

Supplemental Table 1. Selected characteristics of prostate nested case-control participants

Selected Characteristics	Prostate Cancer Cases		Controls		Chi square p
	n	(%)	n	(%)	
All subjects	776	(100.0)	1,444	(100.0)	
Age (years)					
<40	12	(1.5)	17	(1.2)	
40-49	138	(17.8)	273	(18.9)	
50-59	369	(47.6)	673	(46.6)	
60-69	219	(28.2)	408	(28.3)	
≥70	38	(4.9)	73	(5.1)	0.91
State of Residence					
Iowa	520	(67.0)	991	(68.6)	
North Carolina	256	(33.0)	453	(31.4)	0.44
Applicator Type					
Private	741	(95.5)	1,363	(94.4)	
Commercial	35	(4.5)	81	(5.6)	0.27
First-degree family history of prostate cancer					
No	576	(74.2)	1,193	(82.6)	
Yes	130	(16.8)	145	(10.0)	<.0001
Prostate Cancer Stage					
I - Local	579	(74.3)	-	-	
II - Regional	156	(20.1)	-	-	
III - Distant	12	(1.5)	-	-	
IV - Not staged	29	(3.7)	-	-	-
Prostate Cancer Grade					
Well differentiated	38	(4.9)	-	-	
Moderately differentiated	547	(70.5)	-	-	
Poorly differentiated	168	(21.6)	-	-	
Undifferentiated	4	(0.5)	-	-	
Not graded	19	(2.4)	-	-	-

Supplemental Table 2. Associations between intensity-weighted lifetime days of pesticide use and prostate cancer

Chemical/functional class/Pesticide	Non-exposed ¹		Low Exposed		High Exposed		p-trend ²
	Case/Control		Case/Control	OR (95% CI) ²	Case/Control	OR (95% CI) ²	
<u>Insecticide</u>							
Carbamate							
Carbaryl	352/633	REF	115/239	0.84 (0.65-1.09)	102/239	0.63 (0.46-0.86)	0.01
Carbofuran	433/857	REF	123/224	1.09 (0.85-1.40)	120/222	1.07 (0.83-1.38)	0.63
Organochlorine (OC)							
Aldrin	481/896	REF	66/157	0.82 (0.59-1.12)	80/156	0.99 (0.74-1.34)	0.95
Chlordane	505/888	REF	64/150	0.74 (0.54-1.01)	65/150	0.74 (0.54-1.01)	0.04
DDT	373/699	REF	82/222	0.69 (0.52-0.92)	122/221	1.00 (0.77-1.30)	0.69
Heptachlor	545/1,003	REF	52/116	0.86 (0.61-1.22)	47/116	0.78 (0.54-1.11)	0.15
Lindane	606/1,089	REF	31/87	0.65 (0.43-1.00)	36/87	0.75 (0.50-1.12)	0.12
Toxaphene	585/1,084	REF	44/81	1.01 (0.69-1.48)	35/80	0.75 (0.50-1.15)	0.19
Organophosphate (OP)							
Chlorpyrifos	451/854	REF	166/278	1.14 (0.91-1.43)	133/277	0.92 (0.72-1.16)	0.39
Coumaphos	610/1,144	REF	36/66	1.02 (0.67-1.55)	30/66	0.85 (0.55-1.33)	0.49
DDVP	603/1,123	REF	44/91	0.90 (0.62-1.32)	40/91	0.82 (0.56-1.21)	0.32
