Table S1: Definitions for various fruit and vegetable subgroups based on individual items in the FFQ

Sub-groups	Individual foods
Total Fruits	Grapes (1/2 cup)/raisins (2 tbsps.), prunes (1/2 cup), bananas (1 medium), cantaloupe/melon (1 cup), apples/pears (1), oranges (1 small), grapefruit (1/2), strawberries (1 1/4 cup), blueberries (3/4 cup), peaches/plums/apricots (1/2 cup), watermelon (1 cup)*, apple sauce (1/2 cup)*, dried fruits (1/4 cup)*
Total juice	Apple juice/cider (1/2 cup), orange juice (1/2 cup), grapefruit juice (1/2 cup)*, other fruit juices (1/2 cup), prune juice (1/3 cup)*
Total vegetables	Raw spinach (1 cup), cooked spinach (1/2 cup), iceberg or head lettuce (1 cup), romaine or leaf lettuce (1 cup), raw carrots (1 large), cooked carrots (1/2 cup), yams/sweet potatoes (cooked, 1/2 cup), winter squash (dark orange squash) (cooked, 1/2 cup), tomatoes (1 medium), tomato sauce (1/3 cup), salsa (1/2 cup), tomato juice (1/2 cup), broccoli (cooked, 1/2 cup), cabbage/Cole slaw (cooked, 1/2 cup), cauliflower (cooked, 1/2 cup), Brussels sprouts (cooked, 1/2 cup), kale/mustard greens/chard (cooked, 1/2 cup), corn (cooked, 1/2 cup), mixed vegetables (cooked, 1/2 cup), eggplant/zucchini/other summer squash (cooked, 1/2 cup), celery (1 cup), green pepper (1/2 cup)*, onion (1/2 cup)*, green beans (1/2 cup), peas (1/2 cup), mushroom*, beet (cooked, 1/2 cup)*, alfalfa sprouts (1 cup)*, sauerkraut (1/2 cup)*
Green leafy vegetables	Raw spinach, cooked spinach, iceberg or head lettuce, romaine or leaf lettuce
Yellow/orange vegetables	Raw carrots, cooked carrots, yams/sweet potatoes, winter squash
Tomato	Tomatoes, tomato sauce, salsa, tomato juice
Cruciferous vegetables	Broccoli, cabbage/Cole slaw, cauliflower, Brussels sprouts, kale/mustard greens/chard
Other vegetables	Corn, mixed vegetables, eggplant/zucchini/other summer squash, celery, green pepper*, onion*, green beans, peas, mushroom*, beet*, alfalfa sprouts*
Fruits and vegetables high in vitamin C	Cantaloupe, orange, grapefruit, strawberries, broccoli, cabbage/Cole slaw, cauliflower, Brussels sprouts, kale/mustard greens/chard, green peppers
Vegetables high in α-carotene	Raw carrots, cooked carrots
Vegetables high in β-carotene	Raw carrots, cooked carrots, yams/ sweet potatoes, raw spinach, cooked spinach, iceberg or head lettuce, romaine or leaf lettuce, kale/mustard greens/chard
Vegetables high in lutein	Raw spinach, cooked spinach, kale/mustard greens/chard

*Data are not available in all FFQs

Table S2: Post-diagnostic subgroup of fruit and vegetable consumption in relation to mortality after breast cancer diagnosis in the Nurses' Health Study and Nurses' Health Study II.

