

Supplementary Table 1 Association between esophageal squamous-cell carcinoma and body mass index (or its changes over time) stratified by smoking status

Body mass index (BMI) exposure group, defined by different methods	Non-smokers (n=57,675)	Former smokers (n=11,357)	Current smokers (n=26,814)
	Hazard ratios and 95% confidence intervals [*]	Hazard ratios and 95% confidence intervals [*]	Hazard ratios and 95% confidence intervals [*]
BMI level at baseline			
<18.5 kg/m ²	-	1.62 (0.50-5.29)	0.99 (0.50-1.95)
18.5-24.9 kg/m ²	Reference	Reference	Reference
25-29.9 kg/m ²	0.80 (0.44-1.44)	0.75 (0.43-1.33)	0.42 (0.27-0.67)
≥30.0 kg/m ²	1.65 (0.51-5.41)	-	0.31 (0.04-2.24)
<i>P for trend</i>	0.6174	0.0967	0.0003
BMI level at age 20 years			
<18.5 kg/m ²	1.17 (0.41-3.33)	0.97 (0.30-3.13)	0.87 (0.43-1.78)
18.5-24.9 kg/m ²	Reference	Reference	Reference
25-29.9 kg/m ²	1.86 (0.81-4.24)	1.05 (0.41-2.65)	0.87 (0.49-1.55)
≥30.0 kg/m ²	5.74 (1.37-24.1)	1.68 (0.23-12.5)	0.65 (0.09-4.69)
missing	1.93 (1.03-3.60)	1.20 (0.60-2.42)	1.44 (1.01-2.06)
<i>P for trend</i> [†]	0.0665	0.7233	0.7740
Weight change since age 20 years			
Loss more than 5 kg	1.36 (0.52-3.54)	1.12 (0.47-2.67)	1.62 (1.12-2.35)
Weight change less than 5 kg	Reference	Reference	Reference
Increase more than 5 kg	0.87 (0.44-1.74)	1.15 (0.63-2.09)	0.58 (0.38-0.86)
Missing	1.70 (0.80-3.64)	1.29 (0.60-2.78)	0.94 (0.61-1.44)
<i>P for trend</i> [†]	0.2407	0.9688	0.0001
BMI change (% per 5 years) ---between age 20 and baseline (excluded missing/extreme values)			
	0.90 (0.77-1.04)	0.81 (0.70-0.95)	0.84 (0.77-0.92)
BMI change (% per 5 years) by quartiles---between age 20 and baseline			
1 st quartile (<0%)	1.38 (0.65-2.91)	1.21 (0.64-2.29)	1.08 (0.74-1.56)
2 nd quartile (0-1.34%)	Reference	Reference	Reference
3 rd quartile (1.34-3.03%)	0.49 (0.18-1.29)	0.70 (0.35-1.39)	0.83 (0.53-1.29)
4 th quartile (>3.03%)	1.26 (0.57-2.78)	0.32 (0.12-0.87)	0.45 (0.25-0.83)
missing	1.74 (0.82-3.67)	1.39 (0.68-2.83)	1.35 (0.90-2.04)
<i>P for trend</i> [†]	0.3108	0.0036	0.0041
BMI change (% per 5 years) ---allowing adjustment from follow-up measurement, if any[‡] (excluding missing/extreme values)			
	0.88 (0.76-1.02)	0.91 (0.79-1.04)	0.84 (0.78-0.91)

^{*} Derived from Cox regression models, adjusted for age at entry, gender, smoking status, alcohol intake level, occupation, physical activity, living arrangement, fruit/vegetable intake level, and stratified by PHC area. We used time since study entry as the underlying time scale. For regression models that measured BMI changes, the BMI level at time of baseline interview was also included for adjusting.

[†] Except for the 'missing' stratum.

[‡] We fitted a simple linear regression model for each individual, using age as exposure and BMI change in percentage ([BMI at age of interview-BMI at age of 20]/BMI at age 20 years) as outcome. The slopes (×5, indicating change of BMI in % per 5 years) in these regressions were used as the measures of BMI change in a time-varying Cox regression model.

