Spine OA Only  RRR (95% CI) | FOA and spine OA  RRR (95% CI) |
| Age, years | | | |
| 45-54 | Ref | Ref | Ref |
| 55-64 | 1.47 (0.81, 2.67) | **2.16 (1.11, 4.19)** | **2.56 (1.33, 4.93)** |
| 65-74 | 2.11 (0.96, 4.66) | **3.19 (1.29, 7.88)** | **7.50 (3.43, 16.4)** |
| >=75 | 2.83 (0.83, 9.69) | **5.02 (1.20, 20.9)** | **12.7 (3.95, 41.0)** |
| BMI, kg/m2 | | | |
| <30 | Ref | Ref | Ref |
| >=30 | **1.99 (1.17, 3.38)** | 1.09 (0.60, 2.00) | 1.64 (0.97, 2.78) |
| Race | **0.49 (0.28, 0.84)** | 1.36 (0.75, 2.45) | **0.39 (0.23, 0.68)** |
| Sex | 0.83 (0.49, 1.42) | 1.06 (0.59, 1.90) | 1.11 (0.66, 1.86) |
| Low Back Symptoms | 1.04 (0.62, 1.73) | 1.73 (0.97, 3.06) | 1.54 (0.93, 2.55) |
| Knee OA, n (%) | 1.66 (0.88, 3.15) | 0.88 (0.40, 1.92) | **2.46 (1.33, 4.54)** |
| Hip OA, n (%) | 0.81 (0.43, 1.50) | 0.79 (0.29, 2.14) | **0.52 (0.28, 0.98)** |
| Hand OA, n (%) | **2.29 (1.08, 4.86)** | 1.73 (0.97, 3.06) | **2.30 (1.13, 4.70)** |

Spine OA=combination of disc space narrowing and osteophyte of the same level of the lumbar spine, RRR=relative-risk ratio; FOA=facet joint OA; BMI=body mass index; black is the index for race; female the index for sex; OA=osteoarthritis. Phenotypes adjusted for all other covariates in this table. Referent group is no FOA or spine OA for all analyses.