Supplemental Table 1. SNPs evaluated and allele frequency

Gene	Chromosome	SNP	Function	RS#	Minor Allele Frequency[1]	
					Reported	Observed
EXO1	1q42-q43	Ex2+1G>A	5'UTR	1635517	0.433	0.473
		Ex2+117C>T	5'UTR	1776177	0.46	0.46
		Ex9+80A>G	N279S	4149909	0.058	0.046
		Ex11+20G>A	R354H	735943	0.433	0.424
		Ex12+49C>T	T439M	4149963	0.103	0.096
		Ex12+105G>A	V458M	4149965	0.242	0.24
		Ex13+251G>A	E589K	1047840	0.39	0.371
		Ex13-101A>G	E670G	1776148	0.32	0.326
		Ex15+59C>T	P757L	9350	0.183	0.182
		Ex16-7A>G	3'UTR	851797	0.394	0.275
		IVS10-2632G>T	Intron	1635510	0.49	0.482
MGMT	10q26	Ex1-16C>T	5'UTR	16906252	0.12	0.07
		Ex5+34C>T	L53L	1803965	0.129	0.115
		Ex5-25C>T	L84F	12917	0.125	0.138
		Ex7+13A>G	I143V	2308321	0.10	0.12
		Ex7+119A>G	K178R	2308327	0.129	0.145
		IVS4-75473G>A	Intron	524804	0.43	0.46
		IVS4-44836G>A	Intron	9971190	0.48	0.411
		IVS4-7901C>T	Intron	7069143	0.45	0.466
		IVS5+23129G>A	Intron	7898151	0.40	0.457
MLH1	3p21.3	Ex8-41G>A	V213M	2308317	0.01	0.002
		Ex8-23A>G	I219V	1799977	0.058	0.052
		-93G>A	promoter	1800734	0.17	0.277
		IVS3-659A>C	Intron	3774341	0.46	0.45
		IVS12-169C>T	Intron	2286940	0.414	0.449
		IVS14-19A>G	Intron	9876116	0.47	0.465
		*919T>C	3' near gene	1558529	0.433	0.448
MLH3	14q24.3	Ex2-1060G>T	V741F	28756990	0.024	0.021
		Ex2-750C>T	P844L	175080	0.431	0.474
		Ex3+35C>A	D1105E	28757008	0.024	0.015
		Ex13+93A>G	Q1421Q	13712	0.494	0.473
		IVS6+35C>G	Intron	3742780	0.474	0.487
MSH2	2p22-p21	Ex6+23G>A	G322D	4987188	0.032	0.053
		-117T>C	promoter	2303425	0.21	0.141
		IVS1+9C>G	Intron	2303426	0.438	0.362
		IVS9-9A>T	splicing site	12998837	0.169	0.112
		IVS11-62G>A	Intron	17218439	0.20	0.222
		IVS12-265A>G	Intron	2059520	0.31	0.37
		IVS12-6T>C	splicing site	2303428	0.145	0.142
MSH3	5q11-q12	Ex1-3A>G	I79V	1650697	0.26	0.215
		Ex4-100G>A	P231P	1805355	0.062	0.07
		Ex21+33A>G	Q949R	184967	0.20	0.285
		Ex23+3A>G	T1045A	26279	0.312	0.31
		Ex24-318G>A	3'UTR	394592	0.133	0.173
		IVS10-3448A>G	Intron	40139	0.43	0.436
		IVS12+1841T>G	Intron	863221	0.354	0.374
		IVS23+437G>A	Intron	27494	0.312	0.30
MSH6	2p16	Ex1-145G>A	G39E	1042821	0.207	0.220
		Ex2+16A>G	P92P	1800932	0.225	0.189
		Ex3+83T>C	D180D	1800935	0.283	0.27
		IVS1+2214C>T	Intron	3136245	0.183	0.20
		IVS4-101G>C	Intron	2072447	0.237	0.237
PMS1	2q31-q33	Ex1-4G>C	5'UTR	5742933	0.22	0.22