	Consumption Levels					P_{trend}
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	
Fruits and vegetables high in vitamin C						
Median intake, servings/day	0.3	0.5	0.8	1.1	1.7	
Breast cancer-specific mortality						
Number of deaths	213	199	201	206	251	
Model 1	1	0.88 (0.73-1.07)	0.86 (0.71-1.05)	0.87 (0.72-1.05)	1.04 (0.86-1.25)	0.36
Model 2	1	1.00 (0.82-1.21)	1.09 (0.89-1.33)	1.01 (0.83-1.24)	1.09 (0.90-1.33)	0.39
All-cause mortality						
Number of deaths	584	481	502	469	484	
Model 1	1	0.83 (0.73-0.93)	0.85 (0.75-0.95)	0.79 (0.69-0.89)	0.78 (0.69-0.88)	0.0003
Model 2	1	0.91 (0.80-1.03)	0.95 (0.84-1.08)	0.87 (0.76-0.98)	0.86 (0.75-0.98)	0.02
Vegetables high in α-carotene						
Median intake, servings/day	0.04	0.1	0.2	0.3	0.5	
Breast cancer-specific mortality						
Number of deaths	226	242	190	196	214	
Model 1	1	0.94 (0.78-1.13)	0.82 (0.67-0.99)	0.77 (0.63-0.93)	0.87 (0.72-1.05)	0.10
Model 2	1	1.09 (0.90-1.31)	1.13 (0.92-1.38)	1.13 (0.92-1.38)	1.14 (0.93-1.40)	0.26
All-cause mortality						
Number of deaths	549	543	454	483	487	
Model 1	1	0.89 (0.79-1.00)	0.84 (0.74-0.95)	0.81 (0.72-0.92)	0.80 (0.71-0.91)	0.001
Model 2	1	1.02 (0.90-1.15)	1.02 (0.89-1.16)	0.98 (0.86-1.12)	1.01 (0.89-1.16)	0.98
Vegetables high in β-carotene						
Median intake, servings/day	0.4	0.8	1.1	1.5	2.2	
Breast cancer-specific mortality						
Number of deaths	257	233	196	202	182	
Model 1	1	0.86 (0.72-1.03)	0.72 (0.60-0.86)	0.77 (0.64-0.92)	0.74 (0.61-0.89)	0.002
Model 2	1	1.01 (0.84-1.21)	0.94 (0.77-1.14)	0.99 (0.82-1.21)	0.90 (0.73-1.10)	0.29
All-cause mortality						
Number of deaths	642	564	479	438	398	
Model 1	1	0.87 (0.77-0.97)	0.74 (0.66-0.83)	0.69 (0.61-0.78)	0.67 (0.59-0.76)	<0.0001
Model 2	1	0.95 (0.85-1.07)	0.88 (0.78-1.00)	0.79 (0.70-0.90)	0.80 (0.70-0.91)	<0.0001
Vegetables high in lutein						
Median intake, servings/day	0	0.07	0.1	0.3		
Breast cancer-specific mortality						
Number of deaths	255	279	282	249		
Model 1	1	0.96 (0.81-1.13)	1.00 (0.84-1.18)	0.97 (0.81-1.16)		0.86
Model 2	1	1.04 (0.87-1.23)	1.18 (0.99-1.40)	1.12 (0.93-1.34)		0.19
All-cause mortality						
Number of deaths	707	697	609	497		
Model 1	1	0.91 (0.82-1.01)	0.87 (0.78-0.97)	0.82 (0.73-0.92)		0.0006
Model 2	1	0.92 (0.82-1.02)	0.98 (0.87-1.09)	0.92 (0.82-1.04)		0.36

See Table 2 footnote

Table S3: Post-diagnostic subgroup of fruit and vegetable consumption in relation to cardiovascular disease mortality after breast cancer diagnosis in the Nurses' Health Study and Nurses' Health Study II.

