Table SI. Pubmed (https://pubmed.ncbi.nlm.nih.gov/) database search results.

Database	Search terms
Pubmed	(((garlic[Title/Abstract] OR allium[Title/Abstract]) OR allicin[Title/Abstract]) OR allitridum[Title/Abstract]) AND (((((("stomach"[MeSH Terms] OR "stomach"[All Fields]) OR ("stomach"[MeSH Terms] OR "stomach"[All Fields] OR "gastric"[All Fields])) AND ((neoplasms[Title/Abstract] OR cancer[Title/Abstract]) OR tumor[Title/Abstract])) OR (colon[Title/Abstract] AND ((neoplasms[Title/Abstract] OR cancer[Title/Abstract]) OR tumor[Title/Abstract]))) OR (oesophagus[Title/Abstract] AND ((neoplasms[Title/Abstract] OR cancer[Title/Abstract]) OR tumor[Title/Abstract]))) OR (colorectal[Title/Abstract] AND ((neoplasms[Title/Abstract] OR cancer[Title/Abstract]) OR tumor[Title/Abstract]))) OR (pancreatic[Title/Abstract] AND ((neoplasms[Title/Abstract] OR cancer[Title/Abstract]) OR tumor[Title/Abstract])))

Table SII. Embase (https://www.embase.com/landing?status=grey) database search results.

No.	Query strategy	Results
#14	#3 AND #13	343
#13	#8 AND #9 AND #10 OR#11 OR#12	481,599
#12	#1 AND #7	103,846
#11	#1 AND #6	182,655
#10	#1 AND #5	4,153
#9	#1 AND #4	126,961
#8	#1 AND #2	142,542
#7	pancreatic:ab,ti	265,050
#6	colorectal:ab,ti	219,193
#5	oesophagus:ab,ti	16,328
#4	colon:ab,ti	231,832
#3	garlic:ab,ti ORallium:ab,ti ORallicin:ab,ti OR allitridum:ab,ti	12,206
#2	gastric:ab,ti OR stomach:ab,ti	426,504
#1	cancer:ab,ti OR tumor:ab,ti OR neoplasms:ab,ti	3,294,973

Table SIII. Cochrane (https://www.cochranelibrary.com/) database search results.

No.	Query strategy	Results
#1	(garlic):ti,kw (Word variations have been searched)	637
#2	(cancer):ti,ab,kw (Word variations have been searched)	151023
#3	(tumor):ti,ab,kw (Word variations have been searched)	68059
#4	(neoplasms):ti,ab,kw (Word variations have been searched)	75240
#5	#2 or #3 or #4	190528
#6	(gastric):ti,ab,kw (Word variations have been searched)	25209
#7	(stomach):ti,ab,kw (Word variations have been searched)	17645
#8	(colon):ti,ab,kw (Word variations have been searched)	18648
#9	(colorectal):ti,ab,kw (Word variations have been searched)	17540
#10	(oesophagus):ti,ab,kw (Word variations have been searched)	985
#11	(pancreatic):ti,ab,kw (Word variations have been searched)	12649
#12	#6 or #7	32145
#13	#12 and #5	9314
#14	#8 and #5	7275
#15	#9 and #5	15073
#16	#10 and #5	398
#17	#11 and #5	5665
#18	#13 or #14 or #15 or #16 or #17	20841
#19	(allitridum):ti,ab,kw (Word variations have been searched)	1
#20	(allium):ti,ab,kw (Word variations have been searched)	121
#21	#1 or #19 or #20	696
#22	#21 and #18	8

Table SIV. Subgroup analysis of studies of garlic consumption and gastric cancer risk.

Parameter	No. of studies	OR (95% CI)	P heterogeneity	I², %
Study design				
Prospective	3	1.07 (0.79,1.47)	0.265	24.5
Retrospective	8	0.50 (0.39,0.64)	0.088	41.9
Geographic area				
Asia	7	0.53 (0.33,0.73)	0.006	65.0
America	3	0.87 (0.52,1.47)	0.020	69.4
Europe	1	1.27 (0.61,2.64)	NA	NA
Garlic intake				
Yes vs. no	5	0.68 (0.50,0.93)	0.146	38.9
Every day vs. no	2	0.56 (0.39,0.82)	0.472	0.0
≥3 times/week vs. no	2	0.97 (0.46,2.04)	0.045	67.7
Others vs. no	2	0.46 (0.21,1.02)	0.005	87.1

OR, odds ratio; CI, confidence interval.