Supplementary Table 2 Association between esophageal squamous-cell carcinoma and body mass index (or its changes over time) stratified by alcohol consumption level

Body mass index (BMI) exposure group, defined by different methods	Non-drinkers (n=48,952)	Low alcohol intake level (n=27,522)	High alcohol intake level (n=18,370)
	HR and 95% CI*	HR and 95% CI*	HR and 95% CI*
BMI level at baseline			
<18.5 kg/m ²	0.31 (0.04-2.32)	1.31 (0.47-3.64)	1.06 (0.50-2.28)
18.5-24.9 kg/m ²	Reference	Reference	Reference
25-29.9 kg/m ²	0.81 (0.42-1.60)	0.51 (0.26-1.00)	0.54 (0.37-0.81)
≥30.0 kg/m ²	-	1.76 (0.42-7.30)	0.54 (0.13-2.19)
<i>P for trend</i>	0.6866	0.1260	0.0032
BMI level at age 20 years			
<18.5 kg/m ²	1.94 (0.74-5.11)	1.35 (0.53-3.41)	0.59 (0.24-1.44)
18.5-24.9 kg/m ²	Reference	Reference	Reference
25-29.9 kg/m ²	1.52 (0.58-3.99)	1.13 (0.45-2.86)	1.04 (0.61-1.78)
≥30.0 kg/m ²	2.86 (0.38-21.3)	-	2.30 (0.73-7.26)
missing	1.82 (0.91-3.62)	2.54 (1.52-4.24)	1.23 (0.83-1.84)
<i>P for trend</i> [†]	0.7938	0.6018	0.1616
Weight change since age 20 years			
Loss more than 5 kg	1.88 (0.85-4.14)	2.41 (1.28-4.54)	1.23 (0.79-1.91)
Weight change less than 5 kg	Reference	Reference	Reference
Increase more than 5 kg	0.66 (0.30-1.45)	0.91 (0.49-1.70)	0.72 (0.50-1.05)
Missing	0.92 (0.40-2.14)	2.35 (1.22-4.55)	1.02 (0.65-1.59)
<i>P for trend</i> [†]	0.0184	0.0179	0.0405
BMI change (% per 5 years) ---between age 20 and baseline (excluded missing/extreme values)			
	0.82 (0.68-0.97)	0.81 (0.69-0.94)	0.87 (0.80-0.95)
BMI change (% per 5 years) by quartiles---between age 20 and baseline			
1 st quartile (<0%)	1.46 (0.65-3.26)	1.03 (0.57-1.88)	1.20 (0.81-1.78)
2 nd quartile (0-1.34%)	Reference	Reference	Reference
3 rd quartile (1.34-3.03%)	0.71 (0.26-1.96)	0.52 (0.24-1.13)	0.87 (0.56-1.34)
4 th quartile (>3.03%)	0.73 (0.24-2.18)	0.45 (0.18-1.12)	0.61 (0.36-1.03)
missing	1.84 (0.81-4.18)	2.12 (1.17-3.82)	1.27 (0.81-1.97)
<i>P for trend</i> [†]	0.0770	0.0194	0.0050
BMI change (% per 5 years) ---allowing adjustment from follow-up measurement, if any[‡] (excluding missing/extreme values)			
	0.80 (0.69-0.93)	0.82 (0.72-0.94)	0.89 (0.82-0.96)

* Derived from Cox regression models, adjusted for age at entry, gender, smoking status, alcohol intake level, occupation, physical activity, living arrangement, fruit/vegetable intake level, and stratified by PHC area. We used time since study entry as the underlying time scale. For regression models that measured BMI changes, the BMI level at time of baseline interview was also included for adjusting.

[†] Except for the 'missing' stratum.

[‡] We fitted a simple linear regression model for each individual, using age as exposure and BMI change in percentage ([BMI at age of interview-BMI at age 20 years]/BMI at age of 20) as outcome. The slopes ($\times 5$, indicating change of BMI in % per 5 years) in these regressions were used as the measures of BMI change in a time-varying Cox regression model.