	Consumption Levels					P_{trend}
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	
Total fruits and vegetables						
Median intake, servings/day	2.2	3.4	4.3	5.5	7.4	
Number of deaths	70	86	50	53	52	
Model 1	1	1.18 (0.86-1.62)	0.70 (0.49-1.01)	0.76 (0.53-1.09)	0.75 (0.52-1.07)	0.02
Model 2	1	1.24 (0.90-1.72)	0.86 (0.59-1.26)	0.96 (0.65-1.42)	0.96 (0.63-1.45)	0.48
Total fruits						
Median intake, servings/day	0.5	1.0	1.4	1.9	2.8	
Number of deaths	52	67	58	59	75	
Model 1	1	1.15 (0.80-1.65)	0.90 (0.62-1.30)	0.86 (0.59-1.25)	1.02 (0.71-1.46)	0.74
Model 2	1	1.27 (0.88-1.84)	1.01 (0.68-1.49)	1.11 (0.75-1.65)	1.27 (0.85-1.88)	0.39
Total vegetables						
Median intake, servings/day	1.4	2.2	2.9	3.6	5.1	
Number of deaths	85	78	62	49	37	
Model 1	1	0.96 (0.71-1.31)	0.82 (0.59-1.15)	0.67 (0.47-0.96)	0.55 (0.37-0.82)	0.0005
Model 2	1	1.08 (0.79-1.49)	0.98 (0.69-1.39)	0.77 (0.53-1.12)	0.76 (0.49-1.16)	0.08
Fruit juices						
Median intake, servings/day	0	0.3	0.8	1.5	2.1	
Number of deaths	48	57	67	67	72	
Model 1	1	1.16 (0.79-1.71)	1.18 (0.81-1.71)	0.97 (0.67-1.41)	1.08 (0.75-1.56)	0.81
Model 2	1	1.11 (0.74-1.65)	1.15 (0.78-1.68)	1.00 (0.68-1.47)	1.24 (0.84-1.83)	0.48
Green leafy vegetables						
Median intake, servings/day	0.2	0.5	0.8	1.1	1.7	
Number of deaths	95	72	58	41	45	
Model 1	1	0.82 (0.60-1.11)	0.65 (0.47-0.91)	0.48 (0.33-0.69)	0.60 (0.42-0.86)	0.0003
Model 2	1	0.97 (0.71-1.34)	0.73 (0.52-1.03)	0.57 (0.39-0.83)	0.79 (0.54-1.16)	0.03
Yellow/orange vegetables						
Median intake, servings/day	0.1	0.2	0.3	0.4	0.7	
Number of deaths	66	60	85	52	48	
Model 1	1	0.86 (0.61-1.22)	1.18 (0.85-1.63)	0.80 (0.55-1.15)	0.65 (0.44-0.94)	0.01
Model 2	1	1.00 (0.70-1.43)	1.35 (0.96-1.89)	0.94 (0.64-1.38)	0.86 (0.57-1.28)	0.27
Tomatoes						
Median intake, servings/day	0.2	0.3	0.5	0.7	1.1	
Number of deaths	79	60	63	61	48	
Model 1	1	0.90 (0.64-1.26)	0.93 (0.66-1.30)	0.97 (0.69-1.38)	0.82 (0.57-1.19)	0.40
Model 2	1	0.89 (0.63-1.26)	0.99 (0.70-1.41)	1.16 (0.80-1.67)	1.06 (0.71-1.57)	0.46
Cruciferous vegetables						
Median intake, servings/day	0.1	0.2	0.4	0.5	0.9	
Number of deaths	80	72	65	47	47	
Model 1	1	1.01 (0.74-1.40)	0.93 (0.66-1.29)	0.75 (0.52-1.08)	0.72 (0.50-1.04)	0.03
Model 2	1	1.04 (0.75-1.44)	1.01 (0.72-1.41)	0.83 (0.56-1.21)	0.81 (0.55-1.19)	0.14
Other vegetables						
Median intake, servings/day	0.3	0.5	0.7	1.0	1.5	
Number of deaths	71	72	69	56	43	
Model 1	1	1.11 (0.80-1.54)	1.07 (0.77-1.50)	0.91 (0.64-1.30)	0.76 (0.52-1.11)	0.07
Model 2	1	1.05 (0.75-1.48)	1.06 (0.75-1.50)	0.99 (0.68-1.44)	0.85 (0.56-1.29)	0.37
Fruits and vegetables high in vitamin C						
Median intake, servings/day	0.3	0.5	0.8	1.1	1.7	
Number of deaths	74	59	56	70	52	
Model 1	1	0.86 (0.61-1.22)	0.81 (0.57-1.15)	1.01 (0.72-1.40)	0.70 (0.49-1.00)	0.13
Model 2	1	0.87 (0.62-1.24)	0.86 (0.60-1.24)	1.14 (0.80-1.61)	0.87 (0.59-1.29)	0.90
Vegetables high in α-carotene						
Median intake, servings/day	0.04	0.1	0.2	0.3	0.5	
Number of deaths	65	72	59	65	50	
Model 1	1	1.01 (0.72-1.42)	0.96 (0.68-1.37)	0.96 (0.68-1.36)	0.68 (0.47-0.98)	0.02
Model 2	1	1.14 (0.81-1.61)	1.11 (0.77-1.60)	1.02 (0.71-1.47)	0.86 (0.58-1.28)	0.25

Vegetables high in β-carotene						
Median intake, servings/day	0.4	0.8	1.1	1.5	2.2	
Number of deaths	93	76	52	42	48	
Model 1	1	0.84 (0.62-1.13)	0.58 (0.41-0.82)	0.48 (0.33-0.69)	0.60 (0.42-0.85)	0.0002
Model 2	1	0.92 (0.67-1.25)	0.67 (0.47-0.95)	0.55 (0.37-0.80)	0.78 (0.53-1.14)	0.04
Vegetables high in lutein						
Median intake, servings/day	0	0.07	0.1	0.3		
Number of deaths	103	88	70	48		
Model 1	1	0.84 (0.63-1.12)	0.79 (0.58-1.07)	0.66 (0.47-0.94)		0.02
Model 2	1	0.84 (0.63-1.13)	0.89 (0.65-1.22)	0.80 (0.56-1.14)		0.27

See Table 2 footnote

Table S4. Associations of post-diagnostic fruit and vegetable intake with breast cancer-specific and all-cause mortality among breast cancer patients, stratified by participant characteristics and tumor characteristics.

