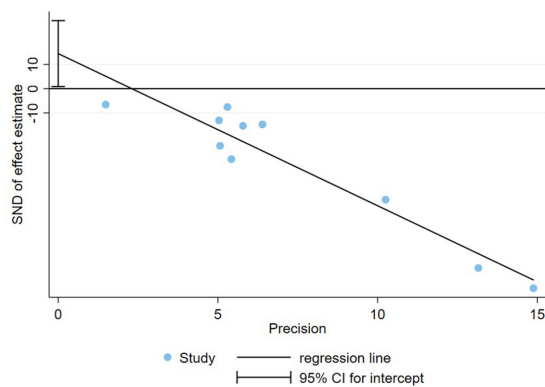


**Figure S1** Postoperative SSI incidence following thyroid surgery (ES =0.02; 95% CI: 0.02, 0.03;  $I^2=97.83\%$ ). ES, effect size; CI, confidence interval; SSI, surgical site infection.



**Figure S2** Egger's test for publication bias of the postoperative SSI incidence following thyroid surgery,  $P=0.04$ . SND, standardized normal deviate; CI, confidence interval; SSI, surgical site infection.

**Table S1** Embase saved searches

Search number	Query	Results
1	'thyroid disease'/exp	324,172
2	'thyroid disease':ab,ti	17,449
3	'surgical infection'/exp	70,287
4	'surgical infection':ab,ti	1,490
5	'infections, surgical wound':ab,ti	20
6	'surgical wound infections':ab,ti	805
7	'wound infections, surgical':ab,ti	14
8	'infection, surgical wound':ab,ti	19
9	'surgical site infection':ab,ti	16,929
10	'infection, surgical site':ab,ti	148
11	'infections, surgical site':ab,ti	108
12	'wound infection, postoperative':ab,ti	121
13	'wound infection, surgical':ab,ti	31
14	'infection, postoperative wound':ab,ti	7
15	'infections, postoperative wound':ab,ti	9
16	'postoperative wound infections':ab,ti	973
17	'wound infections, postoperative':ab,ti	39
18	'postoperative wound infection':ab,ti	1,673
19	#1 OR #2	325,936
20	#3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18	74,643
21	'risk factor'/exp	1,435,555
22	'risk factor':ab,ti	415,694
23	'factor, risk':ab,ti	352
24	'risk factor':ab,ti	415,694
25	'social risk factors':ab,ti	1,462
26	'factor, social risk':ab,ti	
27	'factors, social risk':ab,ti	9
28	'factors, social risk':ab,ti	7
29	'risk factors, social':ab,ti	150
30	'social risk factor':ab,ti	120
31	'health correlates':ab,ti	636
32	'correlates, health':ab,ti	12
33	'population at risk':ab,ti	6,068
34	'populations at risk':ab,ti	3,755
35	'risk scores':ab,ti	23,990
36	'risk score':ab,ti	50,874
37	'score, risk':ab,ti	1,367
38	'risk factor scores':ab,ti	150
39	'risk factor score':ab,ti	302
40	'score, risk factor':ab,ti	17
41	#21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40	1,655,834
42	#19 AND #20 AND #41	105

