Supplemental Information Inventory

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Figure S3. Related to Table 1. Coefficient plots for genes with statistically significant *cis*-eQTLs

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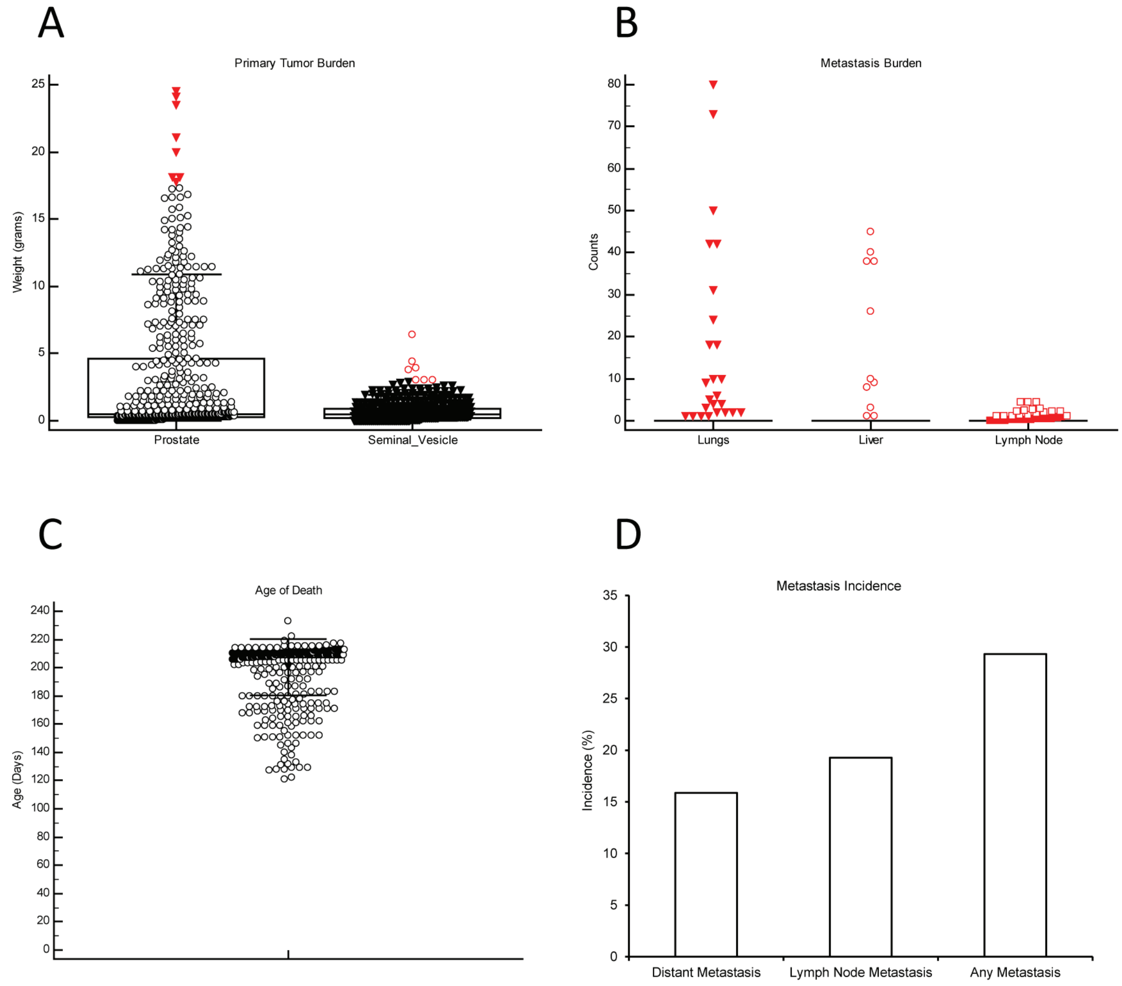

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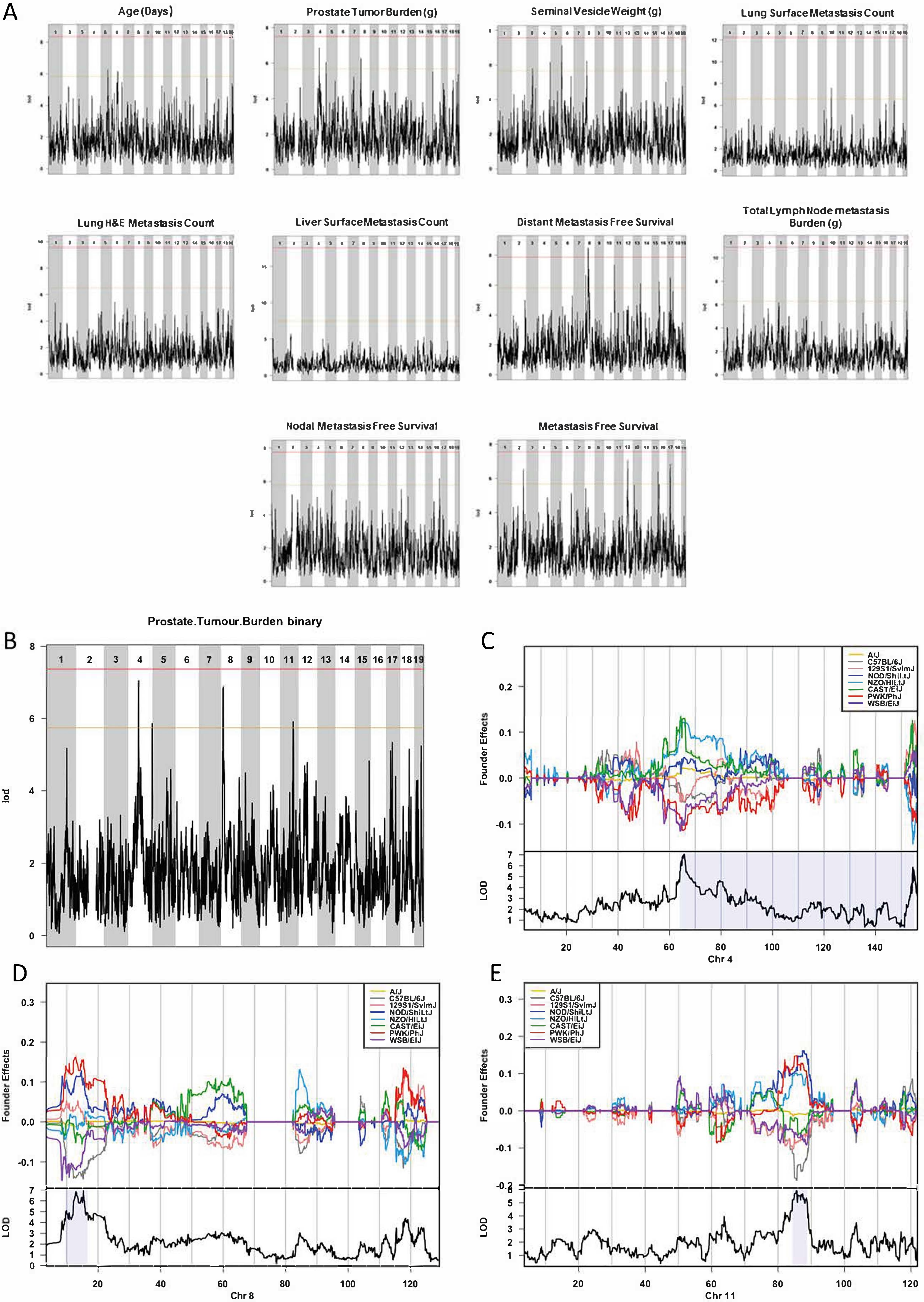

