Table SI. Univariate Cox regression analysis of 158 cholesterol metabolism-related genes

| Gene | HR | 95% CI for Exp (HR) | | Wald P-value |
		Lower	Upper	
ERLIN1	1.581304	1.267197	1.97327	0.0000499
JAG1	1.311729	1.136827	1.51354	0.000202
GPX8	1.310354	1.135333	1.512356	0.00022
ADIPOQ	1.893018	1.340071	2.674124	0.000294
ETHE1	1.429522	1.176289	1.737272	0.000328
GSTM2	0.664685	0.528705	0.835636	0.000469
ANXA13	1.273049	1.111019	1.45871	0.00051
ACTG1	1.543875	1.205873	1.976618	0.000571
MBTPS2	1.50379	1.181634	1.913778	0.000911
ABCA3	0.871826	0.80253	0.947107	0.00117
ADH4	1.276864	1.098901	1.483649	0.001416
PLAUR	1.241841	1.085872	1.420212	0.001561
PLSCR1	1.314611	1.10872	1.558738	0.001647
ACAT2	1.352546	1.1176	1.636885	0.001922
NSDHL	1.492784	1.1548	1.929688	0.002222
ERRFI1	1.210605	1.070499	1.369047	0.002322
S100A11	1.366608	1.116139	1.673283	0.002497
TP53INP1	0.757583	0.625873	0.917011	0.004385
MIR26A1	0.439664	0.248405	0.778183	0.004789
DHCR7	1.293185	1.080933	1.547115	0.004943
LBR	1.371511	1.097114	1.714537	0.005542
CHKA	0.776343	0.649039	0.928617	0.005599
ABCA8	0.798474	0.680027	0.937552	0.006013
SOD1	1.406097	1.101284	1.795277	0.00626
MSMO1	1.302636	1.072852	1.581635	0.007582
GNAI1	1.272816	1.059201	1.529513	0.010066
FDPS	1.334568	1.065729	1.671225	0.011916
SEC14L2	1.235741	1.045874	1.460076	0.012884
NR1H4	1.232259	1.040313	1.459622	0.015631
EEPD1	1.254508	1.041482	1.511105	0.016939
SQLE	1.180357	1.027969	1.355334	0.018719
SCD	1.162289	1.024482	1.318634	0.019513
TRIB3	1.187215	1.02406	1.376365	0.022896
LPL	0.908314	0.835316	0.98769	0.024466
ERLIN2	1.257488	1.028716	1.537135	0.025332
ANTXR2	1.217424	1.023122	1.448626	0.02658
CAV1	1.119686	1.007694	1.244124	0.035509
STARD4	1.230499	1.011718	1.496591	0.037839
ECH1	1.241222	1.010968	1.523918	0.039003
PPARG	1.130214	1.003342	1.273129	0.043917
PTCH1	0.80688	0.654372	0.994932	0.044697
HMGCS1	1.164141	1.001532	1.353151	0.047713
CPEB2	1.224956	1.001318	1.498541	0.048522
TREM2	0.892091	0.796221	0.999505	0.049011
EPHX2	0.859471	0.737998	1.000938	0.051427
TNFRSF12A	1.131177	0.998833	1.281057	0.052189
TTC39B	0.816579	0.65957	1.010965	0.062904
FABP5	1.12623	0.992224	1.278334	0.065887
LGALS3	1.17582	0.986939	1.400848	0.06986
MIR301B	4.702879	0.85846	25.76365	0.074409
ABCA5	0.826115	0.669408	1.019506	0.075083
MVD	1.203905	0.980631	1.478017	0.076216
ANXA5	1.246565	0.976298	1.59165	0.077131
FADS2	1.104012	0.98811	1.233509	0.080361
ABCA12	1.100959	0.986714	1.228431	0.085308

