SUPPLEMENTARY TABLES

Supplementary Table 1 - Comparison of population studied and population excluded from main analyses. The French TELECOM study (N = 3934[a])

Variables of interest	Studied (N = 3117)		Excluded (N = 817)		n_{avail}	*P* [b]
Sex (women)	1564	50.2%	433	53.0%	817	0.16
Current smoker [c]	898	28.8%	239	29.3%	802	0.61
Age (years)	38	[30; 50]	40	[31; 52]	818	**4.10^{-4}**
BMI (kg/m²)	23.2	[21.3; 25.4]	23.4	[21.3; 25.3]	816	0.62
Fasting serum Insulin (mU/l)	6.9	[5.4; 8.9]	7.0	[5.6; 9.6]	437	0.13
Alcohol consumption (AU)	0	[0; 2.25]	0	[0; 2.25]	812	0.73
Afro-Caribbean	350	11.2%	81	10.6%	763	0.68
Professional category					616	0.48
category A	556	17.8%	101	16.4%		
category B	1265	40.6%	265	43.0%		
category C	1296	41.6%	250	40.6%		
Deaths						
All causes	330	10.6%	83	13.9%	599	**0.024**
By cancer if deceased	130	45.5%	33	39.8%	83	0.42

Data are n, % (calculated on available data in the excluded population) or median [Q1; Q3].
BMI: body mass index. AU = alcohol units, 10 g of pure alcohol/day.
n_{avail} = number of data available.
[a] Without the 32 individuals with known diabetes mellitus
[b] *P* values from χ^2, ANOVA or Kruskal-Wallis tests
[c] current smokers: declared having smoked in the last 6 months.

Supplementary Table 2 - Characteristics of the population, by sex. The French TELECOM study (N = 3117)

Variables of interest		Men (N = 1553)		Women (N = 1564)	
Age (years)		35	[29; 48]	41	[31; 51]
BMI (kg/m²)		23.9	[22.2; 26.0]	22.3	[20.6; 24.7]
Current smoker [a]		546	35.2%	352	22.5%
Alcohol consumption (AU)		1.08	[0; 3.2]	0	[0; 1.08]
Fasting serum Insulin (mU/l)		7.1	[5.6; 9.1]	6.7	[5.2; 8.7]
Afro-Caribbean		164	10.6%	186	11.9%
Professional category					
	category A	445	28.7%	111	7.1%
	category B	609	39.2%	656	41.9%
	category C	499	32.1%	797	51.0%
Deaths					
	All causes	194	12.5%	136	8.7%
	By cancer if deceased	80	41.2%	70	51.5%

Data are n, % or median [Q1; Q3].
BMI: body mass index. AU: alcohol units, 10 g of pure alcohol/day.
[a] Current smokers: declared having smoked in the last 6 months.

Supplementary Table 3 - Details of cancer type, by sex, following ICD (International Classification for Diseases, 10th revision). 150 deaths by cancer involving 132 primary cancers. The French TELECOM Study (N = 3117)

Cancer type (ICD-10 classification)	Men		Women	
	N = 80[a]	% (column)	N = 70	% (column)
Digestive organs (C15-C26)	27	34%	17	24%
Oesophagus (C15)	3	4%	0	0%
Stomach (C16)	3	4%	2	3%
Colon or rectum (C18-C20)	8	10%	5	7%
Liver and intrahepatic bile ducts, gallbladder (C22-C23)	6	8%	3	4%
Pancreas (C25)	7	9%	6	9%
Others	0	0%	1	1%
Respiratory and intrathoracic organs (C30-C39)	19	23%	9	13%
Bronchopulmonary (C34)	17	21%	9	13%
Others	2	3%	0	0%
Breast (C50)	0	0%	14	20%
Female genital organs (C51-C58)	-		12	19%
Uterus (C53-C55)	-		3	4%
Ovary (C56)	-		9	13%
Male genital organs (C60-C63)			-	
Prostate (C61)	14	18%	-	
Urinary tract (C64-C68)	7	10%	1	1%
Kidney and ureter (C64-C66)	2	3%	0	0%
Bladder (C67)	5	6%	1	1%
Eye, brain and other parts of central nervous system (C69-C72)	6	8%	7	10%
Brain (C71)	6	8%	6	9%
Others	0	0%	1	2%
Ill-defined, secondary and unspecified sites (C76-C80)	4	5%	4	6%
Lymphoid, haematopoietic and related tissue (C81-C96)	8	10%	6	9%
Lymphoma (C81-C86)	4	5%	2	3%
Myeloma (C90)	1	1%	2	3%
Leukaemia (C91-C95)	2	3%	2	3%
Others	1	1%		