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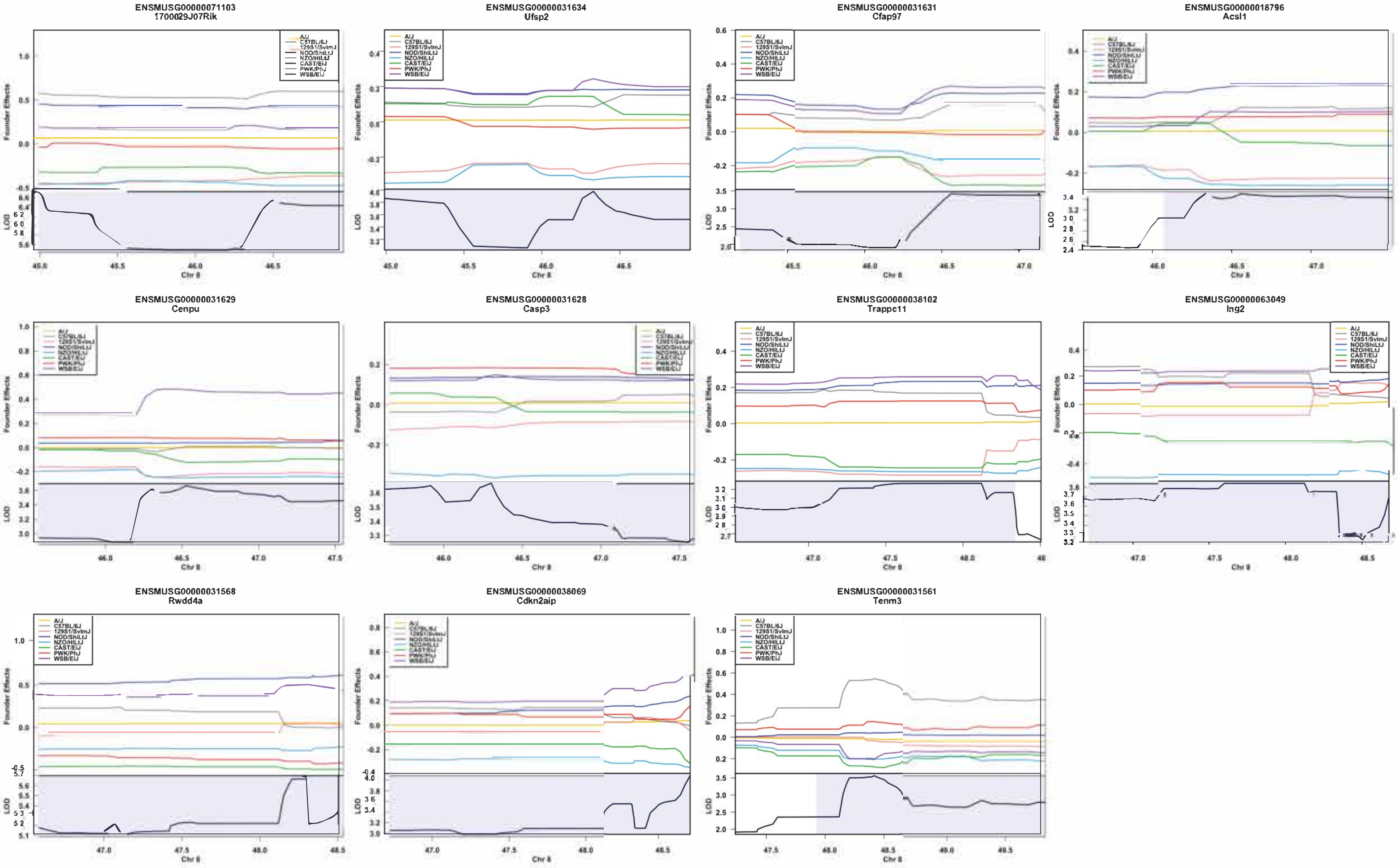

