Supplementary Table 1. Baseline characteristics according to migraine subtypes or non-migraine headache status (N=27,844)

| Characteristic at baseline                        | No history | Non-migraine headache | Migraine with aura | Migraine without aura | Past history |
|--------------------------------------------------|------------|------------------------|--------------------|-----------------------|--------------|
|                                                  | N = 18,691 | N = 4,025              | N = 1,435          | N = 2,175             | N = 1,518    |
| Age, mean, years                                 | 55.2 (7.3) | 53.5 (6.4)             | 53.2 (6.1)         | 52.6 (5.6)            | 55.5 (7.4)   |
| Body mass index, mean (SD), kg/m²                 | 25.8 (4.9) | 26.2 (5.2)             | 25.9 (4.8)         | 26.3 (5.2)            | 26.1 (5.1)   |
| Total cholesterol, median (IQR), mg/dL            | 208        | 207                    | 208                | 207                   | 212          |
| (IQR), mg/dL                                     | (184-235)  | (183-235)              | (184-236)          | (183-234)             | (187-240)    |
| Smoking status, %                                 |            |                        |                    |                       |              |
| Never                                            | 50.8       | 52.7                   | 52.8               | 56.6                  | 50.8         |
| Past                                             | 37.3       | 35.8                   | 36.6               | 33.8                  | 35.4         |
| Current                                          | 11.8       | 11.4                   | 10.5               | 9.6                   | 13.8         |
| Alcohol consumption, %                            |            |                        |                    |                       |              |
| Rarely/never                                      | 42.7       | 47.2                   | 48.4               | 47.5                  | 45.3         |
| 1-3 drinks/month                                  | 12.9       | 13.6                   | 13.0               | 15.5                  | 14.2         |
| 1-6 drinks/week                                   | 32.9       | 31.2                   | 30.8               | 30.1                  | 30.2         |
| ≥1 drink per day                                  | 11.4       | 8.1                    | 7.8                | 6.9                   | 10.3         |
| Vigorous physical activity, %                     |            |                        |                    |                       |              |
| Rarely/never                                      | 37.2       | 36.4                   | 37.3               | 38.3                  | 39.1         |
| <1/week                                           | 18.8       | 20.8                   | 21.1               | 22.6                  | 20.2         |
| 1-3 times/week                                    | 31.9       | 33.5                   | 31.3               | 29.6                  | 29.2         |
| ≥4 times/week                                     | 12.1       | 9.2                    | 10.3               | 9.5                   | 11.4         |
| Diabetes, %                                       | 2.4        | 3.3                    | 1.7                | 1.7                   | 2.7          |
| History of hypertension, %                        | 24.8       | 25.3                   | 23.9               | 24.1                  | 31.2         |
| Family history of:, %                            |            |                        |                    |                       |              |
| Myocardial infarctiona                            | 13.6       | 15.4                   | 16.1               | 14.8                  | 15.2         |
| Colorectal cancerb                                | 10.7       | 9.8                    | 9.8                | 8.8                   | 10.7         |
| Ovarian cancerb                                   | 2.8        | 2.8                    | 3.1                | 3.0                   | 3.8          |
| Breast cancerd                                    | 6.3        | 5.8                    | 6.1                | 5.6                   | 6.2          |

Numbers may not add up to 100% because of rounding or missing data. All variables were measured at baseline. Medical history information was self-reported.

Abbreviations: SD, standard deviation; IQR, interquartile range; cig, cigarettes

- a in parent aged less than 60 years
- b in mother, father, brother or sister at any age
- c in mother or sister at any age
- d in mother or sister aged less than 60 years
Supplementary Table 2. Fine-Gray subdistribution age- and multivariable-adjusted hazard ratios for cause-specific mortality accounting for competing risks according to migraine or headache status (N=27,844).