PMS2	7p22.2	-3905C>T	promoter	2009115	0.125	0.09
		-153C>G	promoter	3735296	0.10	0.136
		Ex7-24C>G	S260S	6463524	0.39	0.20
		Ex11+264C>T	P470S	1805321	0.359	0.31
		Ex11+310C>A	T485K	1805323	0.054	0.07
		Ex11-386A>G	K541E	2228006	0.133	0.11
		Ex11-218A>T	T597S	1805318	0.033	0.023
		Ex11-141G>A	M622I	1805324	0.017	0.023
		Ex13-23T>C	F751F	1805325	0.395	0.374
		Ex14+49A>G	N775S	17420802	0.392	0.406
		IVS1-1121C>T	Intron	7797466	0.202	0.329
		IVS7-164T>G	Intron	2286681	0.41	0.391
		IVS7+442G>T	Intron	12112229	0.348	0.256
PMS2L3	7q11.23	Ex1+118C>T	5'UTR	10266080	0.02	0.014
		Ex7-32G>A	3'UTR	17147225	0.19	0.015
		IVS1-8C>T	Intron	1167823	0.208	0.06
		IVS2-1578A>G	Intron	1167819	0.39	0.32
		IVS3+9A>G	Intron	794378	0.28	0.34
RECQL	12p12	Ex1+61A>C	5'UTR	1061626	0.136	0.16
		Ex1+123C>T	5'UTR	1061627	0.23	0.225
		Ex14+64T>C	N577N	6500	0.05	0.09
		Ex15+159A>C	3'UTR	13035	0.427	0.427
		-5349A>G	promoter	4762834	0.27	0.281
		IVS1-570T>G	Intron	2300211	0.383	0.435
		IVS1-92C>T	Intron	12423412	0.183	0.23
		IVS2-172C>T	Intron	4762703	0.10	0.09
		IVS2+703T>C	Intron	6487235	0.25	0.30
		IVS2+1222T>C	Intron	2284394	0.25	0.299
		IVS4-795C>T	Intron	11612017	0.46	0.40
		IVS4+1179T>C	Intron	10743416	0.345	0.403
		IVS5-717C>A	Intron	10841833	0.208	0.242
		IVS6-1031T>C	Intron	2284392	0.367	0.42
		IVS6+1916T>G	Intron	7307064	0.117	0.188
		IVS8+190A>G	Intron	2159944	0.208	0.303
		IVS8+532A>G	Intron	1029931	0.24	0.269
		IVS11+218T>G	Intron	997820	0.475	0.402
		IVS11+582T>A	Intron	10161130	0.466	0.49
		IVS12-916T>C	Intron	10841830	0.058	0.08
		*1236A>G	3' near gene	7319	0.244	0.38
TP73	1p36.3	Ex2+3C>T	5'UTR	5031052	0.017	0.015
		Ex2+4G>A	5'UTR	2273953	0.234	0.248
		Ex2+14C>T	5'UTR	1801173	0.189	0.226
		Ex5+90C>T	T173T	1801174	0.143	0.14
		Ex14+252G>A	A610A	9662633	0.054	0.044
		IVS1-9896T>A	Intron	3765701	0.47	0.44
		IVS1-7449G>C	Intron	12027041	0.35	0.419
		*1454C>T	3' near gene	1181869	0.31	0.29
TREX1	3p21.31	Ex2-9A>C	K125Q	11925638	0.045	0.018
		Ex14-460C>T	3'UTR	11797	0.431	0.43
		Ex14+297A>G	3'UTR	12486046	0.05	0.065
		Ex14+782T>C	3'UTR	3135941	0.183	0.20

SNP, single-nucleotide polymorphism; RS#, reference SNP identification number; UTR, untranslated region.
[1]The reported minor allele frequency was from the NCBI dbSNP database.

Supplemental Table 2. Linkage disequilibrium of the 102 SNPs

EXO1	T439M	R354H	P757L	V458M	Ex2+1G>A	Ex2+117C>T	N279S	IVS10-2632G>T	E589K	E670G	Ex16-7A>G
T439M											
R354H	-0.967										
P757L	0.3406	-0.7405									
V458M	-0.8703	-0.9687	0.0409								
Ex2+1G>A	-0.8653	0.9407	-0.5479	-0.8032							
Ex2+117C>T	-0.9117	-0.9268	0.2339	0.8865	-0.8207						
N279S	-0.429	-0.7413	-0.0657	-0.5211	-0.3323	0.5713					
IVS10-2632G>T	-0.9174	-0.9451	0.1997	0.9125	-0.745	0.9105	0.3665				
E589K	0.5152	0.2612	0.146	-0.6955	0.2336	-0.5226	-0.3676	-0.4924			
E670G	0.0233	0.476	-0.8924	-0.4595	0.5083	-0.6113	-1	-0.5647	0.1875		
Ex16-7A>G	0.2783	-0.2208	0.9383	-0.1682	-0.175	-0.0239	-0.2968	-0.0434	0.1495	-0.5269	

