

32. Valdes AM, Van Oene M, Hart DJ, Surdulescu GL, Loughlin J, Doherty M and Spector TD. Reproducible genetic associations between candidate genes and clinical knee osteoarthritis in men and women. *Arthritis and rheumatism*. 2006; 54:533-539.

SUPPLEMENTAL TABLES

Supplemental Table 1. Allelic distributions of selected SNPs in general Chinese Han and longevity subjects.

	Control		Control number	Longevity		Longevity number	χ^2	Allelic analysis		<i>p</i> Value
	Major allele	Minor allele		Major allele	Minor allele			OR	%95 CI	
rs2717536 ^a	297 (0.71)	119 (0.29)	208	832 (0.73)	314 (0.27)	573	0.222	0.942	0.734~1.208	0.655
rs2153960	217 (0.80)	57 (0.20)	274	800 (0.70)	346 (0.30)	573	5.665	1.367	1.056~0.769	0.02
rs1377638	154 (0.56)	120 (0.44)	274	647 (0.56)	499 (0.44)	573	0.006	0.99	0.759~1.291	0.946
rs10069397	255 (0.93)	19 (0.07)	274	1056 (0.92)	90 (0.08)	573	0.264	1.144	0.685~1.911	0.705
rs1245541	244 (0.90)	26 (0.10)	270	980 (0.86)	166 (0.14)	573	4.395	1.59	1.027~2.460	0.038
rs2244621	138 (0.50)	136 (0.50)	274	568 (0.50)	578 (0.50)	573	0	0.997	0.766~1.298	0.518
rs11977526	229 (0.84)	43 (0.16)	272	887 (0.77)	259 (0.23)	573	6.049	1.555	1.092~2.215	0.008
rs1063192	215 (0.80)	55 (0.20)	270	942 (0.82)	204 (0.18)	573	0	1	0.034~29.807	0.8
rs579327	260 (0.95)	14 (0.05)	274	1033 (0.90)	113 (0.10)	573	6.129	2.032	1.147~3.599	0.013
rs1455311	225 (0.82)	49 (0.18)	274	958 (0.84)	188 (0.16)	573	0.014	1.021	0.724~1.440	0.491
rs13217795 ^a	317 (0.77)	94 (0.23)	208	789 (0.70)	345 (0.30)	567	8.459	1.175	1.134~1.918	0.002
rs2219078	188 (0.69)	86 (0.31)	274	758 (0.67)	376 (0.33)	567	0.314	1.084	0.817~1.440	0.616
rs2755213	163 (0.60)	111 (0.40)	274	680 (0.60)	454 (0.4)	567	0.021	0.98	0.749~1.283	0.891
rs12629971	184 (0.67)	90 (0.33)	274	716 (0.63)	418 (0.37)	567	1.542	1.194	0.903~1.578	0.234
rs1003533	181 (0.66)	93 (0.34)	274	684 (0.61)	446 (0.39)	567	2.849	1.269	0.962~1.674	0.097
rs189037	202 (0.52)	190 (0.48)	196	662 (0.59)	468 (0.41)	567	5.9	0.752	0.597~0.947	0.009
rs1442709 ^b	147 (0.54)	127 (0.46)	274	633 (0.56)	501 (0.44)	567	0.421	0.916	0.703~1.194	0.542
rs6817112 ^a	135 (0.66)	71 (0.34)	103	734 (0.65)	400 (0.35)	567	0.05	1.036	0.758~1.416	0.874

OR, odds ratio; 95% CI, 95% confidence interval; ^aData of the control group are from the the 1000 Genomes Project; ^bData of the control group are from published literature (Li S, et al. Functional polymorphism rs189037 in the promoter region of ATM gene is associated with angiographically characterized coronary stenosis. *Atherosclerosis*. 2011; 219(2):694-697.); The rest data of control group without annotation are from the Hapmap Project; P-values were not adjusted by sex.

Supplemental Table 2. Genotype association with longevity in Chinese nonagenarians and centenarians.

