Supplementary Information

Supplementary table 1 – Characteristics of 1146 cases and 1804 controls included in the ProtecT GWAS

	Control n=1804	Case n=1146	P-value*
Age - mean (SD)[a]	61.6 (5.2)	62.2 (5.1)	0.002
Social Class[b] – n(%)			
Managerial and professional	806 (44.7)	536 (46.8)	0.23
Intermediate	266 (14.8)	176 (15.4)	
Working	695 (38.5)	420 (36.7)	
Unknown	37 (2.1)	14 (1.2)	
Recruited Centre[c] - n(%)			
Birmingham	83 (4.6)	53 (4.6)	0.52
Bristol	176 (9.7)	118 (10.3)	
Cardiff	261 (14.5)	152 (13.3)	
Cambridge	150 (8.3)	86 (7.5)	
Edinburgh	100 (5.5)	56 (4.9)	
Leicester	263 (14.6)	159 (13.9)	
Leeds	191 (10.6)	121 (10.6)	
Newcastle	242 (13.4)	191 (16.7)	
Sheffield	338 (18.7)	210 (18.3)	
PSA level ng/ml - median (IQR)[d]	0.6 (0.4,1.3)	5 (3.8,8.2)	<0.001
PSA Control Grouping			
<0.5 ng/ml (n=770)	0.4 (0.3,0.4)	-	
≥0.5 & < 3 ng/ml (n=941)	1.1 (0.7,1.7)	-	
≥3 ng/ml (n=93)	3.9 (3.4,5.6)	-	
Family History[e]- n(%)			
Yes	90 (5.0)	83 (7.2)	0.02
No	1522 (84.4)	930 (81.2)	
Unknown	192 (10.6)	133 (11.6)	
Gleason Score- n(%)			
5	-	7 (0.6)	
6	-	794 (69.3)	
7	-	274 (23.9)	
8	-	49 (4.3)	
9	-	20 (1.8)	
Missing	-	2 (0.2)	
Tumour Stage- n(%)			
T1	-	695 (60.7)	
T2	-	249 (21.7)	
T3	-	107 (9.3)	
T4	-	4 (0.4)	
No code assigned/Missing	-	91 (7.9)	

[a] SD – Standard Deviation
[b] Three-class social categorization from Rose and O'Reilly (1998; 20)[1]
[c] Centre at which the participant was recruited

[1] Rose D, O'Reilly. The ESRC Review of Government Social Classifications. London: Office of National Statistics; 1998.

[d] Median and inter quartile range (IQR) reported as data not normally distributed. Wilcoxon rank-sum test used for p-value
[e] Family history of prostate cancer is coded yes if father or brother were diagnosed with prostate cancer
* Chi^2 and t-tests were used to test for differences, unless otherwise stated

Supplementary table 2:381 SNPs associated with PrCa with $P<5 \times 10^{-5}$ in the ProtecT GWAS

SNP	Chr	Position	PROTECT (Discovery)					
			Effect Allele	Beta	SE	LCI	UCI	Pvalue
rs12682344	8	128175966	G	0.57	0.13	0.32	0.83	1.28E-05
rs6983561	8	128176062	A	-0.57	0.13	-0.83	-0.32	1.29E-05
rs16901948	8	128176283	A	0.57	0.13	0.31	0.83	1.36E-05
rs16901949	8	128176335	A	-0.56	0.13	-0.82	-0.31	1.59E-05
rs16901950	8	128176425	A	0.56	0.13	0.31	0.82	1.60E-05
rs16901952	8	128176452	C	0.56	0.13	0.31	0.82	1.60E-05
rs16901953	8	128177411	C	0.56	0.13	0.31	0.81	1.61E-05
rs7010450	8	128177861	G	0.56	0.13	0.31	0.81	1.61E-05
rs16901959	8	128178712	A	-0.56	0.13	-0.81	-0.30	1.64E-05
rs7826388	8	128178958	C	-0.56	0.13	-0.81	-0.30	1.64E-05
rs7830341	8	128179112	A	0.56	0.13	0.30	0.81	1.64E-05
rs16901966	8	128179434	A	-0.56	0.13	-0.81	-0.30	1.64E-05
rs16901967	8	128179459	A	-0.56	0.13	-0.81	-0.30	1.64E-05
rs7001069	8	128179828	A	-0.56	0.13	-0.81	-0.30	1.64E-05
rs6988257	8	128180638	C	0.56	0.13	0.30	0.81	1.64E-05
rs16901969	8	128181279	A	-0.56	0.13	-0.81	-0.30	1.64E-05
rs16901970	8	128181897	G	0.56	0.13	0.30	0.81	1.64E-05
rs10453084	8	128181961	A	0.56	0.13	0.30	0.81	1.64E-05
rs6987723	8	128182041	A	0.56	0.13	0.30	0.81	1.64E-05
rs6987640	8	128182210	A	-0.56	0.13	-0.81	-0.30	1.64E-05

