

Supplemental Table 1: Food groups and individual food items

Food group	Food item
Total fruits (n= 13)	Summary measure of apples, pears, bananas, kiwis, oranges/grapefruits, mandarins/clementines, grapes, peaches/clingstones, apricots, plums, strawberries, melon, and fruit cocktails
Total vegetables (n= 19)	Summary measure of tomatoes (in and out of season), peppers, carrots, salad, peas, beans/chick peas, mushrooms, broccoli, turnips, savoy, black cabbage, onions, cooked spinach/swiss chard/beets/rabes, cooked eggplants/zucchini/string beans, artichokes/fennel, and beets
Total fruits and vegetables (n=17)	Summary measure of tomatoes, peppers, carrots, salad, peas, beans/chick peas, mushrooms, broccoli, turnips, savoy, black cabbage, onions, spinach/swiss chard/coste/erbette cotte, cooked eggplants/zucchini/string beans, artichokes/fennel, and beets
Quercetin-rich foods (n=11)	Summary measure of apples, grapes, onions, artichoke/fennel/celery, beans/chick peas, apricots, plum, turnips, peppers, strawberries, tomatoes, and broccoli
Red meat (n=9)	Summary measure of beef steak, hamburger, pork chops, veal chop/cutlet, cooked ham (prosciutto cotto), smoked ham (prosciutto crudo), cured ham (speck), salami, baloney (mortadella), wurstel, salted sliced beef, coppa, pancetta, and other types of processed meats

Supplemental Table 2: Selected metabolic genes and SNPs included in the study

Gene	Protein	Major function	Location	No. of SNPs	SNP rs # ^a	Nucleotide change	Putatively functional location in gene	Also called	MAF ^b
Phase I genes									
<i>CYP1A1</i>	Cytochrome P450, family 1, subfamily A, polypeptide 1	Metabolize some PAHs to carcinogenic intermediates	15q22-q24	4	rs2606345	UVS1+298C>T	Intron	CYP1A1_14	0.36
					rs2198843	11599bp 3' of STP C>G		CYP1A1_78	0.14
					rs2472299	-17961T>C		CYP1A1_81	0.31
					rs2470893	-4010A>G		CYP1A1_114	0.18
<i>CYP1A2</i>	Cytochrome P450, family 1, subfamily A, polypeptide 2	Metabolize some PAHs to carcinogenic intermediates	15q24	1	rs11072508	14967bp 3' of S		CYP1A2_79	0.39
<i>CYP1B1</i>	cytochrome P450, family 1, subfamily B, polypeptide 1	Metabolize some PAHs to carcinogenic intermediates	2p21	5	rs1800440	Ex3+315A>G		CYP1B1_07	0.17
					rs10175368	-5329G>A		CYP1B1_18	0.26
					rs162556	-3922C>T		CYP1B1_27	0.45
					rs162562	Ex3+939C>A		CYP1B1_31	0.13
					rs162557	-2919C>T		CYP1B1_42	0.14
Phase II Genes									
<i>GST1A1</i>	Glutathione S-transferase alpha 1	Metabolize xenobiotic substrates	6p12.1	1	<u>rs3957357</u>	-4621T>C		GST1A1_01	0.43
<i>GST1A4</i>	Glutathione S-transferase alpha 4	Metabolize xenobiotic substrates	6p12.1	1	rs316128	IVS5+116C>A		GST1A4_05	0.45
<i>GSTM3</i>	Glutathione S-transferase mu 3	Metabolize xenobiotic substrates	1p13.3	3	rs7483	Ex8+91G>A		GSTM3_01	0.26
					rs1799735	IVS6+22AGG>-		GSTM3_02	0.15
					rs1537234	IVS7-30G>T		GSTM3_06	0.36
<i>GSTP1</i>	Glutathione S-transferase pi 1	Metabolize xenobiotic substrates	11q13	1	rs1695	Ex5-24A>G	Exon 5	GSTP1_01	0.29

^aNumber of SNPs typed in the study^bMinor Allele Frequency based on controlsInformation obtained from snp500Cancer Database (<http://snp500cancer.nci.nih.gov>)

Supplemental Table 3: OR*s and 95% CIs for selected *CYP450* and *GST* genes and SNPs and lung cancer risk, EAGLE

