

Appendix 1

Search strategy for PubMed

("lymph nodes"[MeSH Terms] OR "lymph node"[Title/Abstract] OR "lymph node"[Title/Abstract] OR "nodes lymph"[Title/Abstract] OR ("lymphatic metastasis"[MeSH Terms] OR "lymphatic metastases"[Title/Abstract] OR "lymph node metastasis"[Title/Abstract] OR "lymph node metastases"[Title/Abstract] OR "metastasis lymph node"[Title/Abstract])) AND (((("dual"[All Fields] AND ("energie"[All Fields] OR "energies"[All Fields] OR "energy"[All Fields])) OR ("dual"[All Fields] AND ("energie"[All Fields] OR "energies"[All Fields] OR "energy"[All Fields]) AND ("radionuclide imaging"[MeSH Terms] OR ("radionuclide"[All Fields] AND "imaging"[All Fields]) OR "radionuclide imaging"[All Fields] OR "scanning"[All Fields] OR "scan s"[All Fields] OR "scanned"[All Fields] OR "scannings"[All Fields] OR "scans"[All Fields])) AND ("projection"[MeSH Terms] OR "forecasting"[MeSH Terms])) AND ("CT"[Title/Abstract] OR "computed tomograph*"[Title/Abstract] OR "tomography, x-ray computed"[MeSH Terms])) OR "dect"[Title/Abstract] OR "spectral ct"[Title/Abstract])

Search strategy for Cochrane

Search Name:

Date Run: 01/10/2022 08:15:55

Comment:

ID	Search	Hits
#1	MeSH descriptor: [Lymphatic Metastasis] explode all trees	1920
#2	(Lymphatic Metastases):ti,ab,kw OR (Lymph Node Metastasis):ti,ab,kw OR (Lymph Node Metastases):ti,ab,kw OR (Metastasis, Lymph Node):ti,ab,kw (Word variations have been searched)	5609
#3	#1or#2	6207
#4	MeSH descriptor: [Lymph Nodes] explode all trees	907
#5	(Lymph Node):ti,ab,kw OR (Node, Lymph):ti,ab,kw OR (Nodes, Lymph):ti,ab,kw (Word variations have been searched)	12965
#6	#4or#5	12971
#7	#3or#6	13707
#8	MeSH descriptor: [Tomography, Emission-Computed] explode all trees	2652
#9	(ct):ti,ab,kw OR (computed tomograph):ti,ab,kw (Word variations have been searched)	81765
#10	#8or#9	83800
#11	(dual energy):ti,ab,kw (Word variations have been searched)	6153
#12	#10and#11	828
#13	(dect):ti,ab,kw OR (spectral ct):ti,ab,kw (Word variations have been searched)	295
#14	#12or#13	1042
#15	#7and#14	3

Search strategy for Embase

Embase Session Results

No.	Query	Results
#19	#18 AND #10	235
#18	#14 OR #17	395,622
#17	#15 OR #16	282,888
#16	'lymph nodes':ab,ti OR 'node, lymph':ab,ti OR 'nodes, lymph':ab,ti	168,824
#15	'lymph node'/exp	208,033
#14	#11 OR #13	171,888
#13	'lymphatic metastasis':ab,ti OR 'lymphatic metastases':ab,ti OR 'lymph node metastases':ab,ti OR 'metastasis, lymph node':ab,ti	31,605
#11	'lymph node metastasis'/exp	165,753
#10	#4 OR #9	15,209
#9	#3 AND #8	14,377
#8	'dual energy'	59,399
#4	'dural energy computer assisted tomography' OR 'dect' OR 'spectral ct'	3,650
#3	#1 OR #2	1,834,338
#2	'ct' OR 'computer tomography\$'	1,022,897
#1	'computer assisted tomography'/exp	1,313,207