SNP	Chr	Position	PROTECT (Discovery)					
			Effect Allele	Beta	SE	LCI	UCI	Pvalue
rs7824451	8	128183643	C	-0.56	0.13	-0.81	-0.30	1.64E-05
rs7824785	8	128183892	C	-0.56	0.13	-0.81	-0.30	1.64E-05
rs6470498	8	128184902	A	-0.56	0.13	-0.81	-0.30	1.64E-05
rs7844219	8	128187997	A	-0.56	0.13	-0.81	-0.30	1.64E-05
rs1551512	8	128193308	G	0.56	0.13	0.30	0.81	1.64E-05
rs16901979	8	128194098	A	0.56	0.13	0.30	0.81	1.64E-05
rs10505483	8	128194377	C	-0.56	0.13	-0.81	-0.30	1.64E-05
rs7817677	8	128194686	A	-0.56	0.13	-0.81	-0.30	1.64E-05
rs6989838	8	128198554	C	0.56	0.13	0.30	0.81	1.66E-05
rs7013255	8	128199669	A	-0.56	0.13	-0.81	-0.30	1.67E-05
rs16901984	8	128200143	C	0.56	0.13	0.30	0.81	1.69E-05
rs10107982	8	128387937	C	-0.26	0.06	-0.39	-0.13	4.69E-05
rs10956359	8	128411336	C	-0.27	0.06	-0.39	-0.15	1.20E-05
rs17464492	8	128412048	A	0.27	0.06	0.15	0.39	9.25E-06
rs6983267	8	128482487	G	0.22	0.05	0.11	0.32	4.25E-05
rs6470519	8	128553405	A	0.35	0.08	0.19	0.52	2.36E-05
rs7818556	8	128553581	A	-0.35	0.08	-0.52	-0.19	2.36E-05
rs1447295	8	128554220	A	0.35	0.08	0.19	0.52	2.36E-05
rs10109700	8	128555146	A	0.35	0.08	0.19	0.52	2.38E-05
rs11004422	10	51168342	A	-0.26	0.06	-0.37	-0.14	7.03E-06
rs7071471	10	51173341	C	-0.29	0.06	-0.40	-0.17	4.67E-07
rs2012677	10	51174803	A	-0.26	0.06	-0.37	-0.14	7.02E-06

SNP	Chr	Position	PROTECT (Discovery)					
			Effect Allele	Beta	SE	LCI	UCI	Pvalue
rs10825652	10	51180767	A	0.28	0.06	0.17	0.39	4.54E-07
rs2843560	10	51182135	C	-0.25	0.06	-0.35	-0.14	6.79E-06
rs2611513	10	51185463	C	0.27	0.06	0.16	0.38	8.67E-07
rs2611512	10	51185540	A	0.24	0.05	0.14	0.35	6.68E-06
rs2926494	10	51187362	C	-0.27	0.05	-0.38	-0.17	3.22E-07
rs2611508	10	51188053	A	-0.27	0.05	-0.38	-0.17	3.16E-07
rs2843549	10	51191253	A	-0.27	0.05	-0.38	-0.17	3.12E-07
rs2249986	10	51191690	G	-0.27	0.05	-0.38	-0.17	3.04E-07
rs7077830	10	51192282	C	-0.27	0.05	-0.38	-0.17	3.01E-07
rs2843554	10	51193867	G	0.27	0.05	0.17	0.38	2.87E-07
rs2611489	10	51194895	A	-0.27	0.05	-0.38	-0.17	2.79E-07
rs3123078	10	51194977	C	0.27	0.05	0.17	0.38	2.75E-07
rs4935162	10	51195705	C	-0.27	0.05	-0.38	-0.17	2.70E-07
rs7081532	10	51196099	A	0.28	0.06	0.17	0.39	3.30E-07
rs6481329	10	51199752	A	-0.28	0.05	-0.38	-0.18	1.48E-07
rs10826125	10	51200511	A	-0.28	0.05	-0.38	-0.18	1.47E-07
rs10826127	10	51200763	A	-0.28	0.05	-0.38	-0.18	1.45E-07
rs4630240	10	51202534	A	-0.32	0.06	-0.44	-0.19	8.53E-07
rs7920517	10	51202627	A	-0.28	0.05	-0.38	-0.18	1.34E-07
rs4630241	10	51202757	A	-0.28	0.05	-0.38	-0.18	1.36E-07
rs9787697	10	51203382	C	0.28	0.05	0.18	0.38	1.37E-07
rs10763534	10	51204926	C	0.28	0.05	0.18	0.38	1.39E-07

