

Table 10. Continued. Age-adjusted Hazard Ratios* and 95% Confidence Intervals(95% CI) According to the the Frequencies of other Vegetables Intake

	No. of subjects	Person -years	Kidney cancer		Urothelial tract cancer		Non-Hodgkin's		Multiple myeloma		Myeloid leukemia		Ischemic heart disease		Cerebrovascular	
			No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)		
Men																
Cabbage or head lettuce																
<3/w	22,010	278,324	28	1.00	43	1.00	43	1.00	25	1.00	20	1.00	308	1.00	625	1.00
3-4/w	10,408	128,117	11	1.01(0.48-2.12)	21	1.27(0.72-2.24)	23	1.39(0.79-2.42)	8	0.90(0.38-2.12)	13	1.54(0.72-3.26)	140	1.08(0.87-1.33)	272	0.94(0.81-1.09)
≥5/w	7,791	95,894	4	0.46(0.16-1.37)	17	1.25(0.68-2.30)	16	1.20(0.64-2.23)	7	1.01(0.41-2.50)	7	1.08(0.43-2.69)	100	0.95(0.74-1.20)	221	0.90(0.76-1.06)
Chinese cabbage																
<1/w	14,196	181,889	14	1.00	28	1.00	32	1.00	16	1.00	13	1.00	213	1.00	389	1.00
1-2/w	11,813	145,239	19	1.97(0.81-4.76)	18	1.30(0.60-2.80)	20	0.95(0.48-1.87)	9	1.03(0.36-2.96)	11	1.11(0.43-2.91)	151	0.86(0.67-1.09)	285	0.91(0.76-1.09)
≥3/w	13,477	167,334	11	0.95(0.35-2.54)	34	1.93(0.94-3.94) [†]	28	1.07(0.56-2.05)	14	1.31(0.48-3.58)	16	1.37(0.54-3.47)	170	0.75(0.58-0.95)*	424	0.97(0.82-1.16)
Sansai (Edible wild plants)																
<1/w	32,925	417,110	32	1.00	62	1.00	60	1.00	33	1.00	31	1.00	445	1.00	840	1.00
1-2/w	4,976	61,380	5	1.12(0.42-3.00)	7	0.82(0.36-1.85)	12	1.46(0.76-2.81)	5	1.05(0.39-2.81)	7	1.66(0.70-3.95)	62	0.96(0.73-1.26)	153	1.14(0.95-1.36)
≥3/w	3,027	36,637	2	0.63(0.15-2.76)	8	1.28(0.59-2.80)	9	1.57(0.75-3.31)	4	1.16(0.39-3.47)	4	1.45(0.48-4.35)	53	1.17(0.87-1.57)	114	1.14(0.93-1.40)
Women																
Cabbage or head lettuce																
<3/w	25,909	340,301	6	1.00	20	1.00	23	1.00	23	1.00	8	1.00	223	1.00	464	1.00
3-4/w	15,474	194,781	2	0.47(0.09-2.36)	6	0.75(0.27-2.09)	22	1.72(0.91-3.28) [†]	8	0.67(0.28-1.56)	13	3.95(1.28-12.17)*	87	0.84(0.65-1.10)	248	1.01(0.86-1.19)
≥5/w	14,947	189,748	6	1.27(0.40-4.06)	8	0.99(0.39-2.56)	9	0.71(0.31-1.62)	14	1.18(0.57-2.44)	5	1.52(0.40-5.71)	86	0.82(0.63-1.07)	241	0.95(0.80-1.12)
Chinese cabbage																
<1/w	19,430	258,295	6	1.00	15	1.00	20	1.00	17	1.00	7	1.00	137	1.00	317	1.00
1-2/w	15,397	192,447	3	0.30(0.07-1.20) [†]	11	2.31(0.69-7.67)	17	1.01(0.49-2.07)	11	0.93(0.38-2.29)	6	1.83(0.36-9.28)	111	1.35(0.98-1.85) [†]	242	0.96(0.79-1.16)
≥3/w	19,498	250,652	6	0.34(0.11-1.12) [†]	9	1.09(0.31-3.89)	16	0.73(0.34-1.56)	16	0.91(0.38-2.15)	13	2.43(0.52-11.4)	134	1.05(0.77-1.44)	360	0.87(0.72-1.05)
Sansai (Edible wild plants)																
<1/w	44,744	581,734	11	1.00	29	1.00	46	1.00	32	1.00	22	1.00	278	1.00	706	1.00
1-2/w	6,561	83,862	0	NA	5	1.55(0.57-4.23)	7	0.94(0.41-2.13)	3	0.66(0.19-2.21)	4	1.37(0.45-4.16)	57	1.42(1.05-1.92)*	124	1.03(0.84-1.26)
≥3/w	4,483	57,685	3	1.35(0.35-5.17)	3	1.31(0.38-4.52)	4	0.75(0.26-2.15)	7	2.12(0.88-5.08) [†]	6	3.01(1.14-7.94)*	29	0.97(0.65-1.44)	88	0.96(0.76-1.20)

[†]Adjusted for age and area of study. ** p<0.01; * p<0.05; [†] p<0.10 NA: not applicable

Table 11. Age-adjusted Hazard Ratios[#] and 95% Confidence Intervals(95% CI) According to the Frequencies of Fungi, Potatoes, and Seaweed Intake