Appendix 2 Specific reasons for exclusion at the full-text screening stage

N	First author	Year	Title	Journal	Reasons for exclusion
1	Yang <i>et al.</i>	2022	Radiomics profiling identifies the value of CT features for the preoperative evaluation of lymph node metastasis in papillary thyroid carcinoma	<i>Diagnostics</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
2	Xu <i>et al.</i>	2022	Iodine maps from dual-energy CT to predict extrathyroidal extension and recurrence in papillary thyroid cancer based on a radiomics approach	<i>American Journal of Neuroradiology</i>	Wrong outcome: prediction of tumor recurrence
3	Hong <i>et al.</i>	2022	Value of dual-layer spectral detector CT in preoperative prediction of lymph node metastasis of gastric cancer	<i>Zhonghua Yi Xue Za Zhi</i>	Non-English language literature
4	Li <i>et al.</i>	2021	Histological subtypes of solid-dominant invasive lung adenocarcinoma: differentiation using dual-energy spectral CT	<i>Clinical Radiology</i>	Wrong outcome: prediction of tumor recurrence
5	Zeng <i>et al.</i>	2021	Decoupling convolution network for characterizing the metastatic lymph nodes of breast cancer patients	<i>Medical Physics</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
6	Zou <i>et al.</i>	2021	A new prediction model for lateral cervical lymph node metastasis in patients with papillary thyroid carcinoma: based on dual-energy CT	<i>European Journal of Radiology</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
7	Zhou <i>et al.</i>	2021	Radiomics from primary tumor on dual-energy CT derived iodine maps can predict cervical lymph node metastasis in papillary thyroid cancer	<i>Academic Radiology</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
8	Wang <i>et al.</i>	2021	Dual energy CT image prediction on primary tumor of lung cancer for nodal metastasis using deep learning	<i>Computerized Medical Imaging and Graphics</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
9	Takumi <i>et al.</i>	2021	Usefulness of dual-layer spectral CT in follow-up examinations: diagnosing recurrent squamous cell carcinomas in the head and neck	<i>Japanese Journal of Radiology</i>	Wrong outcome: prediction of tumor recurrence
10	Martin <i>et al.</i>	2021	Prospective evaluation of the first integrated positron emission Tomography/dual-energy computed tomography system in patients with lung cancer	<i>Journal of Thoracic Imaging</i>	Wrong outcome: not a diagnostic accuracy study
11	Le <i>et al.</i>	2021	CT features predictive of nodal positivity at surgery in pancreatic cancer patients following neoadjuvant therapy in the setting of dual energy CT	<i>Abdominal Radiology</i>	Unable to extract data: no related parameters
12	Kupik <i>et al.</i>	2021	A comparison study of dual-energy spectral CT and 18F-FDG PET/CT in primary tumors and lymph nodes of lung cancer	<i>Diagn Interv Radiol</i>	Wrong outcome: not a diagnostic accuracy study
13	Cao <i>et al.</i>	2021	Development of a nomogram combining clinical risk factors and dual-energy spectral CT parameters for the preoperative prediction of lymph node metastasis in patients with colorectal cancer	<i>Frontiers in Oncology</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
14	Xu <i>et al.</i>	2021	Integrating CT image features and quantitative dual-energy CT parameters for diagnosing metastatic lymph nodes from papillary thyroid carcinoma	<i>Chinese Journal of Radiology</i>	Non-English language literature
15	An <i>et al.</i>	2021	Deep learning radiomics of dual-energy computed tomography for predicting lymph node metastases of pancreatic ductal adenocarcinoma	<i>European Journal of Nuclear Medicine and Molecular Imaging</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
16	Zhou <i>et al.</i>	2020	Radiomics analysis of dual-energy CT-derived iodine maps for diagnosing metastatic cervical lymph nodes in patients with papillary thyroid cancer	<i>European Radiology</i>	Unable to extract data: radiomics studies
17	Wang <i>et al.</i>	2020	Dual-energy CT in the differentiation of stage T1 nasopharyngeal carcinoma and lymphoid hyperplasia	<i>European Radiology</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
18	Liu <i>et al.</i>	2020	A study of radiomics parameters from dual-energy computed tomography images for lymph node metastasis evaluation in colorectal mucinous adenocarcinoma	<i>Medicine</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
19	Li <i>et al.</i>	2020	Dual-energy CT-based deep learning radiomics can improve lymph node metastasis risk prediction for gastric cancer	<i>European Radiology</i>	Unable to extract data: radiomics studies
20	Kim <i>et al.</i>	2020	Application of dual-energy spectral computed tomography to thoracic oncology imaging	<i>Korean J Radiol</i>	Nonoriginal article