		Total Fruits and Vegetables		Total Fruits		Total Vegetables	
	No. of Deaths	HR (95% CI) Per 2 servings/day	$P_{interaction}$	HR (95% CI) Per 2 servings/day	$P_{interaction}$	HR (95% CI) Per 2 servings/day	$P_{interaction}$
Breast cancer-specific mortality							
Age at diagnosis							
<60 years	638	1.06 (0.96-1.18)	0.07	1.26 (1.02-1.56)	0.03	1.01 (0.87-1.16)	0.12
≥60 years	432	0.89 (0.78-1.01)		0.82 (0.63-1.07)		0.85 (0.71-1.01)	
Smoking							
Never	481	1.00 (0.89-1.12)	0.32	1.00 (0.78-1.28)	0.59	0.99 (0.84-1.16)	0.18
Ever	578	0.97 (0.87-1.08)		1.03 (0.82-1.29)		0.90 (0.78-1.05)	
Alcohol consumption							
<3.5 g/day	730	0.98 (0.89-1.08)	0.27	1.02 (0.84-1.24)	0.39	0.95 (0.83-1.08)	0.29
≥3.5 g/day	340	0.99 (0.85-1.14)		0.99 (0.73-1.34)		0.94 (0.77-1.15)	
Aspirin use							
Ever	801	0.95 (0.86-1.04)	0.13	0.95 (0.79-1.16)	0.08	0.90 (0.80-1.02)	0.50
Never	178	1.07 (0.89-1.30)		1.32 (0.88-1.98)		0.96 (0.73-1.25)	
Body mass index							
<25.0 kg/m^2	450	0.99 (0.88-1.12)	0.65	1.02 (0.79-1.33)	0.72	0.96 (0.81-1.14)	0.64
≥25.0 kg/m^2	597	0.96 (0.86-1.06)		0.97 (0.78-1.21)		0.92 (0.79-1.06)	
Physical activity							
<10 MET-hrs/wk	483	0.93 (0.82-1.04)	0.53	0.95 (0.74-1.22)	0.69	0.85 (0.72-1.01)	0.31
≥10 MET-hrs/wk	440	0.95 (0.84-1.07)		0.94 (0.72-1.22)		0.98 (0.83-1.16)	
Estrogen receptor							
Positive	769	0.99 (0.90-1.08)	0.85	1.02 (0.84-1.24)	0.81	0.95 (0.83-1.08)	0.96
Negative	212	0.95 (0.79-1.13)		0.93 (0.64-1.36)		0.95 (0.74-1.22)	
Stage							
I	339	0.93 (0.80-1.07)	0.92	0.87 (0.64-1.16)	0.44	0.96 (0.79-1.17)	0.32
II	397	0.91 (0.79-1.03)		0.94 (0.72-1.24)		0.84 (0.70-1.01)	
III	334	1.05 (0.91-1.21)		1.21 (0.89-1.65)		0.96 (0.79-1.16)	
All-cause mortality							
Age at diagnosis							
<60 years	1,089	1.01 (0.93-1.10)	0.03	1.21 (1.02-1.43)	0.006	0.95 (0.85-1.06)	0.04
≥60 years	1,432	0.89 (0.82-0.95)		0.86 (0.74-1.00)		0.83 (0.75-0.91)	
Smoking							
Never	1,000	0.97 (0.89-1.05)	0.05	0.90 (0.75-1.07)	0.77	0.97 (0.86-1.08)	0.008
Ever	1,474	0.89 (0.83-0.95)		0.92 (0.80-1.07)		0.82 (0.74-0.90)	
Alcohol consumption							
<3.5 g/day	1,719	0.94 (0.88-1.00)	0.84	0.95 (0.83-1.08)	0.99	0.92 (0.84-1.00)	0.45
≥3.5 g/day	802	0.90 (0.82-1.00)		0.89 (0.73-1.08)		0.82 (0.71-0.93)	
Aspirin use							
Ever	1,844	0.89 (0.84-0.95)	0.08	0.91 (0.80-1.04)	0.24	0.83 (0.76-0.90)	0.11
Never	260	0.98 (0.83-1.15)		1.00 (0.70-1.41)		0.95 (0.75-1.19)	
Body mass index							
<25.0 kg/m^2	1,106	0.88 (0.81-0.96)	0.19	0.85 (0.72-1.00)	0.19	0.85 (0.76-0.95)	0.50
≥25.0 kg/m^2	1,377	0.96 (0.89-1.03)		0.98 (0.85-1.14)		0.91 (0.82-1.00)	
Physical activity							
<10 MET-hrs/wk	1,279	0.89 (0.83-0.96)	0.58	0.88 (0.76-1.03)	0.67	0.85 (0.77-0.95)	0.54
≥10 MET-hrs/wk	1,010	0.89 (0.81-0.96)		0.84 (0.70-1.00)		0.88 (0.78-0.98)	
Estrogen receptor							
Positive	1,847	0.92 (0.87-0.98)	0.59	0.94 (0.83-1.07)	0.35	0.88 (0.81-0.96)	0.79
Negative	445	0.88 (0.77-1.00)		0.82 (0.62-1.08)		0.84 (0.70-1.01)	
Stage							
I	1,279	0.88 (0.82-0.95)	0.09	0.79 (0.68-0.93)	0.04	0.86 (0.77-0.95)	0.29
II	794	0.91 (0.83-1.00)		1.00 (0.82-1.23)		0.86 (0.75-0.98)	
III	448	1.02 (0.89-1.15)		1.22 (0.93-1.60)		0.92 (0.77-1.09)	