[a] In 5 cases (five men), five cancers were declared without an explicit primary location, so both sites were counted.

Supplementary Table 4 - Hazard ratios (95% confidence intervals) of death by cancer for fasting serum insulin used as continuous variable and other exposures, by sex, in multivariable models with and without occupational category (sensitivity analyses). The French TELECOM study.

	Men		Women	
Variables in the model	**Model 1 [b] N = 1553, 80 events**	**Model 2 [b] N = 1608, 84 events**	**Model 1[c] N = 1564, 70 events**	**Model 2[c] N = 1672, 85 events**
Fasting serum insulin (per 1 mU/l) [b]	***p = 0.009***	***p = 0.015***	*p = 0.35*	*p = 0.26*
f_1(insulin)	**0.15 (0.05-0.48)**	**0.18 (0.06-0.57)**	1.03 (0.96-1.11)	1.03 (0.98-1.09)
f_2(insulin)	**0.12 (0.03-0.50)**	**0.15 (0.04-0.56)**	-	-
BMI (per 1 kg/m²)[c]	***p = 0.002***	***p = 0.002***	*p = 0.99*	*p = 0.50*
g_1(BMI)	**3.46 (1.45-8.25)**	**3.39 (1.46-7.85)**	1.00 (0.93-1.08)	1.02 (0.96-1.09)
g_2(BMI)	**0.40 (0.21-0.77)**	**0.40 (0.21-0.76)**	-	
Smoker (Current[d]/Other)	1.36 (0.84-2.19)	1.47 (0.93-2.31)	**1.85 (1.05-3.26)**	**2.02 (1.20-3.40)**
Alcohol consumption (per 1 AU)	1.03 (0.94-1.11)	1.03 (0.95-1.11)	1.02 (0.86-1.21)	1.03 (0.89-1.19)
Afro-Caribbean	0.55 (0.19-1.61)	0.55 (0.20-1.51)	0.52 (0.20 -1.36)	0.79 (0.34-1.85)
Occupational category (ref. = A)	*p = 0.99*	-	***p = 0.018***	**-**
B	1.04 (0.63-1.71)	-	**1.04 (0.32-3.43)**	-
C	1.02 (0.53-1.97)	-	**2.17 (0.66-7.13)**	-

Data are Hazards ratio (95% confidence interval). BMI: Body Mass Index. AU = alcohol unit, 10 g of pure alcohol/day. Results in bold: p < 5%.

All models are adjusted on smoking habits, alcohol consumption, body mass index (continuous variable) and ethnic group, with age used as time scale. Model 1 includes occupational category added as confounding variable, Model 2 does not.

[b] For men, fractional polynomial transformation for fasting serum insulin:

$$f_1(x) = (x/10)^{-2} \text{ and } f_2(x) = (x/10)^{-2} * \log(x/10)$$

and fractional polynomial transformation for body mass index:

$$g_1(x) = (x/10)^3 \text{ and } g_2(x) = (x/10)^3 * \log(x/10)$$

[c] For women, no fractional polynomial transformation was proposed for fasting serum insulin or BMI:

$$f_1(x) = x \text{ and } g_1(x) = x$$

[d] Current smokers: declared having smoked in the last 6 months