

DETAILED SEARCH STRATEGIES FOR EACH DATABASE

MEDLINE

1. (Neuroendocrine[TIAB] OR carcinoid[TIAB] OR Carcinoids[TIAB]) AND (Tumors[TIAB] OR Tumor[TIAB] OR neoplasm[TIAB] OR tumour[TIAB] OR neoplasms[TIAB] OR tumours[TIAB]) 45174
2. ("Neuroendocrine Tumors"[Mesh:NoExp]) OR "Carcinoid Tumor"[Mesh:NoExp] 24596
3. Rectum[TIAB] OR Rectal[TIAB] OR Rectums[TIAB] OR Rectum[Mesh] 157606
4. 1 OR 2 49950
5. 3 AND 4 2140
6. "Neoplasm, Residual"[Mesh] 13587
7. Incomplete[TIAB] OR Residual[TIAB] OR incompletely[TIAB] OR Positive[TIAB] OR Remnant[TIAB] 2496832
8. 6 OR 7 2499424
9. 5 AND 8 414
10. 9 NOT ("review"[Publication Type] OR "review literature as topic"[MeSH Terms]) 381

EMBASE

1. 'neuroendocrine neoplasm'/de OR 'carcinoid'/exp 28311
2. ('neuro-endocrine':ab,ti OR Neuroendocrine:ab,ti OR carcinoid:ab,ti OR Carcinoids:ab,ti) AND (Tumors:ab,ti OR Tumor:ab,ti OR neoplasm:ab,ti OR tumour:ab,ti OR neoplasms:ab,ti OR tumours:ab,ti) 72814
3. 1 OR 2 81666
4. 'minimal residual disease'/exp 48116
5. Incomplete:ab,ti OR Residual:ab,ti OR incompletely:ab,ti OR Positive:ab,ti OR Remnant:ab,ti 3507876
6. 4 OR 5 3515104
7. 'rectum'/exp OR rectum:ab,ti OR rectal:ab,ti OR rectums:ab,ti 231941
8. 3 AND 6 AND 7 1035
9. 8 NOT ('animal experiment'/de OR 'animal model'/de OR 'animal tissue'/de OR

'in vivo study'/de OR 'meta analysis'/de OR 'nonhuman'/de OR 'systematic review'/de) 994

10. 9 NOT ('conference review'/it OR 'review'/it) 967

Cochrane

1. ((Neuroendocrine OR carcinoid OR Carcinoids) AND (Tumors OR Tumor OR neoplasm OR tumour OR neoplasms OR tumours)):ti,ab,kw 1738

2. MeSH descriptor: [Neuroendocrine Tumors] this term only 344

3. MeSH descriptor: [Carcinoid Tumor] this term only 92

4. 1 OR 2 OR 3 1738

5. (Rectum OR Recta OR Rectums):ti,ab,kw 9360

6. MeSH descriptor: [Rectum] explode all trees 1872

7. 5 OR 6 9360

8. 4 AND 7 49

9. MeSH descriptor: [Neoplasm, Residual] explode all trees 606

10. (Incomplete OR Residual OR incompletely OR Positive OR Remnant):ti,ab,kw 199451

11. 9 OR 10 199451

8 AND 11 5

		Risk of bias domains							
		D1	D2	D3	D4	D5	D6	D7	Overall
Study	Cha 2019	⊖	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	Cha 2022	⊗	⊕	⊖	⊕	⊖	⊕	⊕	⊗
	Chatila 2024	⊖	⊕	⊖	⊕	⊕	⊕	⊖	⊖
	Cheminel 2024	⊗	⊖	⊕	⊕	⊕	⊖	⊕	⊗
	Cho 2015	⊖	⊕	⊖	⊗	⊖	⊗	⊖	⊗
	Choi 2017	⊖	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	Chung 2021	⊖	⊕	⊖	⊕	⊕	⊕	⊕	⊖
	Dell'Unto 2024	⊖	⊖	⊕	⊖	⊖	⊕	⊖	⊖
	Duan 2024	⊖	⊕	⊕	⊖	⊖	⊕	⊕	⊖
	Heo 2014	⊖	⊕	⊕	⊕	⊖	⊕	⊕	⊖
	Hwang 2016	⊗	⊕	⊖	⊖	⊖	⊗	⊖	⊗
	Inoue 2013	⊖	⊕	⊖	⊕	⊖	⊖	⊖	⊖
	Jeon 2011	⊖	⊕	⊕	⊕	⊕	⊖	⊖	⊖
	Ju 2024	⊖	⊕	⊖	⊕	⊕	⊕	⊖	⊖
	Kaneko 2016	⊖	⊕	⊕	⊕	⊖	⊕	⊖	⊖
	Kim GU 2013	⊖	⊕	⊕	⊕	⊖	⊕	⊕	⊖
	Kim S 2024	⊗	⊕	⊖	⊕	⊖	⊖	⊖	⊗
	Kim SJ 2024	⊖	⊕	⊕	⊕	⊖	⊕	⊕	⊖
	Kim YJ 2008	⊗	⊖	⊖	⊕	⊗	⊖	⊖	⊗
	Kusuhara 2024	⊖	⊕	⊕	⊕	⊕	⊕	⊖	⊖
	Lee 2024	⊗	⊖	⊖	⊕	⊕	⊖	⊕	⊗
	Li 2021	⊗	⊖	⊕	⊕	⊕	⊖	⊖	⊗
	Moon 2011	⊗	⊕	⊖	⊕	⊖	⊖	⊕	⊗
	Moon 2016	⊖	⊕	⊖	⊕	⊕	⊖	⊖	⊖
	Nakamura 2016	⊖	⊕	⊕	⊕	⊖	⊖	⊖	⊖
	Oh 2024	⊗	⊕	⊖	⊕	⊖	⊕	⊖	⊗
	Park JB 2025	⊖	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	Seo 2024	⊗	⊖	⊖	⊕	⊖	⊖	⊖	⊗
	Sun 2023	⊖	⊕	⊕	⊕	⊖	⊕	⊕	⊖
	Sung 2012	⊗	⊖	⊖	⊕	⊖	⊖	⊖	⊗
	Takita 2016	⊖	⊕	⊖	⊕	⊖	⊕	⊕	⊖
	Wang 2020	⊖	⊖	⊕	⊕	⊕	⊖	⊖	⊖
	Zheng 2021	⊗	⊖	⊖	⊕	⊕	⊖	⊖	⊗
	Zhuang 2023	⊖	⊖	⊖	⊕	⊖	⊖	⊖	⊖
Domains:		Judgement							
D1: Bias due to confounding.		⊗ Serious							
D2: Bias due to selection of participants.		⊖ Moderate							
D3: Bias in classification of interventions.		⊕ Low							
D4: Bias due to deviations from intended interventions.									
D5: Bias due to missing data.									
D6: Bias in measurement of outcomes.									
D7: Bias in selection of the reported result.									

Supplementary Figure 1 Risk of bias assessment using ROBINS-I.