NIBAN1	0.895019	0.786686	1.018269	0.092002
NFIL3	1.193001	0.969351	1.468251	0.095697
FMO5	0.924624	0.842407	1.014866	0.099067
EBP	1.176397	0.961156	1.439839	0.115096
HMGCR	1.183789	0.957869	1.462995	0.118389
CD9	0.886738	0.75863	1.036481	0.131071
SREBF2	1.163425	0.954048	1.418753	0.134843
ALCAM	0.896188	0.774923	1.03643	0.139517
FGF1	0.883434	0.749086	1.041878	0.140874
MIR27B	0.908731	0.798722	1.033892	0.146029
LDLR	1.112716	0.961936	1.287132	0.150546
GLDC	1.088366	0.9669	1.225091	0.160775
PLTP	0.913006	0.801561	1.039945	0.170605
LDLRAP1	0.86367	0.699834	1.065861	0.172048
FASN	1.08146	0.965305	1.211593	0.17674
HSD17B7	0.850715	0.671414	1.077898	0.180634
APOA1	0.851904	0.660654	1.098518	0.216604
LAMTOR1	1.179478	0.895798	1.552994	0.239591
GPS2	0.755419	0.460254	1.239876	0.267227
IDI1	1.117247	0.91708	1.361102	0.271054
NAXE	1.124819	0.90832	1.39292	0.280867
SERPINA12	5.464263	0.23315	128.0639	0.291327
CYP51A1	1.115979	0.909002	1.370083	0.294449
APOB	1.146434	0.885934	1.483531	0.29877
CES1	0.962943	0.896327	1.034511	0.301903
SHH	0.939567	0.833899	1.058625	0.305808
PLA2G10	0.960524	0.889177	1.037595	0.306411
ABCG4	1.517048	0.6782	3.393448	0.310289
PCYT2	1.12338	0.88987	1.418165	0.327797
MIR185	0.635218	0.255619	1.578529	0.328535
NFKBIA	1.090413	0.913015	1.302278	0.339354
CXCL16	0.921377	0.77781	1.091443	0.343385
MIR33A	0.817894	0.522945	1.279199	0.378362
NR1H2	1.141135	0.849688	1.53255	0.380257
ATF5	1.088975	0.899722	1.318036	0.381523
ACADL	0.93714	0.808305	1.086509	0.389569
STX5	1.161243	0.812498	1.659677	0.411979
FDFT1	1.082558	0.892059	1.313739	0.421804
MIR30C1	0.80318	0.470243	1.371842	0.422291
TMEM97	1.067072	0.909398	1.252084	0.426161
MIR9-1	0.47079	0.070731	3.133596	0.436007
ATXN2	1.107087	0.852069	1.438429	0.446323
NR1H3	0.919636	0.736864	1.147743	0.458656
ABCA7	0.939596	0.796176	1.108852	0.460954
PRKAA1	1.084035	0.869903	1.350876	0.472355
SC5D	0.949034	0.817897	1.101198	0.490545
ACSS2	0.940378	0.785072	1.126409	0.504467
CBS	1.097383	0.833236	1.445268	0.508336
MIR128-1	1.182718	0.718455	1.946985	0.509353
MIR613	0.85903	0.538753	1.369706	0.523248
DHCR24	0.949487	0.808965	1.11442	0.525897
SCAP	1.086886	0.836858	1.411615	0.532192
ARV1	0.93166	0.743039	1.168161	0.539673
CLU	0.975006	0.894827	1.062369	0.563188
HSD3B2	0.827317	0.431882	1.584818	0.567611
GNB3	0.924809	0.705404	1.212455	0.571581
SIRT1	0.937478	0.746361	1.177533	0.578868
PDK3	0.946848	0.778996	1.150867	0.583288