See Table 2 footnote

Table S5: Pre-diagnostic fruit and vegetable consumption in relation to mortality after breast cancer diagnosis (n=8,552 women) in the Nurses' Health Study and Nurses' Health Study II.

	Consumption Levels					P_{trend}
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	
Total fruit and vegetables						
Breast cancer-specific mortality						
Median intake, servings/day	1.9	3.0	4.0	5.2	7.4	
Number of deaths	215	195	213	191	190	
Model 1	1	0.91 (0.75-1.10)	1.00 (0.82-1.21)	0.88 (0.73-1.08)	0.89 (0.73-1.09)	0.26
Model 2	1	0.92 (0.76-1.13)	1.09 (0.89-1.33)	0.98 (0.79-1.21)	0.97 (0.77-1.21)	0.88
All-cause mortality						
Number of deaths	475	445	472	506	474	
Model 1	1	0.85 (0.75-0.97)	0.89 (0.78-1.01)	0.88 (0.78-1.00)	0.83 (0.73-0.94)	0.02
Model 2	1	0.94 (0.82-1.07)	1.04 (0.91-1.19)	1.04 (0.91-1.19)	1.00 (0.86-1.15)	0.70
Total fruits						
Breast cancer-specific mortality						
Median intake, servings/day	0.3	0.8	1.2	1.8	2.8	
Number of deaths	207	213	201	188	195	
Model 1	1	0.98 (0.81-1.19)	0.92 (0.76-1.12)	0.83 (0.68-1.01)	0.85 (0.69-1.03)	0.04
Model 2	1	1.08 (0.89-1.32)	1.13 (0.92-1.38)	0.88 (0.71-1.08)	0.93 (0.75-1.15)	0.13
All-cause mortality						
Number of deaths	444	459	468	485	516	
Model 1	1	0.89 (0.78-1.01)	0.86 (0.75-0.98)	0.82 (0.72-0.94)	0.81 (0.71-0.93)	0.003
Model 2	1	0.96 (0.84-1.10)	1.05 (0.92-1.20)	0.92 (0.81-1.06)	0.96 (0.84-1.10)	0.44
Total vegetables						
Breast cancer specific mortality						
Median intake, servings/day	1.2	1.9	2.6	3.5	5.1	
Number of deaths	215	209	191	215	174	
Model 1	1	1.01 (0.84-1.23)	0.94 (0.78-1.15)	1.06 (0.88-1.28)	0.88 (0.72-1.07)	0.27
Model 2	1	1.01 (0.83-1.22)	0.92 (0.75-1.13)	1.17 (0.95-1.44)	0.94 (0.75-1.17)	0.89
All-cause mortality						
Number of deaths	485	472	456	516	443	
Model 1	1	0.96 (0.85-1.09)	0.91 (0.80-1.04)	1.01 (0.89-1.15)	0.87 (0.77-1.00)	0.10
Model 2	1	1.04 (0.91-1.19)	1.02 (0.89-1.17)	1.22 (1.07-1.40)	1.02 (0.88-1.17)	0.45
Fruit juices						
Breast cancer-specific mortality						
Median intake, servings/day	0	0.2	0.7	1.5	2.0	
Number of deaths	232	167	186	235	175	
Model 1	1	1.03 (0.84-1.26)	0.96 (0.79-1.16)	0.96 (0.80-1.15)	0.91 (0.75-1.11)	0.28
Model 2	1	0.98 (0.80-1.20)	0.95 (0.78-1.15)	1.01 (0.84-1.21)	0.99 (0.80-1.21)	0.92
All-cause mortality						
Number of deaths	540	364	430	560	460	
Model 1	1	1.03 (0.90-1.17)	0.99 (0.87-1.12)	0.97 (0.86-1.09)	0.95 (0.84-1.08)	0.27
Model 2	1	1.02 (0.90-1.17)	0.97 (0.86-1.11)	0.98 (0.87-1.11)	1.02 (0.89-1.16)	0.95

Model 1 stratified by cohort and adjusted for age at diagnosis (year) and calendar year of diagnosis.

