

Table SI. Search strategies in online databases.

Online databases	Search strategy	No. of studies
PubMed	[("maternally expressed gene 3") OR (MEG3) OR (rs7158663) OR (rs4081134) OR (rs11160608) OR (rs3087918) OR (rs3783355) OR (rs2281511) OR (rs12431658) OR (rs10132552)] AND (polymorphism OR variant OR mutation) AND (cancer)	83
Excerpta Medica Database	('maternally expressed gene 3' OR 'MEG3' OR 'rs7158663' OR 'rs4081134' OR 'rs11160608' OR 'rs3087918' OR 'rs3783355' OR 'rs2281511' OR 'rs12431658' OR 'rs10132552') AND ('polymorphism' OR 'variant' OR 'mutation') AND ('cancer')	199
Web of Science	(TS=((maternally expressed gene 3) OR (MEG3) OR (rs7158663) OR (rs4081134) OR (rs11160608) OR (rs3087918) OR (rs3783355) OR (rs2281511) OR (rs12431658) OR (rs10132552))) AND (TS=((polymorphism) OR (variant) OR (mutation))) AND (TS=(cancer))	124
China National Knowledge Infrastructure	SU=('polymorphism'+ 'variant'+ 'mutation')*('maternally expressed gene 3'+ 'MEG3'+ 'rs7158663' + 'rs4081134' + 'rs11160608' + 'rs3087918' + 'rs3783355' + 'rs2281511'+ 'rs12431658' + 'rs10132552')*('tumor'+ 'cancer')	9
Wanfang	[SU:(polymorphism) or SU:(variant) or SU:(mutation)] and [SU: (maternally expressed gene 3) or SU:(MEG3) or SU:(MEG3) or SU: (rs7158663) or SU: (rs4081134) or SU: (11160608) or SU: (rs3087918) or SU: (rs3783355) or SU: (rs2281511) or SU: (rs12431658) or SU: (rs10132552)] and [SU:(tumor) or 主题:(cancer)]	43

Table SII. Newcastle-Ottawa Quality Assessment Scale for quality evaluation.

Criteria	Score
Representativeness of cases	
Consecutive/randomly selected cases with clearly defined sampling frame with time, race, quantity and defined criteria	2
Not consecutive/randomly selected case or without clearly defined sampling frame with time, race, quantity and defined criteria	1
Not described	0
Source of controls	
Population	2
Healthy	1
Hospital/NA	0
Hardy-Weinberg equilibrium in controls	
Hardy-Weinberg equilibrium	2
Hardy-Weinberg disequilibrium	1
Not available	0
Genotyping examination	
Genotyping under 'blinded' condition and repeated	2
Genotyping under 'blinded' condition or repeated	1
Unblinded or not mentioned and unrepeated	0
Subjects, n	
≥500	1
<500	0
Association assessment	
Assess association between genotypes and cancer risk with appropriate statistics and adjustment for confounders	2
Assess association between genotypes and cancer risk with appropriate statistics and without adjustment for confounders	1
Inappropriate statistics used	0

NA, not available.