Diazinon	513/964	REF	67/123	1.00 (0.73-1.38)	47/116	0.72 (0.50-1.03)	0.08
Fonofos	511/992	REF	85/158	1.06 (0.79-1.42)	92/153	1.19 (0.89-1.59)	0.25
Malathion	225/399	REF	162/329	0.88 (0.69-1.13)	152/328	0.80 (0.62-1.04)	0.13
Parathion	627/1,176	REF	30/43	1.28 (0.79-2.06)	22/43	0.91 (0.53-1.54)	0.73
Phorate	462/846	REF	80/175	0.90 (0.66-1.21)	74/174	0.82 (0.61-1.11)	0.22
Terbufos	406/803	REF	145/250	1.17 (0.92-1.50)	131/248	1.07 (0.83-1.37)	0.74
Pyrethroid							
Permethrin (crop, animal)	576/1,103	REF	78/121	1.24 (0.91-1.67)	54/121	0.86 (0.61-1.20)	0.37
<u>Herbicide</u>							
Paraquat	592/1,082	REF	33/86	0.68 (0.45-1.04)	40/85	0.78 (0.52-1.17)	0.24
Glyphosate	182/333	REF	276/540	0.93 (0.74-1.18)	275/533	0.94 (0.74-1.19)	0.78
Butylate	501/903	REF	52/152	0.63 (0.45-0.88)	72/139	0.94 (0.69-1.28)	0.72
EPTC	530/1,063	REF	82/120	1.40 (1.03-1.90)	60/120	1.02 (0.73-1.42)	0.93
Atrazine	189/375	REF	274/517	1.07 (0.84-1.35)	273/516	1.06 (0.84-1.34)	0.77
Cyanazine	391/698	REF	160/305	0.91 (0.71-1.16)	129/305	0.73 (0.56-0.94)	0.02
Metribuzin	433/792	REF	88/188	0.89 (0.67-1.19)	86/187	0.87 (0.65-1.15)	0.34
2,4,5-T	500/898	REF	85/153	1.02 (0.77-1.36)	56/153	0.67 (0.48-0.93)	0.02
2,4-D	135/218	REF	293/583	0.82 (0.63-1.06)	295/583	0.82 (0.63-1.07)	0.50
Dicamba	324/573	REF	172/362	0.81 (0.63-1.04)	176/361	0.82 (0.64-1.06)	0.29
Alachlor	277/546	REF	200/388	1.02 (0.81-1.28)	194/387	0.99 (0.79-1.24)	0.86
Metolachlor	369/712	REF	190/304	1.21 (0.97-1.52)	119/298	0.77 (0.60-0.99)	0.02
Pendimethalin	474/856	REF	62/170	0.66 (0.48-0.90)	89/167	0.95 (0.71-1.25)	0.74
Trifluralin	312/583	REF	177/358	0.93 (0.74-1.18)	187/356	0.99 (0.78-1.25)	0.95
Imazethapyr	411/773	REF	161/263	1.17 (0.91-1.50)	105/262	0.77 (0.58-1.01)	0.03
Chlorimuron-ethyl	487/955	REF	78/140	1.11 (0.82-1.50)	65/139	0.91 (0.66-1.25)	0.58
<u>Fungicide</u>							
Benomyl	662/1,242	REF	17/35	0.87 (0.48-1.58)	19/34	0.99 (0.55-1.76)	0.96
Captan	623/1,144	REF	28/64	0.81 (0.51-1.29)	33/64	0.94 (0.61-1.45)	0.79
Metalaxyl	590/1,113	REF	36/76	0.87 (0.57-1.31)	45/75	1.06 (0.70-1.61)	0.75
<u>Fumigant</u>							
Methyl bromide	637/1,215	REF	45/101	0.83 (0.56-1.23)	61/98	1.15 (0.79-1.68)	0.38
<u>Other</u>							
Petroleum oil/distillate	488/964	REF	52/103	1.03 (0.72-1.46)	61/103	1.20 (0.86-1.68)	0.28

