|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Primary analysis | Early censoring | Restricted to those with complete BMI/smoking | Adjusted for ethnicity in complete cases |
| **Age** |  |  |  |  |
| 18-<40 | 0.07 (0.05-0.10) | 0.08 (0.05-0.14) | 0.09 (0.06-0.13) | 0.08 (0.06-0.12) |
| 40-<50 | 0.31 (0.24-0.39) | 0.32 (0.21-0.46) | 0.31 (0.24-0.41) | 0.29 (0.23-0.38) |
| 50-<60 | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) |
| 60-<70 | 2.11 (1.85-2.40) | 2.39 (1.93-2.96) | 2.14 (1.87-2.46) | 2.08 (1.80-2.41) |
| 70-<80 | 4.79 (4.25-5.40) | 5.67 (4.64-6.93) | 4.88 (4.29-5.56) | 4.83 (4.22-5.54) |
| 80+ | 12.57 (11.13-14.20) | 13.57 (11.06-16.63) | 12.81 (11.23-14.62) | 11.99 (10.43-13.79) |
|  |  |  |  |  |
| **Sex** |  |  |  |  |
| Female | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) |
| Male | 1.97 (1.87-2.09) | 2.17 (1.98-2.37) | 2.06 (1.94-2.18) | 1.92 (1.80-2.05) |
|  |  |  |  |  |
| **BMI** (kg/m2) |  |  |  |  |
| Not obese | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) |
| Obese class I (30-34.9) | 1.27 (1.19-1.36) | 1.40 (1.26-1.55) | 1.32 (1.23-1.41) | 1.29 (1.19-1.39) |
| Obese class II (35-39.9) | 1.56 (1.42-1.73) | 1.61 (1.38-1.89) | 1.64 (1.49-1.82) | 1.61 (1.44-1.80) |
| Obese class III (≥40) | 2.26 (1.99-2.58) | 2.43 (1.98-2.98) | 2.40 (2.10-2.74) | 2.27 (1.95-2.65) |
|  |  |  |  |  |
| **Smoking** |  |  |  |  |
| Never | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) |
| Ex-smoker | 1.26 (1.18-1.34) | 1.35 (1.22-1.48) | 1.25 (1.18-1.34) | 1.33 (1.23-1.42) |
| Current | 0.88 (0.79-0.99) | 0.86 (0.72-1.04) | 0.92 (0.82-1.03) | 0.94 (0.82-1.07) |
|  |  |  |  |  |
| **Ethnicity\*** |  |  |  |  |
| White | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) |
| Mixed | 1.64 (1.20-2.26) | 1.13 (0.62-2.06) | 1.58 (1.12-2.22) | 1.64 (1.20-2.26) |
| Asian or Asian British | 1.60 (1.42-1.80) | 1.80 (1.50-2.16) | 1.68 (1.48-1.90) | 1.60 (1.42-1.80) |
| Black | 1.70 (1.43-2.01) | 1.92 (1.49-2.47) | 1.69 (1.41-2.01) | 1.70 (1.43-2.01) |
| Other | 1.38 (1.07-1.78) | 1.88 (1.33-2.66) | 1.46 (1.12-1.90) | 1.38 (1.07-1.78) |
|  |  |  |  |  |
| **IMD quintile** |  |  |  |  |
| 1 (least deprived) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) |
| 2 | 1.14 (1.05-1.25) | 1.01 (0.88-1.16) | 1.13 (1.03-1.24) | 1.20 (1.08-1.34) |
| 3 | 1.22 (1.12-1.33) | 1.05 (0.91-1.20) | 1.23 (1.12-1.34) | 1.25 (1.13-1.39) |
| 4 | 1.49 (1.37-1.63) | 1.29 (1.12-1.47) | 1.49 (1.36-1.63) | 1.54 (1.39-1.70) |
| 5 (most deprived) | 1.74 (1.59-1.90) | 1.48 (1.29-1.70) | 1.72 (1.57-1.89) | 1.69 (1.52-1.88) |
|  |  |  |  |  |
| **Blood pressure** |  |  |  |  |
| Normal | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) |
| High, or diagnosed hyper-tension | 0.96 (0.90-1.02) | 0.94 (0.85-1.05) | 0.95 (0.89-1.01) | 0.98 (0.91-1.05) |
|  |  |  |  |  |
| ***Co-morbidities*** |  |  |  |  |
| **Respiratory disease ex asthma** | 1.78 (1.66-1.90) | 1.93 (1.74-2.15) | 1.73 (1.62-1.85) | 1.79 (1.65-1.93) |