	Model	Genotype	Control	Longevity	OR (95% CI)	P-value	AIC	BIC
rs2717536	Codominant	C/C	290 (50.6%)	229 (48.7%)	1	0.71	1400.3	1420.1
		T/C	252 (44%)	210 (44.7%)	1.04 (0.80-1.34)			
		T/T	31 (5.4%)	31 (6.6%)	1.25 (0.73-2.15)			
	Dominant	C/C	173 (50.6%)	229 (48.7%)	1	0.6	1398.8	1413.6
		T/C-T/T	169 (49.4%)	241 (51.3%)	1.08 (0.82-1.42)			
	Recessive	C/C-T/C	322 (94.2%)	439 (93.4%)	1	0.66	1398.3	1413.2
		T/T	20 (5.8%)	31 (6.6%)	1.14 (0.64-2.03)			
	Overdominant	C/C-T/T	193 (56.4%)	260 (55.3%)	1	0.75	1399	1413.8
		T/C	149 (43.6%)	210 (44.7%)	1.05 (0.79-1.39)			
	Log-additive	---	---	---	1.07 (0.85-1.35)	0.55	1398.5	1413.4
rs2153960	Codominant	T/T	281 (49%)	233 (49.4%)	1	0.84	1404.6	1424.4
		T/C	238 (41.5%)	201 (42.6%)	1.01 (0.78-1.31)			
		C/C	54 (9.4%)	38 (8.1%)	0.88 (0.56-1.39)			
	Dominant	T/T	281 (49%)	233 (49.4%)	1	0.89	1402.9	1417.8
		T/C-C/C	292 (51%)	239 (50.6%)	0.98 (0.77-1.26)			
	Recessive	T/T-T/C	519 (90.6%)	434 (92%)	1	0.56	1402.6	1417.5
		C/C	54 (9.4%)	38 (8.1%)	0.88 (0.56-1.36)			
	Overdominant	T/T-C/C	335 (58.5%)	271 (57.4%)	1	0.84	1402.9	1417.8
		T/C	238 (41.5%)	201 (42.6%)	1.03 (0.80-1.32)			
	Log-additive	---	---	---	0.97 (0.80-1.17)	0.72	1402.8	1417.7
rs1377638	Codominant	C/C	188 (32.8%)	164 (35%)	1	0.35	1397.8	1417.5
		T/C	271 (47.3%)	226 (48.2%)	0.92 (0.70-1.22)			
		T/T	114 (19.9%)	79 (16.8%)	0.77 (0.53-1.10)			
	Dominant	C/C	188 (32.8%)	164 (35%)	1	0.32	1396.9	1411.7
		T/C-T/T	385 (67.2%)	305 (65%)	0.88 (0.67-1.14)			
	Recessive	C/C-T/C	459 (80.1%)	390 (83.2%)	1	0.18	1396.1	1410.9
		T/T	114 (19.9%)	79 (16.8%)	0.80 (0.58-1.11)			
	Overdominant	C/C-T/T	302 (52.7%)	243 (51.8%)	1	0.93	1397.8	1412.7
		T/C	271 (47.3%)	226 (48.2%)	1.01 (0.79-1.30)			
	Log-additive	---	---	---	0.88 (0.74-1.05)	0.16	1395.9	1410.8
rs10069397	Codominant	C/C	484 (84.5%)	387 (82.7%)	1	0.8	1398.3	1418.1
		T/C	88 (15.4%)	80 (17.1%)	1.10 (0.78-1.54)			
		T/T	1 (0.2%)	1 (0.2%)	1.75 (0.11-28.20)			
	Dominant	C/C	484 (84.5%)	387 (82.7%)	1	0.55	1396.4	1411.2
		T/C-T/T	89 (15.5%)	81 (17.3%)	1.11 (0.79-1.55)			
	Recessive	C/C-T/C	572 (99.8%)	467 (99.8%)	1	0.7	1396.6	1411.4
		T/T	1 (0.2%)	1 (0.2%)	1.73 (0.11-27.78)			

