Electronic Supplementary Material (ESI) for Food & Function.

Supplementary Table 1. Classification of vegetables and fruit according to colour groups.

Color groups	Vegetables and fruits items
Green	Chinese cabbage, pakchoi, cabbage, rape, spinach, green cucumber, celery, broccoli, green leek, and kiwi fruit.
Red/purple	Tomato/cherry tomato/tomato sauce, watermelon, grape, strawberry, and red date.
Orange/yellow	Pumpkin, ginger, orange, peach, and pineapple.
White	Cauliflower, mushroom, onion, garlic scape, lotus root, shallot, garlic, apple, pear, and banana.
Uncategorized	Wax gourd, eggplant, radish, red/green pepper (hot), red/green pepper (not hot), fungi, seagrass, and other fruits (expect for kiwi fruit, watermelon, grape, strawberry, red date, orange, peach, pineapple, apple, pear, and banana).

Supplementary Table 2. Selected clinical characteristics and associations with overall survival among ovarian cancer patients

Characteristics	No. of deaths/total (%)	Adjusted HR * (95% CI)
Age at diagnosis (years)		
≤ 50	45/257 (17.51)	1.00 (Ref)
> 50	85/443 (19.19)	1.24 (0.85-1.79)
Histological type		
Serous	92/476 (19.33)	1.00 (Ref)
Non-serous	38/224 (16.96)	1.71 (1.10-2.65)
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	118/596 (19.80)	1.76 (0.70-4.44)
FIGO stage		
I-II	41/342 (11.99)	1.00 (Ref)
III-IV	89/335 (26.57)	2.56 (1.66-3.93)
Residual lesions		
No	82/550 (14.91)	1.00 (Ref)
< 1 cm	31/106 (29.25)	1.71 (1.10-2.66)
≥ 1 cm	17/44 (38.64)	2.39 (1.38-4.13)
Comorbidities		
No	74/391 (18.93)	1.00 (Ref)
Yes	56/309 (18.12)	0.97 (0.68-1.38)

Abbreviations: CI, confidence interval; FIGO, Federation International of Gynecology and Obstetrics; HR, hazard ratio; Ref, reference.

* Mutually adjusted for all other variables listed in the table.

Supplementary Table 3. Adjusted hazard ratio (HR) and 95% confidence interval (CI) adjusted for energy by the residual method for the associations of fruits and vegetables intake with total mortality among 700 ovarian cancer patients*

Characteristics	Tertiles of fruits and vegetables intake**			Continuous †	*P* trend ‡
	I	II	III		
Total FV(g/day)	< 320.37	320.37-455.93	> 455.93		
Deaths, N (% of total deaths)	51 (39.23)	42 (32.31)	37 (28.46)	130 (100.00)	
Model 1	1.00 (Ref)	0.75 (0.50, 1.14)	0.62 (0.41, 0.95)	0.83 (0.69, 1.00)	< 0.05
Model 2	1.00 (Ref)	0.75 (0.50, 1.14)	0.56 (0.36, 0.86)	0.79 (0.65, 0.95)	< 0.05
Total fruits (g/day)	< 135.57	135.57-216.54	> 216.54		
Deaths, N (% of total deaths)	45 (34.62)	43 (33.08)	42 (32.31)	130 (100.00)	
Model 1	1.00 (Ref)	0.87 (0.57, 1.32)	0.82 (0.54, 1.26)	0.95 (0.80, 1.14)	0.40
Model 2	1.00 (Ref)	0.82 (0.53, 1.26)	0.79 (0.52, 1.21)	0.92 (0.77, 1.09)	0.32
Total vegetables (g/day)	< 159.21	159.21-240.37	> 240.37		
Deaths, N (% of total deaths)	41 (31.54)	55 (42.31)	34 (26.15)	130 (100.00)	
Model 1	1.00 (Ref)	0.70 (0.47, 1.06)	0.57 (0.36, 0.90)	0.75 (0.62, 0.91)	< 0.05
Model 2	1.00 (Ref)	0.67 (0.44, 1.02)	0.54 (0.34, 0.86)	0.72 (0.59, 0.88)	< 0.05
Green FV (g/day)	< 70.92	70.92-109.32	> 109.32		
Deaths, N (% of total deaths)	52 (40.00)	41 (31.54)	37 (28.46)	130 (100.00)	
Model 1	1.00 (Ref)	0.74 (0.49, 1.11)	0.63 (0.42, 0.97)	0.83 (0.69, 1.00)	< 0.05
Model 2	1.00 (Ref)	0.79 (0.52, 1.20)	0.61 (0.40, 0.94)	0.78 (0.65, 0.95)	< 0.05
Red/purple FV (g/day)	< 66.13	66.13-111.14	> 111.14		
Deaths, N (% of total deaths)	51 (39.23)	47 (36.15)	32 (24.62)	130 (100.00)	
Model 1	1.00 (Ref)	0.85 (0.57, 1.27)	0.53 (0.34, 0.83)	0.81 (0.67, 0.98)	< 0.05
Model 2	1.00 (Ref)	0.76 (0.51, 1.14)	0.49 (0.32, 0.77)	0.78 (0.64, 0.94)	< 0.05
Orange/yellow FV (g/day)	< 34.33	34.33-57.44	> 57.44		
Deaths, N (% of total deaths)	46 (35.38)	41 (31.54)	43 (33.08)	130 (100.00)	
Model 1	1.00 (Ref)	0.85 (0.56, 1.29)	0.85 (0.56, 1.29)	1.00 (0.84, 1.19)	0.48
Model 2	1.00 (Ref)	0.82 (0.54, 1.26)	0.84 (0.55, 1.28)	0.97 (0.82, 1.15)	0.47
White FV (g/day)	< 81.00	81.00-131.19	> 131.19		
Deaths, N (% of total deaths)	47 (36.15)	44 (33.85)	39 (30.00)	130 (100.00)	
Model 1	1.00 (Ref)	0.83 (0.55, 1.25)	0.77 (0.51, 1.18)	0.90 (0.75, 1.09)	0.27