SNP	Chr	Position	PROTECT (Discovery)					
			Effect Allele	Beta	SE	LCI	UCI	Pvalue
rs10763546	10	51206405	C	0.28	0.05	0.18	0.38	1.43E-07
rs4131357	10	51207298	A	-0.28	0.05	-0.38	-0.17	1.91E-07
rs11006207	10	51208182	C	-0.28	0.05	-0.38	-0.17	1.97E-07
rs10763576	10	51208819	A	0.28	0.05	0.17	0.38	1.95E-07
rs10763588	10	51209768	G	0.28	0.05	0.17	0.38	1.90E-07
rs4630243	10	51210873	C	-0.28	0.05	-0.38	-0.17	1.84E-07
rs4512771	10	51210912	A	-0.28	0.05	-0.38	-0.18	1.79E-07
rs4306255	10	51212450	A	0.27	0.06	0.16	0.38	9.33E-07
rs4631830	10	51213350	C	0.27	0.06	0.16	0.38	8.13E-07
rs7075009	10	51214149	G	-0.28	0.05	-0.39	-0.18	1.37E-07
rs7098889	10	51214481	C	0.28	0.05	0.18	0.39	1.35E-07
rs4304716	10	51214593	A	0.27	0.06	0.16	0.38	7.16E-07
rs7075697	10	51217377	C	0.28	0.06	0.17	0.39	4.54E-07
rs10993994	10	51219502	C	-0.33	0.06	-0.44	-0.22	1.58E-09
rs7222314	17	66616533	A	0.32	0.06	0.21	0.43	8.59E-09
rs17765344	17	66618469	A	0.32	0.05	0.21	0.42	5.85E-09
rs8071558	17	66619268	C	0.32	0.05	0.21	0.42	5.83E-09
rs8072254	17	66619411	A	0.32	0.05	0.21	0.42	5.76E-09
rs984434	17	66619722	C	-0.32	0.05	-0.42	-0.21	5.74E-09
rs1859962	17	66620348	G	0.32	0.05	0.21	0.42	5.72E-09
rs11650165	17	66621213	C	0.31	0.06	0.20	0.42	5.29E-08
rs991429	17	66621368	A	-0.32	0.05	-0.42	-0.21	5.42E-09
rs4793528	17	66622368	A	0.31	0.06	0.20	0.42	4.81E-08

SNP	Chr	Position	PROTECT (Discovery)					
			Effect Allele	Beta	SE	LCI	UCI	Pvalue
rs9674957	17	66622693	A	-0.31	0.06	-0.42	-0.20	4.70E-08
rs8077906	17	66623828	A	-0.32	0.06	-0.43	-0.21	3.07E-08
rs8066875	17	66625172	A	0.32	0.06	0.21	0.43	2.90E-08
rs9889335	17	66626741	G	-0.32	0.05	-0.42	-0.21	4.64E-09
rs4328484	17	66627825	A	-0.31	0.06	-0.42	-0.20	3.65E-08
rs8068266	17	66628530	A	0.33	0.06	0.22	0.44	1.95E-09
rs4793529	17	66630231	C	-0.33	0.06	-0.44	-0.22	1.88E-09
rs7217652	17	66631076	C	-0.33	0.06	-0.45	-0.22	1.58E-08
rs6501437	17	66631567	C	-0.29	0.06	-0.39	-0.18	2.10E-07
rs6501438	17	66631755	A	0.29	0.06	0.18	0.39	2.11E-07
rs8079315	17	66632450	C	0.29	0.06	0.18	0.39	2.11E-07
rs2367256	17	66632881	A	0.29	0.06	0.18	0.39	2.12E-07
rs2190697	17	66632936	A	0.29	0.06	0.18	0.39	2.21E-07
rs4366746	17	66633226	C	-0.28	0.05	-0.38	-0.17	3.77E-07
rs4366747	17	66633238	A	-0.28	0.05	-0.38	-0.17	3.88E-07
rs2159034	17	66633350	A	-0.28	0.05	-0.38	-0.17	4.02E-07
rs1013999	17	66633530	C	0.28	0.05	0.17	0.38	4.05E-07
rs4793530	17	66636858	C	0.28	0.05	0.17	0.38	4.08E-07
rs11654749	17	66637201	G	0.25	0.06	0.15	0.36	4.72E-06
rs11653132	17	66641427	G	0.25	0.06	0.14	0.35	6.75E-06
rs4300694	17	66642431	C	-0.25	0.06	-0.36	-0.15	4.77E-06
rs8076830	17	66643504	C	-0.27	0.05	-0.38	-0.17	4.29E-07

SNP	Chr	Position	PROTECT (Discovery)					
			Effect Allele	Beta	SE	LCI	UCI	Pvalue
rs9900242	17	66647226	A	-0.25	0.06	-0.36	-0.14	4.87E-06
rs9908442	17	66649543	A	-0.25	0.06	-0.36	-0.14	4.95E-06
rs2058083	17	66649998	C	0.25	0.06	0.14	0.36	5.12E-06
rs2058084	17	66650612	C	0.25	0.06	0.14	0.36	5.20E-06
rs2058085	17	66650642	A	0.25	0.06	0.14	0.36	5.37E-06
rs9915190	17	66654223	A	-0.25	0.06	-0.36	-0.14	5.77E-06
rs2041114	17	66656212	A	0.27	0.05	0.16	0.37	7.51E-07
rs723338	17	66657008	A	0.27	0.05	0.16	0.37	7.60E-07
rs2041115	17	66658022	A	0.27	0.05	0.16	0.37	7.88E-07
rs8064263	17	66658425	A	0.27	0.05	0.16	0.37	8.07E-07
rs9897865	17	66658671	A	-0.27	0.05	-0.37	-0.16	8.28E-07
rs11656242	17	66659117	A	0.26	0.05	0.15	0.36	1.96E-06
rs9897358	17	66659137	A	-0.27	0.05	-0.37	-0.16	8.71E-07
rs11651123	17	66659186	A	-0.26	0.05	-0.36	-0.15	2.07E-06
rs11657298	17	66659231	C	-0.26	0.05	-0.36	-0.15	2.09E-06
rs11651469	17	66660114	G	-0.27	0.05	-0.37	-0.16	7.28E-07
rs11651501	17	66660153	A	-0.27	0.05	-0.37	-0.16	7.30E-07
rs719615	17	66661505	A	-0.26	0.05	-0.36	-0.15	2.08E-06
rs1558119	17	66663567	C	0.26	0.05	0.15	0.36	2.06E-06
rs12150098	17	66667429	C	-0.26	0.05	-0.36	-0.15	2.05E-06
rs9910829	17	66671172	A	0.27	0.05	0.16	0.37	9.41E-07
rs7220274	17	66671362	A	0.27	0.05	0.16	0.37	9.41E-07
rs17224833	17	66672070	A	0.27	0.05	0.16	0.37	9.42E-07

