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## SUPPLEMENTARY DATA

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### **Authors' contributions:**

NJW is the principal investigator of InterAct and is the guarantor of the paper. ER is the overall coordinator of the EPIC study, which was conceptualized, designed and implemented in collaboration with the main investigators in the collaborating countries. EJMF is the leader of the Nutrition and Physical Activity Research Line of InterAct. DR and TN designed this analysis. MG analysed the data. DR wrote the manuscript with close assistance from working team members: MG, TN, CL, NF, SS, NS, MS, BB, GB, EM-M, M-JS, MCM-I, BB, SG, YTvdS, EJMF, ER and NJW. All authors contributed to either EPIC or InterAct data collection, study management, or coordination. All authors contributed to data interpretation and critical reading of the manuscript and have seen and approved the final version of the manuscript.

SUPPLEMENTARY DATA

**Supplementary Table 1.** Distribution of cases and characteristics of the InterAct sample by country

|                       |          | <b>Subcohort</b>         |                  | <b>Non -<br/>subcohort</b> |          | <b>Total<br/>sample</b> |  |                                  |
|-----------------------|----------|--------------------------|------------------|----------------------------|----------|-------------------------|--|----------------------------------|
| <b>Country</b>        | <b>N</b> | <b>Person-<br/>years</b> | <b>Cases (%)</b> | <b>Cases</b>               | <b>N</b> | <b>Female, %</b>        | <b>Age at<br/>enrolment,<br/>mean (SD)</b> | <b>rMED score,<br/>mean (SD)</b> |
| France                | 581      | 5,838.49                 | 9 (1.5)          | 271                        | 852      | 100.0                   | 56.9 (6.5)                                 | 9.2 (2.5)                        |
| Italy                 | 1,952    | 23,521.82                | 58 (3.0)         | 1,287                      | 3,239    | 64.9                    | 51.3 (7.7)                                 | 11.1 (2.4)                       |
| Spain                 | 3,513    | 45,359.78                | 254 (7.2)        | 2,240                      | 5,753    | 56.5                    | 50.4 (7.8)                                 | 11.0 (2.5)                       |
| UK-General population | 1,064    | 12,231.67                | 28 (2.6)         | 826                        | 1,890    | 51.0                    | 60.0 (9.2)                                 | 8.2 (2.6)                        |
| UK-Health conscious   | 234      | 2,700.93                 | 0 (0.0)          | 128                        | 362      | 74.0                    | 50.9 (12.1)                                | 11.0 (2.2)                       |
| Netherlands           | 1,462    | 17,533.49                | 40 (2.7)         | 767                        | 2,229    | 80.5                    | 53.7 (10.2)                                | 6.4 (2.3)                        |
| Germany               | 2,024    | 21,803.36                | 60 (3.0)         | 1,490                      | 3,514    | 50.2                    | 52.4 (8.3)                                 | 7.4 (2.3)                        |
| Sweden                | 2,887    | 36,962.52                | 160 (5.5)        | 2,385                      | 5,272    | 52.4                    | 54.9 (9.7)                                 | 6.2 (2.4)                        |
| Denmark               | 2,081    | 23,052.02                | 140 (6.7)        | 1,851                      | 3,932    | 44.3                    | 57.0 (4.4)                                 | 6.8 (2.6)                        |
| Total                 | 15,798   | 189,004.08               | 749 (4.7)        | 11,245                     | 27,043   | 57.3                    | 53.8 (8.7)                                 | 8.4 (3.2)                        |

Abbreviations: rMED: relative Mediterranean diet score. SD: Standard deviation

## SUPPLEMENTARY DATA

**Supplementary Table 2.** Multiple adjusted hazard ratios of type 2 diabetes associated with two unit increment in the relative-Mediterranean Diet score (rMED) and after alternate subtraction of each of its components

| <b>Dietary variable</b>         | <b>HR *</b> | <b>95%CI</b> | <b>P-value †</b> |
|---------------------------------|-------------|--------------|------------------|
| rMED overall                    | 0.96        | 0.94 - 0.99  | 0.002            |
| rMED minus vegetables           | 0.95        | 0.93 - 0.98  | <0.001           |
| rMED minus fruit and nuts       | 0.96        | 0.94 - 0.99  | 0.003            |
| rMED minus legumes              | 0.96        | 0.94 - 0.99  | 0.002            |
| rMED minus fish                 | 0.95        | 0.93 - 0.98  | <0.001           |
| rMED minus cereals              | 0.95        | 0.93 - 0.98  | <0.001           |
| rMED minus olive oil            | 0.97        | 0.95 - 1.00  | 0.027            |
| rMED minus alcohol              | 0.98        | 0.95 - 1.01  | 0.121            |
| rMED minus meat & meat products | 0.98        | 0.95 - 1.00  | 0.058            |
| rMED minus dairy products       | 0.96        | 0.93 - 0.99  | 0.001            |