**Table S2** PubMed saved searches

Search number	Query	Results
1	“Thyroid Gland”[MeSH]	60,620
2	(((((Thyroid Gland[Title/Abstract]) OR (Glands, Thyroid[Title/Abstract])) OR (Gland, Thyroid[Title/Abstract])) OR (Thyroid Glands[Title/Abstract])) OR (Thyroid[Title/Abstract])) OR (Thyroids[Title/Abstract])	220,442
3	(((((Thyroid Gland[Title/Abstract]) OR (Glands, Thyroid[Title/Abstract])) OR (Gland, Thyroid[Title/Abstract])) OR (Thyroid Glands[Title/Abstract])) OR (Thyroid[Title/Abstract])) OR (Thyroids[Title/Abstract])) OR (“Thyroid Gland”[MeSH])	229,731
4	“Surgical Wound Infection”[MeSH]	41,449
5	((((((((((Surgical Wound Infection[Title/Abstract]) OR (Infections, Surgical Wound[Title/Abstract])) OR (Surgical Wound Infections[Title/Abstract])) OR (Wound Infections, Surgical[Title/Abstract])) OR (Infection, Surgical Wound[Title/Abstract])) OR (Surgical Site Infection[Title/Abstract])) OR (Infection, Surgical Site[Title/Abstract])) OR (Infections, Surgical Site[Title/Abstract])) OR (Surgical Site Infections[Title/Abstract])) OR (Wound Infection, Postoperative[Title/Abstract])) OR (Wound Infection, Surgical[Title/Abstract])) OR (Infection, Postoperative Wound[Title/Abstract])) OR (Infections, Postoperative Wound[Title/Abstract])) OR (Postoperative Wound Infections[Title/Abstract])) OR (Wound Infections, Postoperative[Title/Abstract])) OR (Postoperative Wound Infection[Title/Abstract])	21,342
6	((((((((((((((Surgical Wound Infection[Title/Abstract]) OR (Infections, Surgical Wound[Title/Abstract])) OR (Surgical Wound Infections[Title/Abstract])) OR (Wound Infections, Surgical[Title/Abstract])) OR (Infection, Surgical Wound[Title/Abstract])) OR (Surgical Site Infection[Title/Abstract])) OR (Infection, Surgical Site[Title/Abstract])) OR (Infections, Surgical Site[Title/Abstract])) OR (Surgical Site Infections[Title/Abstract])) OR (Wound Infection, Postoperative[Title/Abstract])) OR (Wound Infection, Surgical[Title/Abstract])) OR (Infection, Postoperative Wound[Title/Abstract])) OR (Infections, Postoperative Wound[Title/Abstract])) OR (Postoperative Wound Infections[Title/Abstract])) OR (Wound Infections, Postoperative[Title/Abstract])) OR (Postoperative Wound Infection[Title/Abstract])) OR (“Surgical Wound Infection”[MeSH])	51,133
7	“Risk Factors”[MeSH]	988,988
8	((((((((((((((Risk Factors[Title/Abstract]) OR (Factor, Risk[Title/Abstract])) OR (Risk Factor[Title/Abstract])) OR (Social Risk Factors[Title/Abstract])) OR (Factor, Social Risk[Title/Abstract])) OR (Factors, Social Risk[Title/Abstract])) OR (Risk Factor, Social[Title/Abstract])) OR (Risk Factors, Social[Title/Abstract])) OR (Social Risk Factor[Title/Abstract])) OR (Health Correlates[Title/Abstract])) OR (Correlates, Health[Title/Abstract])) OR (Population at Risk[Title/Abstract])) OR (Populations at Risk[Title/Abstract])) OR (Risk Scores[Title/Abstract])) OR (Risk Score[Title/Abstract])) OR (Score, Risk[Title/Abstract])) OR (Risk Factor Scores[Title/Abstract])) OR (Risk Factor Score[Title/Abstract])) OR (Score, Risk Factor[Title/Abstract])	861,983
9	((((((((((((((((((Risk Factors[Title/Abstract]) OR (Factor, Risk[Title/Abstract])) OR (Risk Factor[Title/Abstract])) OR (Social Risk Factors[Title/Abstract])) OR (Factor, Social Risk[Title/Abstract])) OR (Factors, Social Risk[Title/Abstract])) OR (Risk Factor, Social[Title/Abstract])) OR (Risk Factors, Social[Title/Abstract])) OR (Social Risk Factor[Title/Abstract])) OR (Health Correlates[Title/Abstract])) OR (Correlates, Health[Title/Abstract])) OR (Population at Risk[Title/Abstract])) OR (Populations at Risk[Title/Abstract])) OR (Risk Scores[Title/Abstract])) OR (Risk Score[Title/Abstract])) OR (Score, Risk[Title/Abstract])) OR (Risk Factor Scores[Title/Abstract])) OR (Risk Factor Score[Title/Abstract])) OR (Score, Risk Factor[Title/Abstract])) OR (“Risk Factors”[MeSH])	1,469,413
10	((((((((((((((((((((((Risk Factors[Title/Abstract]) OR (Factor, Risk[Title/Abstract])) OR (Risk Factor[Title/Abstract])) OR (Social Risk Factors[Title/Abstract])) OR (Factor, Social Risk[Title/Abstract])) OR (Factors, Social Risk[Title/Abstract])) OR (Risk Factor, Social[Title/Abstract])) OR (Risk Factors, Social[Title/Abstract])) OR (Social Risk Factor[Title/Abstract])) OR (Health Correlates[Title/Abstract])) OR (Correlates, Health[Title/Abstract])) OR (Population at Risk[Title/Abstract])) OR (Populations at Risk[Title/Abstract])) OR (Risk Scores[Title/Abstract])) OR (Risk Score[Title/Abstract])) OR (Score, Risk[Title/Abstract])) OR (Risk Factor Scores[Title/Abstract])) OR (Risk Factor Score[Title/Abstract])) OR (Score, Risk Factor[Title/Abstract])) OR (“Risk Factors”[MeSH])) AND (((((((((((Surgical Wound Infection[Title/Abstract]) OR (Infections, Surgical Wound[Title/Abstract])) OR (Surgical Wound Infections[Title/Abstract])) OR (Wound Infections, Surgical[Title/Abstract])) OR (Infection, Surgical Wound[Title/Abstract])) OR (Surgical Site Infection[Title/Abstract])) OR (Infection, Surgical Site[Title/Abstract])) OR (Infections, Surgical Site[Title/Abstract])) OR (Surgical Site Infections[Title/Abstract])) OR (Wound Infection, Postoperative[Title/Abstract])) OR (Wound Infection, Surgical[Title/Abstract])) OR (Infection, Postoperative Wound[Title/Abstract])) OR (Infections, Postoperative Wound[Title/Abstract])) OR (Postoperative Wound Infections[Title/Abstract])) OR (Wound Infections, Postoperative[Title/Abstract])) OR (Postoperative Wound Infection[Title/Abstract])) OR (“Surgical Wound Infection”[MeSH])) AND ((((((Thyroid Gland[Title/Abstract]) OR (Glands, Thyroid[Title/Abstract])) OR (Gland, Thyroid[Title/Abstract])) OR (Thyroid Glands[Title/Abstract])) OR (Thyroid[Title/Abstract])) OR (Thyroids[Title/Abstract])) OR (“Thyroid Gland”[MeSH]))	43