Abbreviations: DDT (dichlorodiphenyltrichloroethane), DDVP (dichlorvos), EPTC (S-ethyl dipropylthiocarbamate),

2,4,5-T (2,4,5-trichlorophenoxyacetic acid), 2,4-D (2,4-dichlorophenoxyacetic acid)

^aReferent group

^bAdjusted for age and state

Supplemental Table 3. Prostate cancer risk in relation the lipid metabolism variants included in our interaction analyses¹ (sorted by Gene, SNP)

Gene	SNP	Minor Allele	MinorAllele		OR	(95% CI)	p-trend	FDR p-trend
			Frequency					
A4GALT	rs6002910	T	0.20		1.14	(0.98-1.33)	0.09	0.09
	rs8136914	G	0.25		1.14	(0.98-1.31)	0.08	0.09
ABCA1	rs2065412	C	0.42		1.14	(1.00-1.29)	0.04	0.20
	rs2246293	G	0.46		0.92	(0.81-1.04)	0.17	0.20
	rs2437820	G	0.45		1.09	(0.97-1.24)	0.15	0.20
	rs2472496	G	0.42		1.09	(0.96-1.23)	0.20	0.20
	rs2482430	T	0.15		1.20	(1.02-1.40)	0.03	0.20
	rs2515617	A	0.44		0.91	(0.81-1.03)	0.15	0.20
	rs2515629	G	0.17		0.87	(0.73-1.03)	0.10	0.20
	rs2740484	T	0.35		1.11	(0.98-1.26)	0.11	0.20
	rs3905001	C	0.25		1.10	(0.96-1.27)	0.16	0.20
	rs4149313	C	0.13		0.88	(0.73-1.07)	0.20	0.20
	rs4149336	G	0.19		0.87	(0.74-1.02)	0.09	0.20
rs4149338	A	0.30		0.88	(0.77-1.01)	0.08	0.20	
ABCG5	rs10205816	G	0.26		1.16	(1.01-1.33)	0.04	0.04
	rs1835815	T	0.28		1.22	(1.07-1.39)	0.004	0.01
	rs2278356	C	0.31		1.22	(1.07-1.40)	0.003	0.01
	rs4148214	T	0.46		0.87	(0.77-0.99)	0.03	0.04
	rs4245786	G	0.23		1.12	(0.97-1.30)	0.12	0.12
	rs4952683	G	0.19		1.21	(1.04-1.41)	0.02	0.04
	rs6709904	G	0.10		1.23	(1.02-1.49)	0.03	0.04
ABCG8	rs17606027	C	0.10		1.26	(1.04-1.52)	0.02	0.11
	rs2954804	T	0.28		0.88	(0.76-1.01)	0.06	0.13
	rs2954805	C	0.31		1.11	(0.97-1.28)	0.13	0.16
	rs2954807	T	0.28		1.10	(0.96-1.26)	0.17	0.17
	rs4148217	A	0.21		0.87	(0.75-1.02)	0.08	0.13
	rs4953028	A	0.43		1.12	(0.99-1.27)	0.08	0.13
ACSL5	rs11195943	T	0.10		1.25	(1.03-1.52)	0.02	0.08
	rs12098576	T	0.14		0.87	(0.72-1.04)	0.12	0.14
	rs17674469	G	0.12		1.18	(0.98-1.41)	0.08	0.14
	rs2290965	C	0.11		1.26	(1.04-1.52)	0.02	0.08
	rs2419621	T	0.27		0.89	(0.78-1.03)	0.12	0.14
rs2419627	T	0.27		0.89	(0.77-1.03)	0.10	0.14	
ACSL5	rs876873	C	0.16		0.89	(0.74-1.06)	0.17	0.17
ADIPOR1	rs12733285	T	0.28		1.12	(0.98-1.28)	0.09	0.11
	rs1342387	T	0.43		1.14	(1.00-1.29)	0.05	0.11
	rs16850799	A	0.23		0.89	(0.76-1.03)	0.11	0.11
	rs2275737	A	0.41		1.13	(0.99-1.28)	0.06	0.11
ADIPOR2	rs4766415	T	0.48		1.11	(0.98-1.25)	0.11	0.11
ADRB2	rs17640574	A	0.19		0.89	(0.76-1.04)	0.15	0.18
	rs30297	A	0.14		0.88	(0.73-1.05)	0.16	0.18
	rs877741	C	0.18		1.12	(0.95-1.31)	0.18	0.18
ALOX12	rs1042356	G	0.41		1.10	(0.97-1.25)	0.13	0.14
	rs311740	C	0.36		1.10	(0.97-1.26)	0.14	0.14
	rs312466	A	0.40		1.11	(0.98-1.27)	0.10	0.14
	rs6502997	A	0.35		1.13	(0.99-1.28)	0.07	0.14
	rs7338	C	0.16		0.82	(0.69-0.99)	0.03	0.14
ALOX15	rs916055	G	0.35		0.91	(0.79-1.04)	0.16	0.16
ALOX15B	rs2816	T	0.47		1.11	(0.98-1.26)	0.10	0.19
	rs4287627	A	0.14		1.12	(0.94-1.34)	0.19	0.19
	rs6503072	C	0.19		1.11	(0.95-1.30)	0.18	0.19
ALOX5	rs7099684	A	0.20		1.13	(0.96-1.32)	0.13	0.13
ALOX5AP	rs4238139	G	0.25		1.14	(0.99-1.31)	0.07	0.15
	rs4319601	T	0.37		1.14	(1.01-1.30)	0.04	0.15
	rs9285076	A	0.20		1.11	(0.95-1.29)	0.19	0.19
	rs9579645	C	0.12		0.86	(0.71-1.05)	0.13	0.17
ALOXE3	rs3027208	T	0.14		1.18	(1.00-1.40)	0.06	0.09
	rs3027279	G	0.40		1.12	(0.99-1.28)	0.07	0.09
	rs4792239	G	0.23		1.12	(0.97-1.29)	0.13	0.15
	rs6503086	G	0.44		0.83	(0.73-0.94)	0.003	0.02
	rs7215288	C	0.17		1.20	(1.03-1.41)	0.02	0.06
	rs7215658	C	0.20		1.20	(1.03-1.40)	0.02	0.06
	rs8067165	C	0.39		1.09	(0.96-1.23)	0.20	0.20
	rs9912048	T	0.32		0.87	(0.76-1.00)	0.05	0.09
AMACR	rs299602	A	0.31		1.17	(1.03-1.34)	0.02	0.04
	rs6863657	A	0.11		0.77	(0.62-0.96)	0.02	0.04
	rs840385	C	0.37		1.13	(1.00-1.28)	0.06	0.06
	rs840386	T	0.34		1.13	(1.00-1.29)	0.06	0.06
APOB	rs515135	T	0.17		1.12	(0.95-1.31)	0.18	0.18
APOE	rs2075650	G	0.15		0.88	(0.74-1.06)	0.18	0.18
	rs405697	A	0.23		1.15	(1.00-1.33)	0.06	0.12
ATP1B1	rs1200131	A	0.32		0.87	(0.76-1.00)	0.05	0.10