SNP	Chr	Position	PROTECT (Discovery)					
			Effect Allele	Beta	SE	LCI	UCI	Pvalue
rs2108534	17	66672495	A	0.27	0.05	0.16	0.37	9.44E-07
rs2108535	17	66672740	G	-0.26	0.05	-0.36	-0.15	1.99E-06
rs8182284	17	66672986	A	-0.26	0.05	-0.36	-0.15	1.98E-06
rs8182286	17	66673149	C	-0.27	0.05	-0.37	-0.16	9.47E-07
rs4793533	17	66676066	C	-0.27	0.05	-0.37	-0.16	9.48E-07
rs8069925	17	66676457	A	0.27	0.05	0.16	0.37	9.49E-07
rs8068189	17	66676490	C	-0.25	0.05	-0.36	-0.15	2.66E-06
rs9901508	17	66676794	A	0.27	0.05	0.16	0.37	9.51E-07
rs9907418	17	66676814	C	-0.27	0.05	-0.37	-0.16	9.52E-07
rs2367263	17	66677883	A	-0.25	0.05	-0.36	-0.15	3.30E-06
rs1859964	17	66678166	G	-0.25	0.05	-0.36	-0.15	3.31E-06
rs1859965	17	66678690	C	0.25	0.05	0.15	0.36	3.32E-06
rs6501446	17	66679653	G	-0.25	0.05	-0.36	-0.15	3.32E-06
rs4793534	17	66679888	C	0.25	0.05	0.14	0.35	4.89E-06
rs4239156	17	66679976	C	-0.25	0.05	-0.36	-0.15	3.34E-06
rs4793335	17	66680286	A	-0.25	0.05	-0.35	-0.14	5.25E-06
rs2097984	17	66682821	C	-0.25	0.05	-0.35	-0.14	5.37E-06
rs11654068	17	66684131	C	0.23	0.06	0.12	0.34	2.80E-05
rs8079962	17	66684297	A	0.25	0.05	0.14	0.36	3.44E-06
rs6501447	17	66684693	C	-0.25	0.05	-0.36	-0.14	3.45E-06
rs2886914	17	66685408	C	0.25	0.05	0.14	0.35	4.35E-06
rs8076811	17	66687002	A	0.25	0.05	0.14	0.36	3.48E-06

SNP	Chr	Position	PROTECT (Discovery)					
			Effect Allele	Beta	SE	LCI	UCI	Pvalue
rs17178251	17	66688474	C	0.25	0.05	0.14	0.35	4.30E-06
rs17765644	17	66691087	C	-0.25	0.05	-0.35	-0.14	4.45E-06
rs9913988	17	66691653	C	-0.25	0.05	-0.35	-0.14	3.76E-06
rs758106	17	66692598	C	-0.25	0.05	-0.35	-0.14	3.78E-06
rs740408	17	66692691	A	0.24	0.05	0.13	0.35	7.63E-06
rs4570900	17	66697961	A	-0.25	0.05	-0.35	-0.14	3.94E-06
rs4611499	17	66700364	C	-0.25	0.05	-0.35	-0.14	3.93E-06
rs7214479	17	66702544	C	-0.25	0.05	-0.35	-0.14	3.81E-06
rs1008348	17	66702911	A	-0.25	0.05	-0.35	-0.14	4.90E-06
rs6501449	17	66704440	C	0.27	0.06	0.16	0.38	2.13E-06
rs6501451	17	66704726	C	-0.25	0.05	-0.35	-0.14	4.72E-06
rs6501452	17	66704882	A	-0.24	0.05	-0.34	-0.13	8.22E-06
rs11870732	17	66706836	A	0.25	0.05	0.14	0.35	4.73E-06
rs17178370	17	66707136	A	-0.25	0.05	-0.35	-0.14	4.65E-06
rs7225025	17	66709269	A	0.24	0.05	0.14	0.34	8.04E-06
rs17178377	17	66709728	A	-0.24	0.05	-0.35	-0.14	5.84E-06
rs11655744	17	66710651	C	-0.25	0.05	-0.35	-0.14	4.50E-06
rs2367266	17	66711582	C	-0.25	0.05	-0.35	-0.14	4.42E-06
rs1107305	17	66712238	G	0.24	0.05	0.14	0.34	6.81E-06
rs6501455	17	66713406	A	0.24	0.05	0.14	0.34	7.20E-06
rs7209505	17	66715259	A	0.25	0.05	0.14	0.35	3.98E-06
rs2190463	17	66719063	C	-0.25	0.05	-0.35	-0.14	3.85E-06
rs2190456	17	66722961	C	0.24	0.05	0.14	0.34	6.66E-06

