

Supplemental Information (SI)

Associations of genetic polymorphisms in pTEN/AKT/mTOR signaling pathway genes with cancer risk: A meta-analysis in Asian population

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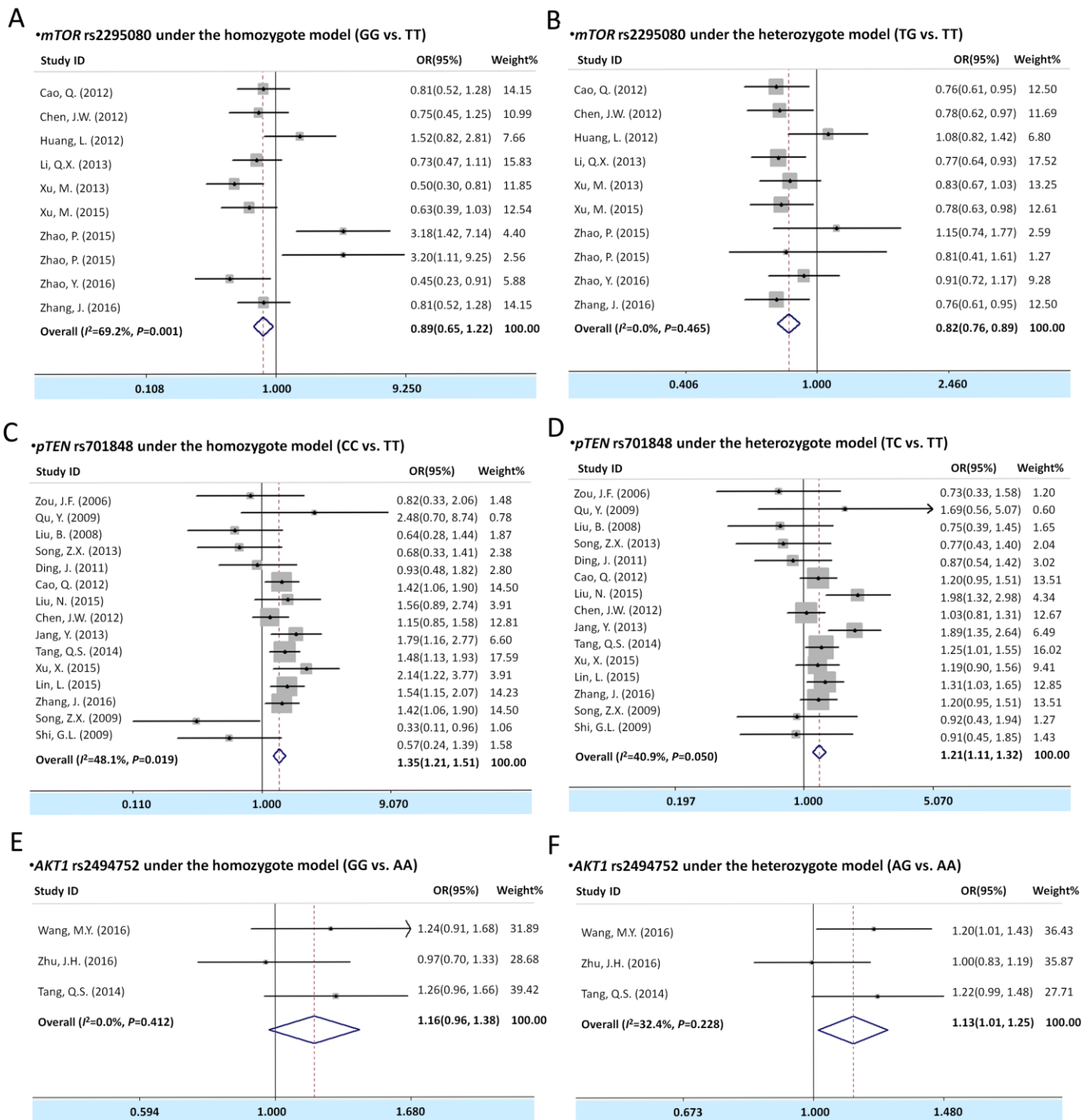