	rs1200132	G	0.22	0.89	(0.76-1.04)	0.13	0.13
BPI	rs1341022	G	0.45	1.10	(0.97-1.25)	0.14	0.17
	rs1341023	C	0.45	1.10	(0.97-1.25)	0.13	0.17
	rs4811656	G	0.20	0.88	(0.75-1.03)	0.10	0.17
	rs6024718	A	0.18	1.14	(0.97-1.33)	0.11	0.17
	rs6069597	T	0.46	1.09	(0.96-1.23)	0.18	0.18
CAV1	rs10270569	T	0.26	0.88	(0.76-1.01)	0.07	0.15
	rs1049337	T	0.27	1.12	(0.98-1.28)	0.11	0.15
	rs1052990	G	0.35	0.91	(0.80-1.03)	0.15	0.15
	rs4236601	A	0.27	0.90	(0.78-1.03)	0.13	0.15
	rs8713	C	0.17	0.89	(0.75-1.05)	0.15	0.15
	rs8940	G	0.17	0.85	(0.72-1.01)	0.06	0.15
CETP	rs12708974	T	0.11	1.15	(0.95-1.39)	0.15	0.15
	rs247615	G	0.21	1.17	(1.01-1.35)	0.04	0.15
	rs289742	C	0.13	0.85	(0.70-1.03)	0.09	0.15
	rs3764261	A	0.33	0.90	(0.79-1.03)	0.12	0.15
CYP2W1	rs1007766	G	0.49	1.14	(1.01-1.29)	0.04	0.08
	rs10257195	T	0.48	1.15	(1.02-1.30)	0.02	0.07
	rs10264122	T	0.39	1.11	(0.98-1.26)	0.10	0.15
	rs10272099	C	0.33	0.91	(0.80-1.04)	0.16	0.16
	rs10274964	T	0.45	0.87	(0.76-0.98)	0.02	0.07
	rs7807150	A	0.13	0.87	(0.72-1.05)	0.15	0.16
CYP4F11	rs12977516	C	0.47	0.92	(0.81-1.04)	0.18	0.18
	rs2305804	G	0.12	1.13	(0.95-1.36)	0.17	0.18
CYP4F12	rs11085969	A	0.19	1.12	(0.96-1.30)	0.15	0.15
	rs12976669	C	0.30	0.89	(0.77-1.02)	0.08	0.15
CYP4F2	rs2018454	G	0.17	1.14	(0.97-1.34)	0.11	0.12
	rs2886297	A	0.32	0.90	(0.79-1.03)	0.12	0.12
CYP4X1	rs12041262	A	0.27	0.88	(0.77-1.02)	0.09	0.15
	rs9728169	A	0.36	0.91	(0.80-1.04)	0.15	0.15
CYP4Z1	rs11211436	A	0.27	0.90	(0.78-1.03)	0.13	0.13
ENPP1	rs1409183	G	0.13	1.20	(1.00-1.44)	0.05	0.13
	rs6925433	A	0.33	0.91	(0.79-1.03)	0.14	0.17
	rs703184	C	0.14	1.18	(0.99-1.41)	0.06	0.13
	rs7753048	T	0.11	0.84	(0.68-1.03)	0.09	0.13
	rs9493099	C	0.28	0.87	(0.76-1.01)	0.07	0.13
	rs9493105	T	0.11	0.87	(0.70-1.07)	0.19	0.19
FASN	rs1140616	G	0.45	0.92	(0.81-1.04)	0.19	0.19
	rs4246444	T	0.25	0.86	(0.74-0.99)	0.04	0.12
	rs8066956	T	0.22	0.90	(0.78-1.05)	0.19	0.19
FOXA3	rs11669442	C	0.31	1.18	(1.03-1.35)	0.01	0.04
	rs7258364	C	0.34	0.90	(0.79-1.02)	0.11	0.11
	rs8103278	A	0.33	1.15	(1.01-1.30)	0.04	0.06
FOXO3A	rs12207868	G	0.11	1.14	(0.94-1.38)	0.19	0.19
GCG	rs2892827	T	0.22	0.90	(0.77-1.04)	0.16	0.18
	rs7599142	T	0.42	1.09	(0.96-1.23)	0.18	0.18
GHRL	rs2619507	G	0.13	0.86	(0.71-1.04)	0.12	0.12
	rs42451	T	0.28	1.12	(0.98-1.29)	0.09	0.12
	rs696220	A	0.38	0.87	(0.77-0.99)	0.04	0.11
LBP	rs1609800	T	0.45	1.16	(1.03-1.31)	0.02	0.06
	rs1619859	A	0.48	1.11	(0.99-1.26)	0.08	0.13
	rs1739640	T	0.47	1.09	(0.96-1.23)	0.19	0.19
	rs1780623	T	0.40	0.85	(0.74-0.96)	0.01	0.06
	rs1780629	C	0.27	0.89	(0.77-1.03)	0.11	0.13
	rs2425362	C	0.36	0.90	(0.79-1.02)	0.10	0.13
	rs745144	T	0.44	1.13	(1.00-1.28)	0.05	0.11
LDLR	rs1799898	T	0.12	1.16	(0.96-1.386)	0.12	0.12
	rs8110695	A	0.23	0.87	(0.75-1.014)	0.08	0.12
LPL	rs270	A	0.17	0.89	(0.75-1.056)	0.19	0.19
	rs3200218	G	0.25	0.90	(0.78-1.04)	0.15	0.19
	rs326	G	0.29	1.10	(0.96-1.253)	0.18	0.19
LRP1	rs10876966	T	0.21	1.11	(0.96-1.284)	0.17	0.17
	rs1800159	A	0.30	1.17	(1.03-1.334)	0.02	0.08
	rs6581128	A	0.32	1.11	(0.97-1.258)	0.13	0.16
	rs7956957	C	0.35	1.12	(0.99-1.273)	0.08	0.15
	rs7978567	T	0.33	1.12	(0.98-1.271)	0.09	0.15
LRP2	rs1003456	A	0.19	0.84	(0.71-0.99)	0.04	0.09
	rs10490131	G	0.13	1.24	(1.05-1.47)	0.01	0.04
	rs2111187	T	0.29	0.89	(0.77-1.02)	0.09	0.14
	rs2239595	A	0.11	1.33	(1.11-1.61)	0.002	0.04
	rs2239602	C	0.10	1.18	(0.97-1.44)	0.11	0.15
	rs2247506	C	0.19	1.21	(1.04-1.41)	0.01	0.04
	rs2268365	C	0.11	1.27	(1.05-1.53)	0.01	0.04
	rs2268372	A	0.18	1.22	(1.04-1.42)	0.01	0.04
	rs2268373	G	0.23	1.12	(0.97-1.29)	0.13	0.15
	rs2302694	A	0.11	0.77	(0.62-0.96)	0.02	0.05

