SUPPLEMENTARY MATERIAL

Polymorphisms and studies for which meta-analyses were conducted.						
Pathway	**Gene**	**rs Number**	**Wt Allele**	**Odds Ratio**	**95% CI**	**Reference**
BER	*APE1*	rs1130409	G	1.52	1.12-1.93	Zhang et al[1]
				1.07	0.92-1.24	Lai et al[2]
				1.06	0.89-1.26	Li et al[3]
				1.17	0.98-1.36	Pardini et al[4]
				1.18	0.95-1.47	Moreno et al[5]
	MUTYH	rs3219489	G	0.97	0.84-1.12	Tao et al[6]
				0.97	0.82-1.16	Picelli et al[7]
				1.67	1.23-2.25	Przybyowska et al[8]
	OGG1	rs1052133	C	1.09	0.98-1.22	Curtin et al[9]
				1.52	0.94-2.46	Sliwinski et al[10]
				1.16	0.90-1.49	Brevik et al[11]
				0.97	0.66-1.42	Engin et al[12]
				0.83	0.57-1.20	Sameer et al[13]
				1.47	1.01-2.14	Przybyowska et al[8]
				0.78	0.57-1.05	Hansen et al[14]
				0.82	0.63-1.07	Moreno et al[5]
				1.02	0.83-1.25	Pardini et al[4]
				1.10	0.92-1.33	Stern et al[15]
				1.04	0.89-1.20	Lai et al[2]
				0.95	0.75-1.22	Zhang et al[1]
				1.15	0.71-1.88	Gil et al[16]
	PARP1	rs1136410	T	1.28	1.07-1.52	Li et al[3]
				1.11	0.84-1.45	Brevik et al[11]
				1.08	0.90-1.29	Stern et al[15]
	XRCC1	rs1799782	C	2.52	1.49-4.26	Nissar et al
				1.30	1.04-1.64	Dai et al[17]
				1.29	1.07-1.55	Li et al[3]
				0.99	0.85-1.16	Yin et al[18]
				0.56	0.26-1.21	Gsur et al[19]
				1.11	0.46-2.67	Sliwinski et al[10]
				4.04	2.35-6.95	Skjelbred et al[20]
				0.81	0.37-1.80	Przybyowska et al[8]
				1.76	0.71-4.37	Gil et al[16]
				0.84	0.55-1.28	Moreno et al[5]
				1.23	0.88-1.71	Pardini et al[4]
		rs25487	G	0.90	0.70-1.17	Zhang et al[1]
				2.37	1.69-3.31	Procopciuc et al[21]
				0.99	0.82-1.19	Li et al[3]
				1.19	1.01-1.41	Yin et al[18]
				0.86	0.62-1.17	Gsur et al[19]
				0.93	0.63-1.35	Gil et al[16]