	No. Person of subjects -years	All causes		All cancers		Esophageal cancer		Stomach cancer		Colon cancer		Rectal cancer		Liver cancer		
		No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	
Men																
Fungi (enokidake, shiitake, mushroom)																
<1/w	23,531	299,947	5,204	1.00	2,008	1.00	73	1.00	403	1.00	104	1.00	74	1.00	265	1.00
1-2/w	11,856	145,318	2,334	0.99(0.94-1.05)	917	1.04(0.95-1.14)	34	0.93(0.59-1.47)	179	1.08(0.88-1.33)	65	1.28(0.90-1.83)	53	1.84(1.19-2.84)**110	1.22(0.93-1.59)	
≥3/w	7,391	91,095	1,620	0.97(0.91-1.03)	624	1.02(0.92-1.13)	33	1.33(0.84-2.11)	126	1.10(0.88-1.38)	32	0.89(0.58-1.38)	25	1.26(0.75-2.12)	58	0.98(0.71-1.35)
Potatoes																
<1/w	10,414	129,411	1,873	1.00	720	1.00	37	1.00	135	1.00	29	1.00	29	1.00	92	1.00
1-2/w	15,165	188,157	3,078	0.95(0.90-1.01)	1,259	1.05(0.95-1.15)	50	0.78(0.50-1.19)	248	1.11(0.90-1.39)	67	1.32(0.85-2.05)	51	1.05(0.66-1.67)	146	0.93(0.71-1.22)
≥3/w	17,164	218,267	4,206	0.93(0.87-0.98)*	1,574	0.98(0.89-1.07)	56	0.70(0.45-1.09)	316	1.05(0.84-1.31)	103	1.44(0.93-2.23) ⁺	75	1.13(0.71-1.80)	184	0.86(0.65-1.13)
Seaweed (algae)																
<3/w	19,205	239,463	3,784	1.00	1,480	1.00	56	1.00	279	1.00	61	1.00	58	1.00	183	1.00
3-4/w	12,672	160,798	2,819	0.99(0.95-1.04)	1,130	1.03(0.95-1.12)	43	1.05(0.70-1.57)	229	1.14(0.95-1.36)	78	1.70(1.21-2.40)**52	21	1.44(0.72-2.87)	49	1.09(0.71-1.66)
≥5/w	11,302	140,730	2,683	0.95(0.90-1.00)*	980	0.93(0.86-1.01) ⁺	44	1.20(0.81-1.80)	206	1.04(0.87-1.25)	66	1.46(1.03-2.08)*	46	1.14(0.77-1.70)	115	0.92(0.73-1.17)
Women																
Fungi (enokidake, shiitake, mushroom)																
<1/w	26,577	355,286	3,177	1.00	1,001	1.00	15	1.00	161	1.00	79	1.00	33	1.00	104	1.00
1-2/w	17,840	224,229	1,715	0.98(0.91-1.05)	571	1.07(0.94-1.21)	6	0.43(0.16-1.14) ⁺	89	1.13(0.82-1.55)	64	1.21(0.83-1.77)	21	1.44(0.72-2.87)	49	1.09(0.71-1.66)
≥3/w	14,474	182,219	1,443	0.96(0.89-1.03)	528	1.16(1.02-1.32)*	4	0.35(0.11-1.08) ⁺	87	1.31(0.95-1.80) ⁺	56	1.24(0.84-1.84)	25	2.03(1.03-3.97)*	52	1.35(0.88-2.05)
Potatoes																
<1/w	8,062	102,262	809	1.00	248	1.00	5	1.00	53	1.00	14	1.00	5	1.00	19	1.00
1-2/w	20,211	255,442	2,013	0.91(0.84-0.99)*	650	0.95(0.82-1.11)	6	0.43(0.13-1.42)	91	0.63(0.45-0.90)*	62	1.59(0.89-2.85)	20	1.26(0.47-3.38)	57	0.98(0.58-1.66)
≥3/w	30,940	407,270	3,568	0.85(0.79-0.93)**1,218	0.99(0.85-1.14)	14	0.65(0.22-1.88)	201	0.78(0.56-1.08)	121	1.86(1.06-3.26)*	52	1.61(0.63-4.11)	130	1.14(0.70-1.88)	
Seaweed (algae)																
<3/w	20,387	259,393	2,244	1.00	684	1.00	9	1.00	108	1.00	64	1.00	20	1.00	62	1.00
3-4/w	18,272	239,242	1,922	0.92(0.86-0.98)**647	0.98(0.88-1.10)	9	1.37(0.54-3.51)	100	1.01(0.77-1.34)	59	1.02(0.71-1.47)	23	1.06(0.58-1.96)	71	1.04(0.74-1.48)	
≥5/w	20,824	269,419	2,295	0.89(0.83-0.94)**802	1.01(0.91-1.12)	8	0.94(0.36-2.50)	140	1.16(0.89-1.50)	73	1.00(0.71-1.41)	35	1.48(0.85-2.58)	75	0.96(0.69-1.36)	

[#]Adjusted for age and area of study. ** p<0.01; * p<0.05; ⁺ p<0.10

Table 11. Continued. Age-adjusted Hazard Ratios[#] and 95% CI According to the Frequencies of Fungi, Potatoes, and Seaweed Intake

	No. of subjects	Person -years	Gall bladder cancer		Pancreas cancer		Lung cancer		Breast cancer		Uterine cervix cancer		Prostate cancer	
			No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)
Men														
Fungi (enokidake, shiitake, mushroom)														
<1/w	23,531	299,947	39	1.00	122	1.00	457	1.00	NA	NA	NA	NA	85	1.00
1-2/w	11,856	145,318	15	1.05(0.52-2.12)	48	0.80(0.55-1.15)	200	0.93(0.78-1.12)	NA	NA	NA	NA	46	1.24(0.81-1.89)
≥3/w	7,391	91,095	11	1.05(0.49-2.28)	30	0.70(0.45-1.07) ⁺	164	1.12(0.92-1.36)	NA	NA	NA	NA	27	0.98(0.60-1.61)
Potatoes														
<1/w	10,414	129,411	9	1.00	40	1.00	188	1.00	NA	NA	NA	NA	23	1.00
1-2/w	15,165	188,157	24	1.46(0.67-3.15)	74	1.13(0.76-1.68)	299	0.98(0.81-1.18)	NA	NA	NA	NA	50	1.20(0.72-2.01)
≥3/w	17,164	218,267	34	1.47(0.68-3.18)	87	0.99(0.66-1.49)	344	0.88(0.73-1.07)	NA	NA	NA	NA	83	1.27(0.77-2.10)
Seaweed (algae)														
<3/w	19,205	239,463	26	1.00	98	1.00	376	1.00	NA	NA	NA	NA	60	1.00
3-4/w	12,672	160,798	21	0.96(0.54-1.73)	59	0.80(0.57-1.11)	250	0.93(0.79-1.10)	NA	NA	NA	NA	54	1.17(0.80-1.71)
≥5/w	11,302	140,730	19	0.93(0.51-1.71)	45	0.62(0.43-0.89)**	202	0.77(0.65-0.92)**	NA	NA	NA	NA	45	0.91(0.61-1.35)
Women														
Fungi (enokidake, shiitake, mushroom)														
<1/w	26,577	355,286	38	1.00	87	1.00	107	1.00	45	1.00	14	1.00	NA	NA
1-2/w	17,840	224,229	25	1.23(0.67-2.26)	61	1.02(0.70-1.48)	79	1.46(1.01-2.11)*	22	1.12(0.59-2.11)	5	0.77(0.23-2.57)	NA	NA
≥3/w	14,474	182,219	23	1.38(0.74-2.57)	49	0.94(0.63-1.41)	57	1.25(0.84-1.85)	30	1.87(1.03-3.41)*	13	2.44(0.90-6.59) ⁺	NA	NA
Potatoes														
<1/w	8,062	102,262	10	1.00	25	1.00	30	1.00	13	1.00	1	1.00	NA	NA
1-2/w	20,211	255,442	31	1.22(0.58-2.58)	57	0.85(0.53-1.38)	86	1.02(0.66-1.57)	35	1.04(0.54-2.01)	10	3.78(0.48-29.65)	NA	NA
≥3/w	30,940	407,270	49	1.14(0.55-2.37)	118	0.98(0.62-1.54)	132	0.90(0.59-1.38)	49	0.83(0.43-1.60)	17	4.16(0.54-32.14)	NA	NA
Seaweed (algae)														
<3/w	20,387	259,393	19	1.00	67	1.00	92	1.00	35	1.00	10	1.00	NA	NA
3-4/w	18,272	239,242	28	1.72(0.95-3.14) ⁺	59	0.96(0.67-1.38)	76	0.87(0.64-1.18)	30	0.83(0.50-1.37)	9	0.95(0.38-2.38)	NA	NA
≥5/w	20,824	269,419	39	1.91(1.08-3.37)*	81	1.02(0.73-1.42)	79	0.76(0.56-1.03) ⁺	33	0.86(0.53-1.40)	13	1.16(0.50-2.69)	NA	NA