Table SV. Subgroup analysis of studies of garlic consumption and colorectal cancer risk.

Parameter	No. of studies	OR (95% CI)	P heterogeneity	I², %
Study design				
Prospective	2	1.01 (0.62,1.65)	0.081	60.2
Retrospective	7	0.72 (0.62,0.84)	<0.001	71.4
Geographic area				
Asia	2	0.53 (0.41,0.69)	0.664	0.0
America	2	0.67 (0.50,0.90)	0.920	0.0
Europe	4	0.84 (0.70,1.00)	0.001	75.1
Australia	1	0.86 (0.68,1.09)	NA	NA
Garlic intake				
Yes vs. no	4	0.85 (0.71,1.01)	0.015	64.4
Others vs. no	5	0.66 (0.52,0.83)	0.018	66.4

OR, odds ratio; CI, confidence interval.

Table SVI. Quality assessment of NOS in case control studies.

First author, year	Selection				Comparability	Exposure			Total points[a]	(Refs.)
	Is the case definition adequate?	Representativeness of the cases	Selection of Controls	Definition of Controls	Comparability of cases and controls on the basis of the design or analysis	Ascertainment of exposure	Same method of ascertainment for cases and controls	Non-response rate		
De Stefani et al, 2001	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports c) no description	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls b) hospital controls c) no description	a) no history of disease (endpoint) b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case/control status ★ c) interview not blinded to case/control status d) written self report or medical record only e) no description	a) yes ★ b) no	a) same rate for both groups b) non-respondents described c) rate different and no designation	6 stars	(34)
Setiawan et al, 2005	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls★ b) hospital controls c) no description	a) no history of disease (endpoint)★ b) no description o	a) study controls for garlic intake ★ b) study controls for any addition	a) secure record (e.g. surgical records) b) structured interview where blind to case/control status ★ c) interview not blinded to case/control st	a) yes ★ b) no	a) same rate for both groups b) non-respond	8 stars	(35)

	reports c) no description			f source	al factor ★	atus d) written self report or medical record only e) no description		ents described c) rate different and no designation		
Munoz *et al*, 2001	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports c) no description	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls★ b) hospital controls c) no description	a) no history of disease (endpoint) b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case/control status ★ c) interview not blinded to case/control status d) written self report or medical record only e) no description	a) yes ★ b) no	a) same rate for both groups b) non-respondents described c) rate different and no designation	7 stars	(37)
You *et al*, 1989	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports c) no description	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls★ b) hospital controls c) no description	a) no history of disease (endpoint) ★ b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case/control status ★ c) interview not blinded to case/control status d) written self report or medical record only e) no description	a) yes ★ b) no	b) non-respondents described c) rate different and no designation	8 stars	(38)
Takezaki *et al*, 2001	a) yes, with independent validation ★	a) consecutive or obviously representative series	a) community controls★ b) hospital c	a) no history of disease (en	a) study controls for garlic intake	a) secure record (e.g. surgical records) b) structured intervie	a) yes ★	b) non-respondents described	8 stars	(18)

	b) yes, e.g. record linkage or based on self reports c) no description	of cases ★ b) potential for selection biases or not stated	ontrols c) no description	dpoint) ★ b) no description of source	★ b) study controls for any additional factor ★	w where blind to case/control status ★ c) interview not blinded to case/control status d) written self report or medical record only e) no description	b) no	c) rate different and no designation		
Gao *et al*, 1999	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports c) no description	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls★ b) hospital controls c) no description	a) no history of disease (endpoint) ★ b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case/control status ★ c) interview not blinded to case/control status d) written self report or medical record only e) no description	a) yes ★ b) no	b) non-respondents described c) rate different and no designation	8 stars	(40)
Pourfarzi *et al*, 2009	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports c) no description	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls★ b) hospital controls c) no description	a) no history of disease (endpoint) ★ b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case /control status ★ c) interview not blinded to case/control status d) written self report or medical record only e) no description	a) yes ★ b) no	b) non-respondents described c) rate different and no designation	8 stars	(41)

