Table S1. Select clinical characteristics and associations with all-cause mortality among women diagnosed with ovarian cancer.

Characteristics	No of deaths/total	Adjusted HR [a](95% CI)
Age at diagnosis		
≤ 50	45/258 (17.44)	1.00 (ref)
> 50	85/445 (19.10)	1.24 (0.85-1.79)
Histological type		
Serous	92/479 (19.21)	1.00 (ref)
Non-serous	38/224 (16.96)	1.71 (1.11-2.66)
Histopathologic grade		
Well differentiated	5/56 (8.93)	1.00 (ref)
Moderately differentiated	7/48 (14.58)	1.12 (0.35-3.57)
Poorly differentiated	118/599 (19.70)	1.76 (0.70-4.43)
FIGO stage		
I-II	41/342 (11.99)	1.00 (ref)
III-IV	89/338 (26.33)	2.54 (1.65-3.91)
Residual lesions		
No	82/553 (14.83)	1.00 (ref)
< 1 cm	31/106 (29.25)	1.73 (1.11-2.68)
≥ 1 cm	17/44 (38.64)	2.41 (1.39-4.16)
Comorbidities		
No	74/393 (18.83)	1.00 (ref)
Yes	56/310 (18.06)	0.97 (0.68-1.38)

CI, confidence interval; HR, hazard ratio; Ref, reference.

[a] Mutually adjusted for all other variables listed in the table.

Table S2. Selected immunohistochemical biomarkers and associations with overall survival among ovarian cancer patients.

Characteristics	No. of deaths/total (%)	Adjusted HR * (95% CI)
WT-1		
Positive	59/378 (15.61)	1.00 (Ref)
Negative	44/190 (23.16)	2.42 (1.51-3.87)
ER		
Positive	81/454 (17.84)	1.00 (Ref)
Negative	30/129 (23.26)	2.09 (1.24-3.52)
PR		
Positive	50/321 (15.58)	1.00 (Ref)
Negative	61/262 (23.28)	1.60 (1.07-2.38)
Vimentin		
Positive	29/156 (18.59)	1.00 (Ref)
Negative	65/359 (18.11)	0.84 (0.51-1.38)
P53		
Positive	92/473 (19.45)	1.00 (Ref)
Negative	27/151 (17.88)	0.94 (0.61-1.44)

CI, confidence interval; ER, Estrogen Receptor; HR, hazard ratio; PR, Progestogen Receptor; Ref, reference; WT-1, Wilms' tumor-1.

* Adjusted for age at diagnosis, FIGO stage, histological type, histopathologic grade, residual lesions, and comorbidities.

Table S3. Adjusted hazard ratio (HR) and 95% confidence interval (CI) of mortality by the tertiles of dietary antioxidant vitamins intake among ovarian cancer patients: sensitivity analysis among people who had not taken vitamin supplements *.

Variables	Dietary antioxidant vitamins intake			*P* trend †
	I	II	III	
Vitamins A (μgRE/d)	1.00 (Ref)	1.01 (0.63-1.63)	0.89 (0.50-1.59)	0.73
Retinol (μg/d)	1.00 (Ref)	0.87 (0.54-1.42)	1.15 (0.71-1.88)	0.44
α-carotene (μg/d)	1.00 (Ref)	0.85 (0.54-1.36)	0.77 (0.46-1.27)	0.15
β-carotene (μg/d)	1.00 (Ref)	0.80 (0.50-1.26)	**0.52 (0.30-0.90)**	**< 0.05**
Vitamins C (mg/d)	1.00 (Ref)	**0.57 (0.35-0.91)**	**0.40 (0.22-0.73)**	**< 0.05**
Vitamins E (mg/d)	1.00 (Ref)	1.41 (0.89-2.23)	1.04 (0.55-1.97)	0.36

CI, confidence interval; HR, hazard ratio; Ref, reference.

