

**Supplemental Table 1. Prospective cohort studies and corresponding methodologic references**

| Prospective Cohort                                                 | Abbreviation | Reference* |
|--------------------------------------------------------------------|--------------|------------|
| Alpha-Tocopherol Beta-Carotene Cancer Prevention Study             | ATBC         | (1)        |
| American Cancer Society Cancer Prevention Study-II                 | CPS II       | (2)        |
| CLUE II                                                            | -            | (3)        |
| European Prospective Investigation into Cancer and Nutrition Study | EPIC         | (4)        |
| Health Professional's Follow-up Study                              | HPFS         | (5)        |
| New York University Women's Health Study                           | NYUWHS       | (6)        |
| Nurses' Health Study                                               | NHS          | (7)        |
| Physicians' Health Study I                                         | PHS          | (8)        |
| Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial     | PLCO         | (9)        |
| Shanghai Men's and Women's Health Study                            | SMWHS        | (10, 11)   |
| Women's Health Initiative                                          | WHI          | (12)       |
| Women's Health Study                                               | WHS          | (13)       |

\* References

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**Supplemental Table 2. Characteristics of pancreatic cancer cases and matched controls**

| Characteristic                                    |         | Cases        | Controls     |
|---------------------------------------------------|---------|--------------|--------------|
| No. of participants                               |         | 1534         | 1583         |
| Mean age (years, +/- SD)*                         |         | 68.6 +/- 8.5 | 69.3 +/- 7.8 |
| Female gender (%)*                                |         | 52.7         | 51.7         |
| White race/ethnicity (%)*                         |         | 90.4         | 91.9         |
| Cohort (No. [%])*                                 |         |              |              |
| ATBC                                              |         | 193 (12.6)   | 208 (13.1)   |
| CLUE II                                           |         | 68 (4.4)     | 71 (4.5)     |
| CPS II                                            |         | 124 (8.1)    | 118 (7.5)    |
| EPIC                                              |         | 421 (27.4)   | 428 (27.0)   |
| HPFS                                              |         | 54 (3.5)     | 52 (3.3)     |
| NHS                                               |         | 82 (5.4)     | 84 (5.3)     |
| NYU-WHS                                           |         | 13 (0.9)     | 13 (0.8)     |
| PHS I                                             |         | 49 (3.2)     | 54 (3.4)     |
| PLCO                                              |         | 203 (13.2)   | 219 (13.8)   |
| SMWHS                                             |         | 58 (3.8)     | 65 (4.1)     |
| WHI                                               |         | 244 (15.9)   | 239 (15.1)   |
| WHS                                               |         | 25 (1.6)     | 32 (2.0)     |
| Smoking status (%)†                               |         |              |              |
| Current                                           |         | 27.3         | 22.9         |
| Past                                              |         | 32.5         | 34.4         |
| Never                                             |         | 37.4         | 41.2         |
| Unknown                                           |         | 2.9          | 1.5          |
| Mean body-mass index (kg/m <sup>2</sup> , +/- SD) |         | 26.6 +/- 4.5 | 26.4 +/- 4.5 |
| History of diabetes mellitus (%)                  |         | 9.6          | 6.5          |
| Genotype-derived ABO blood groups (%)             |         |              |              |
| Blood Type                                        | Alleles |              |              |
| O                                                 | O, O    | 33.3         | 41.5         |
| A                                                 | A, O    | 45.6         | 40.6         |
|                                                   | A, A    | 36.1         | 33.2         |
|                                                   | A, B    | 9.5          | 7.3          |
| AB                                                | A, B    | 6.3          | 5.6          |
| B                                                 | B, O    | 14.7         | 12.3         |
|                                                   | B, O    | 12.9         | 11.3         |
|                                                   | B, B    | 1.8          | 1.0          |

Abbreviations: ATBC, Alpha-Tocopherol Beta-Carotene, Cancer Prevention Study; CPS

II, American Cancer Society Cancer Prevention Study-II; EPIC, European Prospective

Investigation into Cancer and Nutrition Study; HPFS, Health Professional's Follow-up

Study; NYUWHS, New York University Women's Health Study; NHS, Nurses' Health Study; PHS, Physicians' Health Study I; PLCO, Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial; SMWHS, Shanghai Men's and Women's Health Study; WHI, Women's Health Initiative; WHS, Women's Health Study; SD, standard deviation.