	HR	Lower .95 CI	Upper .95 CI	Pr(>z)
TM7SF2	1.043381	0.894319	1.217288	0.589259
FBXO6	0.951462	0.787428	1.149666	0.606304
DGAT2	0.95806	0.807009	1.137384	0.624534
MIR96	1.39417	0.329931	5.891262	0.651326
ABCA1	0.968596	0.833946	1.124987	0.676088
CYP7A1	0.608185	0.054716	6.760213	0.685701
MIR33B	0.944551	0.714702	1.248321	0.688447
SREBF1	1.036243	0.8703	1.233827	0.689281
POR	0.959094	0.772173	1.191262	0.705711
APOE	1.02077	0.916964	1.136329	0.70714
MIR302A	0.931198	0.633439	1.368923	0.716904
PNRC1	1.049663	0.797763	1.381104	0.729202
DGKQ	1.034766	0.844175	1.268387	0.742127
MAL2	0.972983	0.824859	1.147706	0.745151
LGMN	0.96958	0.789983	1.190008	0.767561
PON1	0.97973	0.851128	1.127763	0.775461
LSS	0.973932	0.797992	1.188663	0.794991
CETP	1.037446	0.785865	1.369567	0.795304
MIR548P	0.973362	0.786455	1.204688	0.80399
ALDOC	1.015225	0.900495	1.144573	0.804939
MIR182	1.098934	0.467405	2.58375	0.828763
MVK	0.972752	0.755477	1.252517	0.830391
ACADVL	1.022365	0.811592	1.287876	0.851055
YJEFN3	1.014	0.869779	1.182136	0.859026
AVPR1A	1.014146	0.865883	1.187795	0.861718
EGF	1.010157	0.891241	1.14494	0.874347
LRP1	0.989627	0.858291	1.141059	0.885866
MIR758	0.921174	0.222361	3.816147	0.909856
MBTPS1	0.985168	0.75901	1.278714	0.910587
MIR148A	1.0299	0.572269	1.853488	0.921718
PMVK	1.010341	0.817274	1.249017	0.92425
ABCA2	0.993187	0.827105	1.192619	0.941631
LPCAT3	0.993221	0.812631	1.213944	0.947035
CTNNB1	1.006264	0.835962	1.211259	0.947375
ABCG1	0.995179	0.854752	1.158676	0.950344
ZDHHC8	0.994501	0.817812	1.209363	0.955937
GUSB	0.993517	0.784653	1.257979	0.956926
SEMA3B	1.00175	0.900998	1.113769	0.974204
ATF3	0.998777	0.889403	1.121603	0.983507
MIR130B	0.981978	0.081133	11.88525	0.988595
MIR206	0.000000689	0	Inf	0.993752
RXRA	1.000396	0.803729	1.245185	0.997175
MIR144	NA	NA	NA	NA
MIR19B1	NA	NA	NA	NA
MIR27A	NA	NA	NA	NA

HR, hazard ratio; NA, not applicable; Inf, infinity; CI, confidence interval; Exp, exponential function.

Table SII. Univariate Cox regression was used to screen genes associated with prognosis