Appendix 2 (continued)

Appendix 2 (continued)

N	First author	Year	Title	Journal	Reasons for exclusion
21	Yang <i>et al.</i>	2018	Dual-source CT iodine concentration and Overlay value in diagnosis of different degree gastric cancer and metastatic lymph nodes	<i>Chinese Journal of Medical Imaging Technology</i>	Non-English language literature
22	Seidler <i>et al.</i>	2019	Dual-Energy CT texture analysis with machine learning for the evaluation and characterization of cervical lymphadenopathy	<i>Computational and Structural Biotechnology Journal</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
23	Forghani <i>et al.</i>	2019	Head and neck squamous cell carcinoma: prediction of cervical lymph node metastasis by dual-energy CT texture analysis with machine learning	<i>European Radiology</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
24	Huang <i>et al.</i>	2019	Dual-energy CT iodine image for evaluation of cervical lymph node metastatic potential in papillary thyroid microcarcinoma	<i>Chinese Journal of Radiology</i>	Non-English language literature
25	Rizzo <i>et al.</i>	2019	Metastatic and non-metastatic lymph nodes: quantification and different distribution of iodine uptake assessed by dual-energy CT	<i>European Radiology</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
26	Morgan <i>et al.</i>	2019	The role of dual-energy computed tomography in assessment of abdominal oncology and beyond	<i>Radiol Clin North Am</i>	Nonoriginal article
27	Li <i>et al.</i>	2019	Diagnostic accuracy of dual-energy CT-based nomograms to predict lymph node metastasis in gastric cancer	<i>European Radiology</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
28	Zheng <i>et al.</i>	2017	Dual energy CT in diagnosis of central cervical metastatic lymph nodes in patients with papillary thyroid cancer	<i>Chinese Journal of Medical Imaging Technology</i>	Non-English language literature
29	Hokamp <i>et al.</i>	2018	Verbesserte Darstellung intraspinaler Lymphome mittels virtuell-monoenergetischen Rekonstruktionen der Dual-Energy-CT	<i>Rofo</i>	Non-English language literature
30	Yang <i>et al.</i>	2016	GSI quantitative parameters: Preoperative diagnosis of metastasis lymph nodes in lung cancer	<i>Chinese Journal of Lung Cancer</i>	Non-English language literature
31	Yang <i>et al.</i>	2016	Dual source CT dual-energy imaging technology in differential diagnosis of the metastatic and reactive hyperplastic lymph nodes in patients with colorectal cancer	<i>Chinese Journal of Medical Imaging Technology</i>	Non-English language literature
32	Yang <i>et al.</i>	2016	Differentiation of malignant cervical lymphadenopathy by dual-energy CT: a preliminary analysis	<i>Scientific reports</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
33	Wang <i>et al.</i>	2015	Application of single-source dual-energy spectral CT in differentiating lymphoma and metastatic lymph nodes in the head and neck	<i>Journal: Chinese Journal of Oncology</i>	Non-English language literature
34	Liang <i>et al.</i>	2015	A retrospective study of dual-energy CT for clinical detecting of metastatic cervical lymph nodes in laryngeal and hypopharyngeal squamous cell carcinoma	<i>Acta Oto-Laryngologica</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
35	Fu <i>et al.</i>	2015	Dual-energy virtual noncontrast imaging in diagnosis of cervical metastasis lymph nodes	<i>Journal of Cancer Research and Therapeutics</i>	Unable to extract data: Unable to obtain diagnostic indicators for individual parameters
36	Liu <i>et al.</i>	2014	MSCT in diagnosis of non-functioning cystic neuroendocrine tumors of pancreas	<i>Chinese Journal of Interventional Imaging and Therapy</i>	Non-English language literature
37	Baxa <i>et al.</i>	2014	Dual-phase dual-energy CT in patients with lung cancer: assessment of the additional value of iodine quantification in lymph node therapy response	<i>European Radiology</i>	Unable to extract data: unable to obtain diagnostic indicators for individual parameters
38	Pei <i>et al.</i>	2013	Evaluation of advanced gastric carcinoma with monoenergetic spectrum curve of dual-source dual-energy computed tomography	<i>Chinese Medical Sciences Journal</i>	Nonoriginal article
39	Wang <i>et al.</i>	2013	Dual-energy CT in differential diagnosis of lymphoma and metastatic lymph nodes	<i>Chinese Journal of Medical Imaging Technology</i>	Non-English language literature