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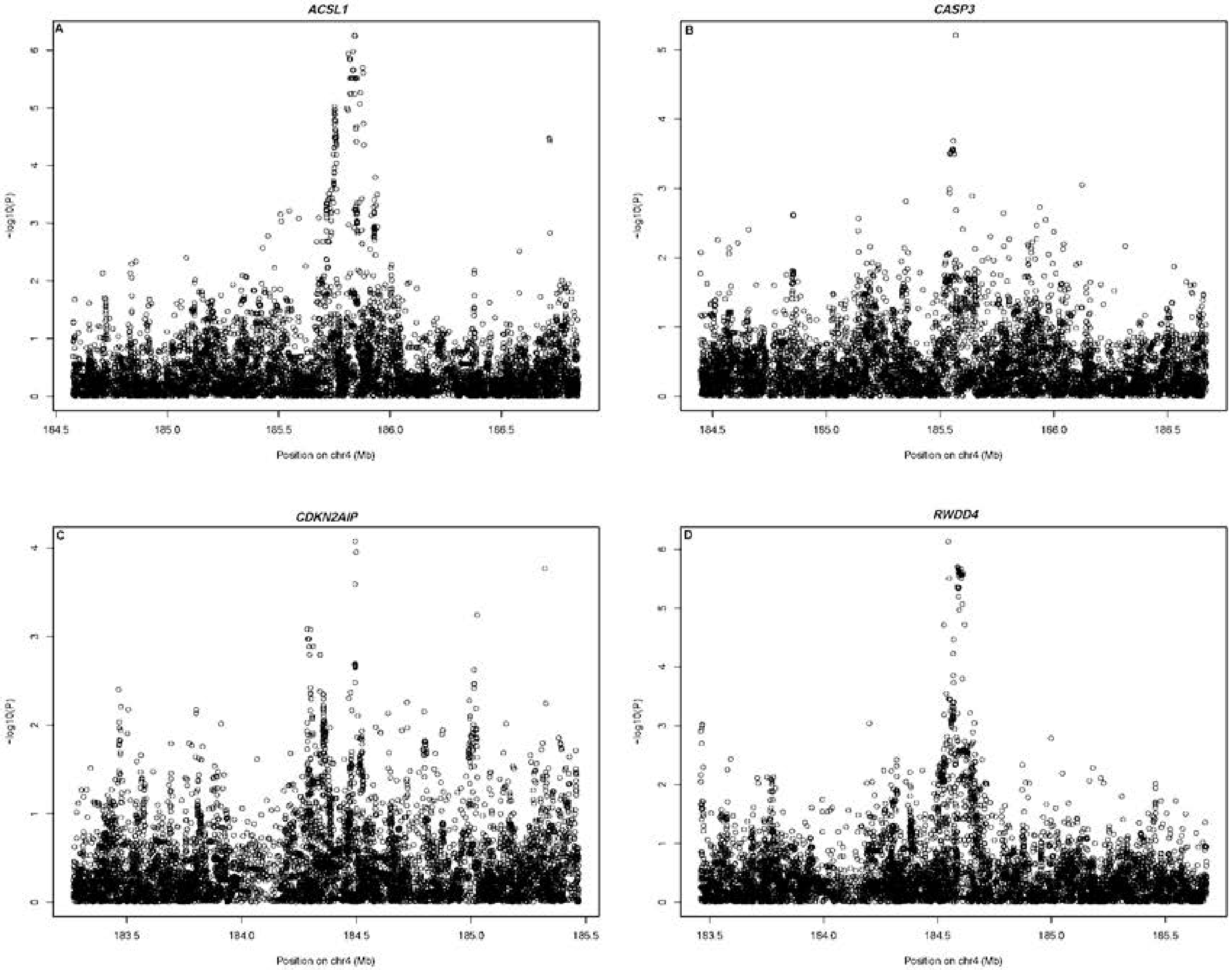

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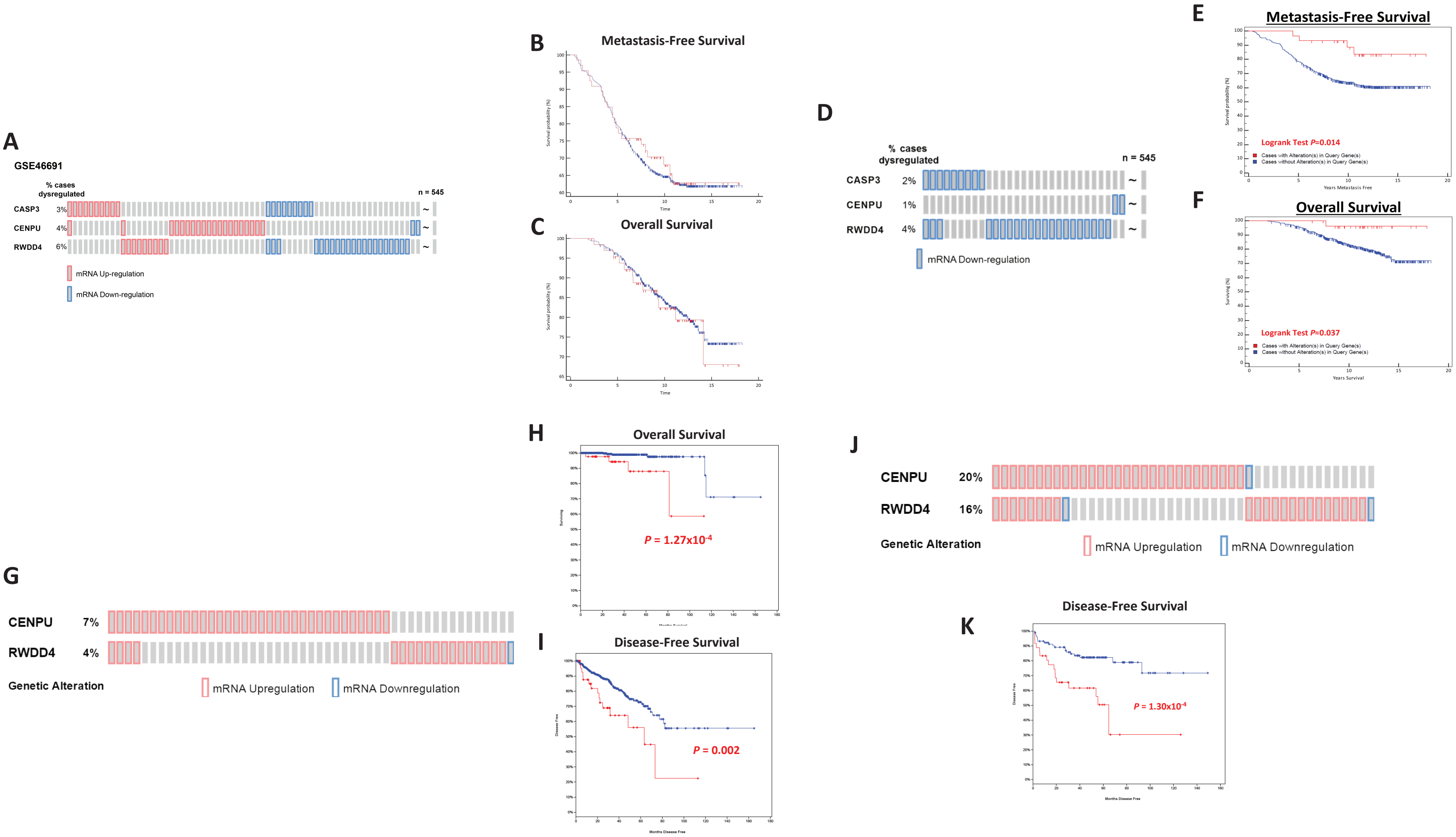

