

Supplemental Table 1. Association Between Fatty Acid Intake and Lung Cancer Risk in the SWHS and SMHS Overall (With Adjustment for Red Meat and Vegetable Intakes)^a

	Pooled Analysis (SMHS+SWHS)		Analysis by Cohort			
	#	HR (95%CI)	#	HR (95%CI)	#	HR (95%CI)
Total Fatty Acid						
Q1	314	Ref.	134	Ref.	180	Ref.
Q2	302	0.97 (0.83-1.14)	154	1.08 (0.85-1.36)	148	0.90 (0.72-1.12)
Q3	277	0.91 (0.77-1.07)	150	1.04 (0.82-1.31)	127	0.81 (0.64-1.02)
Q4	308	1.01 (0.86-1.19)	168	1.12 (0.89-1.41)	140	0.92 (0.73-1.16)
Q5	295	0.97 (0.81-1.17)	176	1.10 (0.85-1.43)	119	0.83 (0.63-1.08)
<i>P_{trend}</i>		0.90		0.43		0.22
Saturated Fatty Acid						
Q1	316	Ref.	132	Ref.	184	Ref.
Q2	299	0.97 (0.83-1.14)	162	1.17 (0.93-1.47)	137	0.83 (0.60-1.03)
Q3	296	0.99 (0.84-1.16)	166	1.19 (0.94-1.50)	130	0.84 (0.67-1.06)
Q4	289	0.96 (0.81-1.13)	151	1.02 (0.81-1.30)	138	0.92 (0.73-1.16)
Q5	296	1.00 (0.84-1.20)	171	1.12 (0.87-1.45)	125	0.90 (0.69-1.16)
<i>P_{trend}</i>		0.90		0.78		0.59
Monounsaturated Fatty Acid						
Q1	307	Ref.	139	Ref.	168	Ref.
Q2	300	0.98 (0.83-1.15)	143	0.94 (0.74-1.18)	157	1.03 (0.83-1.28)
Q3	289	0.97 (0.83-1.15)	155	1.03 (0.82-1.30)	134	0.92 (0.73-1.17)
Q4	310	1.06 (0.90-1.25)	173	1.11 (0.88-1.40)	137	1.01 (0.79-1.28)
Q5	290	1.02 (0.84-1.24)	172	1.06 (0.81-1.39)	118	0.95 (0.71-1.26)
<i>P_{trend}</i>		0.57		0.30		0.69
Polyunsaturated Fatty Acid						
Q1	321	Ref.	151	Ref.	172	Ref.
Q2	270	0.83 (0.71-0.98)	138	0.86 (0.68-1.08)	132	0.82 (0.65-1.03)
Q3	318	0.97 (0.83-1.13)	162	0.98 (0.79-1.23)	151	0.95 (0.76-1.18)
Q4	291	0.87 (0.74-1.02)	162	0.94 (0.75-1.17)	126	0.78 (0.62-0.99)
Q5	296	0.86 (0.73-1.02)	169	0.89 (0.70-1.12)	133	0.79 (0.62-1.01)
<i>P_{trend}</i>		0.15		0.56		0.06
Linoleic Acid						
Q1	312	Ref.	152	Ref.	160	Ref.
Q2	279	0.89 (0.75-1.04)	132	0.81 (0.64-1.03)	147	0.89 (0.71-1.13)
Q3	306	0.96 (0.82-1.13)	167	1.00 (0.80-1.25)	139	0.95 (0.76-1.20)
Q4	299	0.91 (0.77-1.01)	162	0.91 (0.72-1.13)	137	0.85 (0.67-1.07)
Q5	300	0.86 (0.73-1.01)	169	0.86 (0.68-1.08)	131	0.81 (0.64-1.03)
<i>P_{trend}</i>		0.13		0.44		0.28
Linolenic Acid						
Q1	318	Ref.	154	Ref.	164	Ref.
Q2	286	0.92 (0.78-1.08)	152	0.95 (0.76-1.19)	134	0.89 (0.70-1.11)
Q3	300	0.97 (0.82-1.13)	149	0.91 (0.73-1.15)	151	1.02 (0.82-1.28)
Q4	291	0.95 (0.81-1.11)	153	0.95 (0.76-1.19)	138	0.93 (0.74-1.18)
Q5	301	0.98 (0.83-1.16)	174	1.07 (0.85-1.36)	127	0.85 (0.66-1.09)
<i>P_{trend}</i>		0.94		0.63		0.35
Arachidonic Acid						
Q1	335	Ref.	154	Ref.	181	Ref.
Q2	316	1.01 (0.87-1.18)	158	1.03 (0.83-1.29)	158	1.00 (0.81-1.24)
Q3	311	1.03 (0.88-1.20)	156	1.02 (0.81-1.27)	155	1.06 (0.85-1.32)
Q4	260	0.89 (0.76-1.05)	149	0.97 (0.77-1.22)	111	0.81 (0.64-1.04)
Q5	274	0.98 (0.83-1.16)	165	1.07 (0.85-1.35)	109	0.87 (0.68-1.13)
<i>P_{trend}</i>		0.40		0.78		0.12
Timnodonic Acid-EPA						
Q1	303	Ref.	151	Ref.	152	Ref.
Q2	299	1.00 (0.85-1.17)	168	1.07 (0.86-1.34)	131	0.92 (0.73-1.16)
Q3	325	1.18 (1.01-1.39)	162	1.13 (0.90-1.41)	163	1.25 (1.00-1.57)
Q4	290	1.17 (1.00-1.38)	144	1.11 (0.88-1.40)	146	1.24 (0.99-1.57)