Wang *et al*, 2018	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports c) no description	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls★ b) hospital controls c) no description	a) no history of disease (endpoint) ★ b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case /control status ★ c) interview not blinded to case/control status d) written self report or medical record only e) no description	a) yes ★ b) no	b) non-respondents described c) rate different and no designation	8 stars	(43)
Levi *et al*, 1999	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports c) no description	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls★ b) hospital controls c) no description	a) no history of disease (endpoint) ★ b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case/control status ★ c) interview not blinded to case/control status d) written self report or medical record only e) no description	a) yes ★ b) no	b) non-respondents described c) rate different and no designation	8 stars	(44)
Wu *et al*, 2018	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports c) no descripti	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls★ b) hospital controls c) no description	a) no history of disease (endpoint) ★ b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case /control status ★ c) interview not blinded to case/control status d) written self report or medical record o	a) yes ★ b) no	b) non-respondents described c) rate different and no designation	8 stars	(12)

	on					nly e) no description			
Annema *et al*, 2011	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports c) no description	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls★ b) hospital controls c) no description	a) no history of disease (endpoint) ★ b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case/control status ★ c) interview not blinded to case/control status d) written self report or medical record only e) no description	a) yes ★ b) no	b) non-respondents described c) rate different and no designation	8 stars	(50)
Franceschi *et al*, 1997	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports c) no description	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls b) hospital controls c) no description	a) no history of disease (endpoint) ★ b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case/control status ★ c) interview not blinded to case/control status d) written self report or medical record only e) no description	a) yes ★ b) no	b) non-respondents described c) rate different and no designation	7 stars	(46)
Galeone *et al*, 2006	a) yes, with independent validation ★ b) yes, e.g. record linkage or based on self reports	a) consecutive or obviously representative series of cases ★ b) potential for selection biases or not stated	a) community controls b) hospital controls c) no description	a) no history of disease (endpoint) ★ b) no description of source	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case/control status ★ c) interview not blinded to case/control status d) written self report	a) yes ★ b) no	b) non-respondents described c) rate different and no designation	7 stars	(48)

	c) no descripti on					or medical record o nly e) no descript				
Witte *et a l*, 1996	a) yes, with in dependent vali dation ★ b) yes, e.g. re cord linkage or based on self reports c)no descriptio n	a) consecutive o r obviously repr esentative series of cases ★ b) potential for selection biases or not stated	a) community controls★ b) hospital c ontrols c) no descrip tion	a) no hist ory of di sease (en dpoint) ★ b) no des cription o f source	a) study controls for garlic intake ★ b) study controls for any addition al factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case /control status ★ c) interview not blin ded to case/control st atus d) written self report or medical record o nly e) no description	a) yes ★ b) no	b) non-respond ents described c) rate differen t and no desig nation	8 stars	(49)
Yuan *et a l*, 2020	a) yes, with in dependent vali dation ★ b) yes, e.g. re cord linkage or based on self reports c)no descriptio n	a) consecutive o r obviously repr esentative series of cases ★ b) potential for selection biases or not stated	a) community controls b) hospital c ontrols c) no descrip tion	a) no hist ory of di sease (en dpoint) ★ b) no des cription o f source	a) study controls for garlic intake ★ b) study controls for any addition al factor ★	a) secure record (e.g. surgical records) b) structured interview where blind to case /control status ★ c) interview not blin ded to case/control st atus d) written self report or medical record o nly e) no descript	a) yes ★ b) no	b) non-respond ents described c) rate differen t and no desig nation	7 stars	Ref (4 7)

[a]NOS (29); http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp. NOS, Newcastle-Ottawa quality assessment scale.

Table SVII. Quality assessment of NOS in case cohort studies.