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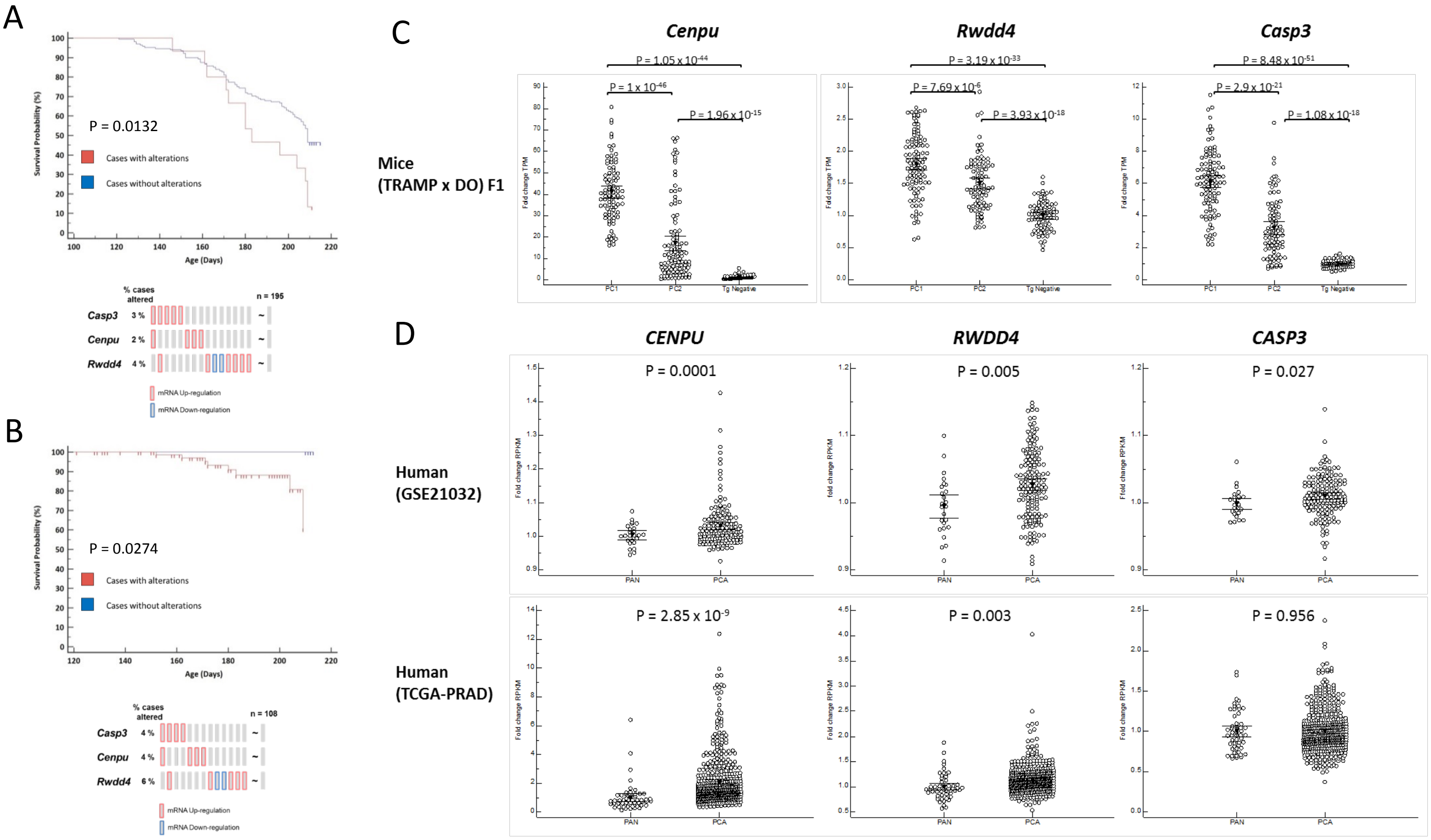

