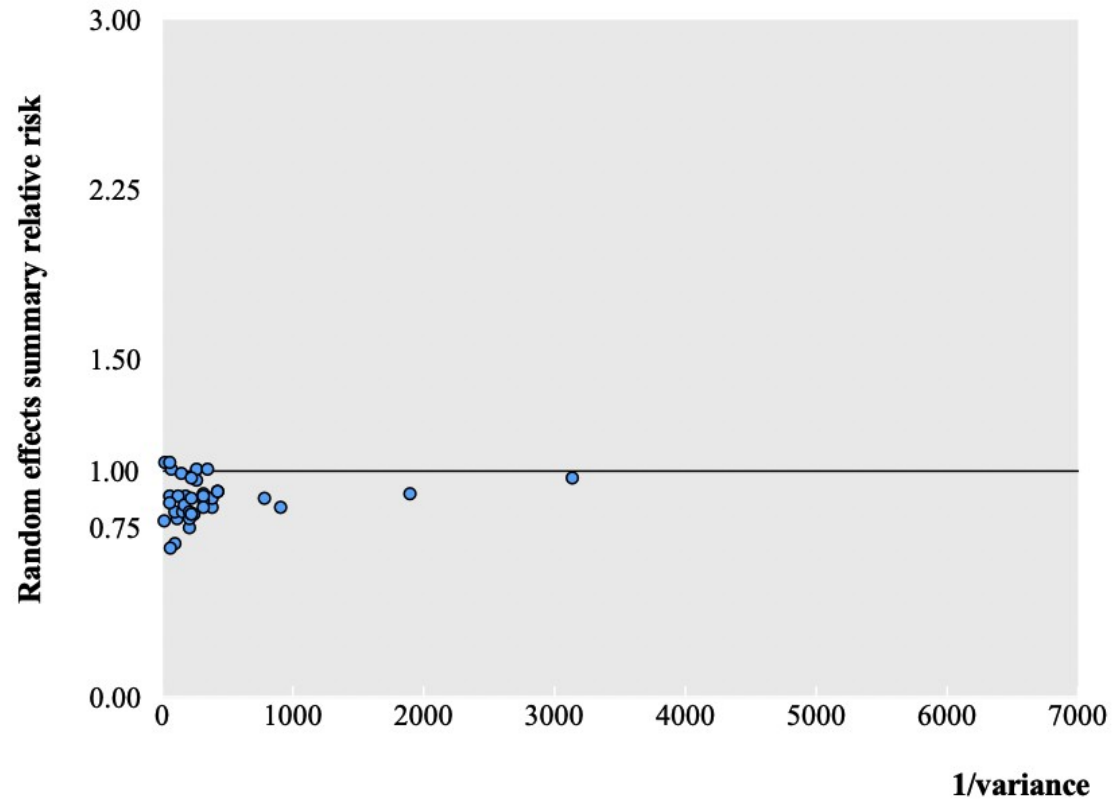**Supplementary Table S1. Search strategy used in the umbrella review**

Literature search strategy in PubMed
1: Brassicaceae OR brassica OR cruciferous vegetables OR broccoli OR cauliflower OR cabbage OR brussels sprout OR mustard plants OR cole slaw OR bok choy OR turnip greens OR vegetables
2: systematic review OR meta-analysis
3: 1 AND 2
Literature search strategy in Web of Science
1: Search TS = (Brassicaceae OR brassica OR cruciferous vegetables OR broccoli OR cauliflower OR cabbage OR brussels sprout OR mustard plants OR cole slaw OR bok choy OR turnip greens OR vegetables)
2: Search TS = (systematic review OR meta-analysis)
3: 1 AND 2
Literature search strategy in EMBASE
1: Brassicaceae OR brassica OR cruciferous vegetables OR broccoli OR cauliflower OR cabbage OR brussels sprout OR mustard plants OR cole slaw OR bok choy OR turnip greens OR vegetables
2: 'systematic review' OR 'meta-analysis'
3: 1 AND 2

Supplementary Figure 1. Association of meta-analysis summary effects sizes with inverse of the variance.

AMSTAR Item

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Overall
Andreea Zurbau, 2020	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	H
Zhanwei Zhao, 2018	Can't answer	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Theodoros N. Sergentanis	Can't answer	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Guo-Chong Chen Chen, 2018	Can't answer	Can't answer	No	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Dagfinn Aune, 2017	Can't answer	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	M
Chang Xu, 2015	Can't answer	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Jiyi Hu MD, 2015	Can't answer	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Bo Han, 2015	Can't answer	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Genevieve T se, 2014	Can't answer	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	M
Jun Zhao, 2013	Can't answer	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Qi-Jun Wu, 2013	Can't answer	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Ben Liu, 2012	Can't answer	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	M
Qi-Jun Wu, 2013	Can't answer	Yes	No	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Xiaojiao Liu, 2013	Can't answer	Yes	No	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Ben Liu, 2012	Can't answer	Can't answer	No	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Tram Kim Lam, 2009	Can't answer	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	M
Elisa V. Bandera, 2007	Can't answer	Yes	Yes	No	No	Yes	Yes	No	Yes	No	Yes	M
Quanjin Dong, 2017	Can't answer	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	M

Legend:
- Green = Yes
- Red = No
- Yellow = Can't answer
- H = High
- M = Moderate
- L = Low

Items

1. Was an 'a priori' provided?
2. Was there duplicate study selection and data extraction?
3. Was a comprehensive literature search performed?
4. Was the status of publication (i.e. grey literature) uesd as an inclusion criterion?
5. Was a list of studies (included and excluded) provided?
6. Were the characteristics of the included studies provided?
7. Was the scientific quality of the included studies assessed and documented?
8. Was the scientific quality of the included studies used appropriately in formulation conclusion?
9. Were the methods used to combine the findings of studies appropriate?
10. Was the likelihood of publication bias assessed?
11. Was the conflict of interest included?

Each question can be answered with "yes," "no," "can't answer," and "not applicable."

A "yes" scores one point, whereas the other answers score 0 points.
High quality: 8 to 11 points. Moderate quality: 4 to 7 points. Low quality: 0 to 3 points

Supplementary Figure 2 Detailed evaluation of the methodological quality with AMSTAR