

**International Journal of Public Health**

**Review**

**Supplementary materials**

**Table S1. Search strategy used in the umbrella review (Liaoning, China. 2020)**

Literature search strategy in PubMed
((cervical [title/abstract]) OR (uterine cervical [title/abstract])) AND ((cancer [title/abstract]) OR (tumor [title/abstract]) or (tumour [title/abstract]) or (neoplasm [title/abstract]) or (carcinoma [title/abstract])) and ((systematic review [title/abstract]) or (meta-analysis [title/abstract]))
Literature search strategy in Web of Science
1: Search TS = (cervical OR uterine cervical)
2: Search TS = (cancer OR tumor OR tumour OR neoplasm OR carcinoma)
3: Search TS = (systematic review OR meta-analysis)
4: #3 AND #2 AND #1
Literature search strategy in EMBASE
1: cervical:ab,ti
2: “uterine cervical”:ab,ti
3: #1 OR #2

4: cancer:ab,ti
5: tumor:ab,ti
6: tumour:ab,ti
7: neoplasm:ab,ti
8: carcinoma:ab,ti
9: #4 OR #5 OR #6 OR #7 OR #8
10: "systematic review":ab,ti
11: "meta analysis":ab,ti
12: #10 OR #11
13: #3 AND #9 AND #12

**Table S2. Detailed evaluation of the methodological quality with AMSTAR (Liaoning, China. 2021)**

Author	AMSTAR											total	Quality
	1-item	2-item	3-item	4-item	5-item	6-item	7-item	8-item	9-item	10-item	11-item		
Asthana et al (10)	Yes	CA	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	8	high quality
Berrington de González et al (33)	CA	CA	No	CA	No	Yes	No	Yes	Yes	No	No	3	low quality
Cao et al (38)	CA	CA	Yes	CA	No	Yes	No	Yes	Yes	Yes	Yes	6	moderate quality
Cortessis et al (44)	No	CA	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	7	moderate quality
De Lima et al (41)	CA	CA	No	No	No	Yes	No	No	Yes	No	No	2	low quality
Hang et al (39)	CA	CA	No	No	No	Yes	No	No	Yes	Yes	Yes	4	moderate quality
He et al (48)	CA	Yes	Yes	CA	No	Yes	Yes	Yes	Yes	Yes	Yes	8	high quality
Hu et al (49)	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	9	high quality
Lehtinen et al (37)	CA	CA	No	CA	No	Yes	No	No	Yes	No	No	2	low quality
Li et al (45)	CA	CA	CA	CA	No	Yes	Yes	Yes	Yes	Yes	Yes	6	moderate quality
Li et al (43)	CA	Yes	Yes	CA	No	Yes	Yes	Yes	Yes	Yes	Yes	8	high quality
Poorolajal et al (35)	CA	Yes	Yes	CA	No	Yes	Yes	Yes	Yes	Yes	Yes	8	high quality
Appleby et al (34)	CA	CA	CA	CA	No	Yes	No	No	Yes	No	Yes	3	low quality
Sugawara et al (36)	CA	CA	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	6	moderate quality
Wang et al (42)	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	9	high quality
Wang et al (46)	CA	Yes	Yes	CA	No	Yes	Yes	Yes	Yes	Yes	Yes	8	high quality
Zhang et al (47)	CA	CA	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	7	moderate quality
Zhu et al (40)	Yes	CA	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	8	high quality

**Table S3. The criteria for classification of the credibility of the evidence (Liaoning, China. 2022)**

Evidence	Criteria
Strong	Summary random effect p value < $10^{-6}$
	Cases > 1000 or participants > 20000
	The largest study reported a significant effect (p < 0.05)
	95% prediction interval excludes null value
	$I^2 < 50\%$
	No evidence of small-study effects (p > 0.1)
	No evidence of excess of significance (p > 0.1)
Highly-suggestive evidence	Summary random effect p value < $10^{-6}$
	Cases > 1000 or participants > 20000
	The largest study reported a significant effect (p < 0.05)
Suggestive evidence	Summary random effect p value < $10^{-3}$
	Cases > 1000 or participants > 20000
Weak evidence	Summary random effect p value < 0.05
Non-significant associations	Summary random effect p value > 0.05