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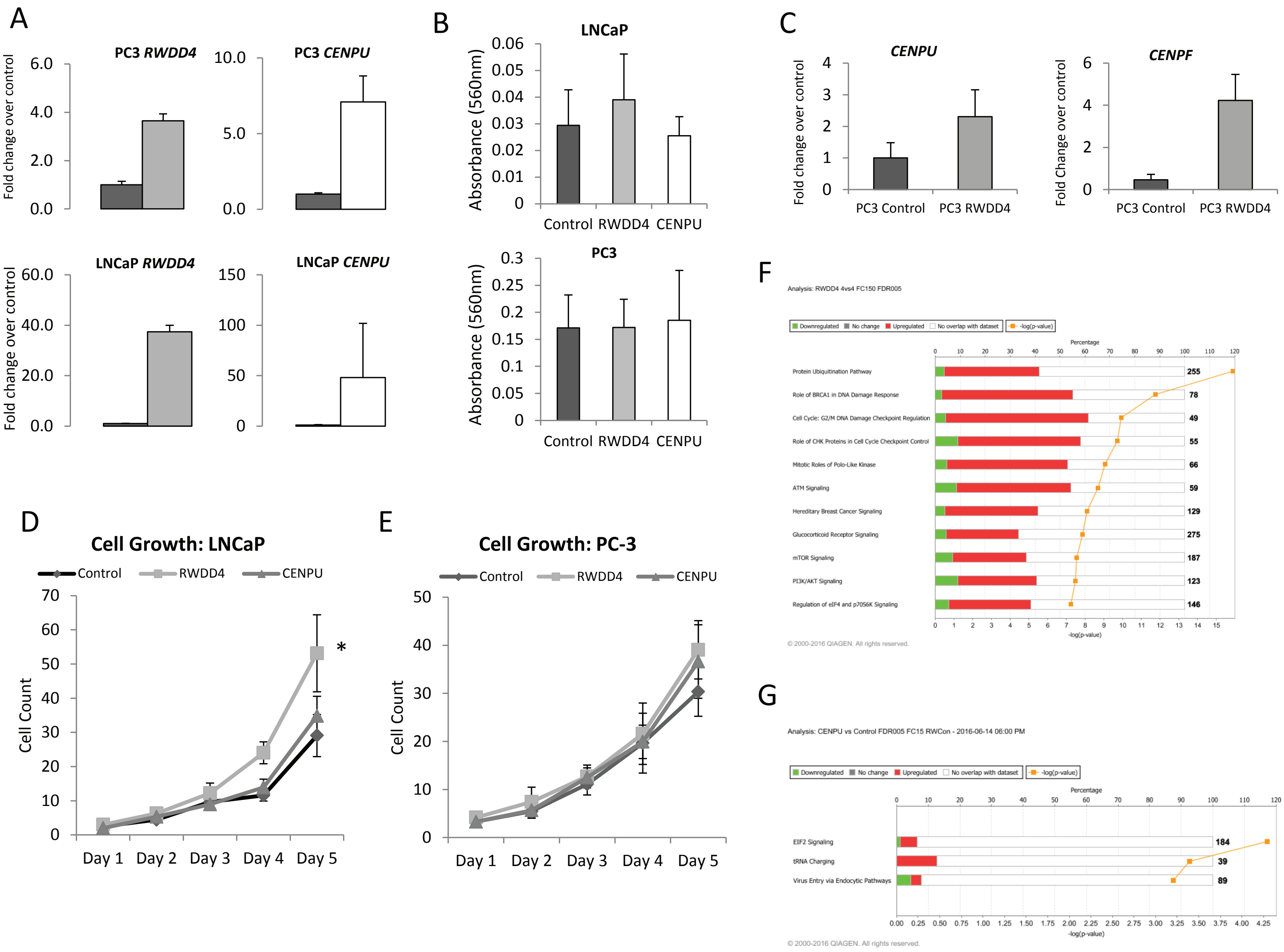

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		Primary Tumor Burden		Metastases Burden			
				Distant Metastases		Lymph Node Metastases	
	Age (Days)	Prostate Tumor (g)	Seminal Vesicles (g)	Lung Surface Counts	Liver Surface Counts	Lymph Node (g)	Lymph Node Counts
Mean	200.6	3.25	0.69	0.89	0.44	0.14	0.39
St. Dev.	19.9	4.85	0.73	6.34	3.85	0.48	0.91
Distant Metastases Free Survival (%)				15.9		19.3	
Metastases Free Survival (%)				29.3			

Table S2. Related to Figure 1. Association mapping for SNPs within the Chr. 8 distant metastasis free survival locus

Table S3. Related to Figure 2 and Table 1. (TRAMP x J:DO) F1 primary tumor *cis*-eQTL analysis for expressed transcripts within the Chr. 8 distant metastasis free survival locus

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Table S5. Related to Table 2. GWAS analysis of the association between haplotypes in linkage disequilibrium with eleven candidate genes and aggressive prostate cancer