	rs2544374	G	0.19	1.16	(1.00-1.35)	0.05	0.09
	rs2673164	C	0.28	0.83	(0.72-0.95)	0.01	0.04
	rs741378	G	0.45	1.11	(0.97-1.25)	0.12	0.15
	rs7575260	A	0.22	0.89	(0.77-1.04)	0.14	0.15
	rs830958	G	0.12	0.82	(0.67-1.01)	0.06	0.11
	rs831004	C	0.42	0.90	(0.79-1.02)	0.10	0.14
	rs9789747	C	0.17	1.11	(0.95-1.30)	0.19	0.19
	rs990626	G	0.25	0.90	(0.77-1.04)	0.14	0.15
LRP5	rs312016	T	0.28	1.10	(0.96-1.26)	0.17	0.20
	rs312788	G	0.41	0.91	(0.80-1.04)	0.15	0.20
	rs729635	C	0.11	0.87	(0.71-1.08)	0.20	0.20
	rs7944040	C	0.45	0.90	(0.79-1.02)	0.10	0.20
LRP6	rs11054724	G	0.47	0.92	(0.81-1.04)	0.18	0.18
LTA4H	rs2660846	A	0.19	0.89	(0.76-1.05)	0.17	0.17
	rs2660848	C	0.23	0.89	(0.77-1.04)	0.14	0.17
LTC4S	rs1019443	G	0.44	1.10	(0.97-1.24)	0.15	0.15
	rs3797762	G	0.34	1.13	(0.99-1.28)	0.07	0.14
NR1H3	rs2291119	T	0.30	0.91	(0.79-1.04)	0.18	0.18
	rs3758674	C	0.13	1.23	(1.03-1.46)	0.02	0.05
PFKP	rs11251694	C	0.19	1.15	(0.98-1.33)	0.08	0.17
	rs2306305	G	0.25	0.90	(0.78-1.04)	0.14	0.19
	rs6602024	A	0.11	0.80	(0.65-0.99)	0.04	0.17
	rs9423477	A	0.46	1.09	(0.96-1.23)	0.19	0.19
PPARA	rs4253655	A	0.15	1.24	(1.05-1.46)	0.01	0.02
	rs6007662	G	0.25	1.20	(1.04-1.38)	0.01	0.02
	rs8138102	G	0.20	1.12	(0.96-1.31)	0.14	0.14
PPARD	rs4713858	A	0.15	0.89	(0.74-1.06)	0.20	0.20
PPARG	rs13090265	G	0.12	1.17	(0.97-1.40)	0.10	0.15
	rs2920499	G	0.48	0.91	(0.81-1.03)	0.15	0.15
PTGDS	rs11145951	T	0.48	0.92	(0.81-1.04)	0.17	0.17
PTGIS	rs576119	G	0.26	1.10	(0.96-1.26)	0.19	0.19
	rs6095543	C	0.16	1.14	(0.97-1.34)	0.11	0.19
RETN	rs10401670	T	0.44	1.09	(0.96-1.23)	0.19	0.19
	rs12610253	G	0.32	1.13	(0.99-1.28)	0.07	0.10
	rs7408174	C	0.30	0.85	(0.75-0.98)	0.02	0.07
RXRA	rs10881582	A	0.23	1.11	(0.96-1.28)	0.17	0.19
	rs12339187	G	0.18	1.11	(0.95-1.30)	0.19	0.19
RXRB	rs2744505	G	0.14	1.15	(0.97-1.37)	0.12	0.12
	rs421446	G	0.27	1.15	(1.00-1.33)	0.05	0.12
	rs9277935	T	0.20	1.14	(0.98-1.33)	0.08	0.12
SCARB1	rs10744182	C	0.41	0.89	(0.79-1.02)	0.09	0.18
	rs10846745	G	0.43	1.09	(0.96-1.23)	0.17	0.18
	rs4765180	T	0.44	0.90	(0.79-1.02)	0.10	0.18
	rs4765622	A	0.46	1.09	(0.96-1.23)	0.18	0.18
	rs4765633	A	0.43	1.12	(0.99-1.27)	0.06	0.18
	rs7954697	C	0.43	1.09	(0.96-1.24)	0.17	0.18
	rs838873	C	0.15	0.82	(0.68-0.98)	0.03	0.18
SEC14L2	rs1061664	A	0.20	1.12	(0.96-1.30)	0.14	0.14
	rs2072159	A	0.25	1.14	(0.99-1.31)	0.06	0.13
SIM1	rs1847912	G	0.25	0.91	(0.79-1.05)	0.20	0.20
	rs241815	G	0.14	1.14	(0.95-1.36)	0.15	0.20
	rs3798483	C	0.19	1.18	(1.01-1.38)	0.03	0.10
TBXAS1	rs11761051	C	0.25	1.14	(0.99-1.32)	0.07	0.12
	rs11772680	C	0.12	0.87	(0.71-1.06)	0.17	0.19
	rs12667080	A	0.16	1.13	(0.96-1.34)	0.15	0.18
	rs2284212	A	0.28	1.22	(1.07-1.40)	0.004	0.04
	rs3779130	C	0.35	1.16	(1.02-1.32)	0.03	0.09
	rs3801148	C	0.48	1.16	(1.03-1.31)	0.02	0.09
	rs3801150	T	0.32	1.15	(1.00-1.31)	0.04	0.09
	rs4726499	G	0.25	0.91	(0.78-1.05)	0.19	0.19
	rs7785584	C	0.34	0.90	(0.79-1.03)	0.11	0.16
	rs7806848	C	0.32	1.15	(1.01-1.31)	0.04	0.09
UCP1	rs7696769	C	0.32	0.90	(0.79-1.03)	0.14	0.14
UCP2	rs1685354	G	0.26	0.85	(0.74-0.98)	0.03	0.08
	rs1685356	T	0.45	1.12	(0.99-1.26)	0.08	0.08
	rs2306820	C	0.31	0.86	(0.75-0.98)	0.03	0.08
	rs2632723	C	0.22	0.87	(0.75-1.01)	0.07	0.08
	rs599277	A	0.46	0.89	(0.78-1.01)	0.06	0.08
	rs647126	G	0.49	0.89	(0.78-1.01)	0.07	0.08
UCP3	rs1726764	C	0.47	1.17	(1.04-1.33)	0.01	0.03
	rs2075577	G	0.44	1.12	(0.99-1.26)	0.07	0.07
	rs2734827	A	0.35	0.88	(0.77-1.00)	0.05	0.07