Q5	279	1.21 (1.03-1.43)	157	1.31 (1.04-1.65)	122	1.11 (0.87-1.41)
<i>P_{trend}</i>		0.003		0.03		0.06
DHA						
Q1	295	Ref.	152	Ref.	143	Ref.
Q2	298	1.00 (0.85-1.18)	161	1.00 (0.80-1.26)	137	1.01 (0.80-1.28)
Q3	322	1.19 (1.02-1.40)	163	1.12 (0.90-1.40)	159	1.29 (1.02-1.62)
Q4	295	1.21 (1.02-1.42)	148	1.13 (0.90-1.42)	147	1.30 (1.03-1.64)
Q5	286	1.26 (1.06-1.48)	158	1.29 (1.03-1.62)	128	1.21 (0.95-1.54)
<i>P_{trend}</i>		0.0007		0.02		0.02
Total n-3 PUFA						
Q1	328	Ref.	164	Ref.	164	Ref.
Q2	282	0.89 (0.75-1.04)	137	0.80 (0.64-1.01)	145	0.97 (0.77-1.21)
Q3	285	0.91 (0.79-1.07)	148	0.88 (0.70-1.10)	137	0.94 (0.75-1.19)
Q4	303	0.99 (0.84-1.16)	164	0.99 (0.79-1.23)	139	0.97 (0.77-1.23)
Q5	298	1.00 (0.85-1.19)	169	0.99 (0.82-1.31)	129	0.92 (0.72-1.18)
<i>P_{trend}</i>		0.61		0.34		0.57
Total n-3 HUFA						
Q1	313	Ref.	160	Ref.	153	Ref.
Q2	282	0.93 (0.79-1.09)	154	0.95 (0.76-1.18)	128	0.91 (0.72-1.16)
Q3	324	1.17 (1.00-1.37)	166	1.12 (0.90-1.39)	158	1.23 (0.98-1.54)
Q4	289	1.14 (0.97-1.34)	142	1.05 (0.83-1.32)	147	1.25 (1.00-1.58)
Q5	288	1.23 (1.05-1.45)	160	1.28 (1.02-1.60)	128	1.17 (0.92-1.49)
<i>P_{trend}</i>		0.001		0.02		0.02
Total n-6 PUFA						
Q1	314	Ref.	151	Ref.	163	Ref.
Q2	275	0.87 (0.74-1.02)	132	0.82 (0.65-1.03)	143	0.92 (0.73-1.15)
Q3	305	0.95 (0.81-1.12)	167	1.01 (0.81-1.26)	138	0.89 (0.71-1.11)
Q4	305	0.92 (0.79-1.08)	163	0.92 (0.73-1.15)	142	0.91 (0.72-1.14)
Q5	297	0.84 (0.71-1.00)	169	0.87 (0.69-1.09)	128	0.78 (0.61-0.99)
<i>P_{trend}</i>		0.14		0.50		0.07
Ratio n-6 PUFA/n-3 PUFA						
Q1	314	Ref.	161	Ref.	153	Ref.
Q2	315	1.02 (0.87-1.20)	164	1.06 (0.85-1.32)	151	0.99 (0.79-1.24)
Q3	278	0.90 (0.77-1.06)	152	1.02 (0.81-1.28)	126	0.79 (0.62-1.01)
Q4	279	0.86 (0.73-1.01)	141	0.89 (0.71-1.13)	138	0.83 (0.65-1.05)
Q5	310	0.79 (0.67-0.93)	164	0.83 (0.66-1.04)	146	0.74 (0.59-0.94)
<i>P_{trend}</i>		0.0005		0.03		0.004