[#]Adjusted for age and area of study. *** p<0.01; * p<0.05; + p<0.10 NA: not applicable

Table 11 Continued. Age-adjusted Hazard Ratios[#] and 95% Confidence Intervals(95% CI) According to the the Frequencies of Fungi, Potatoes, and Seaweed Intake

	No. of subjects	Person -years	Kidney cancer		Urothelial tract cancer		Non-Hodgkin's		Multiple myeloma		Myeloid leukemia		Ischemic heart disease		Cerebrovascular	
			No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)
Men																
Fungi (enokidake, shiitake, mushroom)																
<1/w	23,531	299,947	24	1.00	45	1.00	51	1.00	28	1.00	24	1.00	354	1.00	624	1.00
1-2/w	11,856	145,318	10	0.81(0.36-1.82)	21	1.26(0.68-2.32)	19	0.87(0.48-1.57)	12	1.14(0.51-2.53)	12	0.98(0.45-2.12)	153	0.90(0.73-1.11)	324	1.09(0.93-1.27)
≥3/w	7,391	91,095	5	0.59(0.21-1.64)	18	1.55(0.82-2.94)	16	1.04(0.55-1.96)	4	0.54(0.17-1.68)	7	0.86(0.34-2.14)	96	0.80(0.63-1.03) ⁺	227	1.04(0.88-1.23)
Potatoes																
<1/w	10,414	129,411	13	1.00	13	1.00	18	1.00	9	1.00	7	1.00	137	1.00	223	1.00
1-2/w	15,165	188,157	14	0.65(0.30-1.40)	33	1.54(0.79-3.00)	27	1.00(0.54-1.88)	17	1.04(0.46-2.37)	18	1.87(0.74-4.75)	191	0.84(0.67-1.05)	368	0.95(0.80-1.12)
≥3/w	17,164	218,267	16	0.55(0.25-1.21)	34	1.17(0.59-2.34)	42	1.19(0.64-2.19)	20	0.82(0.35-1.91)	17	1.56(0.59-4.13)	267	0.85(0.68-1.06)	589	1.03(0.87-1.21)
Seaweed (algae)																
<3/w	19,205	239,463	25	1.00	33	1.00	34	1.00	21	1.00	12	1.00	248	1.00	462	1.00
3-4/w	12,672	160,798	11	0.60(0.29-1.24)	28	1.17(0.70-1.96)	25	1.03(0.61-1.75)	11	0.64(0.30-1.35)	17	2.32(1.08-5.00) [*]	185	1.04(0.85-1.26)	379	1.09(0.95-1.26)
≥5/w	11,302	140,730	7	0.40(0.17-0.94) [*]	26	1.08(0.64-1.83)	24	1.08(0.63-1.85)	15	0.95(0.48-1.87)	13	1.82(0.81-4.12)	170	0.93(0.76-1.14)	372	1.03(0.90-1.18)
Women																
Fungi (enokidake, shiitake, mushroom)																
<1/w	26,577	355,286	7	1.00	22	1.00	26	1.00	25	1.00	14	1.00	205	1.00	487	1.00
1-2/w	17,840	224,229	5	1.04(0.28-3.94)	7	0.96(0.33-2.83)	17	1.30(0.62-2.70)	11	0.75(0.33-1.68)	9	1.71(0.52-5.65)	107	0.88(0.68-1.15)	277	0.93(0.79-1.10)
≥3/w	14,474	182,219	5	1.17(0.31-4.47)	7	1.12(0.38-3.35)	18	1.65(0.79-3.42)	11	0.88(0.39-1.97)	9	1.97(0.59-6.53)	80	0.78(0.58-1.04) ⁺	240	0.94(0.79-1.12)
Potatoes																
<1/w	8,062	102,262	3	1.00	1	1.00	7	1.00	5	1.00	1	1.00	63	1.00	123	1.00
1-2/w	20,211	255,442	7	0.91(0.23-3.53)	8	2.50(0.31-20.2)	22	1.08(0.46-2.53)	18	1.32(0.49-3.59)	11	3.40(0.44-26.4)	136	0.85(0.62-1.16)	313	0.94(0.76-1.16)
≥3/w	30,940	407,270	7	0.47(0.12-1.93)	29	3.98(0.53-29.9)	31	0.93(0.40-2.16)	23	0.94(0.34-2.56)	18	2.65(0.35-20.2)	199	0.67(0.49-0.90) ^{**}	556	0.88(0.72-1.08)
Seaweed (algae)																
<3/w	20,387	259,393	6	1.00	11	1.00	17	1.00	11	1.00	8	1.00	141	1.00	377	1.00
3-4/w	18,272	239,242	6	1.23(0.39-3.88)	17	1.27(0.59-2.76)	21	1.29(0.67-2.47)	19	1.84(0.86-3.92)	8	0.94(0.35-2.53)	129	1.08(0.84-1.38)	288	0.85(0.73-1.00) [*]
≥5/w	20,824	269,419	6	0.80(0.25-2.53)	10	0.65(0.28-1.55)	21	1.05(0.55-2.00)	18	1.42(0.66-3.04)	16	1.57(0.66-3.74)	134	0.90(0.70-1.14)	347	0.78(0.67-0.90) ^{**}

[#]Adjusted for age and area of study. ^{**} p<0.01; ^{*} p<0.05; ⁺ p<0.10

mortality from all causes for both men and women, and lower mortality from cerebrovascular disease for men while intake was associated with higher mortality from stomach, colorectal and liver cancer for men. The intake of tofu was associated with lower mortality from all causes, ischemic heart disease and cerebrovascular disease for men and women, lower mortality from uterine cervix cancer, and higher mortality from breast cancer.

Citrus fruits, fresh fruit juice and other fruits (Table 13)

The intake of citrus fruits was associated with lower mortality from all causes and cerebrovascular disease. The intake of fresh fruit juice was associated with lower mortality from all causes, urothelial tract cancer, ischemic heart disease and cerebrovascular disease. The intake of other fruits was associated with lower mortality from all causes, ischemic heart disease and cerebrovascular disease and all causes for men and women.

Sweets (Table 13)

The intake of sweets was associated with lower mortality from all causes, ischemic heart disease and cerebrovascular disease.

Coffee, black tea, green tea and oolong tea (Table 14)

The intake of coffee was associated with lower mortality from all causes, liver cancer and cerebrovascular disease, and lower mortality from esophagus cancer for men. The intakes of black tea and green tea were associated with lower mortality from all causes. The intake of green tea was associated with lower mortality from ischemic heart disease while the intake of oolong tea was positively associated with mortality from ischemic heart disease for men.