Model 2	1.00 (Ref)	0.74 (0.49, 1.13)	0.73 (0.47, 1.13)	0.87 (0.72, 1.06)	0.22
Uncategorized FV (g/day)	< 26.33	26.33-45.40	> 45.40		
Deaths, N (% of total deaths)	46 (35.38)	43 (33.85)	40 (30.77)	130 (100.00)	
Model 1	1.00 (Ref)	0.98 (0.65, 1.49)	0.78 (0.51, 1.19)	0.87 (0.72, 1.05)	0.22
Model 2	1.00 (Ref)	0.93 (0.61, 1.42)	0.74 (0.48, 1.14)	0.86 (0.70, 1.04)	0.16

CI, confidence interval; FV, fruits and vegetables; HR, hazard ratio; Ref, reference.

* HR and 95% CI were calculated through the Cox proportional hazards regression model.

** Adjusted for energy by the residual method.

† Continuous intakes were calculated by per standard deviation increase. The standard deviation of total fruits and vegetables is 186.71 g/day, fruits is 134.07 g/day, vegetables is 103.25 g/day, green is 55.52 g/day, red/purple is 54.35 g/day, orange/yellow is 43.47 g/day, white is 87.56 g/day, and uncategorized is 25.28 g/day.

‡ Test for trend based on variables containing the median value for each group.

§ Uncategorized group included wax gourd, eggplant, radish, red/green pepper (hot), red/green pepper (not hot), fungi, seagrass, and other fruits (expect for kiwi fruit, watermelon, grape, strawberry, red date, orange, peach, pineapple, apple, pear, and banana).

Model 1 was adjusted for age at diagnosis (continuous, years).

Model 2 was further adjusted for education (junior secondary or below, senior high school/technical secondary school, and junior college/university or above), monthly household income (< 5000, 5000-10000, ≥ 10000 RMB; yuan), dietary change (yes or no), red and processed meat intake (continuous, g/day), years of menstruation (continuous, years), physical activity (continuous, MET/hours/day) , comorbidities (yes or no), and FIGO stage (I–II, III–IV, and unknown) based on Model 1.

Supplementary Table 4. Adjusted hazard ratio (HR) and 95% confidence interval (CI) for the associations of vegetables and fruits intake with total mortality among 604 ovarian cancer patients after exclusion of participants who had events in the first 1 year of follow-up*