Abbreviations: BMI, body mass index; CI, confidence interval; HUFA, highly unsaturated fatty acid; HR, hazard ratio; PUFA, polyunsaturated fatty acid; SMHS, Shanghai Men's Health Study; SWHS, Shanghai Women's Health Study;

^aModel adjusted for: age, ever smoking status, smoking packs-year (SMHS only), ever drinking status, BMI, physical activity status, total energy-adjusted red meat (g/day), total energy-adjusted vegetable intake (g/day), vitamin supplemental use, menopausal status, hormone replacement therapy (SWHS only).

Supplemental Table 2. Association Between Fatty Acid Intake and Lung Cancer Risk in the SWHS and SMHS Overall (Different Models of Adjustment)

	Pooled Analysis (SWHS+SMHS)		Analysis by Cohort			
	#	HR (95%CI)	#	HR (95%CI)	#	HR (95%CI)
Total Fatty Acid^a						
Q1	314	Ref.	134	Ref.	180	Ref.
Q2	302	0.93 (0.79-1.10)	154	1.06 (0.83-1.35)	148	0.85 (0.68-1.08)
Q3	277	0.85 (0.71-1.02)	150	1.01 (0.77-1.31)	127	0.75 (0.58-0.98)
Q4	308	0.92 (0.76-1.12)	168	1.07 (0.81-1.42)	140	0.83 (0.62-1.10)
Q5	295	0.82 (0.64-1.05)	176	1.02 (0.72-1.44)	119	0.69 (0.48-1.00)
<i>P_{trend}</i>		0.18		0.87		0.09
Saturated Fatty Acid^a						
Q1	316	Ref.	132	Ref.	184	Ref.
Q2	299	0.95 (0.81-1.12)	162	1.14 (0.90-1.45)	137	0.82 (0.65-1.03)
Q3	296	0.95 (0.80-1.13)	166	1.15 (0.90-1.48)	130	0.82 (0.64-1.05)
Q4	289	0.91 (0.76-1.09)	151	0.98 (0.75-1.28)	138	0.89 (0.69-1.16)
Q5	296	0.91 (0.74-1.12)	171	1.05 (0.77-1.42)	125	0.85 (0.63-1.15)
<i>P_{trend}</i>		0.33		0.74		0.50
Monounsaturated Fatty Acid^a						
Q1	307	Ref.	139	Ref.	168	Ref.
Q2	300	0.96 (0.81-1.13)	143	0.92 (0.72-1.18)	157	1.02 (0.81-1.29)
Q3	289	0.94 (0.79-1.12)	155	1.01 (0.78-1.30)	134	0.91 (0.70-1.17)
Q4	310	1.00 (0.83-1.21)	173	1.07 (0.82-1.40)	137	0.98 (0.74-1.30)