Figure S1. Forest plots of cancer risk with polymorphism of *mTOR* rs2529080 (A,B), *pTEN* rs701848 (C,D) and *AKT1* rs2494752 (E,F) assessing by overall analysis under the homozygote model (A,C,E), heterozygote model (B,D,F). The estimates of OR(95%CI) are plotted with a box and a horizontal line for each study. \diamond , pooled ORs (95% CIs).

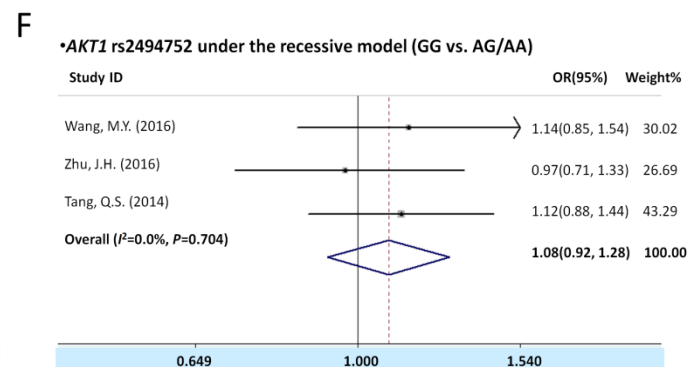
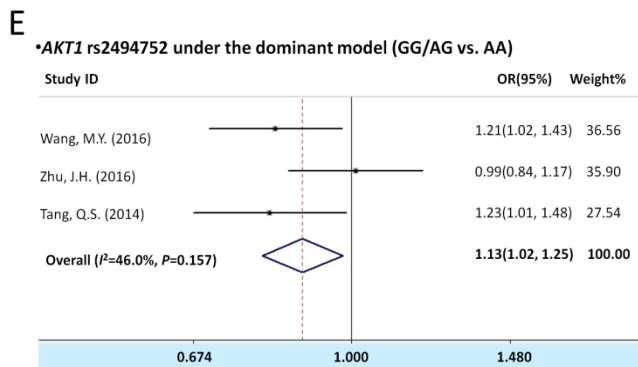
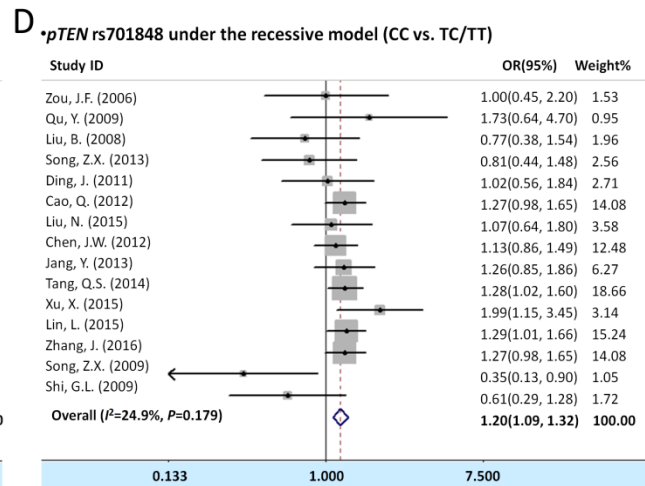
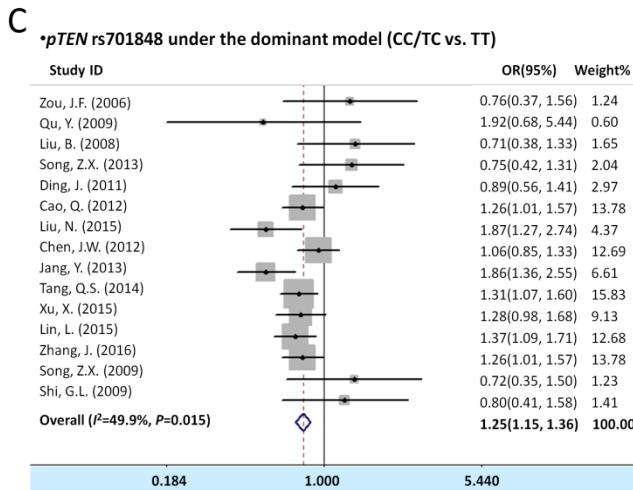
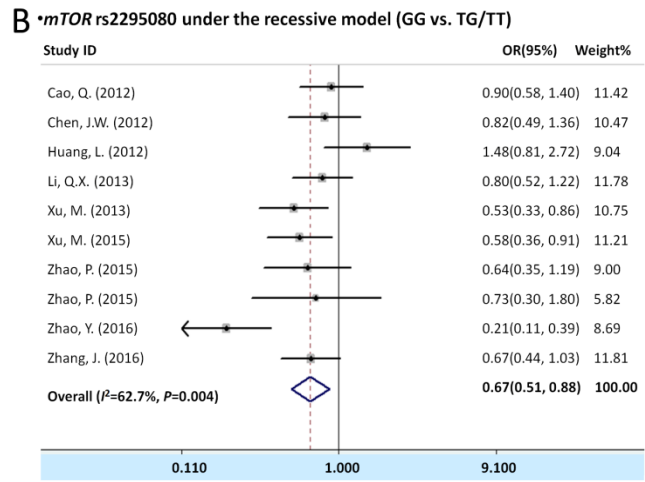
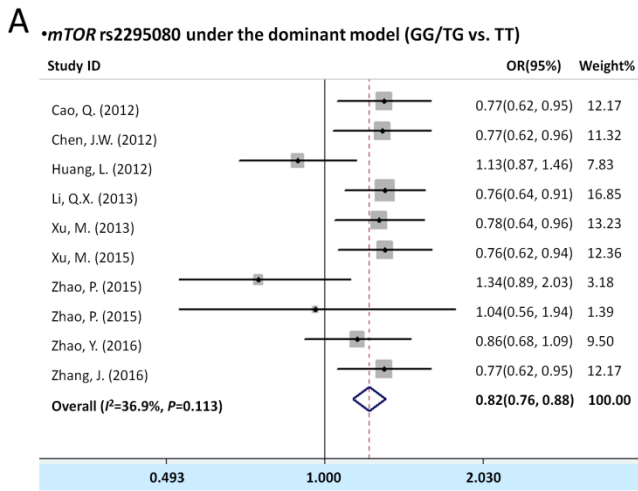