* HR and 95% CI were calculated with the use of the Cox proportional hazards regression model with adjustment for age at diagnosis, total energy, diet change, body mass index, education, income, physical activity, alcohol drinking, smoke status, comorbidities, FIGO stage, histological type, histopathologic grade, parity, menopausal status, and residual lesions.

† Test for trend based on variables containing the median value for each tertile.

Table S4. Adjusted hazard ratio (HR) and 95% confidence interval (CI) of mortality by the tertiles of dietary antioxidant vitamins intake among ovarian cancer patients: sensitivity analysis excluding people who had survived less than one year of death *.

Variables	Dietary antioxidant vitamins intake			*P* trend †
	I	II	III	
Vitamins A (μgRE/d)	1.00 (Ref)	0.95 (0.55-1.65)	0.86 (0.45-1.66)	0.65
Retinol (μg/d)	1.00 (Ref)	0.77 (0.44-1.37)	1.14 (0.66-1.99)	0.38
α-carotene (μg/d)	1.00 (Ref)	0.71 (0.41-1.23)	0.73 (0.41-1.28)	0.39
β-carotene (μg/d)	1.00 (Ref)	**0.54 (0.32-0.93)**	**0.53 (0.29-0.96)**	**< 0.05**
Vitamins C (mg/d)	1.00 (Ref)	**0.39 (0.22-0.68)**	**0.33 (0.17-0.64)**	**< 0.05**
Vitamins E (mg/d)	1.00 (Ref)	1.16 (0.68-1.98)	1.09 (0.53-2.21)	0.87

CI, confidence interval; HR, hazard ratio; Ref, reference.

* HR and 95% CI were calculated with the use of the Cox proportional hazards regression model with adjustment for age at diagnosis, total energy, diet change, body mass index, education, income, physical activity, alcohol drinking, smoke status, vitamin supplement use, comorbidities, FIGO stage, histological type, histopathologic grade, parity, menopausal status, and residual lesions.

† Test for trend based on variables containing the median value for each tertile.

Table S5. Adjusted hazard ratio (HR) and 95% confidence interval (CI) of mortality by the tertiles of dietary antioxidant vitamins intake among ovarian cancer patients: sensitivity analysis excluding people with dietary change *.

Variables	Dietary antioxidant vitamins intake			*P* trend †
	I	II	III	
Vitamins A (μgRE/d)	1.00 (Ref)	0.89 (0.52-1.51)	1.01 (0.55-1.86)	0.89
Retinol (μg/d)	1.00 (Ref)	0.77 (0.45-1.32)	1.12 (0.66-1.90)	0.40
α-carotene (μg/d)	1.00 (Ref)	0.90 (0.54-1.51)	0.72 (0.41-1.25)	0.23
β-carotene (μg/d)	1.00 (Ref)	0.61 (0.37-1.01)	**0.39 (0.21-0.71)**	**< 0.05**
Vitamins C (mg/d)	1.00 (Ref)	**0.56 (0.33-0.94)**	**0.33 (0.17-0.66)**	**< 0.05**
Vitamins E (mg/d)	1.00 (Ref)	1.13 (0.68-1.88)	1.02 (0.51-2.04)	0.98

CI, confidence interval; HR, hazard ratio; Ref, reference.

* HR and 95% CI were calculated with the use of the Cox proportional hazards regression model with adjustment for age at diagnosis, total energy, body mass index, education, income, physical activity, alcohol drinking, smoke status, vitamin supplement use, comorbidities, FIGO stage, histological type, histopathologic grade, parity, menopausal status, and residual lesions.

† Test for trend based on variables containing the median value for each tertile.

