

Table 1 Scale for quality assessment of molecular association studies of CRC cancer

Criterion	Score
Source of case	
Selected from population or cancer registry	3
Selected from hospital	2
Selected from pathology archives, but without description	1
Not described	0
Source of control	
Population-based	3
Blood donors or volunteers	2
Hospital-based	1
Not described	0
Ascertainment of cancer	
Histological or pathological confirmation	2
Diagnosis of CRC cancer by patient medical record	1
Not described	0
Ascertainment of control	
Controls were tested to screen out CRC cancer	2
Controls were subjects who did not report CRC cancer, no objective testing	1
Not described	0
Matching	
Controls matched with cases by age and sex	2
Controls matched with cases only by age or sex	1
Not matched or not described	0
Genotyping examination	
Genotyping done blindly and quality control	2
Only genotyping done blindly or quality control	1
Unblinded and without quality control	0
HWE	
HWE in the control group	2
Hardy-Weinberg disequilibrium in the control group	0
Association assessment	
Assess association between genotypes and CRC cancer with appropriate statistics and adjustment for confounders	2
Assess association between genotypes and CRC cancer with appropriate statistics without adjustment for confounders	1
Inappropriate statistics used	0
Total sample size	
>1000	3
500-1000	2
200-500	1
<200	0
HWE: Hardy-Weinberg equilibrium	

Table 2 Pooled results on the association between the *CYP1A1 T3801C* polymorphism and CRC risk

Variable	n	TC vs. TT				CC vs. TT			(TC+ CC) vs. TT			CC vs. (TT + TC)			C vs. T		
	(Cases/Controls)	OR	(95% CI)	P_W/I^2 (%)	BFDP	OR (95% CI)	P_W/I^2 (%)	BFDP	OR (95% CI)	P_W/I^2 (%)	BFDP	OR (95% CI)	P_W/I^2 (%)	BFDP	OR (95% CI)	P_W/I^2 (%)	BFDP
Overall	27 (9672/12689)	0.98 (0.89, 1.07)	0.060/ 32.5	–	0.92 (0.74, 1.14)	0.042/ 35.5	–	0.98 (0.89, 1.08)	0.011/ 43.3	–	0.93 (0.77, 1.13)	0.074/ 30.8	–	1.02 (0.93, 1.13)	<0.001/ 59.4	–	
Ethnicity																	
Asian	8 (2183/3384)	0.95 (0.84, 1.07)	0.319/ 14.2	–	0.94 (0.79, 1.11)	0.175/ 31.7	–	0.97 (0.82, 1.15)	0.086/ 43.9	–	0.96 (0.82, 1.12)	0.469/ 0.0	–	0.99 (0.86, 1.13)	0.037/ 53.2	–	
Caucasian	14 (5228/6358)	1.04 (0.94, 1.15)	0.217/ 23.0	–	0.92 (0.67, 1.28)	0.109/ 35.1	–	1.04 (0.90, 1.20)	0.065/ 40.3	–	0.92 (0.67, 1.27)	0.117/ 34.1	–	1.14 (0.97, 1.35)	0.001/ 62.8	–	
Mixed	5 (2261/2947)	0.85 (0.62, 1.17)	0.034/ 61.7	–	0.73 (0.37, 1.44)	0.081/ 51.8	–	0.85 (0.64, 1.12)	0.067/ 54.4	–	0.81 (0.38, 1.72)	0.041/ 59.9	–	0.88 (0.68, 1.13)	0.042/ 59.7	–	
Geographic region																	
Asia	10 (2323/3519)	1.03 (0.85, 1.24)	0.063/ 44.4	–	0.95 (0.81, 1.12)	0.177/ 29.1	–	1.07 (0.87, 1.33)	0.007/ 60.6	–	0.97 (0.83, 1.13)	0.468/ 0.0	–	1.06 (0.90, 1.26)	0.002/ 66.4	–	
Europe	9 (3638/3990)	1.03 (0.91, 1.16)	0.559/ 0.0	–	1.06 (0.71, 1.58)	0.121/ 38.7	–	1.03 (0.92, 1.15)	0.401/ 3.7	–	1.06 (0.71, 1.58)	0.121/ 38.7	–	1.14 (0.95, 1.37)	0.014/ 58.3	–	
North America	5 (3334/3859)	0.99 (0.88, 1.11)	0.144/ 41.7	–	0.75 (0.53, 1.06)	0.103/ 48.0	–	0.97 (0.87, 1.08)	0.565/ 0.0	–	0.85 (0.41, 1.79)	0.037/ 60.9	–	0.95 (0.86, 1.05)	0.595/ 0.0	–	
Location																	
Colon	6 (1703/3955)	0.98 (0.85, 1.12)	0.108/ 44.6	–	1.04 (0.80, 1.36)	0.470/ 0.0	–	1.01 (0.79, 1.29)	0.051/ 54.6	–	1.05 (0.82, 1.35)	0.483/ 0.0	–	1.02 (0.82, 1.26)	0.026/ 60.7	–	
Rectal	3 (1342/2844)	0.95 (0.81, 1.10)	0.676/ 0.0	–	0.73 (0.55, 0.97)	0.899/ 0.0	0.998	0.91 (0.79, 1.05)	0.697/ 0.0	–	0.75 (0.57, 0.98)	0.808/ 0.0	0.998	0.89 (0.80, 1.00)	0.733/ 0.0	0.999	