MGMT	IVS4-44836G>A	IVS4-75473G>A	IVS4-7901C>T	IVS5+23129G>A	Ex1-16C>T	I143V	K178R	L53L	L84F
IVS4-44836G>A									
IVS4-75473G>A	0.5119								
IVS4-7901C>T	0.0681	0.0351							
IVS5+23129G>A	0.047	-0.0332	-0.0322						
Ex1-16C>T	-0.0272	0.5668	-0.2421	0.1138					
I143V	0.1061	0.0984	0.1324	0.4158	-0.3543				
K178R	0.0609	0.0493	0.1488	0.3379	-0.3397	0.9533			
L53L	-0.0187	0.2122	-0.3348	-0.2646	0.1129	-0.5581	-0.3992		
L84F	-0.0212	0.1391	-0.1939	-0.3271	0.1385	-0.5782	-0.4392	0.8709	

MLH1	I219V	V213M	IVS12-169C>T	-93G>A	IVS3-659A>C	*919T>C	IVS14-19A>G
I219V							
V213M	1						
IVS12-169C>T	1	1					
-93G>A	-0.733	1	-0.5904				
IVS3-659A>C	0.9125	1	0.9194	-0.6002			
*919T>C	1	1	0.9149	-0.6175	0.9312		
IVS14-19A>G	1	1	0.9057	-0.5324	0.9167	0.8992	

MLH3	P844L	Q1421Q	D1105E	V741F	IVS6+35C>G
P844L					
Q1421Q	0.8525				
D1105E	0.3148	0.4378			
V741F	-0.4776	0.5841	-1		
IVS6+35C>G	-0.8466	-0.8753	0.2105	-0.6078	

MSH2	G322D	IVS12-6T>C	IVS12-265A>G	IVS1+9C>G	IVS9-9A>T	IVS11-62G>A	-117T>C
G322D							

IVS12-6T>C	0.5583					
IVS12-265A>G	0.3609	0.8316				
IVS1+9C>G	0.2894	0.7123	0.5744			
IVS9-9A>T	-0.3786	-0.607	0.981	0.8582		
IVS11-62G>A	0.1097	0.0185	-0.1108	6.21E-03	-0.1585	
-117T>C	9.63E-03	-0.4805	0.7447	0.7162	0.8418	0.021

MSH3	P231P	T1045A	Q949R	Ex24-318G>A	IVS10-3448A>G	IVS12+1841T>G	IVS23+437G>A	I79V
P231P								
T1045A	-0.8356							
Q949R	-0.3522	0.4857						
Ex24-318G>A	0.0302	0.1176	0.2869					
IVS10-3448A>G	0.9354	-0.7809	-0.3486	0.0776				
IVS12+1841T>G	-1	0.0289	-0.5173	-0.3509	-0.3923			
IVS23+437G>A	-0.658	0.946	0.462	0.0423	-0.7805	0.0609		
I79V	-1	0.1431	-0.6324	-0.3007	-0.8222	0.9404	0.188	

MSH6	G39E	D180D	IVS1+2214C>T	IVS4-101G>C	P92P
G39E					
D180D	-0.4892				
IVS1+2214C>T	-0.5007	-1			
IVS4-101G>C	-0.4247	-0.8668	-0.9249		
P92P	-0.6123	0.907	-1	-0.9015	

PMS2	P470S	K541E	S260S	IVS1-1121C>T	T597S	M622I	IVS7-164T>G	IVS7+442G>T	F751F	N775S	-153C>G	-3905C>T
P470S												
K541E	-1											
S260S	-0.9648	0.9412										
IVS1-1121C>T	-0.48	-0.3671	-0.1928									
T597S	0.3842	-0.9998	-0.7729	-0.487								
M622I	-0.6637	-0.2	-0.2433	-0.3229	0.1136							
IVS7-164T>G	0.9466	-0.9653	-0.8913	-0.3657	0.7859	-0.6374						
IVS7+442G>T	-1	-0.7829	-0.7368	0.2887	-0.5113	-0.5741	-0.9752					
F751F	-0.3809	-0.4065	9.38E-03	0.1259	-0.1185	-0.1915	-0.1071	-0.1126				
N775S	-0.5114	-0.4704	0.0581	0.2074	0.0581	0.1256	-0.1287	-0.1339	0.839			
-153C>G	-0.9522	-0.8063	-0.5948	0.6524	-1	-0.7731	-0.9505	0.963	-0.2498	-0.3297		
-3905C>T	-1	-0.9256	-0.7514	0.8166	-1	-0.9999	-0.9606	0.9321	-0.4164	-0.3161	0.945	

