BMD loss and risk of dementia in the Rotterdam Study

n= 2150,

median time between dxa = 4.4 years

number of events= 212,

median FUP = 10,

Max FUP = 10 years

|  |  |  |
| --- | --- | --- |
|  | Male | Female |
| N | 939 | 1211 |
| Age(mean) | 72.34 | 72.62 |
| BMI(mean) | 26.05 | 26.62 |
| APOE4(%) | 0.30 | 0.27 |
| BMD baseline(mean) | 0.93 | 0.82 |
| Time between DXAs (median) | 4.56 | 4.36 |
| Dementia Incidence(%) | 0.07 | 0.12 |
| Follow up time (median) | 10 | 10 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Exposure | Model | Parametrization | Hazard Ratio | Lower CI | Upper CI | p-value |
| Baseline BMD | 1.1 | continuous (g/cm²) | 0.4719 | 0.1537 | 1.449 | 0.1894 |
| 1.2 | Q2 vs. Q1 | 0.9557 | 0.6775 | 1.348 | 0.7965 |
| Q3 vs. Q1 | 0.753 | 0.4924 | 1.151 | 0.1904 |
| Q4 vs. Q1 | 0.8474 | 0.5293 | 1.357 | 0.4905 |
| 1.3 | Q4 vs. vs. Q1-Q3 | 0.957 | 0.6388 | 1.434 | 0.83143 |
| Bone Loss | 2.1 | continuous (% decline/year) | 1.0015 | 0.9272 | 1.082 | 0.97041 |
| 2.2 | Q2 vs. Q1 | 1.018 | 0.6732 | 1.539 | 0.93262 |
| Q3 vs. Q1 | 1.3591 | 0.9223 | 2.003 | 0.12088 |
| Q4 vs. Q1 | 1.1616 | 0.7884 | 1.711 | 0.44859 |
| 2.3 | Q4 vs. vs. Q1-Q3 | 1.0311 | 0.7643 | 1.391 | 0.84092 |
| Baseline BMD and Bone Loss | 3 | Baseline BMD (g/cm²) | 0.9943 | 0.9173 | 1.078 | 0.8898 |
| Bone Loss | 0.4058 | 0.1216 | 1.354 | 0.1424 |

PH assumptions baseline BMD

|  |  |  |  |
| --- | --- | --- | --- |
|  | chisq | df | p |
| sec\_fnbmd | 0.5366 | 1 | 0.46 |
| age\_at\_dxa | 1.1887 | 1 | 0.28 |
| sex | 0.0287 | 1 | 0.87 |
| BMI | 0.687 | 1 | 0.41 |
| apoe4 | 1.2732 | 1 | 0.26 |
| GLOBAL | 3.5044 | 5 | 0.62 |

PH assumptions BMD loss

|  |  |  |  |
| --- | --- | --- | --- |
|  | chisq | df | p |
| BMD\_change\_yr | 0.0416 | 1 | 0.84 |
| age\_at\_dxa | 1.2391 | 1 | 0.27 |
| sex | 0.0309 | 1 | 0.86 |
| BMI | 0.7122 | 1 | 0.4 |
| apoe4 | 1.3328 | 1 | 0.25 |
| GLOBAL | 3.0613 | 5 | 0.69 |

Chart, scatter chart

Description automatically generated