Discussion

This systematic examination for diet and disease revealed favorable dietary patterns associated with lower total mortality. The favorable foods associated with lower total mortality were rice, potatoes, fruits, vegetables, beans and soy bean products (including miso soup), egg, milk, seafoods, and the favorable beverages were coffee, green tea, and black tea. These foods were principal foods for modern Japanese diets. Accordingly, the Japanese-style breakfast was also associated with lower mortality from all causes.

In addition to total mortality, we found potential favorable effects for these food intakes on disease-specific mortality, some of which but not all were reported previously from Japanese prospective studies: the rice intake on mortality from ischemic heart disease and liver cancer, the fruit intake on mortality from urothelial-tract cancer (Nagano et al., 2000; Sakauchi et al., 2004,2005), ischemic heart disease and cerebrovascular disease (Sauvaget et al., 2003; Yokoyama et al., 2000), the green vegetable intake on mortality from lung cancer (Ozasa et al., 2001) and cervical cancer and cerebrovascular disease (Sauvaget et al., 2003; Yokoyama et al., 2000), the intake of soy beans and soy bean products on mortality from breast cancer (Yamamoto et al., 2003; Nishio et al., 2007),

ischemic heart disease and cerebrovascular disease, the intakes of egg and milk (provably dairy calcium intake) on mortality from cerebrovascular disease (Umesawa et al., 2006), the sea food intake on mortality from prostate cancer, urothelial-tract cancer, ischemic heart disease (Iso et al., 2006) and cerebrovascular disease, and the coffee intake on mortality from liver cancer (Inoue et al., 2005; Kurozawa et al., 2005). Some of these diet-disease associations were supported by investigations using dietary biomarkers such as serum concentrations of carotenoids (Ito et al., 2003; 2005; Ozasa et al, 2005a; Wakai et al., 2005) and polyunsaturated fatty acids (Kojima et al., 2005), and they will be examined further in the JACC study.

We also found the other diet and disease associations, which may need further investigation. First, the use of multivitamin, more specifically vitamin E was associated with lower mortality from cerebrovascular disease. Previous prospective studies did not show a significant association between vitamin E use and risk of cerebrovascular disease (Leppala et al., 2000; Ascherio et al., 1999). Further investigation for the associations of dietary and supplemental intake of vitamin E and the mortality risk would be of value.

Second, the inverse association of the intake of miso soup and tofu with mortality from ischemic heart disease may be in part due to an estrogen-like effect of isoflavone from soy bean on atherosclerosis (Anthony et al, 1998). The inverse association between the miso soup intake at the age around 30 and mortality from breast cancer was an interesting finding and that may be due to an estrogen-like effect of isoflavone during the younger ages on the promoted apoptosis of mammary epithelial cells (Dave et al 2005).

Third, the intakes of deeply-fried foods or fried vegetables were associated with lower mortality from all causes, prostate cancer, urothelial-tract cancer, ischemic heart disease and cerebrovascular disease. Most common foods used in deeply-fried cooking (tempura) are vegetables and fish in Japan. Thus, vegetable intake may contribute to the reduced mortality of these endpoints.

Fourth, the intakes of fresh fish, fish paste (Kamaboko) and dried and salted fish (Himono) were associated with lower mortality from all causes, ischemic heart disease and cerebrovascular disease, which was consistent with the previous Japanese study (Iso et al., 2006).

Finally, effects of dietary habits on disease risk have been focused recently. The association between Japanese-style breakfast and lower mortality from gall bladder cancer while the western-style breakfast was associated with lower mortality from stomach cancer and cerebrovascular disease. The Japanese-style breakfast may be represented as a low intake of saturated fat, leading to lower serum cholesterol levels, and reducing the risk of cholesterol gall stones and gall bladder cancer (Vietta et al, 2000). The western-style breakfast is characterized as a low intake of sodium, with reduction in the risk of stomach cancer (Tokui et al, 2005) and cerebrovascular disease (Nagata et al, 2004).

The associations observed by chance or by unknown confounding factors may include 1) the lower mortality

Table 12. Age-adjusted Hazard Ratios[#] and 95% CI According to the Frequencies of Pickles, Soy Sauce-preserved Foods, Boiled Beans, and Soybean Curd Intake