Q5	290	0.92 (0.73-1.17)	172	1.00 (0.72-1.39)	118	0.90 (0.63-1.28)
<i>P_{trend}</i>		0.76		0.58		0.55
Polyunsaturated Fatty Acid^a						
Q1	323	Ref.	151	Ref.	172	Ref.
Q2	270	0.76 (0.64-0.91)	138	0.78 (0.61-0.99)	132	0.76 (0.60-0.96)
Q3	313	0.83 (0.70-1.00)	162	0.85 (0.66-1.09)	151	0.84 (0.65-1.07)
Q4	288	0.70 (0.58-0.86)	162	0.76 (0.58-1.01)	126	0.66 (0.49-0.88)
Q5	302	0.61 (0.47-0.78)	169	0.63 (0.44-0.90)	133	0.59 (0.41-0.86)
<i>P_{trend}</i>		0.0006		0.04		0.007
Linoleic Acid^a						
Q1	312	Ref.	152	Ref.	160	Ref.
Q2	279	0.82 (0.69-0.97)	132	0.74 (0.58-0.95)	147	0.91 (0.72-1.15)
Q3	306	0.85 (0.71-1.01)	167	0.87 (0.68-1.12)	139	0.83 (0.64-1.07)
Q4	299	0.76 (0.63-0.92)	162	0.75 (0.57-0.98)	137	0.78 (0.60-1.03)
Q5	300	0.64 (0.50-0.82)	169	0.63 (0.45-0.88)	131	0.65 (0.46-0.92)
<i>P_{trend}</i>		0.001		0.03		0.02
Linolenic Acid^b						
Q1	318	Ref.	154	Ref.	164	Ref.
Q2	286	0.86 (0.73-1.03)	152	0.92 (0.72-1.18)	134	0.82 (0.64-1.05)
Q3	300	0.87 (0.72-1.05)	149	0.86 (0.66-1.14)	151	0.91 (0.69-1.19)
Q4	291	0.81 (0.65-1.01)	153	0.87 (0.64-1.20)	138	0.79 (0.57-1.08)
Q5	301	0.75 (0.55-1.01)	174	0.93 (0.61-1.43)	127	0.63 (0.40-0.99)
<i>P_{trend}</i>		0.08		0.57		0.13
Arachidonic Acid^a						
Q1	335	Ref.	154	Ref.	181	Ref.
Q2	316	1.00 (0.85-1.17)	158	1.02 (0.81-1.28)	158	1.00 (0.80-1.24)
Q3	311	1.01 (0.86-1.18)	156	1.00 (0.79-1.25)	155	1.05 (0.84-1.31)
Q4	260	0.86 (0.73-1.02)	149	0.94 (0.74-1.19)	111	0.80 (0.62-1.03)
Q5	274	0.93 (0.78-1.11)	165	1.02 (0.79-1.32)	109	0.86 (0.66-1.12)
<i>P_{trend}</i>		0.16		0.89		0.09
Timnodonic Acid-EPA^a						
Q1	303	Ref.	151	Ref.	152	Ref.
Q2	299	1.01 (0.86-1.19)	168	1.08 (0.87-1.35)	131	0.94 (0.74-1.19)
Q3	325	1.20 (1.02-1.41)	162	1.14 (0.91-1.43)	163	1.29 (1.03-1.62)
Q4	290	1.19 (1.01-1.41)	144	1.12 (0.88-1.42)	146	1.29 (1.02-1.64)