Gender																
Female	3	1.27	0.387/	0.999	0.47	0.701/	–	1.19	0.360/	–	0.45	0.728/	–	1.10	0.351/	–
	(885/968)	(1.00, 1.62)	0.0		(0.19, 1.14)	0.0		(0.95, 1.51)	0.0		(0.18, 1.09)	0.0		(0.89, 1.37)	0.0	
Male	4	0.88	0.882/	–	0.73	0.941/	–	0.87	0.894/	–	0.75	0.935/	–	0.87	0.915/	–
	(1422/1455)	(0.73, 1.06)	0.0		(0.37, 1.47)	0.0		(0.72, 1.04)	0.0		(0.38, 1.51)	0.0		(0.74, 1.03)	0.0	
Smoking																
Non -smoker	2	–	–	–	–	–	–	0.74	0.289/	–	–	–	–	–	–	–
	(206/369)							(0.50, 1.11)	11.1							
Smoker	5	–	0.031/	–	0.94	0.625/	–	0.91	0.038/	–	0.69	0.679/	–	1.07	0.275/	–
	(241/422)		78.6		(0.34, 2.60)	0.0		(0.49, 1.72)	60.7		(0.27, 1.75)	0.0		(0.68, 1.67)	16.1	
Sensitivity analysis																
Overall	14	0.97	0.439/	–	0.84	0.041/	–	0.96	0.532/	–	0.88	0.026/	–	0.96	0.342/	–
	(8325/10316)	(0.91, 1.05)	0.9		(0.65, 1.09)	43.6		(0.90, 1.03)	0.0		(0.68, 1.13)	47.1		(0.90, 1.01)	10.1	
Ethnicity																
Asian	4	0.91	0.500/	–	0.86	0.312/	–	0.89	0.327/	–	0.91	0.480/	–	0.92	0.243/	0.999
	(1833/2953)	(0.80, 1.03)	0.0		(0.72, 1.04)	16.0		(0.79, 1.01)	13.1		(0.77, 1.08)	0.0		(0.85, 1.00)	28.2	
Caucasian	7	1.02	0.796/	–	0.97	0.041/	–	1.01	0.652/	–	0.97	0.040/	–	1.00	0.347/	–
	(4532/5015)	(0.92, 1.14)	0.0		(0.51, 1.85)	54.4		(0.91, 1.12)	0.0		(0.51, 1.86)	54.6		(0.91, 1.09)	10.8	
Mixed	3	0.99	0.064/	–	1.05	0.045/	–	0.97	0.368/	–	–	0.015/	–	0.96	0.345/	–
	(1960/2348)	(0.61, 1.60)	63.6		(0.23, 4.89)	67.7		(0.84, 1.11)	0.0			76.2		(0.85, 1.09)	6.1	
Geographic region																
Asia	4	0.91	0.500/	–	0.86	0.312/	–	0.89	0.327/	–	0.91	0.480/	–	0.92	0.243/	0.999
	(1833/2953)	(0.80, 1.03)	0.0		(0.72, 1.04)	16.0		(0.79, 1.01)	13.1		(0.77, 1.08)	0.0		(0.85, 1.00)	28.2	
Europe	6	1.01	0.705/	–	1.19	0.051/	–	1.01	0.524/	–	1.20	0.051/	–	1.01	0.262/	–
	(3369/3725)	(0.90, 1.14)	0.0		(0.54, 2.65)	54.6		(0.90, 1.14)	0.0		(0.54, 2.66)	54.5		(0.91, 1.13)	22.9	