SNP	Chr	Position	PROTECT (Discovery)					
			Effect Allele	Beta	SE	LCI	UCI	Pvalue
rs983085	17	66723656	A	0.24	0.05	0.14	0.34	6.79E-06
rs6501459	17	66725050	C	0.25	0.05	0.14	0.35	4.75E-06
rs4793538	17	66727523	C	0.24	0.05	0.14	0.35	5.51E-06
rs2158905	17	66727636	C	0.24	0.05	0.13	0.34	8.68E-06
rs2190457	17	66728004	A	-0.24	0.05	-0.35	-0.14	5.85E-06
rs11655567	17	66728282	C	-0.24	0.05	-0.34	-0.13	8.90E-06
rs7225458	17	66729941	A	0.24	0.05	0.14	0.35	6.01E-06
rs10401004	17	66730351	A	0.24	0.05	0.14	0.35	6.58E-06
rs917278	17	66733520	C	0.25	0.05	0.14	0.35	4.81E-06
rs1978203	17	66734264	C	-0.25	0.05	-0.35	-0.14	4.84E-06
rs1978204	17	66734540	A	-0.25	0.05	-0.35	-0.14	4.84E-06
rs737956	17	66735463	A	-0.25	0.05	-0.35	-0.14	6.67E-06
rs737957	17	66735504	A	0.25	0.06	0.14	0.35	6.62E-06
rs8075481	17	66735791	C	0.25	0.06	0.14	0.36	6.56E-06
rs7224058	17	66737374	C	-0.26	0.06	-0.37	-0.15	4.41E-06
rs7215307	17	66737962	A	-0.26	0.06	-0.37	-0.14	7.31E-06
rs4793541	17	66739190	C	-0.25	0.06	-0.36	-0.14	1.04E-05
rs7221080	17	66741567	C	-0.28	0.06	-0.39	-0.16	1.47E-06
rs8064388	17	66742612	A	-0.26	0.06	-0.37	-0.15	5.04E-06
rs9906756	17	66747639	A	0.27	0.06	0.15	0.38	9.61E-06
rs17178530	17	66747707	C	-0.26	0.06	-0.37	-0.14	1.75E-05
rs17765886	17	66747800	C	0.26	0.06	0.14	0.37	1.74E-05
rs8070461	17	66752467	G	0.29	0.06	0.17	0.41	4.84E-06
rs9891216	17	66754527	C	0.29	0.07	0.16	0.42	1.18E-05

SNP	Chr	Position	PROTECT (Discovery)					
			Effect Allele	Beta	SE	LCI	UCI	Pvalue
rs2659051	19	56037380	C	-0.36	0.08	-0.51	-0.20	6.21E-06
rs266849	19	56040902	A	0.29	0.07	0.15	0.43	3.87E-05
rs266870	19	56043746	C	0.28	0.05	0.17	0.38	3.13E-07
rs174776	19	56051664	C	0.38	0.08	0.22	0.53	1.14E-06
rs17632542	19	56053569	C	-0.60	0.11	-0.80	-0.39	1.28E-08
rs2659122	19	56054838	C	-0.35	0.06	-0.47	-0.22	4.10E-08
rs1058205	19	56055210	C	-0.40	0.07	-0.54	-0.26	4.63E-08
rs2569735	19	56056081	A	-0.43	0.08	-0.58	-0.27	8.13E-08
rs2735839	19	56056435	A	-0.43	0.08	-0.58	-0.27	8.19E-08

Supplementary Table 3 –Association of SNPs with prostate cancer using low PSA controls in ProtecT for SNPs with moderate-high levels of heterogeneity* and meta-analysis of the results with UKGPCS

						ProtecT				UKGPCS				Combined (Meta-Results)				
SNP	Chrom	Position	Region	Gene	Effect Allele	β	SE	EAF[a]	P-value	β	SE	EAF*	P-value	β	(95% CI)	P-value	I^2[b]	P-Het[c]
rs6983267	8	128482487	8q24.21	SRRM1P1 - POU5F1B	G	0.25	0.06	0.52	9.62E-05	0.36	0.05	0.53	2.30E-12	0.32	(0.24,0.40)	3.46E-15	38.0%	0.20
rs1447295	8	128554220	8q24.21	POU5F1B - MYC	A	0.34	0.11	0.11	1.05E-03	0.67	0.08	0.12	1.20E-16	0.55	(0.42,0.67)	1.18E-16	83.1%	0.01
rs10993994	10	51219502	10q11.23	MSMB	T	0.47	0.07	0.40	3.75E-12	0.46	0.05	0.40	2.15E-19	0.46	(0.38,0.55)	4.06E-29	0.0%	0.90
rs17632542	19	56053569	19q13.33	KLK3	T	0.99	0.12	0.91	3.84E-18	0.82	0.08	0.89	4.74E-23	0.88	(0.74,1.01)	3.25E-37	32.3%	0.22

*I^2>50% in original meta-analysis with all ProtecT controls

[a] Effect Allele Frequency

[b] % of variation between study-specific effect estimates which is due to heterogeneity

[c] Tests the hypothesis that there is no difference in the study-specific effect estimates