|  |  |  |  |  |
| **Asthma (vs none)\*** |  |  |  |  |
| With no recent OCS use | 1.11 (1.02-1.20) | 1.15 (1.01-1.30) | 1.10 (1.02-1.20) | 1.03 (0.94-1.13) |
| With recent OCS use | 1.23 (1.06-1.42) | 1.36 (1.10-1.69) | 1.21 (1.04-1.40) | 1.21 (1.03-1.43) |
|  |  |  |  |  |
| **Chronic heart disease** | 1.26 (1.19-1.34) | 1.33 (1.21-1.46) | 1.26 (1.19-1.34) | 1.27 (1.18-1.36) |
|  |  |  |  |  |
| **Diabetes (vs none)**\*\* |  |  |  |  |
| Controlled (HbA1c<7.5%) | 1.51 (1.41-1.61) | 1.51 (1.36-1.68) | 1.48 (1.38-1.58) | 1.49 (1.38-1.61) |
| Uncontrolled (HbA1c>7.5%) | 2.37 (2.18-2.57) | 2.58 (2.27-2.93) | 2.31 (2.12-2.51) | 2.22 (2.02-2.45) |
| No recent HbA1c measure | 1.86 (1.63-2.12) | 1.70 (1.36-2.11) | 1.84 (1.60-2.11) | 1.92 (1.66-2.23) |
|  |  |  |  |  |
| **Cancer (non-haematological, vs none)** |  |  |  |  |
| Diagnosed < 1 year ago | 1.51 (1.24-1.83) | 1.45 (1.06-1.98) | 1.47 (1.20-1.80) | 1.64 (1.32-2.03) |
| Diagnosed 1-4.9 years ago | 1.18 (1.04-1.34) | 1.37 (1.13-1.65) | 1.19 (1.04-1.36) | 1.20 (1.03-1.40) |
| Diagnosed ≥5 years ago | 0.96 (0.88-1.05) | 0.91 (0.79-1.05) | 0.96 (0.87-1.05) | 1.02 (0.92-1.13) |
|  |  |  |  |  |
| **Haematological malignancy (vs none)** |  |  |  |  |
| Diagnosed < 1 year ago | 3.42 (2.34-4.99) | 2.53 (1.26-5.06) | 3.65 (2.50-5.33) | 3.20 (2.04-5.03) |
| Diagnosed 1-4.9 years ago | 3.07 (2.46-3.84) | 3.54 (2.55-4.90) | 2.99 (2.37-3.77) | 3.36 (2.63-4.31) |
| Diagnosed ≥5 years ago | 1.86 (1.52-2.26) | 1.63 (1.17-2.27) | 1.87 (1.52-2.29) | 1.81 (1.43-2.28) |
|  |  |  |  |  |
| **Liver disease** | 1.61 (1.33-1.95) | 1.84 (1.38-2.44) | 1.58 (1.30-1.93) | 1.61 (1.30-1.99) |
|  |  |  |  |  |
| **Stroke/dementia** | 1.80 (1.67-1.93) | 1.63 (1.45-1.83) | 1.78 (1.65-1.91) | 1.75 (1.61-1.90) |
|  |  |  |  |  |
| **Other neurological** | 2.43 (2.17-2.73) | 2.20 (1.81-2.68) | 2.34 (2.07-2.65) | 2.40 (2.10-2.75) |
|  |  |  |  |  |
| **Kidney disease** | 1.70 (1.60-1.80) | 1.71 (1.55-1.88) | 1.68 (1.57-1.78) | 1.73 (1.61-1.86) |
|  |  |  |  |  |
| **Organ transplant** | 4.23 (3.17-5.64) | 2.62 (1.51-4.56) | 4.41 (3.28-5.91) | 4.57 (3.34-6.24) |
|  |  |  |  |  |
| **Spleen diseases** | 1.39 (0.92-2.10) | 1.85 (1.05-3.27) | 1.24 (0.79-1.94) | 1.41 (0.89-2.25) |
|  |  |  |  |  |
| **Rheumatoid/Lupus/ Psoriasis** | 1.22 (1.12-1.34) | 1.32 (1.14-1.51) | 1.19 (1.09-1.31) | 1.16 (1.04-1.29) |
|  |  |  |  |  |
| **Other immunosuppressive condition** | 1.68 (1.21-2.34) | 2.01 (1.25-3.25) | 1.52 (1.06-2.19) | 1.67 (1.16-2.39) |

*FOOTNOTES: Ethnicity effect estimated from a model restricted to those with recorded ethnicity. Models adjusted for age using a 4-knot cubic spline age spline, except for estimation of age group effects. OCS = oral corticosteroids. \*Recent OCS use defined as in the year before baseline. \*\*HbA1c classification based on latest measure within 15 months before baseline.*