Cohort	Candidate Gene	SNPs	SNP Distance	SNP position	Haplotype base	hap	Clinical trait	hap. frequency	t. value	P value	OR	OR.95%CI. low	OR.95%CI. high	Permutation P value
CGEMS	**CDKN2AIP**	rs11940756 rs1567597	68866 64768	184296922 184301020	G A	4.4295. G A	Gleason Score	0.12206	2.586056	0.009822	1.21152	1.047547	1.401159	0.0109
CGEMS	**ING2**	rs4862182 rs11725216 rs4415002	39661 92117 90913	184326127 184334102 184335306	G C T	4.4297. G C T	Gleason Score	0.210462	-3.17283	0.001547	0.691888	0.551084	0.868666	0.0028
CGEMS	**TENM3**	rs2726797 rs2726792 rs2675534	14249 8409 5375	183230887 183236727 183239761	A G C	4.4259. A G C	Pathological Stage	0.057583	2.81085	0.00502	1.139939	1.040443	1.248951	0.0062
CGEMS	**TENM3**	rs2168681 rs10050018 rs921961	0 0 0	183343563 183349618 183365667	G C T	4.4263. G C T	Distant Metastasis	0.073398	3.021017	0.002571	1.110862	1.037615	1.18928	0.0026
CGEMS	**TENM3**	rs2309764 rs6858496 rs12498650 rs6552597 rs6829893	0 0 0 0 0	183619206 183626332 183628872 183631266 183651765	C C G G G	4.4275. C C G G G	Distant Metastasis	0.134225	2.791587	0.005326	1.077528	1.022493	1.135526	0.0063
CGEMS	**CDKN2AIP**	rs6821104 rs955229	73260 68905	184292528 184296883	T C	4.4294. T C	Nodal Metastasis	0.120032	3.706497	0.00022	1.095923	1.044105	1.150312	1.00E-04
CGEMS	**CDKN2AIP**	rs11940756 rs1567597	68866 64768	184296922 184301020	A A	4.4295. A A	Nodal Metastasis	0.119627	3.382526	0.000741	1.087342	1.035843	1.141402	0.001
CGEMS	**CDKN2AIP**	rs6821104 rs955229	73260 68905	184292528 184296883	T T	4.4294. T T	Nodal Metastasis	0.485401	-2.82158	0.004856	0.956021	0.926615	0.98636	0.0061
CGEMS	**ING2**	rs4241767 rs13111484 rs4862197 rs6844630	73081 69645 64173 52408	184353138 184356574 184362046 184373811	C A C G	4.4299. C A C G	Nodal Metastasis	0.602595	2.653584	0.008067	1.045734	1.011757	1.080852	0.0077
CGEMS	**TENM3**	rs1350317 rs13106786 rs7670943 rs10520533 rs4862074	0 0 0 0 0	183412634 183423315 183424364 183428859 183440877	T G T A A	4.4266. T G T A A	Nodal Metastasis	0.351176	-2.90732	0.003711	0.952586	0.921896	0.984297	0.0034
CGEMS	**TENM3**	rs11132137 rs11726016 rs12499296	0 0 0	183525697 183531705 183536086	C G G	4.4270. C G	Nodal Metastasis	0.253852	2.647314	0.008217	1.0516	1.013148	1.091511	0.0071

						G								
ICPCG	**TENM3**	rs1516538 rs6838423 rs6823473 rs17253954 rs7666497 rs6830860 rs17073248 rs17073255 rs10520531	0 0 0 0 0 0 0 0 0	183321916 183322044 183323457 183324280 183326512 183327907 183328030 183330031 183335191	A A A C A A G G G	4.9366. A A A C A A G G G	Aggressive vs. Non-Aggressive	0.322069	2.936288	0.003322	1.160184	1.050641	1.281147	0.0033
ICPCG	**TENM3**	rs10050018 rs11132125 rs6822105 rs17073286 rs12498833 rs921961 rs12505033	0 0 0 0 0 0 0	183349618 183354559 183361857 183364714 183365002 183365667 183367131	A A G G G G A	4.9367. A A G G G G A	Aggressive vs. Non-Aggressive	0.334485	2.814139	0.004891	1.150894	1.043579	1.269245	0.0049
ICPCG	**TENM3**	rs13109717 rs10520529	0 0	183314359 183315919	A G	4.9365. A G	Aggressive vs. Non-Aggressive	0.325781	2.794193	0.005203	1.152297	1.043229	1.272768	0.0059
ICPCG	**TENM3**	rs12186290 rs4386638 rs12498348 rs10428431 rs17073734 rs12648977 rs2309774 rs2309760 rs11132145 rs2309759 rs4535369	0 0 0 0 0 0 0 0 0 0 0	183579519 183581152 183582696 183583762 183584040 183589823 183590236 183591332 183591707 183593318 183594938	A G A C A G C A G A G	4.9385. A G A C A G C A G A G	Aggressive vs. Non-Aggressive	0.142089	2.718659	0.006555	1.207349	1.053989	1.383023	0.0053

Table S6. Related to Fig. 3. Analysis of candidate gene cis-eQTLs in normal prostate tissue derived from a cohort of 471 men

Table S7. Related to Fig. 4. Logistic regression analyses for seven candidate genes in each of the three human prostate cancer gene expression cohorts