¹ Variants with a Hardy Weinberg Equilibrium p-value>0.001, a minor allele frequency >=0.1, and a p-trend for the additive effect of each allele<0.2

Supplemental Table 4. Associations between intensity-weighted lifetime days of pesticide use and prostate cancer risk stratified by SNPs (sorted by Pesticide, Gene, SNP)

Pesticide	Gene	SNP	Genotype	Non-exposed		Low Exposed				High Exposed				Exposure Trend			p-interaction ¹	FDR p-interaction ¹
				Case/Control	REF	Case/Control	OR ¹	(95% CI) ¹	p ¹	Case/Control	OR ¹	(95% CI) ¹	p ¹	OR ¹	(95% CI) ¹	p ¹		
<u>Insecticides</u>																		
Carbofuran	A4GALT	rs8136914	AA	210/477	REF	69/128	1.22	(0.87-1.71)	0.25	72/115	1.43	(1.02-2.00)	0.04	1.20	(1.02-1.41)	0.03	0.02	0.03
			AG+GG	222/378	REF	54/93	1.01	(0.69-1.47)	0.96	48/107	0.76	(0.52-1.12)	0.17	0.89	(0.75-1.07)	0.22		
	LDLR	rs8110695	TT	285/509	REF	76/132	1.04	(0.75-1.43)	0.82	64/138	0.83	(0.60-1.16)	0.27	0.93	(0.80-1.09)	0.36		
			AT+AA	145/342	REF	47/92	1.17	(0.78-1.76)	0.44	55/83	1.58	(1.06-2.33)	0.02	1.24	(1.03-1.51)	0.02		
	UCP2	rs2632723	TT	263/528	REF	81/129	1.26	(0.92-1.73)	0.15	91/132	1.39	(1.02-1.88)	0.04	1.19	(1.02-1.38)	0.02		
			CT+CC	170/327	REF	42/93	0.87	(0.58-1.32)	0.51	28/89	0.61	(0.38-0.97)	0.04	0.80	(0.64-0.99)	0.04		
Fonofos	ABCG8	rs2954807	GG	236/509	REF	50/67	1.62	(1.07-2.45)	0.02	50/70	1.57	(1.04-2.37)	0.03	1.30	(1.07-1.58)	0.01	0.01	0.02
			GT+TT	275/483	REF	35/91	0.68	(0.44-1.05)	0.08	42/83	0.93	(0.61-1.40)	0.71	0.91	(0.75-1.12)	0.38		
	rs4953028	GG	141/345	REF	26/38	1.73	(0.99-3.00)	0.05	36/46	1.94	(1.17-3.20)	0.01	1.43	(1.12-1.82)	0.004			
		AG+AA	368/644	REF	59/120	0.89	(0.63-1.25)	0.50	56/106	0.95	(0.66-1.36)	0.77	0.96	(0.81-1.14)	0.63			
	BPI	rs6024718	GG	341/646	REF	53/121	0.87	(0.60-1.24)	0.43	50/103	0.96	(0.66-1.40)	0.84	0.96	(0.80-1.15)	0.66		
			AG+AA	170/346	REF	32/36	1.77	(1.05-2.99)	0.03	42/50	1.64	(1.03-2.61)	0.04	1.33	(1.06-1.66)	0.01		
Parathion	ACSL5	rs2419627	CC	365/629	REF	16/18	1.50	(0.75-3.00)	0.25	18/15	2.04	(1.01-4.15)	0.05	1.44	(1.05-1.99)	0.03	0.003	0.02
			CT+TT	262/545	REF	14/25	1.13	(0.57-2.21)	0.73	4/28	0.27	(0.09-0.79)	0.02	0.66	(0.45-0.99)	0.04		