\* Cases and controls matched on covariate.

† Cases and controls matched on smoking status in HPFS, NHS, PHS, and WHS.

**Supplemental Table 3. Risk of incident pancreatic cancer by genotype-derived ABO blood type and stratified by other predisposing factors**

| Characteristic                           | Cases/<br>Controls | Genotype-derived ABO Blood Type<br>Odds Ratio (95% confidence interval)* |                     |                     |                     | P-<br>interaction |
|------------------------------------------|--------------------|--------------------------------------------------------------------------|---------------------|---------------------|---------------------|-------------------|
|                                          |                    | O                                                                        | A                   | AB                  | B                   |                   |
| Age                                      |                    |                                                                          |                     |                     |                     | 0.53              |
| ≤ 65 years                               | 525 / 461          | 1.0                                                                      | 1.16<br>(0.87-1.55) | 1.99<br>(1.05-3.75) | 1.41<br>(0.90-2.20) |                   |
| 66 – 75 years                            | 679 / 775          | 1.0                                                                      | 1.59<br>(1.25-2.03) | 1.37<br>(0.88-2.13) | 1.63<br>(1.17-2.26) |                   |
| > 75 years                               | 330 / 347          | 1.0                                                                      | 1.39<br>(0.98-1.97) | 1.36<br>(0.65-2.85) | 1.57<br>(0.95-2.59) |                   |
| Gender                                   |                    |                                                                          |                     |                     |                     | 0.54              |
| Women                                    | 809 / 819          | 1.0                                                                      | 1.36<br>(1.09-1.70) | 1.34<br>(0.84-2.13) | 1.31<br>(0.94-1.81) |                   |
| Men                                      | 725 / 764          | 1.0                                                                      | 1.38<br>(1.09-1.76) | 1.57<br>(1.00-2.45) | 1.76<br>(1.26-2.44) |                   |
| Race/ethnicity                           |                    |                                                                          |                     |                     |                     | 0.97              |
| White                                    | 1386 / 1455        | 1.0                                                                      | 1.38<br>(1.17-1.63) | 1.45<br>(1.03-2.04) | 1.54<br>(1.20-1.97) |                   |
| Non-White                                | 114 / 118          | 1.0                                                                      | 1.42<br>(0.71-2.83) | 1.62<br>(0.63-4.19) | 1.47<br>(0.73-2.99) |                   |
| Smoking status                           |                    |                                                                          |                     |                     |                     | 0.33              |
| Never / Quit date ≥ 5 years              | 887 / 1036         | 1.0                                                                      | 1.41<br>(1.15-1.73) | 1.31<br>(0.87-1.98) | 1.35<br>(1.00-1.82) |                   |
| Current / Quit date < 5 years or unknown | 603 / 524          | 1.0                                                                      | 1.38<br>(1.04-1.82) | 1.84<br>(1.09-3.11) | 1.90<br>(1.28-2.81) |                   |
| Body-mass index                          |                    |                                                                          |                     |                     |                     | 0.95              |
| < 25 kg/m <sup>2</sup>                   | 587 / 671          | 1.0                                                                      | 1.48<br>(1.14-1.91) | 1.69<br>(1.06-2.70) | 1.55<br>(1.07-2.23) |                   |
| 25-29.9 kg/m <sup>2</sup>                | 639 / 605          | 1.0                                                                      | 1.37<br>(1.06-1.77) | 1.23<br>(0.72-2.10) | 1.40<br>(0.96-2.05) |                   |
| > 30 kg/m <sup>2</sup>                   | 294 / 297          | 1.0                                                                      | 1.25<br>(0.86-1.82) | 1.41<br>(0.63-3.15) | 1.76<br>(1.03-2.99) |                   |

\* Multivariable adjustment by age, gender, race/ethnicity, cohort, smoking status, body-mass index, and history of diabetes mellitus, excluding the stratification covariate.