rs1245541	Overdominant	C/C-T/T	485 (84.6%)	388 (82.9%)	1	0.58	1396.4	1411.3
		T/C	88 (15.4%)	80 (17.1%)	1.10 (0.78-1.54)			
	Log-additive	---	---	---	1.11 (0.80-1.55)	0.53	1396.3	1411.2
	Codominant	C/C	421 (73.5%)	344 (73.3%)	1	0.74	1400.1	1419.9
		T/C	138 (24.1%)	118 (25.2%)	1.05 (0.78-1.40)			
		T/T	14 (2.4%)	7 (1.5%)	0.73 (0.29-1.85)			
	Dominant	C/C	421 (73.5%)	344 (73.3%)	1	0.89	1398.7	1413.6
		T/C-T/T	152 (26.5%)	125 (26.6%)	1.02 (0.77-1.35)			
	Recessive	C/C-T/C	559 (97.6%)	462 (98.5%)	1	0.48	1398.2	1413.1
		T/T	14 (2.4%)	7 (1.5%)	0.72 (0.28-1.82)			
Overdominant	C/C-T/T	435 (75.9%)	351 (74.8%)	1	0.72	1398.6	1413.4	
	T/C	138 (24.1%)	118 (25.2%)	1.05 (0.79-1.41)				
	Log-additive	---	---	---				0.99 (0.77-1.27)
rs2244621	Codominant	T/T	137 (23.9%)	123 (26.1%)	1	0.5	1401.6	1421.4
		T/C	294 (51.3%)	233 (49.5%)	0.83 (0.61-1.13)			
		C/C	142 (24.8%)	115 (24.4%)	0.89 (0.63-1.27)			
	Dominant	T/T	137 (23.9%)	123 (26.1%)	1	0.28	1399.8	1414.6
		T/C-C/C	436 (76.1%)	348 (73.9%)	0.85 (0.64-1.14)			
	Recessive	T/T-T/C	431 (75.2%)	356 (75.6%)	1	0.94	1401	1415.8
		C/C	142 (24.8%)	115 (24.4%)	1.01 (0.76-1.35)			
	Overdominant	T/T-C/C	279 (48.7%)	238 (50.5%)	1	0.31	1400	1414.8
		T/C	294 (51.3%)	233 (49.5%)	0.88 (0.69-1.13)			
	Log-additive	---	---	---	0.95 (0.79-1.13)	0.53	1400.6	1415.4
rs1063192	Codominant	T/T	384 (67%)	300 (64.1%)	1	0.62	1398.6	1418.4
		T/C	174 (30.4%)	151 (32.3%)	1.08 (0.82-1.41)			
		C/C	15 (2.6%)	17 (3.6%)	1.38 (0.67-2.85)			
	Dominant	T/T	384 (67%)	300 (64.1%)	1	0.47	1397.1	1411.9
		T/C-C/C	189 (33%)	168 (35.9%)	1.10 (0.85-1.43)			
	Recessive	T/T-T/C	558 (97.4%)	451 (96.4%)	1	0.42	1396.9	1411.8
		C/C	15 (2.6%)	17 (3.6%)	1.35 (0.66-2.77)			
	Overdominant	T/T-C/C	399 (69.6%)	317 (67.7%)	1	0.66	1397.4	1412.3
		T/C	174 (30.4%)	151 (32.3%)	1.06 (0.81-1.39)			
	Log-additive	---	---	---	1.11 (0.88-1.39)	0.37	1396.8	1411.7
rs579327	Codominant	T/T	472 (82.4%)	398 (84.3%)	1	0.63	1404	1423.9
		C/T	89 (15.5%)	68 (14.4%)	0.95 (0.67-1.35)			
		C/C	12 (2.1%)	6 (1.3%)	0.63 (0.23-1.71)			