Permethrin	ALOX5AP	rs9579645	AA	466/841	REF	56/101	0.99	(0.70-1.40)	0.94	37/98	0.67	(0.45-1.00)	0.05	0.85	(0.71-1.02)	0.08	0.01	0.02
			AC+CC	109/260	REF	20/20	2.66	(1.35-5.25)	0.005	16/23	1.98	(0.98-3.98)	0.06	1.57	(1.14-2.17)	0.01		
Terbufos	ADIPOR1	rs12733285	CC	183/421	REF	74/123	1.39	(0.98-1.96)	0.07	80/131	1.43	(1.02-1.99)	0.04	1.21	(1.03-1.43)	0.02	0.01	0.02
			CT+TT	223/372	REF	70/126	0.96	(0.68-1.35)	0.80	51/117	0.75	(0.52-1.10)	0.14	0.88	(0.74-1.05)	0.16		
	ALOX12	rs1042356	AA	135/240	REF	42/92	0.84	(0.55-1.30)	0.44	39/101	0.71	(0.46-1.10)	0.13	0.84	(0.68-1.04)	0.12		
			AG+GG	270/563	REF	103/156	1.39	(1.04-1.87)	0.03	92/146	1.33	(0.98-1.80)	0.06	1.18	(1.02-1.37)	0.03		
	ALOXE3	rs3027208	CC	307/576	REF	102/195	0.99	(0.74-1.31)	0.93	81/188	0.81	(0.60-1.10)	0.18	0.91	(0.79-1.05)	0.22		
			CT+TT	99/227	REF	43/55	1.86	(1.16-2.99)	0.01	50/60	2.00	(1.28-3.15)	0.00	1.45	(1.16-1.81)	0.001		
	rs7215288	TT	280/532	REF	94/187	0.94	(0.70-1.26)	0.67	71/165	0.80	(0.58-1.11)	0.18	0.90	(0.77-1.05)	0.19			
		CT+CC	120/263	REF	50/59	2.02	(1.30-3.16)	0.002	60/77	1.77	(1.18-2.67)	0.01	1.38	(1.13-1.68)	0.002			
	LTC4S	rs3797762	AA	147/371	REF	66/96	1.77	(1.21-2.58)	0.003	60/101	1.55	(1.06-2.27)	0.02	1.29	(1.07-1.55)	0.01		
			AG+GG	252/423	REF	79/153	0.89	(0.64-1.22)	0.47	70/145	0.82	(0.59-1.14)	0.24	0.90	(0.77-1.06)	0.22		
	SEC14L2	rs2072159	GG	201/457	REF	83/139	1.38	(0.99-1.92)	0.05	82/132	1.43	(1.03-1.99)	0.03	1.21	(1.03-1.42)	0.02		
			AG+AA	204/342	REF	61/108	0.97	(0.67-1.4)	0.88	47/115	0.70	(0.48-1.03)	0.07	0.86	(0.71-1.03)	0.10		
UCP2	rs2306820	TT	194/399	REF	81/97	1.73	(1.21-2.46)	0.002	76/103	1.53	(1.08-2.17)	0.02	1.28	(1.08-1.52)	0.005			
		CT+CC	212/404	REF	64/152	0.83	(0.59-1.17)	0.29	55/144	0.75	(0.52-1.07)	0.11	0.86	(0.72-1.02)	0.09			
rs599277	GG	124/248	REF	49/55	1.80	(1.13-2.84)	0.01	49/63	1.58	(1.02-2.46)	0.04	1.30	(1.05-1.61)	0.02				
	AG+AA	281/553	REF	96/195	0.99	(0.74-1.33)	0.96	82/184	0.90	(0.66-1.21)	0.47	0.95	(0.82-1.10)	0.51				
<u>Herbicides</u>																		
Alachlor	ABCG5	rs1835815	CC	141/270	REF	90/186	0.92	(0.66-1.29)	0.64	75/213	0.68	(0.48-0.95)	0.02	0.83	(0.70-0.98)	0.03	0.002	0.02
			CT+TT	136/276	REF	110/202	1.09	(0.80-1.50)	0.58	119/174	1.37	(1.01-1.88)	0.05	1.17	(1.00-1.37)	0.05		