**Table S3** Web of Science saved searches

Search number	Query	Results
1	(((((TS=(Thyroid Gland)) OR TS=(Glands, Thyroid)) OR TS=(Gland, Thyroid)) OR TS=(Thyroid Glands)) OR TS=(Thyroid)) OR TS=(Thyroids)	241,696
2	(((((((((((((TS=(Surgical Wound Infection)) OR TS=(Infections, Surgical Wound)) OR TS=(Surgical Wound Infections)) OR TS=(Wound Infections, Surgical)) OR TS=(Infection, Surgical Wound)) OR TS=(Surgical Site Infection)) OR TS=(Infection, Surgical Site)) OR TS=(Infections, Surgical Site)) OR TS=(Surgical Site Infections)) OR TS=(Wound Infection, Postoperative)) OR TS=(Wound Infection, Surgical)) OR TS=(Infection, Postoperative Wound)) OR TS=(Infections, Postoperative Wound)) OR TS=(Postoperative Wound Infections)) OR TS=(Wound Infections, Postoperative)) OR TS=(Postoperative Wound Infection)	52,791
3	(((((((((((((((((TS=(Risk Factors)) OR TS=(Factor, Risk)) OR TS=(Risk Factor)) OR TS=(Social Risk Factors)) OR TS=(Factor, Social Risk)) OR TS=(Factors, Social Risk)) OR TS=(Risk Factor, Social)) OR TS=(Risk Factors, Social)) OR TS=(Social Risk Factor)) OR TS=(Health Correlates)) OR TS=(Correlates, Health)) OR TS=(Population at Risk)) OR TS=(Populations at Risk)) OR TS=(Risk Scores)) OR TS=(Risk Score)) OR TS=(Score, Risk)) OR TS=(Risk Factor Scores)) OR TS=(Risk Factor Score)) OR TS=(Score, Risk Factor)	2,253,921
4	#1 AND #2 AND #3	80

