

**Supplemental Table S1.** Cross tabulation of normal-weight/overweight at 7 and 13 years and in early adulthood.\*

		<b>Early adulthood</b>			
		<b>Normal weight</b>		<b>Overweight</b>	
		n	%	n	%
<b>Age 7 years</b>					
<b>Normal-weight</b>	Non-cases	56,311	90.4	4,212	6.8
	Combined cases	230	86.5	20	7.5
<b>Overweight</b>	Non-cases	914	1.5	887	1.4
	Combined cases	5	1.9	11	4.1
<b>Age 13 years</b>					
<b>Normal-weight</b>	Non-cases	56,496	89.6	3,269	5.2
	Combined cases	231	85.2	17	6.3
<b>Overweight</b>	Non-cases	1,397	2.2	1,889	3.0
	Combined cases	9	3.3	14	5.2

\*Overweight defined by IOTF criteria until and including age 17 years and by WHO from 18 years onwards.

**Supplemental Table S2.** Adjusted hazard ratios (HR)\* and 95% confidence intervals (CI) for associations between quintiles of body mass index and esophageal and gastric cardia adenocarcinoma incidence.

Body Mass Index (kg/m <sup>2</sup> )	Total (n)	Esophageal Adenocarcinoma		Gastric Cardia Adenocarcinoma		Combined Cases	
		Cases (n)	HR (95% CI)	Cases (n)	HR (95% CI)	Cases (n)	HR (95% CI)
<b>Age, 7 years</b>							
11.68–14.52	12,518	30	1.54 (0.88, 2.69)	19	0.67 (0.37, 1.18)	49	1.02 (0.69, 1.51)
>14.52–15.10	12,518	25	1.22 (0.68, 2.18)	28	0.94 (0.56, 1.57)	53	1.06 (0.72, 1.55)
>15.10–15.63	12,517	21	Referent	30	Referent	51	Referent
>15.63–16.32	12,519	36	1.69 (0.99, 2.90)	26	0.88 (0.52, 1.48)	62	1.21 (0.84, 1.76)
>16.32–25.55	12,518	29	1.37 (0.78, 2.41)	22	0.75 (0.43, 1.29)	51	1.01 (0.68, 1.48)
P for trend†			0.2		0.5		0.7
<b>Age, 13 years</b>							
12.53–16.42	12,664	24	1.07 (0.60, 1.88)	18	0.59 (0.33, 1.04)	42	0.79 (0.53, 1.17)
>16.42–17.33	12,661	25	1.04 (0.60, 1.83)	26	0.80 (0.48, 1.33)	51	0.90 (0.62, 1.31)
>17.33–18.25	12,668	24	Referent	33	Referent	57	Referent
>18.25–19.57	12,664	29	1.20 (0.70, 2.06)	20	0.60 (0.35, 1.05)	49	0.86 (0.58, 1.25)
>19.57–35.07	12,665	42	1.79 (1.08, 2.95)	30	0.93 (0.57, 1.53)	72	1.29 (0.91, 1.83)
P for trend†			0.5		0.2		0.4
<b>Early Adulthood</b>							
14.23–19.64	12,939	24	1.06 (0.60, 1.86)	13	0.47 (0.25, 0.91)	37	0.74 (0.49, 1.12)
>19.64–20.78	12,937	31	1.26 (0.75, 2.14)	27	0.92 (0.55, 1.55)	58	1.08 (0.74, 1.56)
>20.78–21.85	12,941	25	Referent	30	Referent	55	Referent
>21.85–23.29	12,939	24	0.96 (0.55, 1.68)	28	0.94 (0.56, 1.57)	52	0.95 (0.65, 1.39)
>23.29–41.63	12,939	42	1.73 (1.05, 2.85)	31	1.09 (0.66, 1.80)	73	1.38 (0.97, 1.96)
P for trend†			0.1		0.3		0.2

\*Adjusted for education level and age at conscription. †Tests of trend were performed using linear splines with three knot points.

**Supplemental Table S3.** Adjusted hazard ratios (HR)\* and 95% confidence intervals (CI) for associations between per unit increase in BMI z-score† and esophageal and gastric cardia adenocarcinoma incidence.

Body Mass Index (kg/m <sup>2</sup> )	Total (n)	Esophageal Adenocarcinoma		Gastric Cardia Adenocarcinoma		Combined Cases	
		Cases (n)	HR (95% CI)	Cases (n)	HR (95% CI)	Cases (n)	HR (95% CI)
<b>Age, 7 years</b>	62,590	141	1.07 (0.89, 1.29)	125	1.05 (0.86, 1.27)	266	1.06 (0.93, 1.21)
<b>Age, 13 years</b>	63,322	144	1.24 (1.03, 1.49)	127	1.13 (0.93, 1.37)	271	1.19 (1.04, 1.36)
<b>Early Adulthood</b>	64,695	146	1.23 (1.03, 1.47)	129	1.24 (1.03, 1.50)	275	1.23 (1.08, 1.40)

\*Adjusted for education level and age at conscription. The results should be interpreted with caution as tests for linearity using linear splines indicated that the associations may be non-linear (p-values: esophageal adenocarcinoma age 7 years p=0.03, age 13 years p=0.08, early adulthood p=0.002; gastric cardia: age 7 years p=0.21, age 13 years p=0.23 early adulthood p=0.07; combined cases: age 7 year p=0.04, age 13 years p=0.10, early adulthood p=0.09). †The z-scores were age-specific and based on an internal reference. ‡Tests of trend were performed based on one unit increase in z-score.