rs1455311	Dominant	T/T	472 (82.4%)	398 (84.3%)	1	0.6	1402.7	1417.5	
		C/T-C/C	101 (17.6%)	74 (15.7%)	0.91 (0.65-1.28)				
	Recessive	T/T-C/T	561 (97.9%)	466 (98.7%)	1	0.36	1402.1	1417	
		C/C	12 (2.1%)	6 (1.3%)	0.63 (0.23-1.72)				
	Overdominant	T/T-C/C	484 (84.5%)	404 (85.6%)	1	0.82	1402.9	1417.8	
		C/T	89 (15.5%)	68 (14.4%)	0.96 (0.68-1.36)				
	Log-additive	---	---	---	0.90 (0.67-1.20)	0.46	1402.4	1417.3	
	rs2219078	Codominant	T/T	401 (70%)	327 (69.3%)	1	0.32	1402.7	1422.5
			T/C	156 (27.2%)	125 (26.5%)	0.97 (0.73-1.28)			
		Dominant	C/C	16 (2.8%)	20 (4.2%)	1.66 (0.84-3.30)	0.83	1402.9	1417.8
T/T			401 (70%)	327 (69.3%)	1				
Recessive		T/C-C/C	172 (30%)	145 (30.7%)	1.03 (0.79-1.35)	0.14	1400.8	1415.6	
		T/T-T/C	557 (97.2%)	452 (95.8%)	1				
Overdominant		C/C	16 (2.8%)	20 (4.2%)	1.67 (0.85-3.31)	0.69	1402.8	1417.7	
		T/T-C/C	417 (72.8%)	347 (73.5%)	1				
Log-additive		---	---	---	1.08 (0.86-1.36)	0.5	1402.5	1417.4	
rs2755213		Codominant	T/T	249 (43.9%)	221 (43.8%)	1	0.66	1451	1470.9
	T/C		260 (45.9%)	226 (44.8%)	0.93 (0.72-1.20)				
	C/C		58 (10.2%)	58 (11.5%)	1.12 (0.74-1.69)				
	Dominant	T/T	249 (43.9%)	221 (43.8%)	1	0.76	1449.8	1464.7	
		T/C-C/C	318 (56.1%)	284 (56.2%)	0.96 (0.75-1.23)				
	Recessive	T/T-T/C	509 (89.8%)	447 (88.5%)	1	0.46	1449.3	1464.3	
		C/C	58 (10.2%)	58 (11.5%)	1.16 (0.78-1.71)				
	Overdominant	T/T-C/C	307 (54.1%)	279 (55.2%)	1	0.45	1449.3	1464.2	
		T/C	260 (45.9%)	226 (44.8%)	0.91 (0.71-1.16)				
	Log-additive	---	---	---	1.01 (0.84-1.22)	0.91	1449.9	1464.8	
rs2755213	Codominant	C/C	206 (36.3%)	181 (35.8%)	1	0.42	1450.1	1470	
		T/C	268 (47.3%)	225 (44.5%)	0.92 (0.70-1.21)				
		T/T	93 (16.4%)	99 (19.6%)	1.16 (0.81-1.65)				
	Dominant	C/C	206 (36.3%)	181 (35.8%)	1	0.88	1449.9	1464.8	
		T/C-T/T	361 (63.7%)	324 (64.2%)	0.98 (0.76-1.27)				