	case/control	OR*	95% CI	p-trend
<i>CYP450s</i>				
<i>CYP1A1</i> _14 (rs2606345)				
GG	749/781	1.0	(ref)	
GT	770/882	0.92	0.80-1.1	
TT	217/248	0.92	0.74-1.1	0.24
GT + TT	987/1130	0.91	0.80-1.0	
<i>CYP1A1</i> _78 (rs2198843)				
GG	1188/1318	1.0	(ref)	
CG	482/534	1.0	0.87-1.2	
CC	67/60	1.2	0.87-1.8	0.44
CG+CC	549/594	1.0	0.89-1.2	
<i>CYP1A1</i> _81 (rs2472299)				
CC	816/900	1.0	(ref)	
CT	719/802	0.98	0.85-1.1	
TT	201/216	1.0	0.83-1.3	0.97
CT+TT	920/1018	1.0	0.88-1.1	
<i>CYP1A1</i> _114 (rs2470893)				
GG	1088/1214	1.0	(ref)	
GT	558/622	1.0	0.87-1.1	
TT	88/74	1.34	0.97-1.9	0.29
GT+TT	646/696	1.0	0.91-1.2	
<i>CYP1A2</i> _79 (rs11072508)				
AA	647/714	1.0	(ref)	
AB	801/911	0.97	0.84-1.1	
BB	284/289	1.1	0.89-1.3	0.63
AB+BB	1085/1200	1.0	0.87-1.1	
<i>CYP1B1</i> _07 (rs1800440)				
AA	1096/1225	1.0	(ref)	
AG	550/612	1.0	0.87-1.2	
GG	87/78	1.2	0.90-1.7	0.42
AG+GG	637/690	1.0	0.90-1.2	
<i>CYP1B1</i> _18 (rs10175368)				
GG	921/992	1.0	(ref)	
GA	698/750	1.0	0.88-1.2	
AA	112/163	0.74	0.58-0.96	0.14
GA+AA	810/913	0.96	0.84-1.1	
<i>CYP1B1</i> _27 (rs162556)				
CC	481/583	1.0	(ref)	
CT	885/949	1.1	0.97-1.3	
TT	362/377	1.2	0.96-1.4	0.10
CT+TT	1247/1326	1.1	0.99-1.3	
<i>CYP1B1</i> _31 (rs162562)				
CC	1231/1370	1.0	(ref)	
CT	452/494	1.0	0.88-1.2	
TT	54/50	1.2	0.82-1.8	0.45
CT+TT	506/544	1.0	0.90-1.2	
<i>CYP1B1</i> _42 (rs162557)				
AA	1185/1323	1.0	(ref)	
AC	488/536	1.0	0.88-1.2	
CC	64/57	1.3	0.87-1.8	0.35
AC+CC	552/593	1.0	0.90-1.2	

GSTs

<i>GSTAI_01</i> (rs3957357)					
TT	554/636	1.0	(ref)		
TC	844/904	1.1	0.93-1.3		
CC	331/363	1.1	0.88-1.3		0.45
TC + CC	1175/1267	1.1	0.93-1.2		
<i>GST44_05</i> (rs1051535)					
CC	534/605	1.0	(ref)		
CA	864/964	1.0	0.88-1.2		
AA	337/346	1.1	0.92-1.3		0.33
CA+AA	1201/1310	1.0	0.90-1.2		
<i>GSTM3_01</i> (rs7483)					
GG	921/968	1.0	(ref)		
GA	648/756	0.90	0.78-1.0		
AA	118/156	0.80	0.62-1.0		0.04
GA+AA	766/912	0.88	0.77-1.0		
<i>GSTM3_02</i> (rs1799735)					
+/+	1188/1300	1.0	(ref)		
+/-	496/551	0.98	0.85-1.1		
-/-	52/64	0.89	0.61-1.3		0.61
+/- & -/-	548/615	0.98	0.85-1.1		
<i>GSTM3_06</i> (rs1537234)					
TT	655/761	1.0	(ref)		
GT	827/869	1.1	0.96-1.3		
GG	245/272	1.1	0.86-1.3		0.38
GT + GG	1072/1141	1.1	0.96-1.2		
<i>GSTP1_01</i> (rs1695)					
AA	853/932	1.0	(ref)		
AG	732/796	1.0	0.87-1.2		
GG	151/185	0.89	0.71-1.1		0.51
AG+GG	883/981	0.98	0.86-1.1		

*Adjusted for age and sex

Supplemental Table 4: Selected characteristics comparing high versus low consumers of quercetin-rich foods, EAGLE

	Low consumer	High consumer	p-value
Quercetin-rich foods, servings per day			
Mean (SD)	0.58 (0.16)	2.5 (0.54)	<0.001 ^a
Female (%)	2 (12.5)	12 (54.6)	0.008 ^b
Male (%)	14 (87.5)	10 (45.5)	
Age, (%)			
< median	12 (50.0)	12 (50.0)	0.03 ^b
≥ median	2 (14.3)	12 (85.7)	
BMI, kg/m ²			
Mean (SD)	23.8 (3.7)	24.7 (4.3)	0.51 ^a
Smoking status			
Never	2 (14.3)	8 (33.3)	0.13 ^b
Former	4 (28.6)	10 (41.7)	
Current	8 (57.1)	6 (25.0)	

^attest

^bChi-square test

SD = Standard Deviation

Supplemental Table 5: Odds ratios (ORs)[†] and 95% confidence intervals (CIs) for lung cancer by quintiles[‡] of isothiocyanate-rich foods, EAGLE

Quintile	Case/ control	Q1 (lowest)	Case/ control	Q2	Case/ control	Q3	Case/ control	Q4	Case/ control	Q5 (highest)	p-trend
Isothiocyanate-rich foods ¹											
All	361/413	1.0 (ref)	361/398	1.09 (0.86-1.4)	364/393	1.1 (0.89-1.4)	333/392	1.0 (0.80-1.3)	386/395	1.1 (0.88-1.4)	0.55
Female	76/90	1.0 (ref)	73/90	1.0 (0.62-1.8)	71/90	0.70 (0.41-1.2)	71/90	0.87 (0.51-1.5)	68/89	1.2 (0.67-2.1)	0.86
Male	285/323	1.0 (ref)	288/308	1.1 (0.86-1.5)	293/303	1.3 (0.96-1.7)	262/302	1.1 (0.82-1.5)	318/306	1.1 (0.84-1.5)	0.52

[†] All models adjusted for age, gender, area of residence, education, bmi, alcohol consumption, total red meat intake (continuous), cigarette intensity in packs per day (quartile, distribution of controls), duration of cigarettes smoking (continuous, 0 for nonsmokers), years since last cigarette smoked (former smokers only)

[‡] Quintiles of intake: sex-specific, based on the distribution of controls

¹ Total cruciferous vegetables: Summary measure of broccoli, turnips, savoy, and black cabbage.