| Migraine or headache status: | No history, (N=18,691) | Non-migraine headache, (N=4,025) | Any migraine, (N=5,128) |
|-----------------------------|-------------------------|-----------------------------------|-------------------------|
|                             | HR (95% CI)             | HR (95% CI)                       | HR (95% CI)             |
| **Cardiovascular death, N** | 281                     | 46                                | 59                      |
| Age-adjusted<sup>a</sup>    | 1 (ref)                 | 1.07 (0.78-1.45)                  | 1.05 (0.79-1.39)        |
| Multivariable-adjusted<sup>b</sup> | 1 (ref) | 0.98 (0.71-1.34) | 1.06 (0.80-1.40) |
| **Cancer death, N**         | 861                     | 164                               | 199                     |
| Age-adjusted<sup>a</sup>    | 1 (ref)                 | 1.01 (0.85-1.19)                  | 0.96 (0.82-1.12)        |
| Multivariable-adjusted<sup>b</sup> | 1 (ref) | 1.02 (0.86-1.20) | 0.98 (0.84-1.15) |
| **Female-specific cancer death, N** | 248 | 41 | 53 |
| Age-adjusted<sup>a</sup>    | 1 (ref)                 | 0.85 (0.61-1.18)                  | 0.86 (0.64-1.16)        |
| Multivariable-adjusted<sup>b</sup> | 1 (ref) | 0.87 (0.62-1.21) | 0.88 (0.65-1.18) |

Abbreviations: HR, hazard ratio; CI, confidence interval; ref, reference category.

Hazard ratios and corresponding 95% confidence intervals were estimated using Fine-Gray subdistribution hazard models. For each model, any deaths due to causes other than the cause of interest were treated as competing events in the models.

<sup>a</sup>Adjusted for age at baseline

<sup>b</sup>Adjusted for the following variables measured at baseline: age, BMI, total cholesterol, smoking, alcohol use, physical activity, diabetes, hypertension, family history of myocardial infarction, and family history of cancer (categorizations described in detail in the Methods).
Supplementary Table 3. Fine-Gray subdistribution age- and multivariable-adjusted hazard ratios for cause-specific mortality accounting for competing risks according to migraine subtypes or non-migraine headache status (N=27,844).

| Migraine or headache status: | No history, (N=18,691) | Non-migraine headache, (N=4,025) | Migraine with aura, (N=1,435) | Migraine without aura, (N=2,175) | Past history of migraine, (N=1,518) |
|-----------------------------|------------------------|-------------------------------|-------------------------------|----------------------------------|----------------------------------|
|                             | HR -ref- HR (95% CI)   | HR (95% CI)                   | HR (95% CI)                   | HR (95% CI)                      | HR (95% CI)                      |
| Cardiovascular death, N     | 281 46 22 12 25        |                               |                               |                                 |                                 |
| Age-adjusted\(^a\)          | 1 (ref) 1.07 (0.78-1.45) | 1.53 (0.99-2.38) | 0.65 (0.36-1.15) | 1.07 (0.71-1.61) |
| Multivariable-adjusted\(^b\) | 1 (ref) 0.97 (0.71-1.33) | 1.63 (1.05-2.53) | 0.68 (0.38-1.21) | 1.01 (0.67-1.53) |
| Cancer death, N             | 861 164 48 85 66       |                               |                               |                                 |                                 |
| Age-adjusted\(^a\)          | 1 (ref) 1.01 (0.85-1.19) | 0.84 (0.63-1.14) | 1.05 (0.84-1.31) | 0.93 (0.73-1.20) |
| Multivariable-adjusted\(^b\) | 1 (ref) 1.02 (0.86-1.21) | 0.88 (0.66-1.17) | 1.10 (0.88-1.38) | 0.93 (0.72-1.20) |
| Female-specific cancer death, N | 248 41 12 26 15    |                               |                               |                                 |                                 |
| Age-adjusted\(^a\)          | 1 (ref) 0.85 (0.61-1.18) | 0.71 (0.40-1.28) | 1.06 (0.71-1.59) | 0.73 (0.44-1.24) |
| Multivariable-adjusted\(^b\) | 1 (ref) 0.87 (0.62-1.21) | 0.73 (0.41-1.30) | 1.09 (0.72-1.63) | 0.75 (0.45-1.26) |

Abbreviations: HR, hazard ratio; CI, confidence interval; ref, reference category.

Hazard ratios and corresponding 95% confidence intervals were estimated using Fine-Gray subdistribution hazard models. For each model, any deaths due to causes other than the cause of interest were treated as competing events in the models.

\(^a\)Adjusted for age at baseline

\(^b\)Adjusted for the following variables measured at baseline: age, BMI, total cholesterol, smoking, alcohol use, physical activity, diabetes, hypertension, family history of myocardial infarction, and family history of cancer (categorizations described in detail in the Methods).