Gene	Clinical Trait	Cohort	Odds ratio	95% CI	Coefficient	Std. Error	Wald	P-Value	FDR
CASP3	**Node Stage**	**TCGA**	1.6309	1.2139 to 2.1912	0.48913	0.15066	10.5399	0.0012	0.021
CENPU	**Recurrence**	**GSE21032**	2.2838	1.4921 to 3.4955	0.82583	0.21717	14.4598	0.0001	0.0042
CENPU	**Node Stage**	**GSE21032**	2.1963	1.3517 to 3.5686	0.78677	0.24766	10.0923	0.0015	0.021
CENPU	**Pathological Stage**	**GSE21032**	1.7629	1.2629 to 2.4608	0.56694	0.17016	11.1005	0.0009	0.021
CENPU	**Pathological Stage**	**TCGA**	2.5823	1.7877 to 3.7302	0.94869	0.18764	25.5618	0.0001	0.0042
CENPU	**Gleason**	**TCGA**	3.5908	1.6060 to 8.0287	1.27838	0.41053	9.697	0.0018	0.0216
RWDD4	**Node Stage**	**GSE21032**	0.1187	0.0318 to 0.4428	-2.13087	0.67159	10.0673	0.0015	0.021
RWDD4	**Gleason**	**GSE21032**	2.3755	1.3401 to 4.2106	0.86519	0.29204	8.7765	0.0031	0.03255
ACSL1	**Gleason**	**GSE21032**	0.5189	0.3193 to 0.8434	-0.65607	0.24781	7.0092	0.0081	0.06804
ING2	**Gleason**	**GSE21032**	0.6129	0.4286 to 0.8765	-0.48959	0.18253	7.1945	0.0073	0.06804
CASP3	**Pathological Stage**	**TCGA**	1.4291	1.0862 to 1.8804	0.35707	0.14001	6.5044	0.0108	0.082473
TENM3	**Node Stage**	**GSE21032**	0.2292	0.0659 to 0.7971	-1.47302	0.63583	5.3669	0.0205	0.133754
ACSL1	**Node Stage**	**TCGA**	1.3111	1.0422 to 1.6493	0.27083	0.11709	5.3501	0.0207	0.133754
CENPU|NM_024629	**Metastasis**	**GSE46691**	1.2351	1.0273 to 1.4851	0.21118	0.094024	5.0448	0.0247	0.1482
ACSL1	**Node Stage**	**GSE21032**	2.6479	1.1032 to 6.3556	0.97378	0.44671	4.7519	0.0293	0.152188
ING2	**Recurrence**	**GSE21032**	0.636	0.4236 to 0.9549	-0.45255	0.20736	4.7629	0.0291	0.152188
ING2	**Pathological Stage**	**TCGA**	0.8013	0.6553 to 0.9798	-0.22152	0.10259	4.6626	0.0308	0.152188
CENPU	**Recurrence**	**TCGA**	1.2767	1.0187 to 1.6001	0.24429	0.1152	4.497	0.034	0.158667
CDKN2AIP	**Gleason**	**TCGA**	1.5483	1.0218 to 2.3459	0.43714	0.21202	4.251	0.0392	0.173305
CASP3	**Death**	**GSE46691**	1.287	1.0086 to 1.6423	0.25233	0.12438	4.1153	0.0425	0.1744
RWDD4|NM_152682	**Metastasis**	**GSE46691**	1.3131	1.0078 to 1.7107	0.27237	0.13497	4.072	0.0436	0.1744
CASP3	**Recurrence**	**TCGA**	1.3119	1.0006 to 1.7201	0.27149	0.1382	3.8588	0.0495	0.180783
CASP3	**Metastasis**	**GSE46691**	1.2194	1.0007 to 1.4857	0.19832	0.10081	3.8704	0.0491	0.180783
ING2	**Pathological Stage**	**GSE21032**	0.7374	0.5342 to 1.0179	-0.30463	0.1645	3.4295	0.064	0.21504
CDKN2AIP	**Recurrence**	**TCGA**	0.7668	0.5793 to 1.0151	-0.2655	0.14311	3.4416	0.0636	0.21504
TENM3|NM_001080477	**Recurrence**	**GSE46691**	0.8347	0.6853 to 1.0166	-0.18073	0.10062	3.2261	0.0725	0.234231
CENPU|NM_024629	**Recurrence**	**GSE46691**	1.1863	0.9765 to 1.4412	0.17083	0.09931	2.959	0.0854	0.265689
ING2	**Recurrence**	**TCGA**	0.8125	0.6345 to 1.0406	-0.20762	0.12621	2.7062	0.1	0.291393
RWDD4	**Gleason**	**TCGA**	0.7681	0.5605 to 1.0525	-0.26386	0.16071	2.6956	0.1006	0.291393
TENM3	**Recurrence**	**GSE21032**	1.4917	0.8890 to 2.5030	0.39993	0.26406	2.2938	0.1299	0.340988
CDKN2AIP	**Death**	**GSE46691**	0.8181	0.6327 to 1.0577	-0.20083	0.13109	2.3469	0.1255	0.340988
RWDD4|NM_152682	**Death**	**GSE46691**	1.2877	0.9284 to 1.7861	0.25288	0.16692	2.295	0.1298	0.340988
ING2	**Node Stage**	**TCGA**	0.8003	0.5971 to 1.0727	-0.22274	0.14946	2.221	0.1361	0.346436