PMS2L3	Ex7-32G>A	IVS3+9A>G	IVS2-1578A>G	Ex1+118C>T	IVS1-338A>G	IVS1-8C>T
Ex7-32G>A						
IVS3+9A>G	-0.8687					
IVS2-1578A>G	-0.9999	0.0467				
Ex1+118C>T	-1	-0.0837	0.3179			

IVS1-338A>G	0.0117	0.1113	-0.028	0.4519	
IVS1-8C>T	-0.327	-0.6139	-1	-1	-0.9946

RECQL	Ex1+61A>C	N577N	*1236A>G	IVS12-916T>C	IVS11+582T>A	IVS11+218T>G	IVS8+532A>G	IVS8+190A>G	IVS6-1031T>C	IVS6+1916T>G	IVS5-717C>A	IVS4-795C>T	IVS4+1179T>C	IVS2-172C>T	IVS2+703T>C	IVS1-92C>T	IVS1-570T>G	Ex1+123C>T	-5349A>G	IVS2+1222T>C	Ex15+159A>C
Ex1+61A>C																					
N577N	-0.7128																				
*1236A>G	-0.8711	-1																			
IVS12-916T>C	-0.0498	0.6168	-0.7532																		
IVS11+582T>A	0.4088	0.8021	-0.831	0.5492																	
IVS11+218T>G	-0.9092	-1	0.8909	-0.7672	-0.8938																
IVS8+532A>G	-0.7767	-0.269	-0.5965	-0.1982	0.7973	-0.8223															
IVS8+190A>G	-0.8052	-0.677	-0.6042	-0.4543	0.7696	-0.854	0.8697														
IVS6-1031T>C	-0.6161	0.2925	-0.6574	0.6074	0.5172	-0.8284	0.8665	0.8288													
IVS6+1916T>G	0.7879	-1	-0.7636	-0.1003	0.4744	-0.6149	-0.4436	-0.3705	-0.5398												
IVS5-717C>A	-0.8996	-0.5408	-0.553	-0.482	0.9206	-0.8052	0.886	0.9229	0.9402	-0.6392											
IVS4-795C>T	-0.9497	-0.2356	0.6927	-0.762	-0.7729	0.7956	-0.9337	-0.8358	-0.9395	-0.771	-1										
IVS4+1179T>C	-0.7322	0.3582	-0.6596	0.6323	0.5729	-0.881	0.8675	0.8109	0.9468	-0.611	0.9559	-0.9679									
IVS2-172C>T	-0.7244	0.5003	-0.6652	0.637	0.8678	-0.8523	-0.5111	-0.7499	0.8457	-0.6747	-1	-0.7857	0.8943								
IVS2+703T>C	-0.9627	-0.451	-0.7805	-0.2028	0.5142	-0.8646	0.6915	0.6485	0.873	-0.6282	0.8236	-0.941	0.8893	-0.654							
IVS1-92C>T	-0.8939	-0.4265	-0.7502	-0.4643	0.9031	-0.8036	0.8889	0.9213	0.9662	-0.7066	0.9441	-0.9507	0.9598	-1	0.9586						
IVS1-570T>G	0.808	-0.5453	-0.8054	0.0573	0.481	-0.8409	0.5801	0.5141	0.443	0.5682	0.677	-0.8432	0.4525	-0.545	0.8332	0.8241					
Ex1+123C>T	0.9206	-0.7366	-0.8612	-0.0151	0.1413	-0.8938	-0.6683	-0.8536	-0.0305	0.5985	-0.8472	-0.8937	-0.033	-0.5196	0.0799	-0.934	0.8194				
-5349A>G	-0.7643	-0.5342	-0.7246	-0.3742	0.7129	-0.7518	0.7009	0.6458	0.7888	-0.278	0.7729	-0.8623	0.7878	-0.8917	0.8143	0.9277	0.7612	-0.4391			
IVS2+1222T>C	-0.8886	-0.4928	-0.7788	-0.1344	0.5049	-0.8542	0.6587	0.653	0.8712	-0.5857	0.7931	-0.9603	0.8871	-0.5857	0.9648	0.9278	0.8179	0.0662	0.7965		
Ex15+159A>C	-0.7974	-0.9668	0.9213	-0.6627	-0.7906	0.894	-0.6714	-0.6419	-0.7131	-0.5726	-0.646	0.7599	-0.752	-0.7572	-0.868	-0.8264	-0.7953	-0.8203	-0.7264	-0.8588	