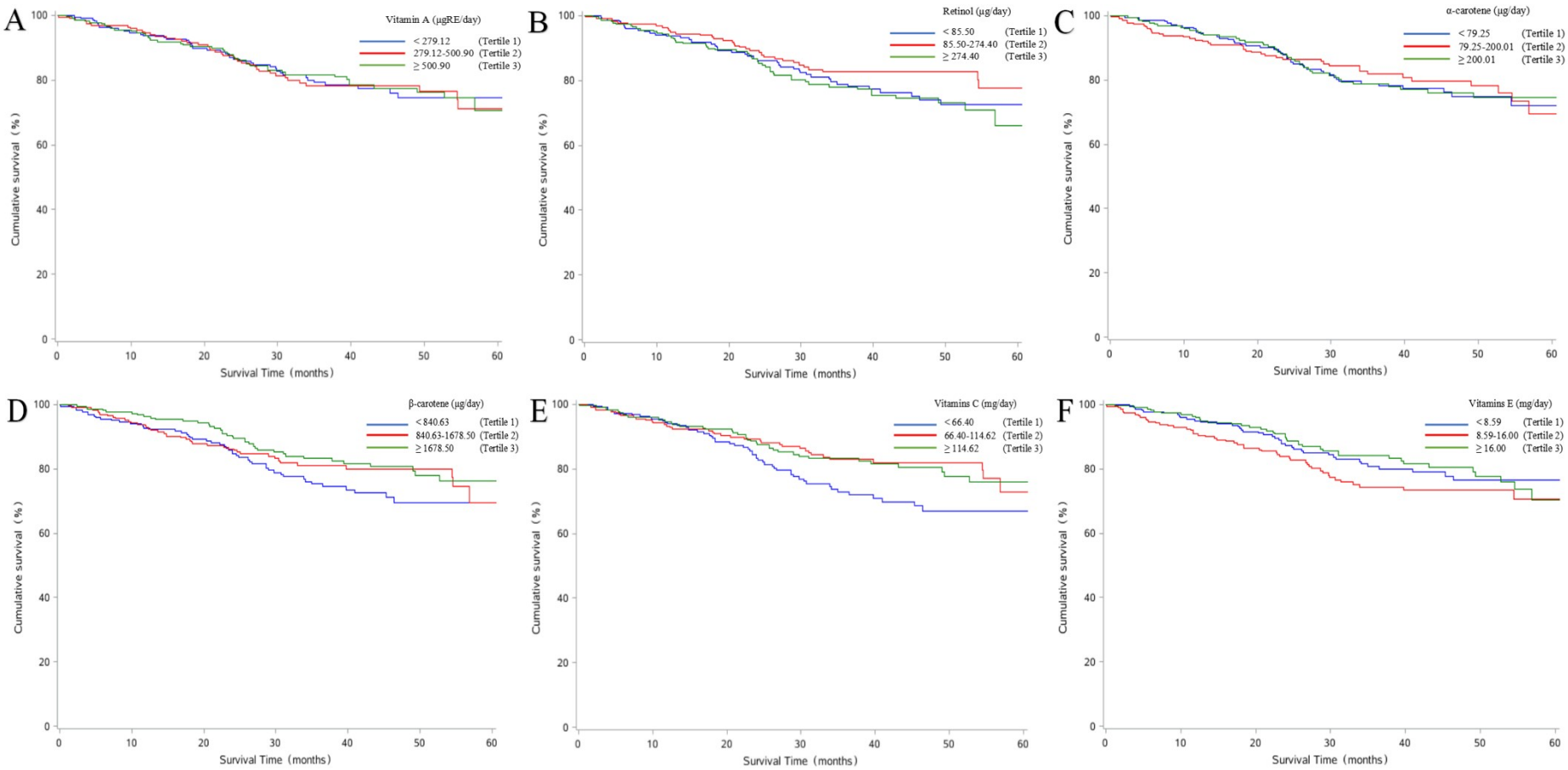

Figure S1 Kaplan-Meier survival curves for vitamins A (A), retinol (B), α-carotene (C), β-carotene (D), vitamins C (E), and vitamins E (F).