Model 2 stratified by cohort and adjusted for age at diagnosis (year), calendar year of diagnosis, time between diagnosis and first FFQ (year), calendar year at start of follow-up of each-2-year questionnaire cycle, pre-diagnostic BMI (<20, 20 to <22.5, 22.5 to <25, 25.0 to <30, 30 to <35, ≥35 kg/m^2, missing), BMI change after diagnosis (no change (≥-0.5 to ≤0.5 kg/m^2), decrease (<-0.5 kg/m^2), increase (>0.5-2 kg/m^2), increase (>2 kg/m^2), missing), post-diagnostic smoking (never, past, current 1-14 cigarettes/day, current 15-24 cigarettes/day, current ≥25 cigarettes/day, missing), post-diagnostic physical activity (<5, 5 to <11.5, 11.5 to <22, ≥22 MET-h/week, missing), pre-diagnostic oral contraceptive use (ever, never), pre-diagnostic alcohol consumption (<0.15, 0.15 to <2.0, 2.0 to 7.5, ≥7.5 g/day), pre-diagnostic total energy intake (quintiles, kcal/day), pre-diagnostic menopausal status, age at menopause, and postmenopausal hormone use (premenopausal, postmenopausal and age at menopause<50 year and never postmenopausal hormone use, postmenopausal and age at menopause<50 year and past postmenopausal hormone use, postmenopausal and age at menopause<50 year and current postmenopausal hormone use, postmenopausal and age at menopause≥50 year and never postmenopausal hormone use, postmenopausal and age at menopause≥50 year and past postmenopausal hormone use, postmenopausal and age at menopause≥50 year and current postmenopausal hormone use, missing), post-diagnostic aspirin use (never, past, current, missing), race (white, other), stage of disease (I, II, III), ER/PR status (ER/PR positive, ER positive and PR negative, ER/PR negative, missing), radiotherapy (yes, no, missing), chemotherapy (yes, no, missing), and hormonal treatment (yes, no, missing).

Table S6: Four-year time-lagged analysis for fruit and vegetable consumption in relation to mortality after breast cancer diagnosis (n=6,854 women) in the NHS and NHSII.

	Consumption Levels					P_{trend}
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	
Total fruit and vegetables						
Breast cancer-specific mortality						
Median intake, serving/day	2.0	3.3	4.3	5.5	7.7	
Number of deaths	125	104	109	127	135	
Model 1	1	0.81 (0.63-1.06)	0.85 (0.65-1.09)	0.99 (0.78-1.27)	1.07 (0.84-1.36)	0.19
Model 2	1	0.79 (0.61-1.03)	0.86 (0.65-1.12)	0.97 (0.74-1.27)	1.05 (0.79-1.40)	0.29
All-cause mortality						
Number of deaths	438	378	343	324	329	
Model 1	1	0.85 (0.74-0.97)	0.78 (0.67-0.89)	0.75 (0.65-0.86)	0.77 (0.67-0.89)	0.0002
Model 2	1	0.89 (0.77-1.02)	0.90 (0.78-1.04)	0.83 (0.71-0.97)	0.87 (0.74-1.03)	0.11
Total fruits						
Breast cancer-specific mortality						
Median intake, serving/day	0.4	0.9	1.4	1.9	2.9	
Number of deaths	119	121	106	128	126	
Model 1	1	0.99 (0.77-1.27)	0.84 (0.65-1.09)	1.01 (0.79-1.30)	0.99 (0.77-1.27)	0.92
Model 2	1	1.08 (0.83-1.40)	0.91 (0.70-1.20)	1.13 (0.86-1.47)	0.99 (0.75-1.31)	0.99
All-cause mortality						
Number of deaths	385	356	331	367	373	
Model 1	1	0.89 (0.77-1.02)	0.76 (0.65-0.88)	0.81 (0.70-0.93)	0.80 (0.69-0.92)	0.004
Model 2	1	1.02 (0.88-1.18)	0.89 (0.77-1.04)	0.99 (0.85-1.16)	0.92 (0.79-1.08)	0.31
Total vegetables						
Breast cancer-specific mortality						
Median intake, serving/day	1.2	2.1	2.8	3.7	5.3	
Number of deaths	129	107	115	114	135	
Model 1	1	0.83 (0.64-1.07)	0.89 (0.69-1.14)	0.89 (0.69-1.15)	1.07 (0.84-1.37)	0.30
Model 2	1	0.78 (0.60-1.02)	0.85 (0.65-1.10)	0.82 (0.63-1.08)	1.04 (0.79-1.37)	0.43
All-cause mortality						
Number of deaths	478	372	341	324	297	
Model 1	1	0.81 (0.71-0.93)	0.76 (0.66-0.87)	0.76 (0.66-0.87)	0.73 (0.63-0.84)	<0.0001
Model 2	1	0.85 (0.74-0.98)	0.83 (0.72-0.96)	0.80 (0.69-0.93)	0.84 (0.72-0.99)	0.04
Fruit juice Intake						
Breast cancer-specific mortality						
Median intake, serving/day	0	0.2	0.7	1.5	2.1	
Number of deaths	100	107	124	123	143	
Model 1	1	0.88 (0.67-1.15)	1.01 (0.77-1.31)	1.05 (0.81-1.37)	1.21 (0.93-1.56)	0.02
Model 2	1	0.92 (0.69-1.21)	1.05 (0.80-1.37)	1.12 (0.85-1.47)	1.34 (1.02-1.76)	0.004
All-cause mortality						
Number of deaths	343	325	363	391	386	
Model 1	1	0.81 (0.70-0.95)	0.84 (0.72-0.97)	0.87 (0.76-1.01)	0.89 (0.77-1.03)	0.71
Model 2	1	0.93 (0.80-1.09)	0.96 (0.83-1.12)	0.99 (0.85-1.14)	1.08 (0.93-1.26)	0.14