Characteristics	Tertiles of fruits and vegetables intake			Continuous †	*P* trend ‡
	I	II	III		
Total FV(g/day)	< 282.88	282.88-446.81	> 446.81		
Deaths, N (% of total deaths)	34 (37.78)	33 (36.67)	23 (25.56)	90 (100.00)	
Model 1	1.00 (Ref)	0.91 (0.56, 01.48)	0.59 (0.35, 1.01)	0.88 (0.70, 1.10)	< 0.05
Model 2	1.00 (Ref)	0.91 (0.56, 1.49)	0.56 (0.32, 0.97)	0.85 (0.67, 1.06)	< 0.05
Total fruits (g/day)	< 106.24	206.24-216.36	> 216.36		
Deaths, N (% of total deaths)	32 (35.56)	34 (37.78)	24 (26.67)	90 (100.00)	
Model 1	1.00 (Ref)	1.06 (0.65, 1.72)	0.67 (0.39, 1.13)	0.96 (0.78, 1.20)	0.11
Model 2	1.00 (Ref)	0.96 (0.58, 1.57)	0.62 (0.36, 1.07)	0.92 (0.74, 1.15)	0.07
Total vegetables (g/day)	< 144.87	144.87-246.98	> 246.98		
Deaths, N (% of total deaths)	36 (40.00)	28 (31.11)	26 (28.89)	90 (100.00)	
Model 1	1.00 (Ref)	0.73 (0.44, 1.20)	0.62 (0.37, 1.03)	0.82 (0.66, 1.03)	0.07
Model 2	1.00 (Ref)	0.78 (0.47, 1.31)	0.58 (0.34, 0.98)	0.80 (0.63, 1.00)	< 0.05
Green FV(g/day)	< 60.39	60.39-110.95	> 110.95		
Deaths, N (% of total deaths)	34 (37.78)	28 (31.11)	28 (31.11)	90 (100.00)	
Model 1	1.00 (Ref)	0.80(0.49, 1.33)	0.72 (0.44, 1.19)	0.92 (0.74, 1.13)	0.23
Model 2	1.00 (Ref)	0.94 (0.57, 1.56)	0.67 (0.40, 1.13)	0.87 (0.70, 1.08)	0.12
Red/purple FV(g/day)	< 60.25	60.25-116.00	> 116.00		
Deaths, N (% of total deaths)	36 (40.00)	29 (32.22)	25 (27.78)	90 (100.00)	
Model 1	1.00 (Ref)	0.71 (0.44, 1.17)	0.60 (0.36, 1.00)	0.79 (0.56, 1.12)	0.06
Model 2	1.00 (Ref)	0.64 (0.39, 1.05)	0.54 (0.32, 0.91)	0.75 (0.53, 1.07)	< 0.05
Orange/yellow FV(g/day)	< 28.45	28.45-58.23	> 58.23		
Deaths, N (% of total deaths)	33 (36.67)	28 (31.11)	29 (32.22)	90 (100.00)	
Model 1	1.00 (Ref)	0.83 (0.50, 1.38)	0.84 (0.51, 1.38)	1.00 (0.80, 1.27)	0.55
Model 2	1.00 (Ref)	0.80 (0.48, 1.34)	0.83 (0.50, 1.40)	0.98 (0.78, 1.23)	0.57
White FV(g/day)	< 62.72	62.72-134.85	> 134.85		
Deaths, N (% of total deaths)	34 (37.78)	31 (34.44)	25 (27.78)	90 (100.00)	
Model 1	1.00 (Ref)	0.76 (0.46, 1.24)	0.64 (0.38, 1.07)	0.89 (0.71, 1.12)	0.10
Model 2	1.00 (Ref)	0.77 (0.47, 1.27)	0.64 (0.38, 1.08)	0.86 (0.64, 1.09)	0.11

Uncategorized FV§ (g/day)	< 23.71	23.71-44.44	> 44.44		
Deaths, N (% of total deaths)	31 (34.44)	29 (32.22)	30 (33.33)	90 (100.00)	
Model 1	1.00 (Ref)	0.96 (0.57, 1.59)	0.93 (0.56, 1.54)	0.88 (0.71, 1.11)	0.78
Model 2	1.00 (Ref)	1.05 (0.62, 1.75)	0.88 (0.52, 1.47)	0.86 (0.68, 1.09)	0.57

CI, confidence interval; FV, fruits and vegetables; HR, hazard ratio; Ref, reference.

* HR and 95% CI were calculated through the Cox proportional hazards regression model.

† Continuous intakes were calculated by per standard deviation increase. The standard deviation of total fruits and vegetables is 242.95 g/day, fruits is 161.79 g/day, vegetables is 122.22 g/day, green is 65.30 g/day, red/purple is 62.67 g/day, orange/yellow is 49.92 g/day, white is 102.04 g/day, and uncategorized is 28.32 g/day.

‡ Test for trend based on variables containing the median value for each group.

§ Uncategorized group included wax gourd, eggplant, radish, red/green pepper (hot), red/green pepper (not hot), fungi, seagrass, and other fruits (expect for kiwi fruit, watermelon, grape, strawberry, red date, orange, peach, pineapple, apple, pear, and banana).

Model 1 was adjusted for age at diagnosis (continuous, years).