Q5	279	1.23 (1.03-1.68)	157	1.32 (1.02-1.69)	122	1.16 (0.89-1.51)
<i>P_{trend}</i>		0.005		0.05		0.03
DHA^a	295	Ref.	152	Ref.	143	Ref.
Q1	298	1.02 (0.87-1.20)	161	1.01 (0.81-1.26)	137	1.03 (0.81-1.31)
Q2	322	1.21 (1.03-1.42)	163	1.13 (0.90-1.41)	159	1.32 (1.05-1.67)
Q3	295	1.23 (1.04-1.45)	148	1.14 (0.90-1.43)	147	1.35 (1.06-1.71)
Q4	286	1.28 (1.07-1.53)	158	1.30 (1.02-1.67)	128	1.28 (0.99-1.66)
Q5		0.0007		0.02		0.007
<i>P_{trend}</i>						
Total n-3 PUFA^b						
Q1	294	Ref.	164	Ref.	168	Ref.
Q2	299	0.90 (0.76-1.07)	137	0.83 (0.65-1.05)	145	1.00 (0.79-1.27)
Q3	323	0.94 (0.78-1.12)	148	0.92 (0.71-1.18)	137	0.99 (0.77-1.29)
Q4	294	1.02 (0.84-1.25)	164	1.05 (0.80-1.39)	139	1.04 (0.78-1.39)
Q5	286	1.21 (0.82-1.35)	169	1.14 (0.81-1.61)	129	1.03 (0.72-1.48)
<i>P_{trend}</i>		0.42		0.21		0.80
Total n-3 HUFA^b						
Q1	313	Ref.	160	Ref.	153	Ref.
Q2	282	0.94 (0.80-1.11)	154	0.95 (0.76-1.19)	128	0.93 (0.73-1.18)
Q3	324	1.18 (1.01-1.39)	166	1.13 (0.91-1.41)	158	1.26 (1.00-1.58)
Q4	289	1.16 (0.98-1.36)	142	1.06 (0.84-1.33)	147	1.29 (1.02-1.62)
Q5	288	1.24 (1.05-1.47)	160	1.29 (1.02-1.62)	128	1.19 (0.94-1.52)
<i>P_{trend}</i>		0.0008		0.02		0.01
Total n-6 PUFA^a						
Q1	314	Ref.	151	Ref.	163	Ref.
Q2	275	0.80 (0.68-0.95)	132	0.75 (0.59-0.96)	143	0.86 (0.68-1.09)
Q3	305	0.84 (0.71-1.00)	167	0.88 (0.69-1.13)	138	0.80 (0.62-1.03)
Q4	305	0.77 (0.64-0.93)	163	0.76 (0.58-1.00)	142	0.79 (0.60-1.04)
Q5	297	0.63 (0.49-0.80)	169	0.64 (0.46-0.90)	128	0.61 (0.43-0.87)
<i>P_{trend}</i>		0.001		0.01		0.01
Ratio n-6 PUFA/n-3 PUFA^c						
Q1	314	Ref.	161	Ref.	153	Ref.
Q2	315	1.03 (0.88-1.20)	164	1.07 (0.86-1.34)	151	0.99 (0.79-1.24)
Q3	278	0.91 (0.77-1.07)	152	1.00 (0.83-1.30)	126	0.80 (0.63-1.02)
Q4	279	0.87 (0.74-1.03)	141	0.92 (0.73-1.16)	138	0.84 (0.66-1.07)
Q5	310	0.81 (0.69-0.96)	164	0.87 (0.69-1.09)	146	0.76 (0.60-0.98)
<i>P_{trend}</i>		0.003		0.10		0.01

Abbreviations: BMI, body mass index; CI, confidence interval; HUFA, highly unsaturated fatty acid; HR, hazard ratio; PUFA, polyunsaturated fatty acid; SMHS, Shanghai Men's Health Study; SWHS, Shanghai Women's Health Study;

^aModel adjusted for: age, ever smoking status, smoking packs-year (SMHS only), ever drinking status, BMI, physical activity status, total energy-adjusted n-3 PUFA intake (g/day), total energy-adjusted red meat (g/day), total energy-adjusted vegetable intake (g/day), vitamin supplemental use, menopausal status, hormone replacement therapy (SWHS only).

^bModel adjusted for: age, ever smoking status, smoking packs-year (SMHS only), ever drinking status, BMI, physical activity status, total energy-adjusted n-6 PUFA intake (g/day), total energy-adjusted red meat (g/day), total energy-adjusted vegetable intake (g/day), vitamin supplemental use, menopausal status, hormone replacement therapy (SWHS only).

^cModel adjusted for: age, ever smoking status, smoking packs-year (SMHS only), ever drinking status, BMI, physical activity status, total energy-adjusted n-3 PUFA intake (g/day), total energy-adjusted n-6 PUFA intake (g/day), total energy-adjusted red meat (g/day), total energy-adjusted vegetable intake (g/day), vitamin supplemental use, menopausal status, hormone replacement therapy (SWHS only).