TP73	Ex2+4G>A	Ex2+14C>T	Ex2+3C>T	T173T	IVS1-9896T>A	IVS1-7449G>C	*1454C>T	A610A
Ex2+4G>A								
Ex2+14C>T	0.9722							
Ex2+3C>T	-0.9999	-1						
T173T	0.1287	0.1	0.1129					
IVS1-9896T>A	0.224	0.2243	-0.2823	-0.0153				
IVS1-7449G>C	0.7805	0.8712	-0.6974	0.0255	0.306			
*1454C>T	0.0351	0.0386	0.4003	0.8713	-0.1157	-0.0246		
A610A	0.0345	0.0506	0.1218	-0.4003	0.123	0.0211	0.8604	

TREX1	Ex14-460C>T	K125Q	Ex14+297A>G	Ex14+782T>C
Ex14-460C>T				
K125Q	-0.2113			
Ex14+297A>G	0.5371	0.067		
Ex14+782T>C	-0.8587	-1	-0.4613	

$0.5 \le |D'| < 0.9$

$0.9 \le |D'| \le 1$

Supplemental Table 3. Association of haplotype with pancreatic cancer risk

Haplotype	Frequency (Case/Control)	OR[1] (95% CI)	*P*[1]
EXO1			
CACGCCAGGG	0.155/0.169	1.0	
C**G**CG**TT**A**TA**G	0.03/0.047	0.54 (0.32-0.91)	0.02
MGMT			
GGCG	0.1268/0.1113	1.0	
AACG	0.0903/0.094	0.63 (0.45-0.87)	0.005
G**AT**G	0.0451/0.0362	1.92 (1.17-3.15)	0.01
G**A**CG	0.0449/0.0456	0.50 (0.26-0.98)	0.04
AG**TA**	0.0295/0.019	2.03 (1.03-4.02)	0.04
AGCG	0.0293/0.0147	3.19 (1.20-8.48)	0.02
AG**T**G	0.0276/0.01	5.35 (1.74-16.4)	0.003
MLH1			
ATGCCG	0.2713/0.3266	1.0	
A**CAATA**	0.2088/0.2041	1.26 (1.01-1.57)	0.04
A**C**GCCG	0.0282/0.0141	1.87 (1.06-3.30)	0.03
ATGCC**A**	0.0247/0.0119	1.93 (1.05-3.55)	0.03
A**C**G**AT**G	0.0229/0.0104	2.56 (1.34-4.88)	0.004
MSH2			
GTACAGT	0.4153/0.3988	1.0	
GTAGA**A**T	0.0974/0.1055	0.68 (0.50-0.91)	0.0098
MSH3			
GAAGGTAA	0.1779/0.2152	1.0	
GAA**A**GTAA	0.0196/0.0298	0.32 (0.14-0.72)	0.006
MSH6			
GTCGA	0.1908/0.2241	1.0	
G**C**CG**G**	0.1658/0.1643	1.36 (1.02-1.82)	0.03
GT**T**GA	0.154/0.1433	1.48 (1.12-1.96)	0.006
G**C**CGA	0.0894/0.0731	1.45 (1.10-1.91)	0.009
PMS2			
TACCGGTA	0.1382/0.2323	1.0	
CACCGGTA	0.0396/0.0243	1.83 (1.15-2.92)	0.01
CGGC**T**G**CG**	0.022/0.0126	2.36 (1.06-5.25)	0.03
TP73			
GCCCTGCG	0.2632/0.2626	1.0	
GCC**T**TG**T**G	0.0344/0.0527	0.51 (0.33-0.80)	0.0029
ATCCT**CT**G	0.0223/0.01	2.67 (1.27-5.63)	0.009
TREX1			
TAAT	0.3764/0.3735	1.0	
CA**G**T	0.025/0.0133	2.19 (1.07-4.48)	0.03

[1]Odds ratios and *P* values were from logistic regression adjusted for sex, race, age, diabetes, smoking, alcohol consumption, and family history of cancer.
Haplotypes with *P*>0.05 in logistic regression models are not shown.