CT, computed tomography; MSCT, multislice computed tomography

Appendix 3

Table S1 Main findings of included studies for IC in the arterial phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zou <i>et al.</i> 2021	359	102	62	37	158	73.63%	71.94%
Zhuo <i>et al.</i> 2021	216	78	17	14	107	84.80%	86.30%
Sun <i>et al.</i> 2020	51	23	4	11	13	67.80%	76.40%
Zeng <i>et al.</i> 2019	156	36	29	16	75	68.60%	72.00%
Li <i>et al.</i> 2016	40	16	7	4	13	80%	65%
Kato <i>et al.</i> 2015	81	30	5	5	41	84.80%	88.60%

IC, iodine concentration.

Table S2 Main findings of the included studies for NIC in the arterial phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	76	17	16	107	82.60%	86.30%
Sun <i>et al.</i> 2020	51	32	9	2	8	94.10%	47.10%
Zeng <i>et al.</i> 2019	156	38	27	14	77	72.80%	73.90%
Yang <i>et al.</i> 2019	178	63	36	9	70	87.50%	66.00%
He <i>et al.</i> 2019	212	112	3	12	85	90.30%	96.60%
Zhang <i>et al.</i> 2018	337	41	104	35	157	54%	60.20%
Li <i>et al.</i> 2016	40	15	5	5	15	75%	75%
Liu <i>et al.</i> 2015	175	38	4	25	108	60.30%	96.40%
Liu <i>et al.</i> 2015	152	39	38	21	54	64.40%	58.30%
Kato <i>et al.</i> 2015	81	29	9	6	37	82.60%	81.00%

NIC, normalized iodine concentration.

Table S3 Main findings of the included studies for slope in the arterial phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	75	21	17	103	81.50%	83.10%
Qiu <i>et al.</i> 2021	150	67	23	17	43	80.30%	65.48%
Zeng <i>et al.</i> 2019	156	38	25	14	79	73.80%	75.60%
Yang <i>et al.</i> 2019	178	52	17	20	89	72.20%	84.00%
He <i>et al.</i> 2019	212	109	1	15	87	87.90%	98.80%
Zhang <i>et al.</i> 2018	337	46	78	30	183	60%	70.10%
Liu <i>et al.</i> 2015	175	33	7	30	105	52.40%	93.80%

Table S4 Main findings of the included studies for IC in the venous phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	74	27	18	97	80.40%	78.20%
Wu <i>et al.</i> 2021	206	44	19	36	107	55.00%	84.90%
Sun <i>et al.</i> 2020	51	27	3	7	14	79.40%	82.40%
Zeng <i>et al.</i> 2019	156	43	18	9	86	81.90%	82.40%
Li <i>et al.</i> 2019	99	61	2	9	27	87.10%	93.10%
Foust <i>et al.</i> 2018	29	11	4	2	12	84.60%	75%
Zhao <i>et al.</i> 2017	136	85	3	17	31	83.30%	91.20%
Kato <i>et al.</i> 2015	81	30	5	5	41	87.00%	88.60%

IC, iodine concentration.