	No. of subjects	Person -years	All causes		All cancers		Esophageal cancer		Stomach cancer		Colon cancer		Rectal cancer		Liver cancer	
			No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)
Men																
Pickles																
<3/w	10,624	128,779	2,379	1.00	856	1.00	35	1.00	162	1.00	57	1.00	37	1.00	123	1.00
3-4/w	7,017	88,665	1,350	0.87(0.81-0.93)**	517	0.92(0.82-1.03)**	20	0.81(0.47-1.41)	90	0.87(0.67-1.14)	36	0.88(0.58-1.35)	27	1.05(0.63-1.73)	77	0.86(0.64-1.15)
≥5/w	25,394	322,125	5,477	0.84(0.80-0.88)**	2,202	0.96(0.89-1.04)	89	0.96(0.64-1.42)	457	1.07(0.89-1.30)	106	0.65(0.47-0.90)**	93	0.91(0.61-1.34)	227	0.65(0.51-0.81)**
Tukudani (soy sauce-preserved foods)																
<1/w	23,501	300,046	4,948	1.00	1,935	1.00	90	1.00	375	1.00	111	1.00	90	1.00	261	1.00
1-2/w	10,034	123,568	1,980	1.00(0.94-1.05)	770	1.01(0.92-1.10)	20	0.55(0.33-0.90)*	142	0.94(0.77-1.16)	40	0.93(0.63-1.35)	34	0.96(0.63-1.46)	80	0.97(0.74-1.28)
≥3/w	7,429	91,679	1,615	0.99(0.94-1.05)	617	1.01(0.91-1.11)	27	0.95(0.61-1.49)	134	1.10(0.89-1.36)	34	1.00(0.66-1.50)	22	0.79(0.48-1.29)	69	1.10(0.82-1.47)
Boiled beans																
<1/w	27,537	349,539	5,653	1.00	2,236	1.00	96	1.00	429	1.00	106	1.00	89	1.00	281	1.00
1-2/w	8,622	106,309	1,791	0.91(0.86-0.97)**	635	0.86(0.78-0.94)**	19	0.59(0.35-0.97)*	125	0.90(0.73-1.11)	43	1.19(0.82-1.73)	27	0.99(0.63-1.57)	76	1.12(0.85-1.47)
≥3/w	5,657	68,895	1,451	0.95(0.89-1.01) [†]	580	1.05(0.95-1.16)	19	0.81(0.48-1.35)	136	1.30(1.05-1.60)*	42	1.53(1.04-2.25)*	32	1.59(1.03-2.48)*	63	1.36(1.01-1.83)*
Tofu (soybean curd)																
<3/w	19,698	244,366	4,133	1.00	1,569	1.00	54	1.00	323	1.00	80	1.00	62	1.00	197	1.00
3-4/w	13,656	173,701	2,934	0.93(0.88-0.98)**	1,143	0.96(0.88-1.04)	40	0.91(0.59-1.41)	219	0.96(0.80-1.16)	69	1.16(0.81-1.64)	46	0.96(0.64-1.46)	140	0.79(0.62-1.00)*
≥5/w	10,764	133,848	2,561	0.90(0.85-0.95)**	971	0.94(0.86-1.02)	53	1.40(0.93-2.12)	189	0.96(0.79-1.17)	58	1.12(0.78-1.62)	49	1.21(0.81-1.83)	104	0.77(0.59-0.99)*
Women																
Pickles																
<3/w	13,305	166,459	1,467	1.00	448	1.00	7	1.00	70	1.00	46	1.00	15	1.00	49	1.00
3-4/w	8,506	109,129	892	0.96(0.88-1.04)	280	0.96(0.83-1.12)	3	0.81(0.21-3.17)	41	0.96(0.65-1.43)	27	0.92(0.57-1.49)	12	1.11(0.52-2.39)	23	0.70(0.43-1.15)
≥5/w	37,385	489,208	4,040	0.83(0.78-0.89)**	1,397	0.96(0.86-1.07)	14	0.67(0.27-1.68)	234	1.08(0.82-1.42)	129	0.91(0.64-1.27)	49	0.88(0.49-1.58)	133	0.80(0.57-1.11)
Tukudani (soy sauce-preserved foods)																
<1/w	32,994	433,980	3,465	1.00	1,144	1.00	13	1.00	178	1.00	108	1.00	39	1.00	129	1.00
1-2/w	12,560	158,983	1,270	1.02(0.96-1.10)	416	1.03(0.92-1.16)	4	0.70(0.22-2.19)	61	0.98(0.72-1.33)	37	0.88(0.60-1.30)	14	1.33(0.68-2.58)	32	0.83(0.55-1.25)
≥3/w	10,415	131,555	1,154	1.03(0.96-1.11)	390	1.10(0.98-1.25)	4	0.84(0.27-2.64)	69	1.24(0.92-1.68)	38	1.07(0.72-1.57)	17	1.98(1.05-3.73)*	33	0.97(0.64-1.46)
Boiled beans																
<1/w	35,909	469,616	3,701	1.00	1,239	1.00	15	1.00	206	1.00	111	1.00	54	1.00	118	1.00
1-2/w	12,387	156,580	1,321	0.95(0.88-1.01)	428	0.96(0.85-1.08)	8	1.09(0.45-2.63)	62	0.83(0.61-1.12)	42	0.92(0.63-1.33)	9	0.46(0.22-0.96)*	48	1.41(0.97-2.04) [†]
≥3/w	9,689	123,716	1,195	0.91(0.84-0.97)**	407	1.01(0.90-1.15)	3	0.47(0.13-1.68)	66	0.98(0.72-1.32)	43	1.05(0.72-1.53)	13	0.75(0.39-1.44)	37	1.24(0.83-1.87)
Tofu (soybean curd)																
<3/w	23,266	296,367	2,628	1.00	829	1.00	9	1.00	127	1.00	71	1.00	33	1.00	76	1.00
3-4/w	19,287	251,172	2,039	0.91(0.85-0.97)**	675	0.96(0.86-1.07)	5	0.77(0.25-2.38)	102	1.02(0.76-1.35)	74	1.22(0.86-1.72)	16	0.43(0.23-0.81)**	69	0.96(0.67-1.37)
≥5/w	18,071	234,793	1,964	0.90(0.84-0.96)**	673	0.99(0.89-1.11)	12	1.86(0.73-4.72)	127	1.34(1.02-1.76)*	57	0.87(0.60-1.26)	33	1.00(0.60-1.68)	67	0.99(0.69-1.43)

[#]Adjusted for age and area of study. ** p<0.01; * p<0.05; [†] p<0.10

Table 12. Continued. Age-adjusted Hazard Ratios* and 95% CI According to the Frequencies of Pickles, Soy Sauce-preserved Foods, Boiled Beans, and Soybean Curd Intake

	No. of subjects	Person -years	Gall bladder cancer		Pancreas cancer		Lung cancer		Breast cancer		Uterine cervix cancer		Prostate cancer	
			No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)
Men														
Pickles														
<3/w	10,624	128,779	13	1.00	49	1.00	196	1.00	NA	NA	NA	NA	40	1.00
3-4/w	7,017	88,665	5	0.54(0.19-1.53)	31	1.01(0.64-1.59)	114	0.93(0.73-1.17)	NA	NA	NA	NA	27	1.07(0.65-1.76)
≥5/w	25,394	322,125	50	1.34(0.72-2.48)	119	0.94(0.67-1.32)	511	1.02(0.86-1.21)	NA	NA	NA	NA	94	0.83(0.57-1.22)
Tukudani (soy sauce-preserved foods)														
<1/w	23,501	300,046	34	1.00	101	1.00	417	1.00	NA	NA	NA	NA	87	1.00
1-2/w	10,034	123,568	19	1.57(0.85-2.90)	45	1.11(0.77-1.61)	198	1.13(0.94-1.35)	NA	NA	NA	NA	40	1.21(0.81-1.81)
≥3/w	7,429	91,679	12	1.16(0.57-2.36)	36	1.09(0.73-1.63)	140	0.98(0.80-1.20)	NA	NA	NA	NA	23	0.84(0.51-1.36)
Boiled beans														
<1/w	27,537	349,539	47	1.00	129	1.00	533	1.00	NA	NA	NA	NA	90	1.00
1-2/w	8,622	106,309	10	0.60(0.29-1.22)	34	0.75(0.51-1.11)	144	0.76(0.63-0.92)**	NA	NA	NA	NA	35	1.12(0.73-1.70)
≥3/w	5,657	68,895	11	0.78(0.39-1.57)	30	0.87(0.57-1.33)	115	0.81(0.66-1.00)*	NA	NA	NA	NA	29	1.11(0.71-1.76)
Tofu (soybean curd)														
<3/w	19,698	244,366	27	1.00	89	1.00	390	1.00	NA	NA	NA	NA	61	1.00
3-4/w	13,656	173,701	25	1.27(0.68-2.38)	68	1.02(0.72-1.44)	247	0.85(0.72-1.01)*	NA	NA	NA	NA	55	1.18(0.79-1.77)
≥5/w	10,764	133,848	16	0.91(0.46-1.81)	50	0.82(0.56-1.19)	222	0.84(0.70-1.00)*	NA	NA	NA	NA	46	1.07(0.70-1.63)
Women														
Pickles														
<3/w	13,305	166,459	19	1.00	44	1.00	52	1.00	19	1.00	7	1.00	NA	NA
3-4/w	8,506	109,129	7	0.58(0.24-1.40)	23	0.81(0.49-1.34)	34	1.04(0.67-1.62)	12	0.88(0.42-1.83)	7	1.44(0.50-4.15)	NA	NA
≥5/w	37,385	489,208	63	1.03(0.61-1.76)	135	0.95(0.67-1.34)	163	1.03(0.74-1.42)	66	1.05(0.62-1.79)	18	0.79(0.32-1.92)	NA	NA
Tukudani (soy sauce-preserved foods)														
<1/w	32,994	433,980	43	1.00	101	1.00	129	1.00	60	1.00	16	1.00	NA	NA
1-2/w	12,560	158,983	15	0.84(0.46-1.56)	44	1.08(0.75-1.56)	48	1.11(0.78-1.58)	20	0.99(0.58-1.69)	6	1.10(0.41-3.00)	NA	NA
≥3/w	10,415	131,555	19	1.20(0.68-2.15)	41	1.17(0.80-1.72)	46	1.26(0.87-1.81)	14	0.84(0.45-1.55)	8	1.65(0.65-4.18)	NA	NA
Boiled beans														
<1/w	35,909	469,616	51	1.00	107	1.00	144	1.00	59	1.00	19	1.00	NA	NA
1-2/w	12,387	156,580	19	0.92(0.53-1.60)	46	1.06(0.73-1.52)	50	1.04(0.74-1.47)	17	1.02(0.57-1.81)	6	0.99(0.37-2.63)	NA	NA
≥3/w	9,689	123,716	16	0.87(0.48-1.58)	48	1.21(0.84-1.74)	43	1.04(0.72-1.50)	19	1.41(0.80-2.49)	5	0.97(0.34-2.78)	NA	NA
Tofu (soybean curd)														
<3/w	23,266	296,367	33	1.00	81	1.00	97	1.00	25	1.00	17	1.00	NA	NA
3-4/w	19,287	251,172	23	1.00(0.56-1.79)	66	0.95(0.67-1.33)	81	0.93(0.68-1.28)	42	2.13(1.20-3.78)*	7	0.41(0.16-1.03)*	NA	NA
≥5/w	18,071	234,793	33	1.51(0.88-2.59)	59	0.81(0.57-1.16)	70	0.87(0.62-1.20)	33	1.86(1.02-3.38)*	9	0.62(0.27-1.45)	NA	NA