\* Modified Cox proportional hazard regression models stratified by center, and adjusted for sex, body mass index (as a continuous variable), educational level (no formal education, primary school, technical/professional school, secondary school and longer education including university degree), physical activity (inactive, moderately inactive, moderately active and active), smoking status (never, former and three categories of current smoker: 1-10 cigarettes day<sup>-1</sup>, 11-20 cigarettes day<sup>-1</sup> and >20 cigarettes day<sup>-1</sup>), total calorie intake (as a continuous variable) and corresponding subtracted rMED components (codified like in the score). Originally estimated logarithms of type 2 diabetes ratios were multiplied by 17/19 and then exponentiated to correct for eighteen point scale (except for rMED overall).

† Calculated from the original numbers.

SUPPLEMENTARY DATA

**Supplementary Table 3.** Sensitivity analyses for risk type 2 diabetes associated with a two-point increment in the relative-Mediterranean Diet score (rMED)

|   | No. Cases / No. Sub-cohort * | HR † | 95%CI       |
|---|------------------------------|------|-------------|
| <b>Further adjusting by</b>   |                              |      |             |
| WC ‡  | 11,158 / 14,089              | 0.97 | 0.94 – 0.99 |
| Hypertension  | 11,994 / 15,049              | 0.95 | 0.93 – 0.98 |
| Hyperlipidaemia §   | 9,449 / 12,322               | 0.95 | 0.93 – 0.98 |
| WC, hypertension and hyperlipidaemia ‡ §  | 9,449 / 12,322               | 0.96 | 0.93 – 0.99 |
| <b>Excluding</b>  |                              |      |             |
| The first two years of follow-up  | 10,969 / 14,983              | 0,96 | 0.94 –0.99  |
| Participants with chronic diseases at baseline §                                      | 3,823 / 9,602                | 0.95 | 0.91 – 0.98 |
| The first two years of follow-up and participants with chronic diseases at baseline § | 3,565 / 9,568                | 0.94 | 0.91 – 0.98 |
| Miss-reporters of energy according to the Goldberg classification                     | 7,605 / 10,580               | 0.96 | 0.93 – 1.00 |
| <b>Additive calibration</b>   |                              |      |             |
| Calibrated rMED score   | 11,994 / 15,049              | 0.97 | 0.94 – 0.99 |

Abbreviations: WC: waist circumference.

\* No. in the Sub-cohort excluding T2DM cases.

† Modified Cox proportional hazard regression models stratified by center and adjusted for sex, body mass index (as a continuous variable), educational level (no formal education, primary school, technical/professional school, secondary school and longer education including university degree), physical activity (inactive, moderately inactive, moderately active and active), smoking status (never, former and three categories of current smoker: 1-10 cigarettes day<sup>-1</sup>, 11-20 cigarettes day<sup>-1</sup> and >20 cigarettes day<sup>-1</sup>) and total calorie intake (as a continuous variable).

‡ Excludes Umea where WC was not recorded.

§ Excludes Malmo and Umea where hyperlipidaemia was not asked.

|| Participants who reported cardiovascular diseases (myocardial infarction, angina or stroke), hypertension, hyperlipidemia or were obese (BMI>30 kg.m<sup>2</sup>) at baseline.