**Table S4** Cochrane Library saved searches

Search number	Query	Results
1	MeSH descriptor: [Thyroid Gland] explode all trees	706
2	(Thyroid Gland):ti,ab,kw OR (Glands, Thyroid):ti,ab,kw OR (Gland, Thyroid):ti,ab,kw OR (Thyroid Glands):ti,ab,kw OR (Thyroid):ti,ab,kw	10,089
3	#1 or #2	10,089
4	MeSH descriptor: [Surgical Wound Infection] explode all trees	4,585
5	(Surgical Wound Infection):ti,ab,kw OR (Infections, Surgical Wound):ti,ab,kw OR (Surgical Wound Infections):ti,ab,kw OR (Wound Infections, Surgical):ti,ab,kw OR (Infection, Surgical Wound):ti,ab,kw	9,474
6	(Surgical Site Infection):ti,ab,kw OR (Infection, Surgical Site):ti,ab,kw OR (Infections, Surgical Site):ti,ab,kw OR (Surgical Site Infections):ti,ab,kw OR (Wound Infection, Postoperative):ti,ab,kw	10,577
7	(Wound Infection, Surgical):ti,ab,kw OR (Infection, Postoperative Wound):ti,ab,kw OR (Infections, Postoperative Wound):ti,ab,kw OR (Postoperative Wound Infections):ti,ab,kw OR (Wound Infections, Postoperative):ti,ab,kw	11,058
8	MeSH descriptor: [Risk Factors] explode all trees	38,174
9	(Risk Factors):ti,ab,kw OR (Factor, RiskFactor, Risk):ti,ab,kw OR (Risk Factor):ti,ab,kw OR (Social Risk Factors):ti,ab,kw OR (Factor, Social Risk):ti,ab,kw	125,070
10	(Factors, Social Risk):ti,ab,kw OR (Risk Factor, Social):ti,ab,kw OR (Risk Factors, Social):ti,ab,kw OR (Social Risk Factor):ti,ab,kw OR (Health Correlates):ti,ab,kw	8,719
11	(Correlates, Health):ti,ab,kw OR (Population at Risk):ti,ab,kw OR (Populations at Risk):ti,ab,kw OR (Risk Scores):ti,ab,kw OR (Risk Score):ti,ab,kw	100,933
12	(Score, Risk):ti,ab,kw OR (Risk Factor Scores):ti,ab,kw OR (Risk Factor Score):ti,ab,kw OR (Score, Risk Factor):ti,ab,kw	43,464
13	#4 or #5 or #6 or #7	13,344
14	#8 or #9 or #10 or #11 or #12	184,066
15	#3 and #13 and #14	14

**Table S5** Search keywords

Number	Keywords
1	Thyroid gland Glands, thyroid Gland, thyroid Thyroid glands Thyroid Thyroids
2	Surgical wound infection Infections, surgical wound Surgical wound infections Wound infections, surgical Infection, surgical wound Surgical site infection Infection, surgical site Infections, surgical site Surgical site infections Wound infection, postoperative Wound infection, surgical Infection, postoperative wound Infections, postoperative wound Postoperative wound infections Wound infections, postoperative Postoperative wound infection
3	Risk factors Factor, risk Risk factor Social risk factors Factor, social risk Factors, social risk Risk factor, social Risk factors, social Social risk factor Health correlates Correlates, health Population at risk Populations at risk Risk scores Risk score Score, risk Risk factor scores Risk factor score Score, risk factor

**Table S6** Chinese search queries

Databases	Chinese search queries
CNKI	(主题:甲状腺手术) OR (主题:甲状腺癌手术) AND (主题:手术部位感染) OR (主题:感染) OR (主题:术后感染) AND (主题:危险因素)
Wanfang Data	主题:(甲状腺手术 OR 甲状腺癌手术) AND 主题:(手术部位感染 OR 术后感染 OR 感染) AND 主题:(危险因素)
CBM	
#1	“甲状腺手术”[常用字段:智能] OR “甲状腺癌手术”[常用字段:智能]
#2	“手术部位感染”[常用字段:智能] OR “术后感染”[常用字段:智能] OR “感染”[常用字段:智能]
#3	“危险因素”[常用字段]
#4	“#1 and #2 and #3”

CNKI, China National Knowledge Infrastructure; CBM, China Biology Medicine.