Model 1 stratified by cohort and adjusted for age at diagnosis (year) and calendar year of diagnosis.

Model 2 stratified by cohort and adjusted for age at diagnosis (year), calendar year of diagnosis, calendar year at start of follow-up of each-2-year questionnaire cycle, pre-diagnostic BMI (<20, 20 to <22.5, 22.5 to <25, 25.0 to <30, 30 to <35, ≥35 kg/m^2, missing), BMI change after diagnosis (no change (≥-0.5 to ≤0.5 kg/m^2), decrease (<-0.5 kg/m^2), increase (>0.5-2 kg/m^2), increase (>2 kg/m^2), missing), post-diagnostic smoking (never, past, current 1-14/day, current 15-24/day, current ≥25/day, missing), post-diagnostic physical activity (<5, 5 to <11.5, 11.5 to <22, ≥22 MET-h/week, missing), oral contraceptive use (ever, never), post-diagnostic alcohol consumption (<0.15, 0.15 to <2.0, 2.0 to 7.5, ≥7.5 g/day), post-diagnostic total energy intake (quintiles, kcal/day), pre-diagnostic menopausal status, age at menopause, and postmenopausal hormone use (premenopausal, postmenopausal and age at menopause<50 year and never postmenopausal hormone use, postmenopausal and age at menopause<50 year and past postmenopausal hormone use, postmenopausal and age at menopause<50 year and current postmenopausal hormone use, postmenopausal and age at menopause≥50 year and never postmenopausal hormone use, postmenopausal and age at menopause≥50 year and past postmenopausal hormone use, postmenopausal and age at menopause≥50 year and current postmenopausal hormone use, missing), post-diagnostic aspirin use (never, past, current, missing), race (white, other), stage of disease (I, II, III), ER/PR status (ER/PR positive, ER positive and PR negative, ER/PR negative, missing), radiotherapy (yes, no, missing), chemotherapy (yes, no, missing), and hormonal treatment (yes, no, missing).

Table S7: First post-diagnostic* fruit and vegetable consumption in relation to mortality after breast cancer diagnosis in the NHS and NHSII.