Atazine	LDLR	rs8110695	TT	128/223	REF	181/307	1.04	(0.78-1.40)	0.79	154/315	0.86	(0.64-1.16)	0.33	0.92	(0.79-1.07)	0.27	0.02	0.03
			AT+AA	60/150	REF	92/207	1.11	(0.75-1.66)	0.59	117/199	1.49	(1.01-2.19)	0.04	1.23	(1.02-1.49)	0.03		
	LRP1	rs1800159	GG	91/173	REF	117/261	0.85	(0.60-1.19)	0.34	108/273	0.74	(0.52-1.05)	0.09	0.86	(0.73-1.02)	0.09	0.01	0.04
			AG+AA	98/202	REF	156/254	1.32	(0.95-1.82)	0.10	165/241	1.46	(1.06-2.02)	0.02	1.20	(1.02-1.40)	0.02		
Dicamba	ALOX12	rs7338	TT	254/386	REF	116/246	0.70	(0.52-0.94)	0.02	118/264	0.66	(0.49-0.89)	0.01	0.81	(0.70-0.94)	0.005	0.0001	0.001
			CT+CC	59/173	REF	54/112	1.30	(0.80-2.11)	0.29	56/90	1.65	(1.01-2.72)	0.05	1.29	(1.00-1.65)	0.05		
EPTC	A4GALT	rs8136914	AA	260/593	REF	53/63	1.96	(1.31-2.94)	0.001	39/58	1.57	(1.01-2.44)	0.04	1.36	(1.11-1.67)	0.003	0.001	0.001
			AG+GG	269/465	REF	29/56	0.93	(0.58-1.51)	0.78	21/62	0.61	(0.36-1.03)	0.06	0.81	(0.64-1.02)	0.08		
	ALOX15	rs916055	AA	242/433	REF	34/45	1.38	(0.85-2.23)	0.19	18/58	0.56	(0.32-0.99)	0.05	0.85	(0.67-1.09)	0.19	0.01	0.01
			AG+GG	274/592	REF	45/70	1.47	(0.98-2.22)	0.06	42/58	1.63	(1.06-2.50)	0.02	1.31	(1.07-1.60)	0.01		
Glyphosate	ALOX5AP	rs9579645	AA	151/241	REF	227/433	0.84	(0.64-1.09)	0.18	200/410	0.78	(0.59-1.02)	0.07	0.89	(0.77-1.02)	0.08	0.004	0.02
			AC+CC	31/91	REF	48/109	1.25	(0.73-2.16)	0.42	71/120	1.74	(1.03-2.93)	0.04	1.33	(1.03-1.72)	0.03		
Petroleum Oil/Distillate	ACSL5	rs12098576	GG	379/715	REF	35/71	0.96	(0.63-1.47)	0.86	40/84	0.93	(0.62-1.39)	0.72	0.96	(0.80-1.16)	0.70	0.01	0.04
			GT+TT	109/249	REF	17/32	1.20	(0.64-2.26)	0.57	21/19	2.54	(1.31-4.92)	0.01	1.51	(1.11-2.05)	0.01		
		rs876873	TT	369/691	REF	32/69	0.90	(0.58-1.39)	0.62	38/80	0.93	(0.61-1.39)	0.71	0.95	(0.79-1.15)	0.61	0.01	0.04
			CT+CC	119/269	REF	20/34	1.33	(0.73-2.41)	0.35	23/21	2.46	(1.31-4.63)	0.01	1.52	(1.14-2.04)	0.005		
	ALOX5	rs7099684	TT	281/602	REF	33/63	1.19	(0.76-1.86)	0.45	43/60	1.56	(1.03-2.38)	0.04	1.24	(1.02-1.51)	0.03	0.02	0.02
			AT+AA	200/346	REF	19/36	0.91	(0.51-1.63)	0.76	14/41	0.60	(0.32-1.13)	0.12	0.80	(0.60-1.07)	0.13		
	LRP1	rs1800159	GG	229/477	REF	18/51	0.74	(0.42-1.31)	0.31	20/58	0.72	(0.42-1.23)	0.23	0.83	(0.65-1.07)	0.15	0.01	0.03
			AG+AA	258/484	REF	34/52	1.26	(0.80-2.00)	0.32	41/45	1.76	(1.12-2.77)	0.01	1.32	(1.07-1.63)	0.01		
		rs6581128	CC	227/452	REF	21/49	0.87	(0.51-1.49)	0.61	18/51	0.70	(0.40-1.23)	0.22	0.84	(0.65-1.09)	0.20	0.02	0.03
			AC+AA	261/509	REF	31/54	1.17	(0.71-1.87)	0.52	43/50	1.73	(1.12-2.68)	0.01	1.29	(1.05-1.59)	0.01		
		rs7956957	GG	209/417	REF	14/44	0.66	(0.35-1.23)	0.19	17/46	0.75	(0.42-1.34)	0.33	0.83	(0.63-1.09)	0.17	0.02	0.03
			CG+CC	279/547	REF	38/59	1.32	(0.85-2.03)	0.22	44/57	1.57	(1.03-2.40)	0.04	1.26	(1.04-1.54)	0.02		
		rs7978567	CC	219/437	REF	16/48	0.69	(0.38-1.25)	0.22	20/49	0.83	(0.48-1.43)	0.49	0.87	(0.67-1.13)	0.29	0.03	0.04
			CT+TT	268/527	REF	36/55	1.34	(0.86-2.10)	0.20	41/54	1.56	(1.01-2.41)	0.05	1.26	(1.03-1.55)	0.02		
Fungicide																		
Metalaxyl	LTC4S	rs1019443	AA	159/353	REF	19/16	2.65	(1.32-5.34)	0.01	16/21	1.76	(0.84-3.70)	0.14	1.51	(1.07-2.13)	0.02	0.01	0.02
			AG+GG	430/753	REF	17/59	0.48	(0.27-0.84)	0.01	29/53	0.85	(0.51-1.42)	0.54	0.83	(0.65-1.05)	0.13		

¹ Risk estimates adjusted for age and state