North	4	1.00	0.117/	—	0.81	0.053/	—	0.98	0.548/	—	0.87	0.017/	—	0.96	0.545/	—
America	(3123/3638)	(0.89, 1.13)	49.1		(0.37, 1.79)	61.0		(0.87, 1.10)	0.0		(0.35, 2.19)	70.6		(0.87, 1.07)	0.0	
Location																
Colon	3	0.96	0.966/	—	0.99	0.443/	—	0.96	0.863/	—	1.02	0.395/	—	0.98	0.564/	—
	(1451/2990)	(0.83, 1.12)	0.0		(0.75, 1.31)	0.0		(0.83, 1.12)	0.0		(0.79, 1.31)	0.0		(0.87, 1.10)	0.0	
Rectal	3	0.95	0.676/	—	0.73	0.899/	0.998	0.91	0.697/	—	0.75	0.808/	0.998	0.89	0.733/	0.999
	(1342/2844)	(0.81, 1.10)	0.0		(0.55, 0.97)	0.0		(0.79, 1.05)	0.0		(0.57, 0.98)	0.0		(0.80, 1.00)	0.0	
Gender																
Female	3	1.27	0.387/	0.998	0.47	0.701/	—	1.19	0.360/	—	0.45	0.728/	—	1.10	0.351/	—
	(885/968)	(1.00, 1.62)	0.0		(0.19, 1.14)	0.0		(0.95, 1.51)	0.0		(0.18, 1.09)	0.0		(0.89, 1.37)	0.0	
Male	3	0.89	0.997/	—	0.71	0.750/	—	0.88	0.949/	—	0.72	0.749/	—	0.89	0.896/	—
	(1211/1234)	(0.73, 1.10)	0.0		(0.31, 1.61)	0.0		(0.72, 1.08)	0.0		(0.32, 1.64)	0.0		(0.74, 1.07)	0.0	
Smoking																
Non	1	—	—		—	—	—	1.07	—	—	—	—		—	—	
-smoker	(75/126)							(0.49, 2.36)								
Smoker	2	—	—		—	—	—	1.01	0.236/	—	—	—		—	—	
	(84/149)							(0.50, 2.02)	28.7							

[illegible]

Asian	7	0.96	0.093/	–	1.41	0.007/	–	1.05	0.011/	–	1.38	0.026/	–	–	<0.001/	–
	(2432/3692)	(0.81, 1.14)	44.7		(0.93, 2.13)	66.4		(0.85, 1.28)	63.7		(0.96, 1.98)	58.2			75.2	
Caucasian	12	1.26	0.130/	0.986	1.71	0.955/	0.998	1.27	0.082/	0.997	1.65	0.965/	–	1.27	0.156/	0.808
	(4206/5122)	(1.10, 1.46)	34.8		(1.00, 2.93)	0.0		(1.04, 1.54)	40.0		(0.96, 2.84)	0.0		(1.12, 1.43)	29.6	
Mixed	5	–	<0.001/	–	1.28	0.047/	–	–	<0.001/	–	0.97	0.229/	–	–	<0.001/	–
	(2295/2878)		94.2		(0.37, 4.40)	58.5			94.3		(0.55, 1.72)	28.9			91.8	
Geographic region																
Asia	7	0.96	0.093/	–	1.41	0.007/	–	1.05	0.011/	–	1.38	0.026/	–	–	<0.001/	–
	(2432/3692)	(0.81, 1.14)	44.7		(0.93, 2.13)	66.4		(0.85, 1.28)	63.7		(0.96, 1.98)	58.2			75.2	
Europe	9	1.43	0.360/	0.680	2.13	0.898/	–	1.45	0.372/	0.475	2.00	0.900/	–	1.43	0.516/	0.126
	(2758/2894)	(1.20, 1.70)	9.0		(0.98, 4.60)	0.0		(1.23, 1.72)	7.5		(0.92, 4.31)	0.0		(1.22, 1.66)	0.0	
North	5	1.05	0.234/	–	1.19	0.628/	–	1.06	0.565/	–	1.19	0.572/	–	1.06	0.903/	–
America	(3326/3873)	(0.89, 1.23)	28.1		(0.71, 2.01)	0.0		(0.90, 1.24)	0.0		(0.70, 2.00)	0.0		(0.92, 1.23)	0.0	
Location																
Colon	5	1.02	0.306/	–	1.04	0.566/	–	1.01	0.197/	–	1.06	0.583/	–	1.01	0.186/	–
	(1671/3781)	(0.86, 1.22)	17.0		(0.69, 1.57)	0.0		(0.85, 1.19)	33.6		(0.71, 1.59)	0.0		(0.88, 1.17)	35.3	
Rectal	2	0.95	0.757/	–	0.72	0.175/	–	0.93	0.474/	–	0.74	0.186/	–	0.91	0.292/	–
	(1126/2381)	(0.77, 1.16)	0.0		(0.43, 1.22)	45.8		(0.76, 1.13)	0.0		(0.44, 1.24)	42.7		(0.77, 1.08)	9.8	
Gender																
Female	3	0.75	–	–	–	–	–	1.23	0.134/	–	–	–	–	0.75	–	–
	(465/570)	(0.30, 1.88)						(0.56, 2.69)	55.5					(0.30, 1.87)		
Male	4	1.04	0.878/	–	1.32	–	–	1.47	0.327/	0.992	1.31	–	–	1.08	0.807/	–
	(793/799)	(0.65, 1.65)	0.0		(0.35, 5.00)			(1.12, 1.94)	13.2		(0.35, 4.95)			(0.71, 1.63)	0.0	
Smoking																
Non	3	–	–	–	–	–	–	1.05	0.261/	–	–	–	–	–	–	–
-smoker	(250/427)							(0.69, 1.60)	25.6							