*Adjusted for age and area of study. ** p<0.01; * p<0.05; + p<0.10 NA: not applicable

Table 12. Continued. Hazard Ratios* and 95% CI According to the the Frequencies of Pickles, Soy Sauce-preserved Foods, Boiled Beans, and Soybean Curd Intake

	No. of subjects	Person -years	Kidney cancer		Urothelial tract cancer		Non-Hodgkin's		Multiple myeloma		Myeloid leukemia		Ischemic heart disease		Cerebrovascular	
			No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)
Men																
Pickles																
<3/w	10,624	128,779	11	1.00	21	1.00	20	1.00	9	1.00	6	1.00	162	1.00	313	1.00
3-4/w	7,017	88,665	5	0.71(0.24-2.04)	11	0.85(0.41-1.79)	11	0.87(0.41-1.85)	4	0.59(0.18-1.94)	8	2.34(0.76-7.18)	106	1.04(0.81-1.33)	195	0.97(0.81-1.17)
≥5/w	25,394	322,125	26	0.90(0.44-1.83)	55	0.97(0.58-1.64)	54	1.06(0.62-1.83)	32	1.16(0.54-2.46)	28	2.10(0.80-5.48)	328	0.75(0.62-0.91)**	678	0.79(0.69-0.91)**
Tukudani (soy sauce-preserved foods)																
<1/w	23,501	300,046	22	1.00	56	1.00	47	1.00	24	1.00	24	1.00	321	1.00	645	1.00
1-2/w	10,034	123,568	14	1.73(0.83-3.59)	11	0.43(0.22-0.84)*	21	1.16(0.67-2.01)	8	0.99(0.42-2.35)	9	0.82(0.37-1.82)	123	0.92(0.74-1.15)	254	0.92(0.79-1.07)
≥3/w	7,429	91,679	5	0.74(0.27-2.05)	9	0.42(0.20-0.87)*	14	0.94(0.50-1.78)	9	1.30(0.56-3.03)	8	0.91(0.39-2.10)	121	1.10(0.88-1.38)	202	0.88(0.75-1.04)
Boiled beans																
<1/w	27,537	349,539	26	1.00	54	1.00	56	1.00	32	1.00	27	1.00	371	1.00	700	1.00
1-2/w	8,622	106,309	11	1.34(0.63-2.85)	13	0.75(0.40-1.43)	15	0.82(0.45-1.49)	7	0.65(0.28-1.54)	6	0.67(0.27-1.68)	112	0.83(0.67-1.04)	267	1.03(0.88-1.19)
≥3/w	5,657	68,895	3	0.48(0.14-1.65)	12	0.89(0.45-1.73)	11	0.78(0.39-1.54)	5	0.57(0.21-1.54)	8	1.26(0.54-2.90)	101	0.96(0.76-1.21)	178	0.84(0.70-1.00)*
Tofu (soybean curd)																
<3/w	19,698	244,366	17	1.00	39	1.00	42	1.00	18	1.00	10	1.00	272	1.00	532	1.00
3-4/w	13,656	173,701	13	0.87(0.41-1.85)	33	1.07(0.64-1.76)	27	0.83(0.49-1.40)	12	0.87(0.39-1.96)	21	4.38(1.75-11.0)**	205	1.06(0.87-1.29)	373	0.91(0.79-1.04)
≥5/w	10,764	133,848	16	1.34(0.66-2.72)	16	0.55(0.30-1.02)*	19	0.71(0.40-1.26)	17	1.62(0.77-3.38)	11	2.94(1.07-8.08)*	146	0.83(0.67-1.03)*	345	0.88(0.76-1.02)*
Women																
Pickles																
<3/w	13,305	166,459	4	1.00	5	1.00	13	1.00	5	1.00	4	1.00	101	1.00	230	1.00
3-4/w	8,506	109,129	2	0.75(0.14-4.11)	7	1.86(0.59-5.88)	11	1.29(0.58-2.90)	4	1.20(0.32-4.48)	5	1.63(0.43-6.09)	54	0.91(0.65-1.27)	155	1.07(0.87-1.32)
≥5/w	37,385	489,208	11	0.83(0.26-2.64)	28	1.31(0.50-3.43)	37	0.92(0.49-1.76)	38	2.30(0.90-5.88)*	22	1.38(0.47-4.05)	237	0.76(0.60-0.96)*	623	0.81(0.69-0.95)**
Tukudani (soy sauce-preserved foods)																
<1/w	32,994	433,980	8	1.00	18	1.00	30	1.00	22	1.00	19	1.00	217	1.00	514	1.00
1-2/w	12,560	158,983	5	1.21(0.39-3.72)	10	2.38(0.93-6.11)*	15	1.32(0.69-2.54)	10	1.30(0.59-2.89)	4	0.53(0.17-1.59)	78	1.03(0.78-1.35)	226	1.08(0.92-1.28)
≥3/w	10,415	131,555	4	0.95(0.28-3.23)	8	2.10(0.77-5.76)	14	1.38(0.70-2.73)	7	1.03(0.42-2.56)	8	1.24(0.51-2.99)	62	0.89(0.66-1.21)	186	0.98(0.82-1.17)
Boiled beans																
<1/w	35,909	469,616	6	1.00	22	1.00	38	1.00	27	1.00	18	1.00	227	1.00	554	1.00
1-2/w	12,387	156,580	4	1.20(0.33-4.30)	7	1.06(0.40-2.77)	9	0.60(0.28-1.26)	10	1.11(0.51-2.41)	5	0.70(0.25-2.00)	84	1.00(0.76-1.31)	217	0.91(0.77-1.08)
≥3/w	9,689	123,716	6	1.72(0.54-5.51)	7	1.03(0.38-2.75)	11	0.84(0.41-1.70)	9	1.10(0.48-2.49)	8	1.20(0.48-2.99)	67	0.83(0.62-1.12)	203	0.88(0.74-1.04)
Tofu (soybean curd)																
<3/w	23,266	296,367	7	1.00	15	1.00	27	1.00	18	1.00	14	1.00	171	1.00	439	1.00
3-4/w	19,287	251,172	8	2.32(0.70-7.73)	13	0.86(0.37-1.98)	13	0.62(0.30-1.27)	20	1.22(0.61-2.42)	12	1.12(0.46-2.72)	118	0.74(0.58-0.94)*	315	0.90(0.77-1.05)
≥5/w	18,071	234,793	3	0.71(0.16-3.23)	10	0.83(0.34-2.01)	22	1.12(0.60-2.09)	10	0.60(0.27-1.37)	6	0.58(0.20-1.66)	130	0.89(0.70-1.13)	297	0.82(0.70-0.97)*