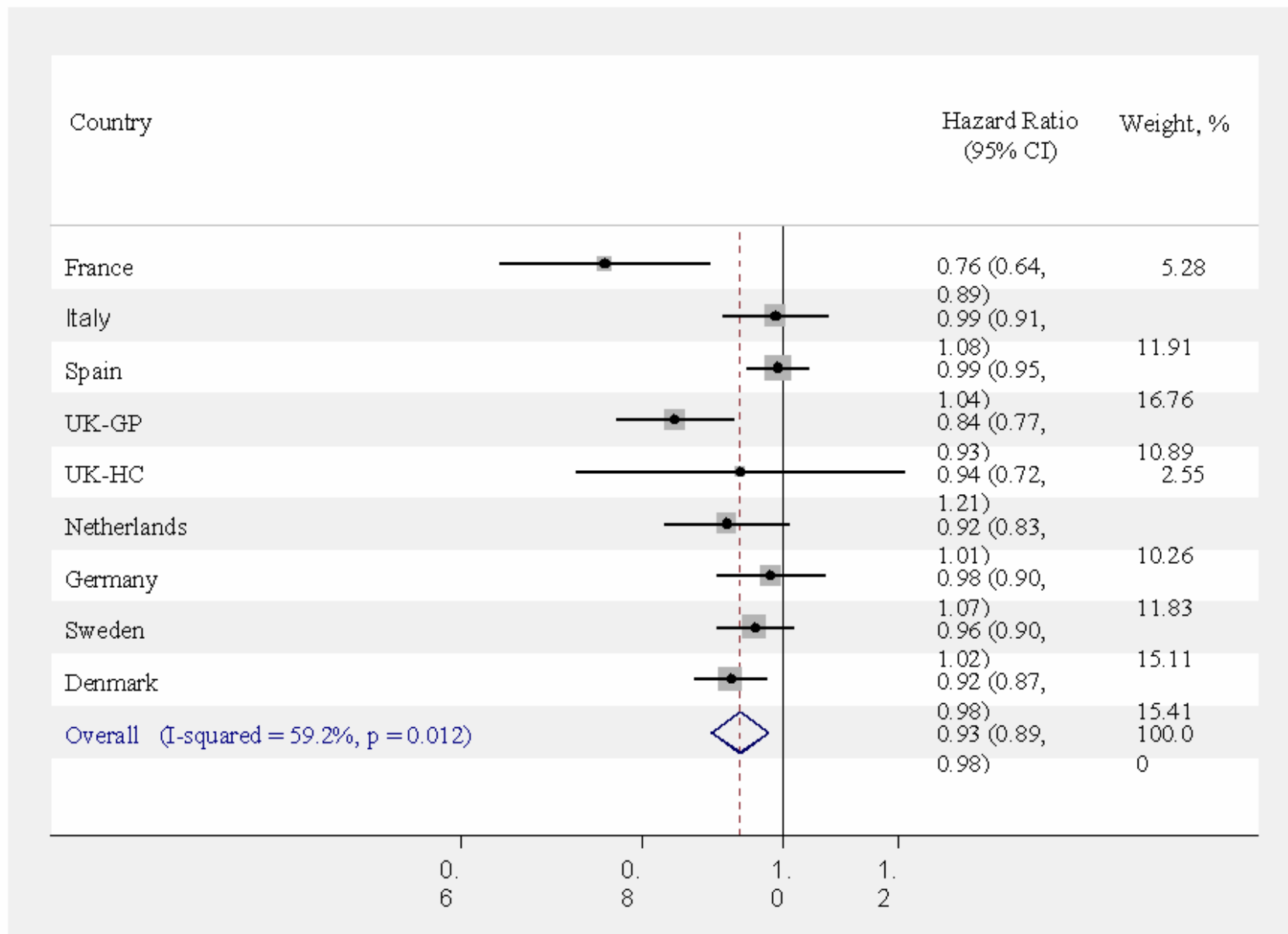
## SUPPLEMENTARY DATA

**Supplementary Figure 1.** Country-specific hazard ratios of type 2 diabetes associated with a two-point increment in the relative-Mediterranean Diet score (rMED).

Hazard Ratios and 95% CI derived by modified Cox proportional hazard regression models stratified by center and adjusted sex, body mass index (as a continuous variable), educational level (no formal education, primary school, technical/professional school, secondary school and longer education including university degree), physical activity (inactive, moderately inactive, moderately active and active), smoking status (never, former and three categories of current smoker: 1-10 cigarettes day<sup>-1</sup>, 11-20 cigarettes day<sup>-1</sup> and >20 cigarettes day<sup>-1</sup>) and total calorie intake (as a continuous variable). Weights are from random effects analysis.

Abbreviations: UK-HC: UK Health conscious group; UK-GP: UK General population.

SUPPLEMENTARY DATA





SUPPLEMENTARY DATA

**Supplementary Figure 2.** Multivariable hazard ratio of type 2 diabetes associated with a two-point increment in the relative-Mediterranean Diet Score (rMED) by country, according to the mean age at recruitment in the sub-cohort.

Area of symbol proportional to sample size (% weight).

Abbreviations: UK-HC: UK Health conscious group; UK-GP: UK General population