First author, year	Selection				Comparability	Outcome			Total points[a]	(Refs.)
	Representativeness of the exposed cohort	Selection of the non exposed cohort	Ascertainment of exposure	Demonstration that outcome of interest was not present at start of study	Comparability of cohorts on the basis of the design or analysis	Assessment of outcome	Was follow-up long enough for outcomes to occur	Adequacy of follow up of cohorts		
Dorant *et al*, 1996	a) truly representative of the average garlic intake in the community b) somewhat representative of the average garlic intake in the community ★ c) selected group of users e.g. nurses, volunteers d) no description of the derivation of the cohort	a) drawn from the same community as the exposed cohort ★ b) drawn from a different source c) no description of the derivation of the non exposed cohort	a) secure record (e.g. surgical records) ★ b) structured interview c) written self report d) no description	a) yes b) no	a) study controls for garlic intake★ b) study controls for any additional factor ★	a) independent ★ blind assessment b) record linkage c) self report d) no description	a) yes b) no	a) complete follow up - all subjects accounted for b) subjects lost to follow up unlikely to introduce bias - small number lost - > 10 % follow up, or description provided of those lost c) follow up rate < 20% and no description of those lost d) no statement	6 stars	(36)
Kim *et al*, 2018	a) truly representative of the average garlic intake in the community b) somewhat	a) drawn from the same community as the exposed cohort ★	a) secure record (e.g. surgical records) ★ b) structured interview	a) yes b) no	a) study controls for garlic intake★ b) study controls for	a) independent ★ blind assessment b) record linkage	a) yes ★ b) no	a) complete follow up - all subjects accounted for ★ b) subjects lost to follow up unlikely	7 stars	(39)

	representative of the average garlic intake in the community c) selected group of users e.g. nurses, volunteers d) no description of the derivation of the cohort	b) drawn from a different source c) no description of the derivation of the non exposed cohort	c) written self report d) no description		any additional factor ★	c) self report d) no description		to introduce bias - small number lost - > 10 % follow up, or description provided of those lost c) follow up rate < 20% and no description of those lost d) no statement		
Dorant *et al*, 1996	a) truly representative of the average garlic intake in the community b) somewhat representative of the average garlic intake in the ★ community c) selected group of users e.g. nurses, volunteers d) no description of the derivation of the cohort	a) drawn from the same community as the exposed cohort ★ b) drawn from a different source c) no description of the derivation of the non exposed cohort	a) secure record (e.g. surgical records) ★ b) structured interview c) written self report d) no description	a) yes b) no	a) study controls for garlic intake ★ b) study controls for any additional factor ★	a) independent ★ blind assessment b) record linkage c) self report d) no description	a) yes (select an adequate follow up period for outcome of interest) b) no	a) complete follow up - all subjects accounted for b) subjects lost to follow up unlikely to introduce bias - small number lost - > 10 % follow up, or description provided of those lost c) follow up rate < 20% and no description of those lost d) no statement	6 stars	(42)

Steinmetz *et al*, 1994	a) truly representative of the average garlic intake in the community b) somewhat representative of the average garlic intake in the community c) selected group of users e.g. nurses, volunteers d) no description of the derivation of the cohort	a) drawn from the same community as the exposed cohort ★ b) drawn from a different source c) no description of the derivation of the non exposed cohort	a) secure record (e.g. surgical records) ★ b) structured interview c) written self report d) no description	a) yes b) no	a) study controls for garlic intake★ b) study controls for any additional factor ★	a) independent ★ blind assessment b) record linkage c) self report d) no description	a) yes b) no	a) complete follow up - all subjects accounted for ★ b) subjects lost to follow up unlikely to introduce bias - small number lost - > 10 % follow up, or description provided of those lost c) follow up rate < 20% and no description of those lost d) no statement	6 stars	(45)

[a]NOS (29); http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp. NOS, Newcastle-Ottawa quality assessment scale.

Table SVIII. Egger's test.

Cancer type	Std_Eff	Coef	Std_Err	t	P-value	95% CI
Garlic and gastric cancer	slope	-0.782	0.450	-1.74	0.110	-1.77,0.21
	bias	1.181	1.654	0.71	0.490	-2.46,4.82
Garlic and colorectal cancer	slope	-0.563	0.099	-0.57	0.584	-0.28,0.17
	bias	-1.507	0.934	-1.61	0.141	-3.62,0.61

CI, confidence interval; Std_Eff, standard effect; Coef, regression coefficients; Std_Err, standard error.