Gene	HR	95.0% CI for Exp (HR)		Log-rank P-value
		Lower	Upper	
GJB3	1.213568	1.125075	1.309022	3.90×10^{-07}
KRT6A	1.129542	1.076695	1.184984	4.36×10^{-07}
IGF2BP1	1.225711	1.13113	1.328202	3.59×10^{-07}
CYP4B1	0.879608	0.82696	0.935609	4.11×10^{-05}
SFTPB	0.91017	0.869862	0.952347	4.16×10^{-05}
NAPSA	0.899768	0.854029	0.947956	6.31×10^{-05}
GGTLC1	0.871597	0.812954	0.934469	0.0001005
AC106045.1	1.182152	1.084445	1.288662	0.000123898
HTR1D	1.221329	1.100481	1.355448	0.000150018
C16orf89	0.899508	0.851017	0.950761	0.000167757
CACNA2D2	0.865138	0.800953	0.934465	0.000206188
ADGRF4	1.178972	1.077425	1.290088	0.000310906
KRT16	1.12484	1.051527	1.203264	0.000588008
HMGA2	1.16302	1.066621	1.268131	0.000550554
GRIA1	0.605469	0.453144	0.808999	0.000587003
LY6K	1.169648	1.067397	1.281695	0.00073985
CRTAC1	0.869111	0.799863	0.944353	0.000900834
VEGFD	0.838503	0.755328	0.930836	0.00088434
APCDD1L	1.240926	1.090282	1.412384	0.001027177
TMPRSS11E	1.114032	1.043847	1.188936	0.001069114
ABCA3	0.871826	0.80253	0.947107	0.001132802
C4BPA	0.90554	0.852863	0.961472	0.001162938
SFTPD	0.902098	0.847592	0.960109	0.001141466
RPL13AP17	0.749104	0.627604	0.894125	0.001248584
CYP2B7P	0.902239	0.846052	0.962157	0.001672242
KLK6	1.124839	1.043861	1.212098	0.001833104
TNNT1	1.102733	1.033258	1.17688	0.003079812
CYP4Z2P	0.774882	0.653792	0.918399	0.003010364
CLDN2	0.908938	0.852318	0.96932	0.003413984
AL135999.3	0.887347	0.81869	0.961761	0.003483913
AP000357.2	0.834968	0.739364	0.942935	0.003558786
PRDM16-DT	0.77562	0.653015	0.921243	0.003635489
LIPK	1.246585	1.072142	1.44941	0.003838226
KLK11	0.910461	0.852598	0.97225	0.004905941
VSIG2	0.902364	0.839747	0.969652	0.00497922
B3GAT1-DT	0.835626	0.736894	0.947586	0.00489482
SCGB3A1	0.93858	0.897787	0.981227	0.005099649
AC236972.3	0.807522	0.694469	0.938979	0.005232197
CHIA	0.870576	0.788478	0.961223	0.00580239
MS4A15	0.903413	0.8401	0.971497	0.005937998
HABP2	0.898578	0.832169	0.970286	0.006133946
AC092071.1	0.873138	0.79128	0.963465	0.006715094
PLA2G1B	0.902338	0.836844	0.972956	0.007290301
ADH1B	0.894111	0.822949	0.971426	0.00793947
GFRA1	0.787596	0.658666	0.941763	0.00887971
SFTPC	0.951795	0.917107	0.987795	0.008817829
EREG	1.082737	1.019759	1.149605	0.008960228
AQP4	0.918429	0.860876	0.979829	0.009721845
COL11A1	1.091598	1.020966	1.167117	0.010032293
PIGR	0.935363	0.888752	0.984419	0.010285451
PGC	0.951113	0.915211	0.988423	0.010429974
AGER	0.912174	0.849713	0.979227	0.010920804
PEBP4	0.919173	0.861151	0.981105	0.011146681
AL162511.1	0.850743	0.750332	0.964593	0.011524445
LINC01234	1.308325	1.0616	1.61239	0.010910939