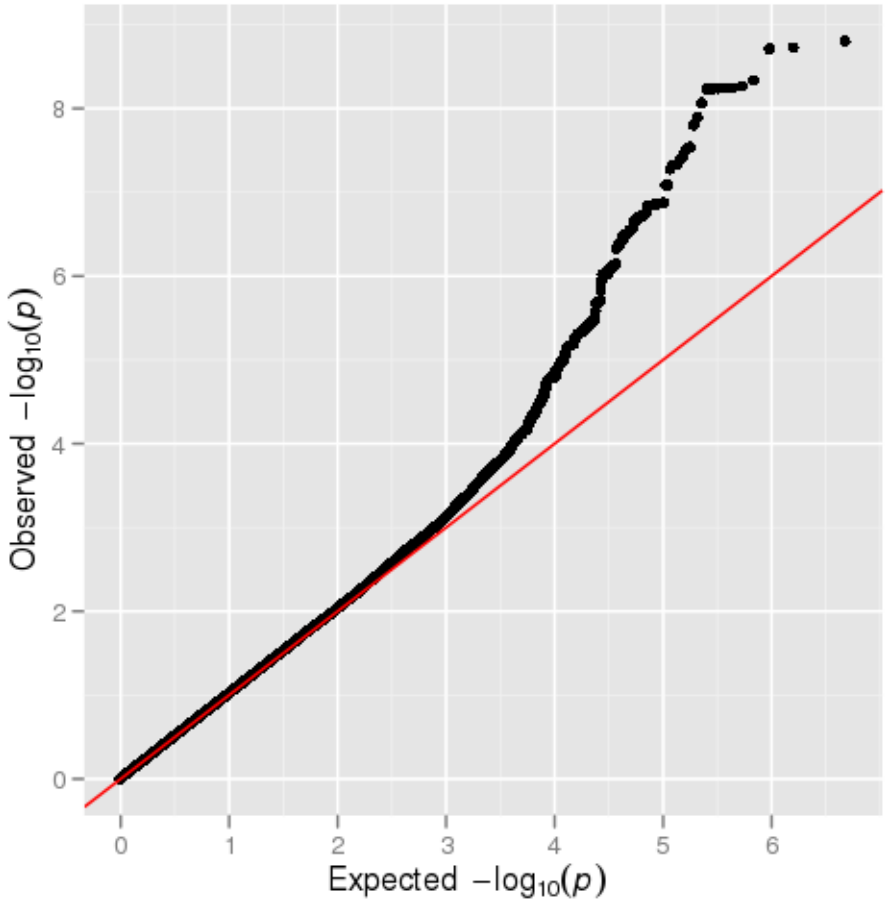
Supplementary table 4 – Comparison of cases with low (PSA <0.05ng/ml) and high (PSA ≥2 ng/ml) PSA controls (sensitivity analysis)*

	Stratified analysis comparing cases with two different control groups				
SNP	Low PSA controls (n=770)		High PSA controls(n=250)		*p het* [a]
	OR (SE)	*p*	OR (SE)	*p*	
rs9311171	1.07 (0.10)	0.49	1.48 (0.19)	0.003	0.02
rs6869841	1.35 (0.11)	3.44E-04	0.97 (0.11)	0.77	0.01
rs1512268	1.3 (0.09)	9.56E-05	1.06 (0.11)	0.55	0.05
rs445114	1.46 (0.01)	8.17E-08	1.07 (0.11)	0.54	0.01
rs11199874	1.24 (0.06)	0.01	0.87 (0.13)	0.20	0.002
rs10788160	1.24 (0.06)	0.01	0.88 (0.13)	0.22	0.003
rs10993994	1.61 (0.11)	4.55E-12	1.3 (0.13)	0.01	0.04
rs17632542	2.73 (0.32)	1.39E-17	0.86 (0.19)	0.49	3.39E-08
rs2735839	2.13 (0.20)	1.90E-16	1.02 (0.16)	0.89	1.18E-06
rs266849	1.76 (0.45)	8.62E-12	1.06 (0.12)	0.68	9.83E-05
rs4775302	1.02 (0.07)	0.76	1.29 (0.13)	0.01	0.03

* SNPs showing evidence of heterogeneity ($p < 0.05$) in effect estimates quantifying the difference in risk between cases and low or high PSA controls