				0.84	0.56-1.26	Sliwinski et al[10]
				0.92	0.71-1.21	Skjelbred et al[20]
				0.89	0.76-1.05	Yeh et al[22]
				1.43	1.04-1.95	Przybyowska et al[8]
				0.96	0.77-1.21	Moreno et al[5]
				0.94	0.79-1.12	Pardini et al[4]
				1.60	1.20-2.12	Poomphakwaen et al[23]
		rs25489	G	1.03	0.67-1.60	Moreno et al[5]
				1.71	0.82-3.62	Skjelbred et al[20]
				0.96	0.75-1.24	Yin et al[18]
HRR	*RAD18*	rs373572	A	1.45	1.02-2.05	Kanzakhi et al[24]
				1.28	1.07-1.52	Pan et al 1[25]
				1.32	1.09-1.61	Pan et al 2[25]
	RAD51	rs1801320	G	1.35	0.93-1.98	Nissar et al[26]
				1.02	0.70-1.47	Romanowicz-Makowska et al[27]
				0.89	0.57-1.37	Mucha et al[28]
				0.31	0.20-0.48	Krupa et al[29]
				1.04	0.61-1.77	Gil et al[16]
	XRCC 3	rs861539	C	2.14	1.38-3.31	Nissar et al[30]
				0.79	0.59-1.05	Mucha et al[31]
				1.13	0.76-1.68	Gil et al[16]
				1.59	1.04-2.44	Krupa et al[29]
				0.84	0.64-1.09	Skjelbred et al[20]
				2.71	1.30-5.68	Jin et al[32]
				0.80	0.57-1.13	Yeh et al[22]
				0.91	0.73-1.13	Moreno et al[5]
MMR	*MLH1*	rs1799977	A	1.09	0.98-1.20	Picelli et al[7]
				1.12	0.95-1.31	Tulupova et al[33]
				1.00	0.91-1.11	Campbell et al[34]
				1.80	1.26-2.58	Nejda et al[35]
	MSH2	rs2303425	T	1.05	0.82-1.25	Li et al[36]
				1.01	0.85-1.21	Mrkonjic et al 1[37]
				1.13	0.92-1.38	Mrkonjic et al 2[37]
	MSH6	rs1042821	C	0.78	0.64-0.97	Tulupova et al[33]
				1.03	0.89-1.18	Picelli et al[7]
				1.12	0.99-1.26	Campbell et al[34]
NER	*ERCC 1*	rs11615	C	1.24	0.97-1.58	Skjelbred et al[38]
				1.23	0.93-1.63	Hou et al[39]
				0.96	0.66-1.40	Gil et al[16]
				1.07	0.85-1.34	Moreno et al[5]
	ERCC 5	rs17655	C	1.05	0.92-1.20	Sun et al[40]
				1.20	1.05-1.37	Du et al[41]
				1.13	1.00-1.28	Liu et al[42]
				1.53	0.98-2.40	Gil et al[16]
				1.13	0.91-1.34	Pardini et al[4]
				1.08	0.91-1.27	Steck et al[43]
	TP53	rs1042522	C	1.10	0.60-2.03	Abderrah et al[44]

				1.20	0.99-1.47	Gao et al[45]
				0.84	0.79-1.01	Oh et al[46]
				1.28	0.97-1.70	Aizat et al[47]
				0.84	0.68-1.05	Tan et al[48]
				1.10	0.92-1.32	Koushik et al[49]
				1.19	0.92-1.53	Gemignani et al[50]
				1.54	1.28-1.85	Zhu et al[51]
				1.32	1.0-1.75	Cao et al[52]
				1.04	0.87-1.24	Polakova et al[53]
				0.78	0.61-1.01	Dasterjedi et al[54]
				2.94	2.27-3.81	Djansugrova et al[55]
	XPC	rs2228000	C	1.29	1.13-1.48	Sun et al[40]
				0.90	0.76-1.01	Wu et al[56]
				1.02	0.84-1.23	Steck et al[43]
		rs2228001	A	0.74	0.51-1.07	Engin et al[12]
				1.07	0.90-1.23	Hansen et al[57]
				1.15	0.78-1.69	Gil et al[16]
				1.20	1.01-1.42	Wu et al[56]
				1.10	0.97-1.25	Liu et al[42]
				1.38	1.06-1.79	Aizat et al[58]
				1.04	0.88-1.24	Pardini et al[4]
	XPD	rs13181	G	0.96	0.61-1.52	Gomez-Diaz et al[59]
				1.91	1.32-2.74	Procopciuc et al[21]
				2.72	2.07-3.56	Kabzinski et al[60]
				1.23	0.85-1.79	Gil et al[16]
				0.63	0.41-0.96	Sliwinski et al[10]
				1.20	0.91-1.57	Skjelbred et al[20]
				1.17	0.89-1.54	Yeh et al[61]
				1.00	0.84-1.200	Hansen et al[57]
				1.00	0.80-1.25	Moreno et al[5]
				1.11	0.78-1.57	Jelonek et al[62]
		rs1799793	G	1.46	1.10-1.93	Kabzinski et al[60]
				0.99	0.70-1.45	Gil et al[16]
				0.99	0.83-1.89	Hansen et al[57]
DRR	*MGMT*	rs12917	C	0.74	0.53-1.05	Stern et al[15]
				0.80	0.60-1.01	Khatami et al[63]
				0.91	0.65-1.27	Moreno et al[5]
		rs2308321	A	1.08	0.83-1.42	Loh et al[64]
				0.88	0.60-1.30	Khatami et al[63]
				0.93	0.65-1.32	Moreno et al[5]

Supplementary Table 1. Polymorphisms and studies for which meta-analyses were conducted.