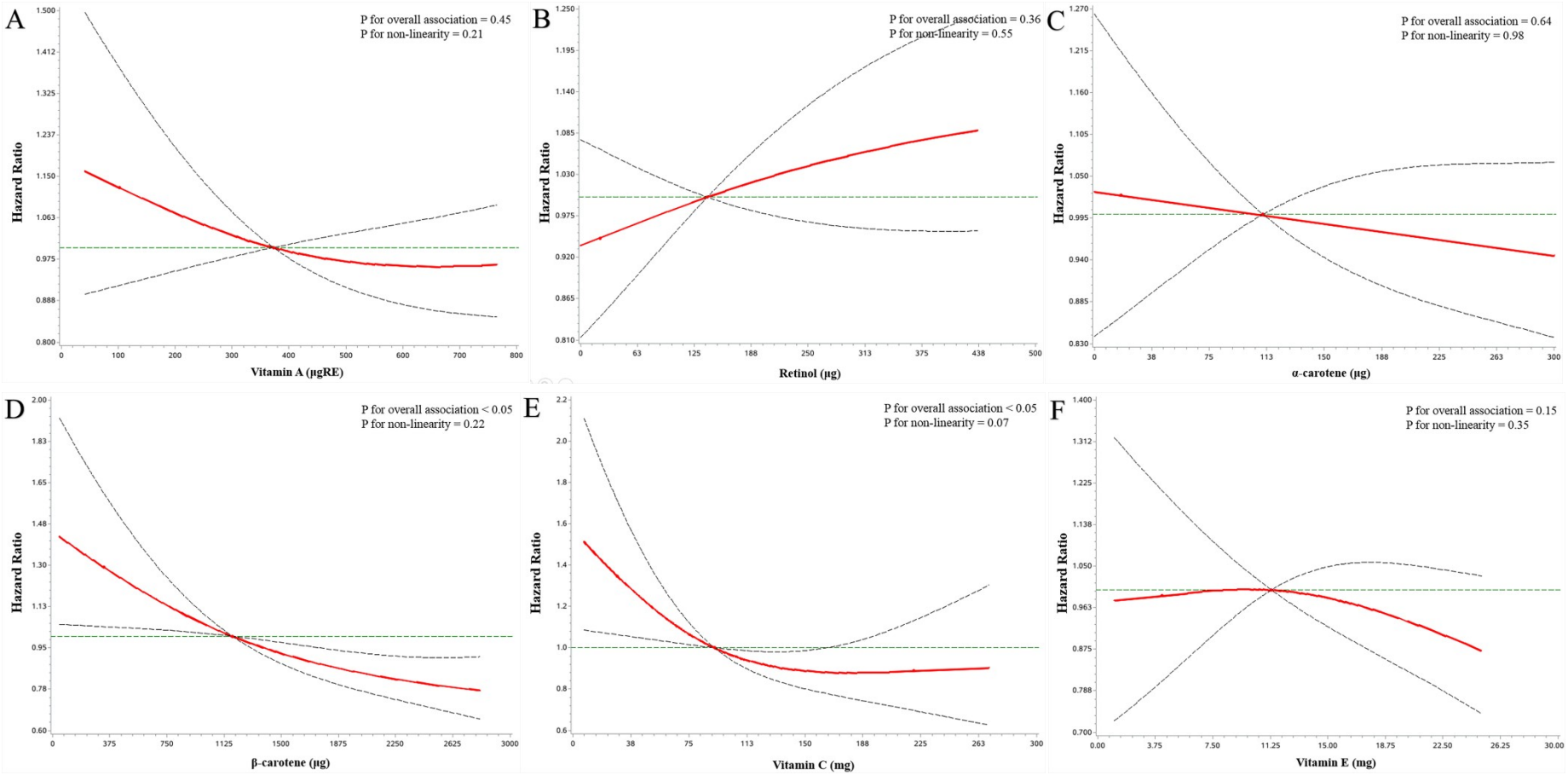

Figure S2 HR and 95% CI of overall survival among OC patients by vitamin A (A), retinol (B), α-carotene (C), β-carotene (D), vitamins C (E), and vitamins E (F). The association was adjusted for age at diagnosis, total energy, diet change, body mass index, education, income, physical activity, alcohol drinking, vitamin supplement use, smoke status, comorbidities, FIGO stage, histological type, histopathologic grade, parity, menopausal status, and residual lesions.