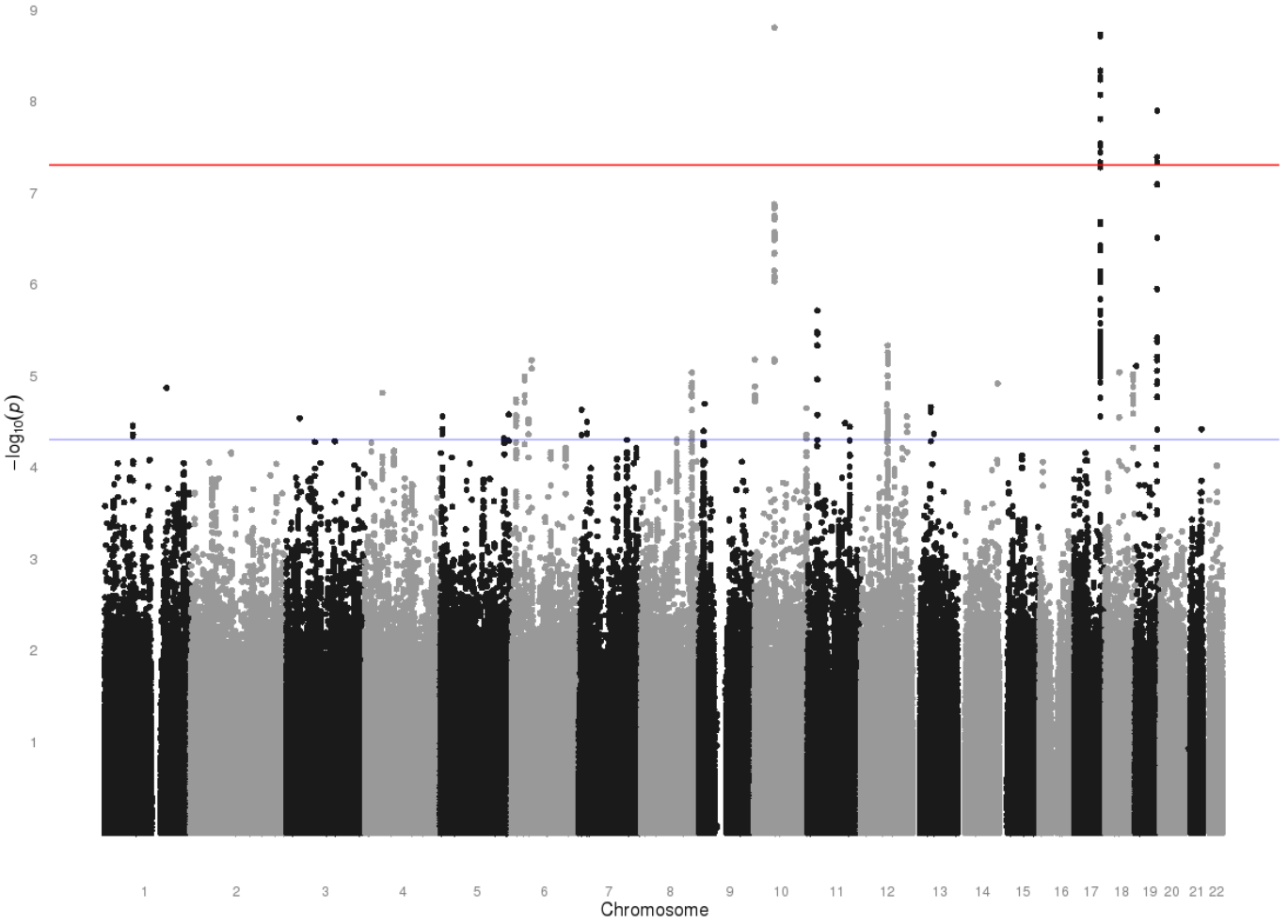
[a] Tests the hypothesis that there is no difference between the effect estimate of the cases vs. low PSA controls and cases vs. high PSA controls

Supplementary Figure 1 – Quantile-quantile plot (Q-Q plot) for ProtecT GWAS



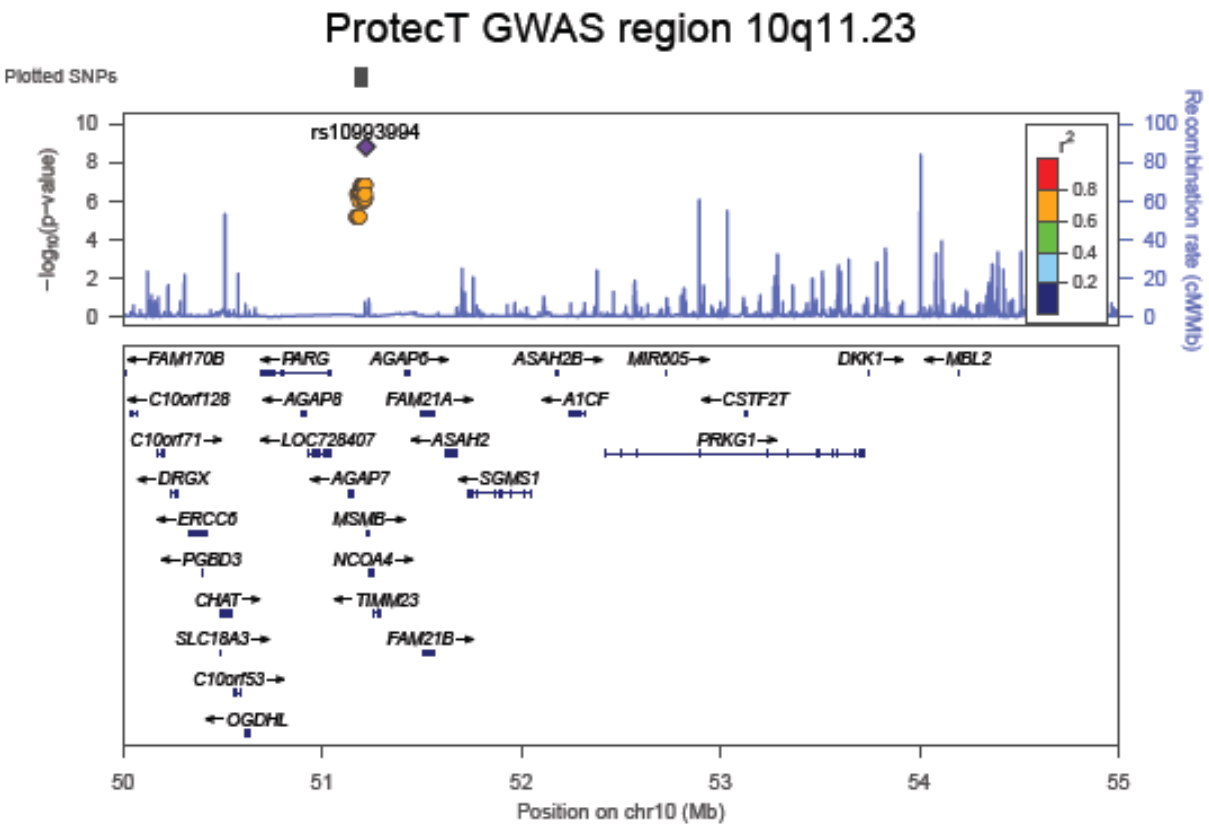
Q-Q plot shows the distribution of test statistics for comparison of genotype frequencies in cases versus controls