Polymorphisms for which meta-analyses could not be conducted.						
Pathway	**Gene**	**rs Number**	**Wt Allele**	**Odds Ratio**	**95% CI**	**Reference**
BER	*APE1*	rs1760944	C	0.97	0.84-1.12	Lai et al[2]
				0.85	0.67-1.08	Zhang et al[1]
		rs2307486	A	1.21	0.88-1.66	Kabzinski et al[65]
	MUTYH	rs3219484	G	0.91	0.76-1.09	Picelli et al[7]
	POLB	rs3136797	C	0.23	0.04-1.09	Moreno et al[5]
	WRN	rs1346044	T	0.84	0.69-1.02	Sun et al[40]
				0.99	0.93-1.15	Frank et al[66]
HRR	***NBS1***	**rs2735383**	**C**	**1.29**	**1.12-1.48**	**Li et al[67]**
				1.26	**1.01-1.56**	
		rs1805794	G	1.07	0.93-1.23	Li et al[67]
		rs13312840	T	1.07	0.89-1.29	Li et al[67]
		rs1805794	G	0.90	0.75-1.08	Pardini et al[4]
				1.07	0.73-1.57	Gil et al[16]
	RAD51	rs2619679	A	0.90	0.62-1.3	Mucha et al[68]
		rs5030789	G	1.27	0.88-1.87	Mucha et al[68]
	XRCC2	**rs718282**	**C**	**1.49**	**1.07-2.07**	**Li et al[69]**
		rs3218384	G	1.23	0.88-1.72	Li et al[69]
		rs3218536	**G**	**1.93**	**1.04-3.56**	**Krupa et al[29]**
NHEJ	***XRCC4***	**rs6869366**	**T**	**0.47**	**0.33-0.69**	**Bau et al[70]**
		rs28360071	Deletion	1.19	0.92-1.54	Bau et al[70]
		rs7727691	C	0.91	0.64-1.30	Bau et al[70]
		rs2075685	T	1.07	0.85-1.35	Bau et al[70]
		rs2075686	C	1.11	0.88-1.41	Bau et al[70]
		rs3734091	C	0.82	0.58-1.17	Bau et al[70]
		rs28360317	Deletion	1.12	0.90-1.40	Bau et al[70]
MMR	*MLH1*	rs1800734	G	0.98	0.88-1.10	Campbell et al[34]
				0.99	0.82-1.20	Tulupova et al[33]
	MSH2	IVS7-212	T	1.05	0.87-1.25	Li et al[36]
		IVS15-214	T	0.95	0.80-1.13	Li et al[36]
		rs2303428	T	1.04	0.86-1.25	Li et al[36]
				1.17	0.88-1.55	Tulupova et al[33]
		IVS10+12	G	1.00	0.84-1.20	Li et al[36]
		IVS11+107	A	0.97	0.81-1.15	Li et al[36]
		IVS11+183	A	0.91	0.76-1.08	Li et al[36]
		IVS8+719	T	1.11	0.92-1.33	Li et al[36]
	MSH3	rs1805355	G	1.28	0.95-1.72	Tulupova et al[33]
		rs26279	G	0.97	0.81-1.16	Tulupova et al[33]
	MSH6	rs3136228	G	1.14	0.97-1.35	Tulupova et al[33]
		rs2072447	G	1.14	0.96-1.36	Tulupova et al[33]
		rs41540312	C	0.88	0.72-1.08	Mrkonjic et al[37]
				1.24	0.91-1.68	
NER	***ERCC1***	**rs2336219**	**A**	**1.30**	**1.08-1.57**	**Dai et al[17]**
		rs3212986	**T**	**1.37**	**1.03-1.83**	**Hou et al[39]**
	EXO1	rs9350	C	0.78	0.53-1.14	Yamamoto et al[71]
	XPA	rs1800975	G	0.89	0.74-1.06	Hansen et al[57]
				0.72	0.50-1.05	Gil et al[16]

	XPF	rs2276466	C	1.17	0.90-1.52	Yang et al[72]
				1.14	0.83-1.57	Hou et al[39]

Supplementary Table 2. Polymorphisms for which meta-analyses could not be conducted.

Polymorphisms which have been shown to increase risk of CRC are in bold.

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