Smoker	6	1.54	0.725/	–	1.36	0.688/	–	1.24	0.026/	–	1.16	0.640/	–	1.36	0.998/	–
	(288/474)	(0.79, 2.98)	0.0		(0.30, 6.14)	0.0		(0.64, 2.38)	60.6		(0.26, 5.09)	0.0		(0.80, 2.31)	0.0	
Sensitivity analysis																
Overall	16	–	<0.001/	–	1.24	0.145/	0.998	–	<0.001/	–	1.27	0.293/	0.997	–	<0.001/	–
	(7610/9620)		83.4		(1.02, 1.51)	29.1			82.9		(1.04, 1.54)	14.7			77.4	
Ethnicity																
Asian	5	0.89	0.839/	0.999	1.14	0.097/	–	0.93	0.809/	–	1.19	0.066/	–	0.99	0.293/	–
	(2287/3461)	(0.80, 1.00)	0.0		(0.81, 1.60)	49.2		(0.84, 1.04)	0.0		(0.83, 1.71)	54.7		(0.90, 1.08)	19.1	
Caucasian	7	1.22	0.106/	0.997	1.86	0.853/	–	1.25	0.096/	0.999	1.80	0.878/	–	1.26	0.115/	0.979
	(3255/3681)	(1.04, 1.43)	42.8		(0.99, 3.48)	0.0		(1.00, 1.56)	44.3		(0.96, 3.37)	0.0		(1.09, 1.45)	41.3	
Mixed	4	–	<0.001/	–	2.12	0.057/	–	–	<0.001/	–	1.24	0.242/	–	–	<0.001/	–
	(2068/2478)		95.0		(0.34, 13.44)	60.2			95.0		(0.63, 2.45)	28.4			91.8	
Geographic region																
Asia	5	0.89	0.839/	0.999	1.14	0.097/	–	0.93	0.809/	–	1.19	0.066/	–	0.99	0.293/	–
	(2287/3461)	(0.80, 1.00)	0.0		(0.81, 1.60)	49.2		(0.84, 1.04)	0.0		(0.83, 1.71)	54.7		(0.90, 1.08)	19.1	
Europe	6	1.36	0.281/	0.975	2.36	0.843/	0.998	1.39	0.266/	0.937	2.21	0.845/	–	1.39	0.294/	0.865
	(2095/2393)	(1.13, 1.64)	20.3		(1.00, 5.55)	0.0		(1.16, 1.67)	22.4		(0.94, 5.20)	0.0		(1.17, 1.65)	18.3	
North America	4	1.05	0.135/	–	1.17	0.462/	–	1.05	0.400/	–	1.16	0.406/	–	1.06	0.799/	–
	(3114/3652)	(0.88, 1.24)	46.0		(0.66, 2.06)	0.0		(0.89, 1.24)	0.0		(0.66, 2.05)	0.0		(0.91, 1.24)	0.0	
Location																
Colon	2	1.01	0.384/	–	0.94	0.846/	–	1.00	0.425/	–	0.96	0.808/	–	1.00	0.496/	–
	(1347/2541)	(0.83, 1.23)	0.0		(0.59, 1.49)	0.0		(0.83, 1.21)	0.0		(0.61, 1.50)	0.0		(0.85, 1.17)	0.0	
Rectal	2	0.95	0.757/	–	0.72	0.175/	–	0.93	0.474/	–	0.74	0.186/	–	0.91	0.292/	–
	(1126/2381)	(0.77, 1.16)	0.0		(0.43, 1.22)	45.8		(0.76, 1.13)	0.0		(0.44, 1.24)	42.7		(0.77, 1.08)	9.8	
Gender																

Female	3	0.75	–	–	–	–	–	1.23	0.134/	–	–	–	–	0.75	–	–
	(465/570)	(0.30, 1.88)						(0.56, 2.69)	55.5					(0.30, 1.87)		
Male	3	0.97	–	–	–	–	–	1.66	0.216/	0.996	–	–	–	0.97	–	–
	(581/578)	(0.38, 2.51)						(1.09, 2.53)	34.6					(0.38, 2.48)		
Smoking																
Non	1	–	–	–	–	–	–	1.71	–	–	–	–	–	–	–	–
-smoker	(80/133)							(0.48, 6.09)								
Smoker	2	–	–	–	–	–	–	1.22	0.675/	–	–	–	–	–	–	–
	(91/152)							(0.44, 3.36)	0.0							