*Adjusted for age and area of study. ** p<0.01; * p<0.05; + p<0.10

Table 13. Age-adjusted Hazard Ratios* and 95% Confidence Intervals(95% CI) According to the Frequencies of Fruits, Fruit Juice, and Sweets Intake

	No. of subjects	All causes		All cancers		Esophageal cancer		Stomach cancer		Colon cancer		Rectal cancer		Liver cancer		
		No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	
Men																
Citrus fruits																
<3/w	26,113	332,812	5,724	1.00	2,198	1.00	84	1.00	442	1.00	106	1.00	90	1.00	275	1.00
3-4/w	7,741	95,290	1,581	0.94(0.88-1.00)*	617	1.01(0.91-1.11)	26	1.17(0.73-1.88)	117	1.00(0.80-1.24)	41	1.39(0.93-2.08)	23	0.92(0.56-1.51)	69	1.13(0.84-1.52)
≥5/w	9,157	111,128	1,976	0.92(0.87-0.98)**	764	1.01(0.92-1.10)	29	1.18(0.73-1.89)	156	1.06(0.86-1.30)	51	1.44(0.97-2.13)*	37	1.24(0.80-1.94)	89	1.23(0.93-1.63)
Fresh fruit juice (in summer season)																
<1/w	24,153	306,172	5,341	1.00	2,051	1.00	86	1.00	402	1.00	108	1.00	96	1.00	258	1.00
1-2/w	8,169	101,027	1,615	0.92(0.86-0.98)**	636	0.99(0.90-1.09)	20	0.68(0.41-1.13)	125	1.10(0.88-1.37)	37	1.03(0.68-1.55)	28	0.86(0.55-1.36)	61	1.00(0.73-1.37)
≥3/w	9,008	112,161	1,805	0.88(0.82-0.93)**	704	0.96(0.87-1.05)	32	0.95(0.61-1.49)	151	1.15(0.93-1.42)	45	1.03(0.69-1.54)	26	0.69(0.43-1.11)	93	1.40(1.05-1.85)*
Other fruits (excluded citrus fruits)																
<3/w	22,836	290,190	5,339	1.00	2,050	1.00	80	1.00	399	1.00	107	1.00	93	1.00	270	1.00
3-4/w	8,196	101,725	1,392	0.87(0.82-0.93)**	549	0.89(0.81-0.99)*	22	0.70(0.42-1.15)	106	0.99(0.78-1.25)	30	0.86(0.55-1.33)	22	0.72(0.44-1.19)	68	1.07(0.79-1.45)
≥5/w	10,363	128,407	1,948	0.93(0.88-0.98)*	780	0.98(0.89-1.07)	32	0.77(0.49-1.20)	158	1.13(0.92-1.40)	46	1.03(0.70-1.52)	34	0.88(0.57-1.36)	79	1.00(0.75-1.33)
Sweets																
<1/w	20,854	263,296	4,379	1.00	1,679	1.00	81	1.00	327	1.00	89	1.00	79	1.00	201	1.00
1-2/w	10,292	127,753	2,095	0.91(0.86-0.96)**	839	0.98(0.90-1.07)	29	0.66(0.43-1.02)*	144	0.94(0.76-1.15)	54	1.19(0.83-1.70)	44	1.09(0.74-1.60)	104	1.14(0.89-1.47)
≥3/w	11,936	148,665	2,796	0.84(0.80-0.88)**	1,050	0.88(0.81-0.96)**	31	0.54(0.35-0.83)**	233	1.10(0.92-1.32)	57	0.93(0.65-1.32)	35	0.63(0.42-0.96)*	129	0.98(0.78-1.24)
Women																
Citrus fruits																
<3/w	27,441	368,077	3,241	1.00	1,030	1.00	11	1.00	159	1.00	87	1.00	43	1.00	104	1.00
3-4/w	11,163	140,745	1,179	0.99(0.92-1.07)	372	1.04(0.91-1.18)	5	0.99(0.33-2.98)	59	1.20(0.85-1.68)	44	1.19(0.80-1.77)	12	0.79(0.39-1.59)	32	1.18(0.74-1.88)
≥5/w	20,900	260,141	2,081	0.84(0.79-0.90)**	736	1.03(0.92-1.16)	9	0.80(0.30-2.11)	126	1.29(0.95-1.74)*	68	0.98(0.68-1.42)	26	0.97(0.53-1.77)	75	1.57(1.05-2.34)*
Fresh fruit juice (in summer season)																
<1/w	24,610	327,388	3,014	1.00	943	1.00	9	1.00	153	1.00	71	1.00	35	1.00	107	1.00
1-2/w	11,776	148,782	1,167	0.96(0.89-1.04)	375	1.02(0.89-1.18)	6	1.47(0.48-4.45)	56	1.05(0.74-1.49)	39	1.22(0.78-1.89)	15	1.11(0.54-2.25)	29	0.80(0.50-1.28)
≥3/w	20,096	255,290	1,885	0.86(0.81-0.93)**	682	1.05(0.93-1.19)	6	0.84(0.27-2.62)	118	1.28(0.95-1.74)	78	1.38(0.94-2.03)	22	0.86(0.44-1.67)	59	0.91(0.61-1.36)
Other fruits (excluded citrus fruits)																
<3/w	30,233	399,571	3,626	1.00	1,172	1.00	11	1.00	188	1.00	108	1.00	43	1.00	116	1.00
3-4/w	10,065	127,542	932	1.01(0.94-1.09)	297	0.97(0.85-1.12)	3	0.83(0.22-3.08)	50	1.11(0.79-1.57)	25	0.67(0.42-1.05)*	11	0.92(0.45-1.90)	28	1.16(0.73-1.85)
≥5/w	15,897	200,961	1,399	0.94(0.88-1.01)*	512	1.04(0.93-1.17)	9	1.53(0.60-3.94)	83	1.16(0.86-1.56)	56	0.92(0.65-1.30)	22	1.19(0.66-2.16)	49	1.32(0.89-1.97)
Sweets																
<1/w	21,367	278,832	2,502	1.00	798	1.00	11	1.00	127	1.00	67	1.00	32	1.00	87	1.00
1-2/w	15,697	198,972	1,551	0.89(0.84-0.96)**	532	0.99(0.88-1.11)	5	0.51(0.17-1.49)	86	1.05(0.78-1.41)	53	0.99(0.68-1.44)	23	1.01(0.57-1.78)	46	0.86(0.58-1.26)
≥3/w	22,477	291,354	2,347	0.88(0.82-0.93)**	763	0.93(0.83-1.04)	10	0.78(0.32-1.89)	130	1.03(0.79-1.35)	78	1.01(0.72-1.43)	25	0.70(0.41-1.21)	67	0.75(0.53-1.05)*