Model 2 was further adjusted for education (junior secondary or below, senior high school/technical secondary school, and junior college/university or above), monthly household income (< 5000, 5000-10000, ≥ 10000 RMB; yuan),dietary change (yes or no), red and processed meat intake (continuous, g/day), years of menstruation (continuous, years), physical activity (continuous, MET/hours/day), comorbidities (yes or no), and FIGO stage (I–II, III–IV, and unknown) based on Model 1.

Supplementary Table 5. Adjusted hazard ratio (HR) and 95% confidence interval (CI) for the associations of vegetables and fruits intake with total mortality among 532 ovarian cancer patients after exclusion of participants who had a diet change*

Characteristics	Tertiles of fruits and vegetables intake			Continuous †	*P* trend ‡
	I	II	III		
Total FV (g/day)	< 270.79	270.79-446.81	> 446.81		
Deaths, N (% of total deaths)	40 (40.82)	33 (36.67)	25 (25.51)	98 (100.00)	
Model 1	1.00 (Ref)	0.78 (0.49, 1.23)	0.57 (0.34, 0.94)	0.83 (0.67, 1.04)	< 0.05
Model 2	1.00 (Ref)	0.75 (0.47, 1.21)	0.54 (0.32, 0.91)	0.80 (0.64, 1.00)	< 0.05
Total fruits (g/day)	< 107.59	107.59-213.85	>213.85		
Deaths, N (% of total deaths)	35 (35.71)	37 (37.76)	26 (26.53)		
Model 1	1.00 (Ref)	1.11 (0.70, 1.77)	0.71 (0.43, 1.18)	0.90 (0.73, 1.12)	0.15
Model 2	1.00 (Ref)	1.02 (0.63, 1.64)	0.68 (0.40, 1.14)	0.87 (0.70, 1.08)	0.12
Total vegetables (g/day)	< 141.42	141.42-246.39	>246.39		
Deaths, N (% of total deaths)	37 (37.76)	37 (37.76)	24 (24.48)		
Model 1	1.00 (Ref)	0.97 (0.61, 1.52)	0.56 (0.33, 0.94)	0.79 (0.64, 0.99)	< 0.05
Model 2	1.00 (Ref)	1.03 (0.64, 1.65)	0.51 (0.30, 0.88)	0.77 (0.61, 0.97)	< 0.05
Green FV (g/day)	< 59.19	59.19-108.91	> 108.91		
Deaths, N (% of total deaths)	39 (39.80)	34 (34.69)	25 (25.51)	98 (100.00)	
Model 1	1.00 (Ref)	0.89 (0.56, 1.41)	0.59 (0.36, 0.97)	0.84 (0.68, 1.04)	< 0.05
Model 2	1.00 (Ref)	1.01 (0.63, 1.61)	0.54 (0.32, 0.92)	0.80 (0.64, 1.00)	< 0.05
Red/purple FV (g/day)	< 59.30	59.30-112.58	> 112.58		
Deaths, N (% of total deaths)	41 (41.84)	32 (32.65)	25 (25.51)	98 (100.00)	
Model 1	1.00 (Ref)	0.70 (0.44, 1.12)	0.53 (0.33, 0.88)	0.79 (0.64, 0.99)	< 0.05
Model 2	1.00 (Ref)	0.64 (0.40, 1.03)	0.51 (0.31, 0.87)	0.78 (0.62, 0.98)	< 0.05
Orange/yellow FV (g/day)	< 27.73	27.73-56.72	> 56.72		
Deaths, N (% of total deaths)	39 (39.80)	27 (27.55)	32 (32.65)	98 (100.00)	
Model 1	1.00 (Ref)	0.71 (0.44, 1.17)	0.87 (0.54, 1.39)	0.95 (0.76, 1.17)	0.67
Model 2	1.00 (Ref)	0.69 (0.42, 1.14)	0.87 (0.54, 1.41)	0.93 (0.75, 1.15)	0.71
White FV (g/day)	< 63.28	63.28-135.64	> 135.64		
Deaths, N (% of total deaths)	37 (37.76)	31 (31.63)	30 (30.61)	98 (100.00)	
Model 1	1.00 (Ref)	0.78 (0.48, 1.25)	0.76 (0.47, 1.23)	0.88 (0.71, 1.10)	0.31
Model 2	1.00 (Ref)	0.78 (0.48, 1.28)	0.77 (0.47, 1.26)	0.86 (0.69, 1.08)	0.34

Uncategorized FV§ (g/day)	< 22.94	22.94-43.02	> 43.02		
Deaths, N (% of total deaths)	34 (34.69)	32 (32.65)	32 (32.65)	98 (100.00)	
Model 1	1.00 (Ref)	0.99 (0.61, 1.60)	0.87 (0.54, 1.41)	0.90 (0.73, 1.12)	0.56
Model 2	1.00 (Ref)	1.00 (0.61, 1.63)	0.80 (0.49, 1.33)	0.89 (0.70, 1.12)	0.36

CI, confidence interval; FV, fruits and vegetables; HR, hazard ratio; Ref, reference.