	Consumption Levels					P_{trend}
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	
Total fruit and vegetable intake						
Breast cancer-specific mortality						
Median intake, serving/day	2.1	3.3	4.3	5.5	7.9	
Number of deaths	233	184	228	210	215	
Model 1	1	0.76 (0.62-0.92)	0.93 (0.77-1.11)	0.85 (0.71-1.03)	0.88 (0.73-1.06)	0.51
Model 2	1	0.76 (0.62-0.92)	0.96 (0.79-1.17)	0.86 (0.70-1.05)	0.93 (0.75-1.16)	0.95
All-cause mortality						
Number of deaths	564	513	500	470	474	
Model 1	1	0.86 (0.77-0.97)	0.83 (0.73-0.93)	0.80 (0.70-0.90)	0.79 (0.70-0.89)	0.0002
Model 2	1	0.88 (0.78-0.99)	0.94 (0.82-1.07)	0.83 (0.73-0.95)	0.88 (0.76-1.01)	0.09
Total fruit intake						
Breast cancer-specific mortality						
Median intake, serving/day	0.4	0.9	1.4	1.9	3.0	
Number of deaths	219	215	204	197	235	
Model 1	1	0.97 (0.80-1.17)	0.88 (0.73-1.07)	0.86 (0.71-1.05)	1.02 (0.85-1.23)	0.91
Model 2	1	1.13 (0.93-1.37)	1.04 (0.85-1.27)	0.98 (0.80-1.20)	1.04 (0.85-1.28)	0.92
All-cause mortality						
Number of deaths	522	496	468	489	546	
Model 1	1	0.90 (0.80-1.02)	0.79 (0.70-0.90)	0.80 (0.71-0.90)	0.87 (0.77-0.98)	0.03
Model 2	1	1.10 (0.97-1.24)	0.94 (0.82-1.07)	0.99 (0.86-1.12)	0.99 (0.86-1.13)	0.50
Total vegetable intake						
Breast cancer-specific mortality						
Median intake, serving/day	1.3	2.1	2.9	3.7	5.3	
Number of deaths	215	219	215	222	199	
Model 1	1	1.00 (0.83-1.20)	0.97 (0.80-1.17)	1.00 (0.83-1.21)	0.90 (0.74-1.09)	0.29
Model 2	1	0.92 (0.76-1.12)	0.93 (0.76-1.14)	0.99 (0.81-1.21)	0.92 (0.74-1.13)	0.67
All-cause mortality						
Number of deaths	582	535	492	468	444	
Model 1	1	0.93 (0.82-1.04)	0.86 (0.76-0.97)	0.84 (0.74-0.95)	0.80 (0.70-0.90)	0.0002
Model 2	1	0.94 (0.83-1.06)	0.91 (0.80-1.04)	0.89 (0.78-1.01)	0.89 (0.77-1.02)	0.08
Fruit juice Intake						
Breast cancer-specific mortality						
Median intake, serving/day	0	0.2	0.8	1.5	2.1	
Number of deaths	242	155	202	215	250	
Model 1	1	0.88 (0.72-1.08)	0.91 (0.76-1.10)	0.96 (0.80-1.16)	1.12 (0.93-1.33)	0.09
Model 2	1	0.93 (0.76-1.15)	0.94 (0.77-1.14)	1.06 (0.87-1.28)	1.23 (1.02-1.48)	0.008
All-cause mortality						
Number of deaths	586	351	482	558	536	
Model 1	1	0.88 (0.77-1.00)	0.90 (0.79-1.01)	0.95 (0.84-1.06)	0.96 (0.85-1.08)	0.88
Model 2	1	0.91 (0.79-1.04)	0.92 (0.81-1.03)	1.04 (0.92-1.17)	1.05 (0.93-1.19)	0.07

*Dietary intake reported at least one year after diagnosis

Model 1 stratified by cohort and adjusted for age at diagnosis (year) and calendar year of diagnosis.

Model 2 stratified by cohort and adjusted for age at diagnosis (year), calendar year of diagnosis, time between diagnosis and first FFQ (year), calendar year at start of follow-up of each-2-year questionnaire cycle, pre-diagnostic BMI (<20, 20 to <22.5, 22.5 to <25, 25.0 to <30, 30 to <35, ≥35 kg/m^2, missing), BMI change after diagnosis (no change (≥-0.5 to ≤0.5 kg/m^2), decrease (<-0.5 kg/m^2), increase (>0.5-2 kg/m^2), increase (>2 kg/m^2), missing), post-diagnostic smoking (never, past, current 1-14 cigarettes/day, current 15-24 cigarettes/day, current ≥25 cigarettes/day, missing), post-diagnostic physical activity (<5, 5 to <11.5, 11.5 to <22, ≥22 MET-h/week, missing), pre-diagnostic oral contraceptive use (ever, never), first post-diagnostic alcohol consumption (<0.15, 0.15 to <2.0, 2.0 to 7.5, ≥7.5 g/day), first post-diagnostic total energy intake (quintiles, kcal/day), pre-diagnostic menopausal status, age at menopause, and postmenopausal hormone use (premenopausal, postmenopausal and age at menopause<50 year and never postmenopausal hormone use, postmenopausal and age at menopause<50 year and past postmenopausal hormone use, postmenopausal and age at menopause<50 year and current postmenopausal hormone use, postmenopausal and age at menopause≥50 year and never postmenopausal hormone use, postmenopausal and age at menopause≥50 year and past postmenopausal hormone use, postmenopausal and age at menopause≥50 year and current postmenopausal hormone use, missing), post-diagnostic aspirin use (never, past, current, missing), race (white, other), stage of disease (I, II, III), ER/PR status (ER/PR positive, ER positive and PR negative, ER/PR negative, missing), radiotherapy (yes, no, missing), chemotherapy (yes, no, missing), and hormonal treatment (yes, no, missing).