*Adjusted for age and area of study. ** p<0.01; * p<0.05; + p<0.10

Table 13. Continued. Age-adjusted Hazard Ratios[†] and 95% CI According to the Frequencies of Fruits, Fruit Juice, and Sweets Intake

	No. of subjects	Person -years	Gall bladder cancer		Pancreas cancer		Lung cancer		Breast cancer		Uterine cervix cancer		Prostate cancer	
			No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)	No	HR(95%CI)
Men														
Citrus fruits														
<3/w	26,113	332,812	46	1.00	123	1.00	527	1.00	NA	NA	NA	NA	87	1.00
3-4/w	7,741	95,290	14	1.23(0.63-2.39)	35	0.98(0.65-1.46)	146	0.91(0.75-1.11)	NA	NA	NA	NA	28	1.12(0.70-1.81)
≥5/w	9,157	111,128	6	0.42(0.17-1.06) [†]	39	0.89(0.60-1.33)	156	0.78(0.64-0.95) [*]	NA	NA	NA	NA	44	1.32(0.86-2.03)
Fresh fruit juice (in summer season)														
<1/w	24,153	306,172	41	1.00	118	1.00	473	1.00	NA	NA	NA	NA	84	1.00
1-2/w	8,169	101,027	15	1.25(0.64-2.46)	35	0.86(0.57-1.29)	143	0.88(0.72-1.08)	NA	NA	NA	NA	35	1.33(0.85-2.08)
≥3/w	9,008	112,161	7	0.49(0.21-1.18)	30	0.66(0.43-1.02) [†]	156	0.87(0.72-1.07)	NA	NA	NA	NA	33	1.01(0.63-1.61)
Other fruits (excluded citrus fruits)														
<3/w	22,836	290,190	38	1.00	116	1.00	468	1.00	NA	NA	NA	NA	94	1.00
3-4/w	8,196	101,725	9	0.95(0.42-2.14)	36	0.96(0.64-1.45)	124	0.81(0.66-1.01) [†]	NA	NA	NA	NA	21	0.81(0.48-1.34)
≥5/w	10,363	128,407	15	1.19(0.59-2.43)	33	0.67(0.44-1.02) [†]	191	0.96(0.80-1.16)	NA	NA	NA	NA	37	1.11(0.72-1.70)
Sweets														
<1/w	20,854	263,296	34	1.00	101	1.00	396	1.00	NA	NA	NA	NA	65	1.00
1-2/w	10,292	127,753	17	1.11(0.59-2.08)	42	0.76(0.52-1.11)	181	0.85(0.71-1.02) [†]	NA	NA	NA	NA	45	1.38(0.91-2.09)
≥3/w	11,936	148,665	15	0.63(0.33-1.21)	58	0.75(0.53-1.06)	246	0.84(0.71-0.99) [*]	NA	NA	NA	NA	49	0.95(0.64-1.42)
Women														
Citrus fruits														
<3/w	27,441	368,077	38	1.00	93	1.00	115	1.00	50	1.00	13	1.00	NA	NA
3-4/w	11,163	140,745	19	1.36(0.72-2.54)	32	0.73(0.48-1.13)	44	1.09(0.74-1.61)	13	0.81(0.41-1.59)	8	2.24(0.76-6.59)	NA	NA
≥5/w	20,900	260,141	31	1.00(0.56-1.80)	78	0.83(0.58-1.19)	84	1.02(0.72-1.44)	34	1.15(0.66-2.01)	10	1.23(0.42-3.54)	NA	NA
Fresh fruit juice (in summer season)														
<1/w	24,610	327,388	32	1.00	91	1.00	108	1.00	42	1.00	15	1.00	NA	NA
1-2/w	11,776	148,782	21	1.82(0.93-3.55) [†]	35	0.67(0.44-1.02) [†]	48	1.17(0.79-1.74)	12	0.76(0.37-1.59)	5	0.80(0.26-2.47)	NA	NA
≥3/w	20,096	255,290	29	1.44(0.75-2.73)	67	0.70(0.49-1.00) [†]	73	1.01(0.70-1.46)	39	1.41(0.80-2.51)	9	0.84(0.31-2.23)	NA	NA
Other fruits (excluded citrus fruits)														
<3/w	30,233	399,571	49	1.00	99	1.00	136	1.00	51	1.00	14	1.00	NA	NA
3-4/w	10,065	127,542	12	0.88(0.45-1.73)	37	1.29(0.86-1.94)	38	1.05(0.71-1.56)	11	0.87(0.42-1.77)	7	2.64(0.88-7.96) [†]	NA	NA
≥5/w	15,897	200,961	16	0.74(0.40-1.37)	51	1.11(0.76-1.62)	54	0.93(0.65-1.32)	28	1.36(0.78-2.37)	10	2.14(0.77-5.97)	NA	NA
Sweets														
<1/w	21,367	278,832	36	1.00	60	1.00	85	1.00	40	1.00	9	1.00	NA	NA
1-2/w	15,697	198,972	16	0.63(0.34-1.18)	61	1.37(0.93-2.02)	65	1.09(0.77-1.54)	20	0.73(0.41-1.28)	9	1.50(0.55-4.10)	NA	NA
≥3/w	22,477	291,354	35	0.98(0.59-1.62)	72	1.11(0.77-1.62)	88	0.97(0.71-1.34)	37	0.83(0.51-1.34)	13	1.38(0.54-3.50)	NA	NA

[†]Adjusted for age and area of study. ^{**} p<0.01; ^{*} p<0.05; [†] p<0.10 Not applicable