**Table S7** Embase saved supplementary searches

No.	Query results	Results	Date
#16	#1 AND #14 AND #15	9	4-Oct-24
#15	#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13	75,775	4-Oct-24
#14	#2 OR #3	331,007	4-Oct-24
#13	'postoperative wound infection':ab,ti	1,687	4-Oct-24
#12	'infections, surgical site':ab,ti	113	4-Oct-24
#11	'infection, surgical site':ab,ti	151	4-Oct-24
#10	'surgical site infection':ab,ti	17,384	4-Oct-24
#9	'infection, surgical wound':ab,ti	18	4-Oct-24
#8	'wound infections, surgical':ab,ti	14	4-Oct-24
#7	'surgical wound infections':ab,ti	817	4-Oct-24
#6	'infections, surgical wound':ab,ti	20	4-Oct-24
#5	'surgical infection':ab,ti	1,502	4-Oct-24
#4	'surgical infection'/exp	71,866	4-Oct-24
#3	'thyroid disease':ab,ti	17,632	4-Oct-24
#2	'thyroid disease'/exp	329,218	4-Oct-24
#1	factors AND predictive	196,298	4-Oct-24



**Table S9** Web of Science saved supplementary searches

Search number	Query	Results	Date
1	TS=(Factors predictive)	204,320	Fri Oct 04 2024 20:30:16 GMT+0800
2	(((((TS=(Surgical Wound Infection)) OR TS=(Infections, Surgical Wound)) OR TS=(Surgical Wound Infections)) OR TS=(Wound Infections, Surgical)) OR TS=(Infection, Surgical Wound)) OR TS=(Surgical Site Infection)) OR TS=(Infection, Surgical Site)) OR TS=(Infections, Surgical Site)) OR TS=(Surgical Site Infections)) OR TS=(Wound Infection, Postoperative)) OR TS=(Wound Infection, Surgical)) OR TS=(Infection, Postoperative Wound)) OR TS=(Infections, Postoperative Wound)) OR TS=(Postoperative Wound Infections)) OR TS=(Wound Infections, Postoperative)) OR TS=(Postoperative Wound Infection)	54,358	Fri Oct 04 2024 20:31:16 GMT+0800
3	(((((TS=(Thyroid Gland)) OR TS=(Glands, Thyroid)) OR TS=(Gland, Thyroid)) OR TS=(Thyroid Glands)) OR TS=(Thyroid)) OR TS=(Thyroids)	246,011	Fri Oct 04 2024 20:31:49 GMT+0800
4	#1 AND #2 AND #3	5	Fri Oct 04 2024 20:31:55 GMT+0800

**Table S10** Cochrane Library saved supplementary searches

ID	Search	Hits
#1	Factors predictive	13,398
#2	MeSH descriptor: [Thyroid Gland] explode all trees	715
#3	(Thyroid Gland):ti,ab,kw OR (Glands, Thyroid):ti,ab,kw OR (Gland, Thyroid):ti,ab,kw OR (Thyroid Glands):ti,ab,kw OR (Thyroid):ti,ab,kw	10,370
#4	#2 or #3	10,370
#5	MeSH descriptor: [Surgical Wound Infection] explode all trees	4,638
#6	(Surgical Wound Infection):ti,ab,kw OR (Infections, Surgical Wound):ti,ab,kw OR (Surgical Wound Infections):ti,ab,kw OR (Wound Infections, Surgical):ti,ab,kw OR (Infection, Surgical Wound):ti,ab,kw	9,738
#7	(Surgical Site Infection):ti,ab,kw OR (Infection, Surgical Site):ti,ab,kw OR (Infections, Surgical Site):ti,ab,kw OR (Surgical Site Infections):ti,ab,kw OR (Postoperative Wound Infections):ti,ab,kw	7,327
#8	#6 or #7 or #5	12,426
#9	#1 and #4 and #8	1

**Table S11** Chinese search supplementary queries

Databases	Chinese search queries
CNKI	主题:(甲状腺 + 甲状腺手术) AND (主题:感染) AND (主题:预测因素)
Wanfang Data	主题:(甲状腺 + 甲状腺手术) AND (主题:感染) AND (主题:预测因素)
CBM	主题:(甲状腺 + 甲状腺手术) AND (主题:感染) AND (主题:预测因素)

CNKI, China National Knowledge Infrastructure; CBM, China Biology Medicine.