rs12629971	Recessive	C/C-T/C	474 (83.6%)	406 (80.4%)	1	0.24	1448.5	1463.4	
		T/T	93 (16.4%)	99 (19.6%)	1.21 (0.88-1.67)				
	Overdominant	C/C-T/T	299 (52.7%)	280 (55.5%)	1	0.29	1448.8	1463.7	
		T/C	268 (47.3%)	225 (44.5%)	0.88 (0.69-1.12)				
	Log-additive	---	---	---	1.05 (0.88-1.24)	0.59	1449.6	1464.5	
	rs1003533	Codominant	C/C	232 (40.9%)	212 (41.8%)	1	0.99	1455.7	1475.6
			T/C	252 (44.4%)	222 (43.8%)	0.99 (0.76-1.29)			
		Dominant	T/T	83 (14.6%)	73 (14.4%)	1.01 (0.70-1.47)	0.96	1453.7	1468.6
			C/C	232 (40.9%)	212 (41.8%)	1			
		Recessive	T/C-T/T	335 (59.1%)	295 (58.2%)	0.99 (0.78-1.27)	0.93	1453.7	1468.6
C/C-T/C			484 (85.4%)	434 (85.6%)	1				
Overdominant		T/T	83 (14.6%)	73 (14.4%)	1.02 (0.72-1.44)	0.91	1453.7	1468.6	
		C/C-T/T	315 (55.6%)	285 (56.2%)	1				
Log-additive		---	---	---	1.00 (0.84-1.19)	0.99	1453.7	1468.6	
rs1442709		Codominant	C/C	205 (36.3%)	199 (39.5%)	1	0.69	1447.4	1467.3
	T/C		274 (48.5%)	232 (46%)	0.89 (0.68-1.16)				
	Dominant	T/T	86 (15.2%)	73 (14.5%)	0.92 (0.63-1.33)	0.4	1445.4	1460.3	
		C/C	205 (36.3%)	199 (39.5%)	1				
	Recessive	T/C-T/T	360 (63.7%)	305 (60.5%)	0.90 (0.70-1.15)	0.9	1446.1	1461	
		C/C-T/C	479 (84.8%)	431 (85.5%)	1				
	Overdominant	T/T	86 (15.2%)	73 (14.5%)	0.98 (0.69-1.38)	0.46	1445.6	1460.5	
		C/C-T/T	291 (51.5%)	272 (54%)	1				
	Log-additive	---	---	---	0.91 (0.71-1.17)	0.51	1445.7	1460.6	
	rs1442709	Codominant	C/C	186 (32.8%)	164 (32.4%)	1	1	1453.8	1473.7
T/C			261 (46%)	234 (46.2%)	1.01 (0.76-1.33)				
T/T			120 (21.2%)	108 (21.3%)	1.00 (0.71-1.40)				
Dominant		C/C	186 (32.8%)	164 (32.4%)	1	0.98	1451.8	1466.7	
		T/C-T/T	381 (67.2%)	342 (67.6%)	1.00 (0.77-1.30)				
Recessive		C/C-T/C	447 (78.8%)	398 (78.7%)	1	0.97	1451.8	1466.7	
	T/T	120 (21.2%)	108 (21.3%)	0.99 (0.74-1.34)					

rs6817112	Overdominant	C/C-T/T	306 (54%)	272 (53.8%)	1	0.95	1451.8	1466.7
		T/C	261 (46%)	234 (46.2%)	1.01 (0.79-1.29)			
	Log-additive	---	---	---	1.00 (0.84-1.18)	1	1451.8	1466.7
	Codominant	C/C	126 (22.2%)	115 (22.8%)	1	0.97	1450.7	1470.6
		T/C	322 (56.8%)	289 (57.3%)	0.97 (0.72-1.32)			
		T/T	119 (21%)	100 (19.8%)	0.96 (0.66-1.40)			
	Dominant	C/C	126 (22.2%)	115 (22.8%)	1	0.83	1448.7	1463.6
		T/C-T/T	441 (77.8%)	389 (77.2%)	0.97 (0.72-1.30)			
		C/C-T/C	448 (79%)	404 (80.2%)	1			
	Recessive	T/T	119 (21%)	100 (19.8%)	0.98 (0.72-1.33)	0.9	1448.7	1463.7
		C/C-T/T	245 (43.2%)	215 (42.7%)	1			
		T/C	322 (56.8%)	289 (57.3%)	0.99 (0.77-1.27)			
		---	---	---	0.98 (0.81-1.18)			

* P-values were adjusted by sex; OR, Odds ratio; %95 CI, 95% confidence interval; AIC, Akaike information criteria; BIC, Bayesian information criteria

Supplemental Table 3. Sex and age of the control and longevity groups.

	Control (n=508)	Longevity (567)	P-value
Sex (male/female)	289/219	216/351	<0.001
Age (years) *	51.7±5.5	94.1±3.2	<0.001
*age is expressed as mean value ± standard deviation.			