Table S5 Main findings of the included studies for NIC in the venous phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	74	37	18	87	80.40%	70.20%
Wu <i>et al.</i> 2021	206	50	18	30	108	62.50%	85.70%
Sun <i>et al.</i> 2020	51	24	3	10	14	70.60%	82.40%
Zeng <i>et al.</i> 2019	156	44	17	8	87	83.90%	84.10%
Yang <i>et al.</i> 2019	178	60	29	12	77	83.30%	72.60%
Li <i>et al.</i> 2019	99	68	7	2	22	97.10%	75.90%
He <i>et al.</i> 2019	212	108	18	16	70	87.10%	79.50%
Zhang <i>et al.</i> 2018	337	55	75	21	186	73%	71.30%
Zhao <i>et al.</i> 2017	136	98	8	4	26	96.10%	76.50%
Liu <i>et al.</i> 2015	175	38	15	25	97	60.30%	86.60%
Liu <i>et al.</i> 2015	152	45	28	15	64	75.50%	70.00%
Kato <i>et al.</i> 2015	81	31	6	4	40	89.10%	86.80%

NIC, normalized iodine concentration.

Table S6 Main findings of the included studies for slope in the venous phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	62	23	30	101	67.40%	81.50%
Wu <i>et al.</i> 2021	206	42	15	38	111	52.50%	88.10%
Qiu <i>et al.</i> 2021	150	47	12	37	54	56.06%	82.14%
Zeng <i>et al.</i> 2019	156	43	17	9	87	81.80%	84.10%
Yang <i>et al.</i> 2019	178	49	25	23	81	68.00%	76.40%
Li <i>et al.</i> 2019	99	64	4	6	25	91.40%	86.20%
He <i>et al.</i> 2019	212	102	4	22	84	82.30%	95.50%
Zhang <i>et al.</i> 2018	337	50	6	26	255	66%	97.70%
Foust <i>et al.</i> 2018	29	12	8	1	8	92.30%	50%
Zhao <i>et al.</i> 2017	136	90	6	12	28	88.20%	82.40%
Liu <i>et al.</i> 2015	175	39	10	24	102	62.00%	91.10%

Table S7 Main findings of the included studies for IC in the arterial phase combined with NIC in the arterial phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	87	47	5	77	95.10%	62.10%
Sun <i>et al.</i> 2020	51	34	11	0	6	98.70%	36.00%
Zeng <i>et al.</i> 2019	156	28	9	24	95	91.50%	53.20%
Li <i>et al.</i> 2016	40	19	10	1	10	95.00%	48.80%
Kato <i>et al.</i> 2015	81	34	13	1	33	97.40%	71.80%

IC, iodine concentration; NIC, normalized iodine concentration.

Table S8 Main findings of the included studies for NIC in the arterial phase combined with slope in the arterial phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	89	35	3	89	96.80%	71.70%
Zeng <i>et al.</i> 2019	156	48	46	4	58	92.90%	55.90%
Yang <i>et al.</i> 2019	178	69	47	3	59	96.50%	55.40%
He <i>et al.</i> 2019	212	123	4	1	84	98.80%	95.40%
Zhang <i>et al.</i> 2018	337	62	151	14	110	81.60%	42.20%
Liu <i>et al.</i> 2015	175	51	11	12	101	81.10%	90.40%

NIC, normalized iodine concentration.

Table S9 Main findings of the included studies for NIC in the arterial phase combined with NIC in the venous phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	89	49	3	75	96.60%	60.60%
Sun <i>et al.</i> 2020	51	33	10	1	7	98.30%	38.80%
Zeng <i>et al.</i> 2019	156	50	39	2	65	95.60%	62.10%
Yang <i>et al.</i> 2019	178	71	55	1	51	98.00%	47.90%
He <i>et al.</i> 2019	212	122	20	2	68	98.70%	76.80%
Zhang <i>et al.</i> 2018	337	67	149	9	112	87.60%	42.90%
Liu <i>et al.</i> 2015	152	55	54	5	38	91.30%	40.80%
Liu <i>et al.</i> 2015	175	53	18	10	94	84.20%	83.50%
Kato <i>et al.</i> 2015	81	34	14	1	32	98.10%	70.30%

NIC, normalized iodine concentration.