Supplementary Figure 2 – Manhattan Plot for ProtecT GWAS



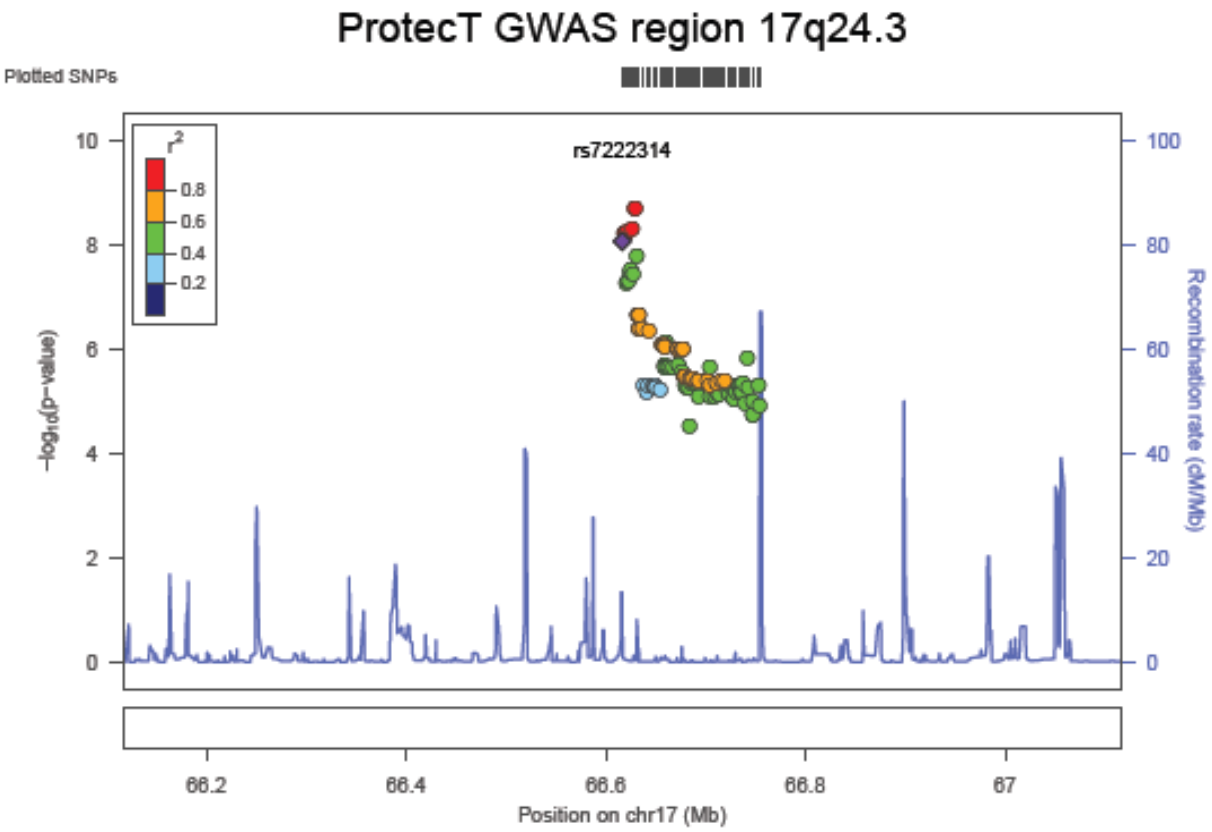
Manhattan plots of the association p-values for prostate cancer in ProtecT. Analysed SNPs are plotted on the X-axis in the order of chromosome location. The log p-values are plotted on the Y-axis. The red line indicated the genome wide significance levels ($p<5x10^{-8}$)

Supplementary Figure 3 – Locus Zoom[2] plot of region 10q11.23 of the ProtecT GWAS



[2] Pruim RJ*, Welch RP*, Sanna S, Teslovich TM, Chines PS, Gliedt TP, Boehnke M, Abecasis GR, Willer CJ. (2010) LocusZoom: Regional visualization of genome-wide association scan results. Bioinformatics 2010 September 15; 26(18): 2336.2337.

Supplementary Figure 4 - Locus Zoom[2] plot of region 17q24.3 of the ProtecT GWAS



Supplementary Figure 5 - Locus Zoom[2] plot of region 19q13.33 of the ProtecT GWAS