* HR and 95% CI were calculated through the Cox proportional hazards regression model.

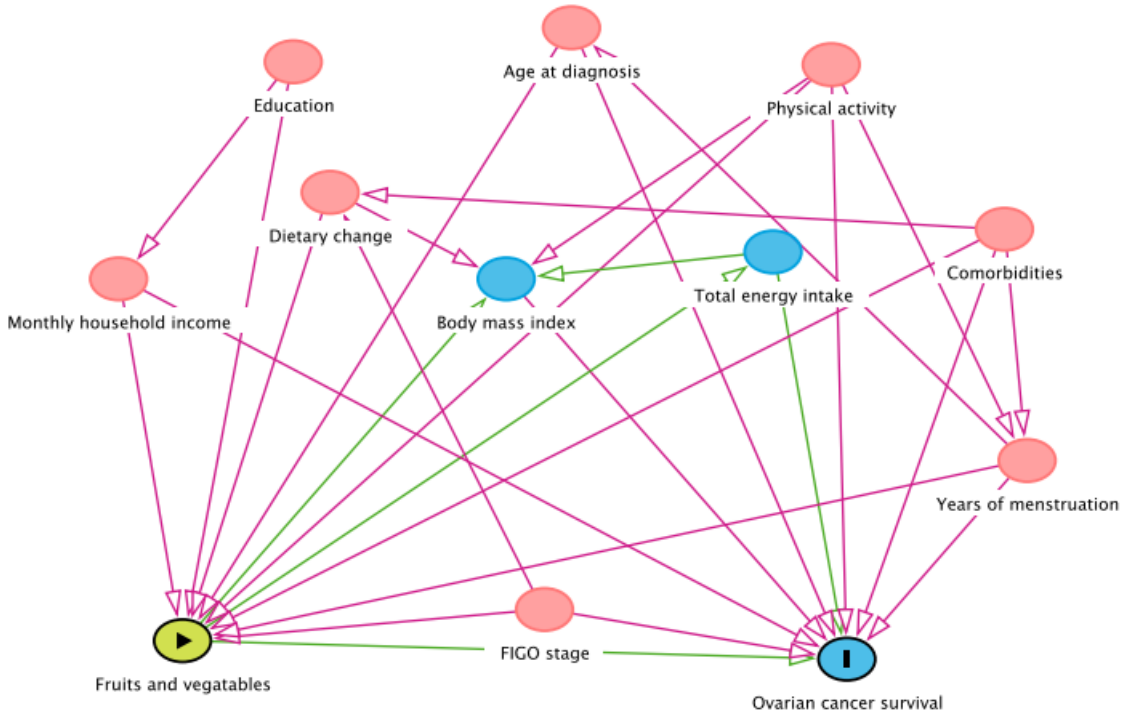
† Continuous intakes were calculated by per standard deviation increase. The standard deviation of total fruits and vegetables is 239.38 g/day, fruits is 157.89 g/day, vegetables is 122.41 g/day, green is 64.65 g/day, red/purple is 62.73 g/day, orange/yellow is 49.71g/day, white is 100.99 g/day, and uncategorized is 28.90 g/day.

‡ Test for trend based on variables containing the median value for each group.

§ Uncategorized group included wax gourd, eggplant, radish, red/green pepper (hot), red/green pepper (not hot), fungi, seagrass, and other fruits (expect for kiwi fruit, watermelon, grape, strawberry, red date, orange, peach, pineapple, apple, pear, and banana).

Model 1 was adjusted for age at diagnosis (continuous, years).

Model 2 was further adjusted for education (junior secondary or below, senior high school/technical secondary school, and junior college/university or above), monthly household income (< 5000, 5000-10000, ≥ 10000 RMB; yuan),dietary change (yes or no), red and processed meat intake (continuous, g/day), years of menstruation (continuous, years), physical activity (continuous, MET/hours/day), comorbidities (yes or no), and FIGO stage (I–II, III–IV, and unknown) based on Model 1.



Supplementary Figure 1. Directed acyclic graph (DAG) visualizing potential confounders of the association between diet quality and ovarian cancer survival.