Table S10 Main findings of the included studies for NIC in the arterial phase combined with slope in the venous phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	87	37	5	87	94.30%	70.30%
Zeng <i>et al.</i> 2019	156	49	39	3	65	95.00%	62.10%
Yang <i>et al.</i> 2019	178	69	53	3	53	96.00%	50.40%
He <i>et al.</i> 2019	212	122	7	2	81	98.30%	92.30%
Zhang <i>et al.</i> 2018	337	64	108	12	153	84.40%	58.80%
Liu <i>et al.</i> 2015	175	53	14	10	98	84.90%	87.70%

NIC, normalized iodine concentration.

Table S11 Main findings of the included studies for slope in the arterial phase combined with NIC in the venous phase.

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	89	52	3	72	96.40%	58.30%
Zeng <i>et al.</i> 2019	156	50	38	2	66	95.80%	63.60%
Yang <i>et al.</i> 2019	178	69	41	3	65	95.40%	61.00%
He <i>et al.</i> 2019	212	122	19	2	69	98.40%	78.50%
Zhang <i>et al.</i> 2018	337	68	130	8	131	89.20%	50.00%
Liu <i>et al.</i> 2015	175	51	21	12	91	81.10%	81.20%

NIC, normalized iodine concentration.

Table S12 Main findings of the included studies for slope in the arterial phase combined with slope in the venous phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	86	40	6	84	94.00%	67.70%
Qiu <i>et al.</i> 2021	150	77	31	7	35	91.30%	53.40%
Zeng <i>et al.</i> 2019	156	50	38	2	66	95.20%	63.40%
Yang <i>et al.</i> 2019	178	66	38	6	68	91.10%	64.20%
He <i>et al.</i> 2019	212	121	5	3	83	97.80%	94.30%
Zhang <i>et al.</i> 2018	337	66	82	10	179	86.40%	68.50%
Liu <i>et al.</i> 2015	175	52	16	11	96	81.90%	85.50%

Table S13 Main findings of the included studies for IC in the venous phase combined with NIC in the venous phase.

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	89	56	3	68	96.20%	54.90%
Wu <i>et al.</i> 2021	206	66	34	14	92	83.10%	72.80%
Sun <i>et al.</i> 2020	51	32	5	2	12	93.90%	67.90%
Zeng <i>et al.</i> 2019	156	50	32	2	72	97.00%	69.30%
Li <i>et al.</i> 2019	99	70	8	0	21	99.60%	70.70%
Zhao <i>et al.</i> 2017	136	101	10	1	24	99.30%	69.80%
Kato <i>et al.</i> 2015	81	35	11	0	35	98.60%	76.90%

IC, iodine concentration; NIC, normalized iodine concentration.

Table S14 Main findings of the included studies for IC in the venous phase combined with slope in the venous phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	86	45	6	79	93.60%	63.70%
Wu <i>et al.</i> 2021	206	63	32	17	94	78.60%	74.80%
Zeng <i>et al.</i> 2019	156	50	32	2	72	96.70%	69.30%
Li <i>et al.</i> 2019	99	69	6	1	23	98.90%	80.20%
Foust <i>et al.</i> 2018	29	13	10	0	6	98.80%	35.00%
Zhao <i>et al.</i> 2017	136	100	8	2	26	98.00%	75.10%

IC, iodine concentration.

Table S15 Main findings of the included studies for NIC in the venous phase combined with slope in the venous phase

Study ID	Total	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity
Zhuo <i>et al.</i> 2021	216	86	53	6	71	93.60%	57.00%
Wu <i>et al.</i> 2021	206	66	29	14	97	82.20%	77.10%
Zeng <i>et al.</i> 2019	156	50	30	2	74	97.00%	70.70%
Yang <i>et al.</i> 2019	178	68	47	4	59	94.70%	55.50%
Li <i>et al.</i> 2019	99	70	10	0	19	99.80%	65.40%
He <i>et al.</i> 2019	212	121	21	3	67	97.70%	75.90%
Zhang <i>et al.</i> 2018	337	69	79	7	182	90.80%	69.70%
Zhao <i>et al.</i> 2017	136	101	13	1	21	99.50%	63.00%
Liu <i>et al.</i> 2015	175	53	24	10	88	84.90%	78.80%

NIC, normalized iodine concentration.