CENPU	**Gleason**	**GSE21032**	1.2983	0.9079 to 1.8565	0.26102	0.18249	2.0458	0.1526	0.36624
TENM3	**Gleason**	**TCGA**	0.7921	0.5764 to 1.0886	-0.23302	0.16222	2.0633	0.1509	0.36624
ING2	**Recurrence**	**GSE46691**	1.143	0.9466 to 1.3801	0.13365	0.096185	1.9308	0.1647	0.3843
TENM3|NM_001080477	**Metastasis**	**GSE46691**	0.8749	0.7221 to 1.0601	-0.13363	0.097962	1.8608	0.1725	0.391622
CENPU	**Node Stage**	**TCGA**	1.1748	0.9278 to 1.4875	0.16109	0.12043	1.7893	0.181	0.400105
CDKN2AIP	**Node Stage**	**GSE21032**	0.6537	0.3410 to 1.2532	-0.42504	0.33202	1.6388	0.2005	0.431846
ACSL1	**Death**	**TCGA**	1.2903	0.8662 to 1.9222	0.25488	0.20335	1.5711	0.2101	0.440427
CASP3	**Node Stage**	**GSE21032**	1.4418	0.7973 to 2.6072	0.36588	0.30225	1.4654	0.2261	0.440427
TENM3|NM_001080477	**Death**	**GSE46691**	0.8653	0.6832 to 1.0961	-0.14462	0.1206	1.4381	0.2304	0.440427
CDKN2AIP	**Metastasis**	**GSE46691**	0.8765	0.7109 to 1.0808	-0.13177	0.10689	1.5196	0.2177	0.440427
ING2	**Metastasis**	**GSE46691**	1.1227	0.9291 to 1.3566	0.11574	0.096563	1.4367	0.2307	0.440427
RWDD4	**Node Stage**	**TCGA**	0.8432	0.6332 to 1.1228	-0.1706	0.14614	1.3628	0.2431	0.453787
RWDD4|NM_152682	**Recurrence**	**GSE46691**	1.1601	0.8948 to 1.5039	0.14846	0.13245	1.2563	0.2623	0.478983
TENM3	**Gleason**	**GSE21032**	0.7726	0.4818 to 1.2391	-0.25795	0.24098	1.1458	0.2844	0.489429
TENM3	**Pathological Stage**	**GSE21032**	1.2701	0.8228 to 1.9604	0.23908	0.22147	1.1653	0.2804	0.489429
ACSL1	**Gleason**	**TCGA**	0.8004	0.5319 to 1.2044	-0.22266	0.2085	1.1405	0.2855	0.489429
CENPU|NM_024629	**Death**	**GSE46691**	1.1202	0.8999 to 1.3943	0.11347	0.1117	1.0319	0.3097	0.520296
CASP3	**Pathological Stage**	**GSE21032**	0.8663	0.6537 to 1.1481	-0.14352	0.1437	0.9974	0.3179	0.5236
TENM3	**Pathological Stage**	**TCGA**	1.1183	0.8942 to 1.3985	0.11178	0.11407	0.9602	0.3271	0.528392
CASP3	**Gleason**	**GSE21032**	1.1591	0.8543 to 1.5726	0.14762	0.15568	0.8992	0.343	0.533556
ACSL1	**Recurrence**	**GSE46691**	0.8859	0.6903 to 1.1369	-0.12114	0.12726	0.9062	0.3411	0.533556
CDKN2AIP	**Pathological Stage**	**GSE21032**	1.1735	0.8247 to 1.6698	0.16001	0.17995	0.7907	0.3739	0.56085
CDKN2AIP	**Node Stage**	**TCGA**	0.8698	0.6404 to 1.1813	-0.1395	0.15619	0.7977	0.3718	0.56085
CASP3	**Gleason**	**TCGA**	1.2244	0.7579 to 1.9782	0.20246	0.24475	0.6843	0.4081	0.601411
CDKN2AIP	**Pathological Stage**	**TCGA**	1.1082	0.8629 to 1.4230	0.10269	0.12761	0.6476	0.421	0.609724
CENPU	**Death**	**TCGA**	1.2219	0.7401 to 2.0172	0.20039	0.25578	0.6138	0.4334	0.617044
CASP3	**Recurrence**	**GSE46691**	0.9252	0.7568 to 1.1312	-0.077699	0.10255	0.5741	0.4486	0.62804
ING2	**Death**	**TCGA**	1.2218	0.7096 to 2.1036	0.20029	0.27723	0.522	0.47	0.647213
ING2	**Gleason**	**TCGA**	1.128	0.8043 to 1.5819	0.12041	0.17257	0.4869	0.4853	0.657503
TENM3	**Node Stage**	**TCGA**	0.9192	0.7106 to 1.1888	-0.084306	0.13127	0.4125	0.5207	0.694267
ING2	**Death**	**GSE46691**	1.0767	0.8514 to 1.3615	0.07388	0.11976	0.3805	0.5373	0.705206
CDKN2AIP	**Death**	**TCGA**	0.8052	0.3932 to 1.6490	-0.21663	0.36572	0.3509	0.5536	0.715422
CDKN2AIP	**Gleason**	**GSE21032**	0.8881	0.5923 to 1.3317	-0.11863	0.20669	0.3295	0.566	0.720364
CDKN2AIP	**Recurrence**	**GSE21032**	1.0905	0.7198 to 1.6520	0.086593	0.21195	0.1669	0.6829	0.856173
CASP3	**Recurrence**	**GSE21032**	1.0613	0.7678 to 1.4672	0.059529	0.16521	0.1298	0.7186	0.881148
TENM3	**Recurrence**	**TCGA**	0.9561	0.7455 to 1.2263	-0.044867	0.12696	0.1249	0.7238	0.881148

RWDD4	**Recurrence**	**TCGA**	0.9625	0.7618 to 1.2160	-0.03824	0.1193	0.1027	0.7486	0.89832
ING2	**Node Stage**	**GSE21032**	0.9199	0.5321 to 1.5903	-0.083484	0.2793	0.08935	0.765	0.903583
TENM3	**Death**	**TCGA**	0.9264	0.5489 to 1.5634	-0.076483	0.267	0.08205	0.7745	0.903583
ACSL1	**Recurrence**	**TCGA**	1.0287	0.8299 to 1.2752	0.028338	0.10958	0.06688	0.7959	0.909016
ACSL1	**Pathological Stage**	**TCGA**	0.9708	0.7713 to 1.2220	-0.029616	0.11739	0.06365	0.8008	0.909016
CASP3	**Death**	**TCGA**	1.0736	0.5595 to 2.0600	0.071012	0.33249	0.04561	0.8309	0.930608
RWDD4	**Recurrence**	**GSE21032**	1.0574	0.5965 to 1.8745	0.055837	0.29209	0.03654	0.8484	0.937705
ACSL1	**Recurrence**	**GSE21032**	0.9656	0.5973 to 1.5611	-0.034991	0.24508	0.02038	0.8865	0.939659
RWDD4	**Death**	**TCGA**	1.0336	0.6280 to 1.7014	0.033073	0.25426	0.01692	0.8965	0.939659
RWDD4	**Pathological Stage**	**TCGA**	0.982	0.7893 to 1.2217	-0.018203	0.11146	0.02667	0.8703	0.939659
ACSL1	**Metastasis**	**GSE46691**	0.9855	0.7729 to 1.2566	-0.014617	0.12398	0.0139	0.9061	0.939659
CDKN2AIP	**Recurrence**	**GSE46691**	0.983	0.7942 to 1.2167	-0.017115	0.10882	0.02474	0.875	0.939659
RWDD4	**Pathological Stage**	**GSE21032**	1.0193	0.6295 to 1.6507	0.019147	0.24593	0.006061	0.9379	0.9492
ACSL1	**Death**	**GSE46691**	1.0124	0.7554 to 1.3568	0.012302	0.1494	0.00678	0.9344	0.9492
ACSL1	**Pathological Stage**	**GSE21032**	1.0116	0.6779 to 1.5096	0.011519	0.20425	0.003181	0.955	0.955

Table S8. Related to Fig. 5. Microarray data analysis of dysregulated transcripts in four PC-3 clonal isolates over-expressing *RWDD4*

Table S9. Related to Fig. 5. Microarray data analysis of dysregulated transcripts in four PC-3 clonal isolates over-expressing *CENPU*