NR0B2	0.89918	0.825407	0.979548	0.014516295
MUC16	1.124686	1.022392	1.237216	0.015385
C7	0.910579	0.843237	0.983298	0.01666468
PLA2G12B	0.898575	0.822337	0.981881	0.017633452
FGF5	1.201327	1.031851	1.398639	0.014744729
LRRK2-DT	0.893858	0.813963	0.981596	0.018527538
PLPP4	1.171664	1.026187	1.337766	0.018864742
SCGB3A2	0.949978	0.90954	0.992213	0.020513544
LINC02489	0.900069	0.823198	0.984118	0.020491685
ABCC8	0.592817	0.379578	0.92585	0.021077347
LINC00261	0.901046	0.824246	0.985002	0.02156715
CD300LG	0.679214	0.487893	0.945559	0.02101879
PADI1	1.119166	1.015645	1.233239	0.022233732
CHIAP2	0.806464	0.669608	0.97129	0.022292202
LPL	0.908314	0.835316	0.98769	0.024336376
DMBT1	0.934839	0.88129	0.991641	0.024879842
LHFPL3-AS2	0.890888	0.80517	0.985732	0.024877145
PRMT8	0.77724	0.621198	0.97248	0.026898527
WIF1	0.935262	0.881074	0.992782	0.027536543
SLC14A2	0.898239	0.814849	0.990162	0.029432175
GFRA3	0.929017	0.868881	0.993315	0.03065242
AC023421.1	0.921903	0.855819	0.99309	0.030748421
LINC02577	1.117898	1.009013	1.238533	0.032524422
AL138900.2	0.834355	0.705996	0.986052	0.033525841
SLC26A5	0.745252	0.567665	0.978395	0.034213823
AC084375.1	0.895722	0.808696	0.992113	0.03430724
CLDN18	0.940028	0.886982	0.996246	0.036478157
AC010998.3	0.843126	0.716512	0.992113	0.038939466
ATP13A4-AS1	0.892833	0.80099	0.995208	0.040092215
TMEM132D	0.829113	0.688023	0.999136	0.047491416
SCGB1A1	0.957329	0.915366	1.001215	0.056018916
LHFPL3	0.836358	0.696006	1.005012	0.056254852
PCDH15	0.442558	0.189274	1.034784	0.059186808
LGI3	0.899899	0.803022	1.008463	0.06874035
C8orf34-AS1	0.904022	0.810469	1.008374	0.069938669
PAX7	0.914646	0.830306	1.007553	0.068895353
SFTPA2	0.962583	0.92274	1.004146	0.076614348
MIR663AHG	0.864125	0.7341	1.01718	0.07848677
SCTR	0.934689	0.865469	1.009445	0.084898578
SFTPA1	0.965643	0.927002	1.005894	0.092903334
F11	0.853788	0.707865	1.029791	0.097237904
RSPO2	0.838497	0.680063	1.033841	0.098894139
TMEM132C	0.730337	0.50102	1.064613	0.102474528
STUM	0.918115	0.827239	1.018973	0.107108287
AL359704.2	0.94212	0.874849	1.014562	0.113474438
LINC00973	1.068075	0.982266	1.16138	0.12209026
MUCL3	0.927466	0.839647	1.024469	0.138256444
AL137018.1	0.914089	0.809493	1.032201	0.146317558
CPB2	0.905013	0.788936	1.038169	0.153610718
AC046195.1	0.830582	0.642908	1.073042	0.154951087
ENAM	0.870948	0.71107	1.066773	0.18104195
GKN2	0.959707	0.899619	1.023808	0.212028971
FAM133A	0.953222	0.874352	1.039206	0.276115685
LRP2	0.948998	0.853759	1.05486	0.331710894
PCSK2	0.970808	0.911254	1.034255	0.358300379
HMGCS2	0.953663	0.861335	1.055888	0.360657138
IL36RN	1.047638	0.946923	1.159066	0.366499876
SBSN	1.047729	0.940478	1.167211	0.396971686

LINC02772	0.928098	0.77835	1.106656	0.405752998
MAGEA3	1.024361	0.967589	1.084463	0.407657412
AGTR2	0.964442	0.876757	1.060896	0.456455606
DACT2	0.97205	0.893055	1.058032	0.512024308
AC008268.1	0.975668	0.900967	1.056562	0.544318446
SLC13A2	0.97274	0.878286	1.077352	0.595743733
MAGEA6	1.016017	0.955847	1.079974	0.609827776
TRIM71	0.953596	0.772433	1.177247	0.658489469
GJB1	0.983284	0.910275	1.06215	0.668447092
NELL1	0.981987	0.902054	1.069002	0.674699352
SILC1	1.049445	0.511337	2.153834	0.895334373

HR, hazard ratio; CI, confidence interval; Exp, exponential function.