Figure S2. Forest plots of cancer risk with polymorphism of *mTOR* rs2529080 (A,B), *pTEN* rs701848 (C,D) and *AKT1* rs2494752 (E,F) assessing by overall analysis under the dominant model (A,C,E) and recessive model (B,D,F). The estimates of OR(95% CIs) are plotted with a box and a horizontal line for each study. \diamond , pooled ORs (95% CIs).

Table S1. Meta-analysis of the association between genetic polymorphisms of PTEN/AKT/mTOR pathway and cancer risk

Variables	No. of cases/controls	P^z	Homozygous OR (95%CI)	$P^{het\#}$	$I^2\#$ (%)	P^z	Heterozygous OR (95%CI)	$P^{het\#}$	$I^2\#$ (%)
<i>mTOR</i> rs2295080			GG vs. TT				TG vs. TT		
Urinary system cancer [†]	4203/4392	0.070	0.832(0.681,1.015)	0.787	0.0	0.030	0.832(0.705,0.982)	0.011	69.4
Blood system cancer [§]	5971/1146	0.003	2.250(1.327,3.815)	0.264	24.8	0.574	1.065(0.855,1.327)	0.691	0.0
Digestive system cancer [¶]	3605/3747	0.169	0.777(0.542,1.113)	0.059	59.6	0.785	0.972(0.795,1.189)	0.005	76.3
Overall	8965/9868	0.449	0.913(0.722,1.155)	0.001	62.6	0.104	0.915(0.821,1.019)	0.001	64.5
<i>pTEN</i> rs701848			CC vs. TT				TC vs. TT		
Oral cavity cancer [¥]	331/356	0.452	0.831(0.512,1.347)	0.312	16.0	0.292	0.823(0.572,1.183)	0.603	0.0
Digestive system cancer	2418/2662	0.387	1.191(0.802,1.769)	0.000	77.6	0.108	1.235(0.955,1.598)	0.001	73.3
Urinary system cancer	2086/2228	0.001	1.331(1.120,1.582)	0.561	0.0	0.049	1.145(1.000,1.310)	0.593	0.0
Overall	5882/6284	0.098	1.180(0.970, 1.435)	0.000	62.6	0.030	1.154(1.014,1.313)	0.010	51.1

* P^z : the significance of the pooled OR was determined by Z-test, and $P < 0.05$ was considered as statistically significant.

P^{het} and I^2 were calculated by Chi square-based Q-test.

†Urinary system cancer: renal cancer, prostate cancer; § Blood system cancer: acute lymphocytic leukemia, acute myeloid leukemia; ¶Digestive system cancer: gastric cancer, ESCC, hepatocellular cancer, colorectal cancer; ¥Oral cavity cancer: laryngo cancer; \$Reproductive system cancer: endometrial cancer.

Table S2. Meta-analysis of the association between genetic polymorphisms of PTEN/AKT/mTOR pathway and cancer risk by recessive and dominant models

Variables	<i>Pz</i> *	Recessive OR (95%CI)	<i>Phet</i> #	<i>I2</i> # (%)	<i>Pz</i> *	Dominant OR (95%CI)	<i>Phet</i> #	<i>I2</i> # (%)
<i>mTOR</i> rs2295080		GG/TG vs. TT				GG vs. TG/TT		
Urinary system cancer†	0.225	0.885(0.727,1.078)	0.953	0.0	0.118	0.699(0.446,1.095)	0.000	96.3
Blood system cancer§	0.004	2.253(1.300,3.904)	0.227	32.6	0.142	1.169(0.949,1.440)	0.722	0.0
Digestive system cancer ¶	0.111	0.788(0.588,1.056)	0.168	40.6	0.014	0.491(0.279,0.865)	0.000	97.6
Overall	0.574	0.939(0.756,1.168)	0.005	57.7	0.020	0.707(0.527,0.948)	0.000	96.1
<i>pTEN</i> rs701848		CC/ TC vs. TT				CC vs. TC/TT		
Oral cavity cancer¥	0.674	0.924(0.639,1.336)	0.568	0.0	0.250	0.818(0.581,1.152)	0.409	0.0
Digestive system cancer	0.195	1.106(0.950,1.288)	0.008	65.7	0.160	1.215(0.926,1.594)	0.000	78.4
Urinary system cancer	0.008	1.229(1.054,1.432)	0.784	0.0	0.006	1.195(1.053,1.357)	0.476	0.0
Overall	0.003	1.154(1.051,1.267)	0.039	42.2	0.042	1.156(1.005,1.328)	0.001	62.0

**Pz*: the significance of the pooled OR was determined by Z-test, and $P < 0.05$ was considered as statistically significant.

Phet and *I2* were calculated by Chi square-based Q-test.

†Urinary system cancer: renal cancer, prostate cancer; § Blood system cancer: acute lymphocytic leukemia, acute myeloid leukemia; ¶ Digestive system cancer: gastric cancer, ESCC, hepatocellular cancer, colorectal cancer; ¥Oral cavity cancer: laryngo cancer; \$Reproductive system cancer: endometrial cancer.