

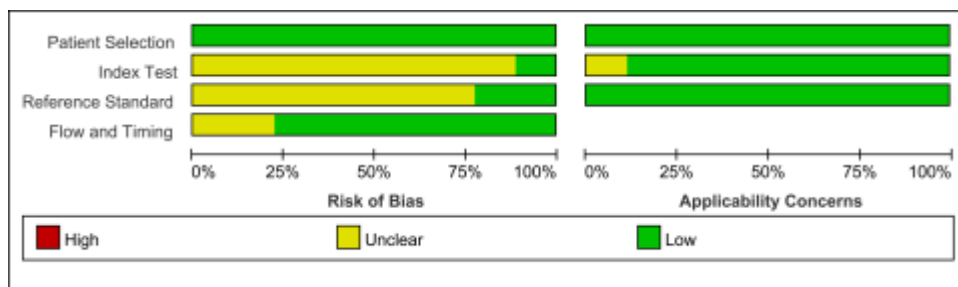
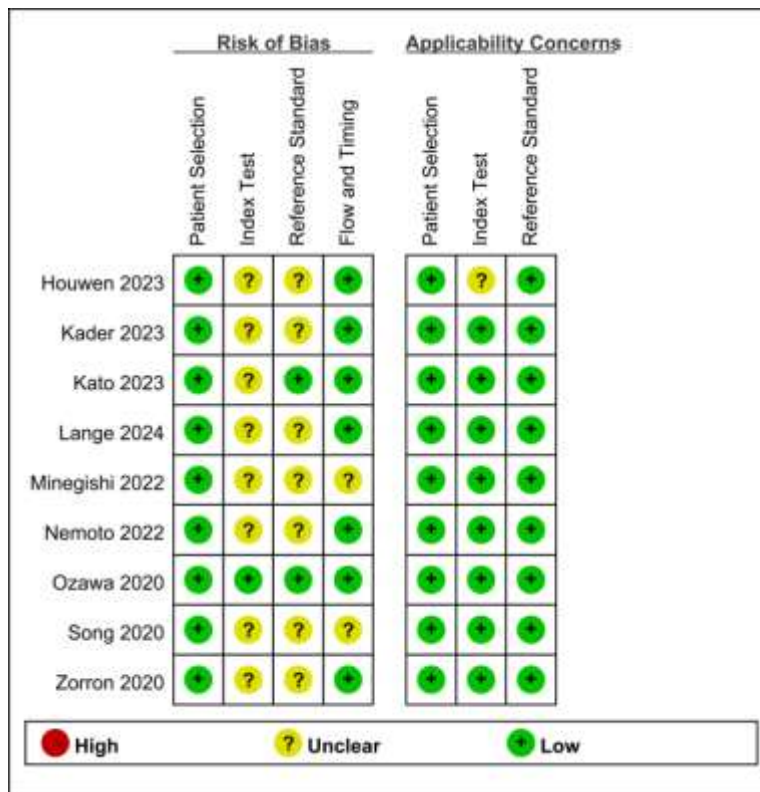
SUPPLEMENTARY METHODS

Definitions

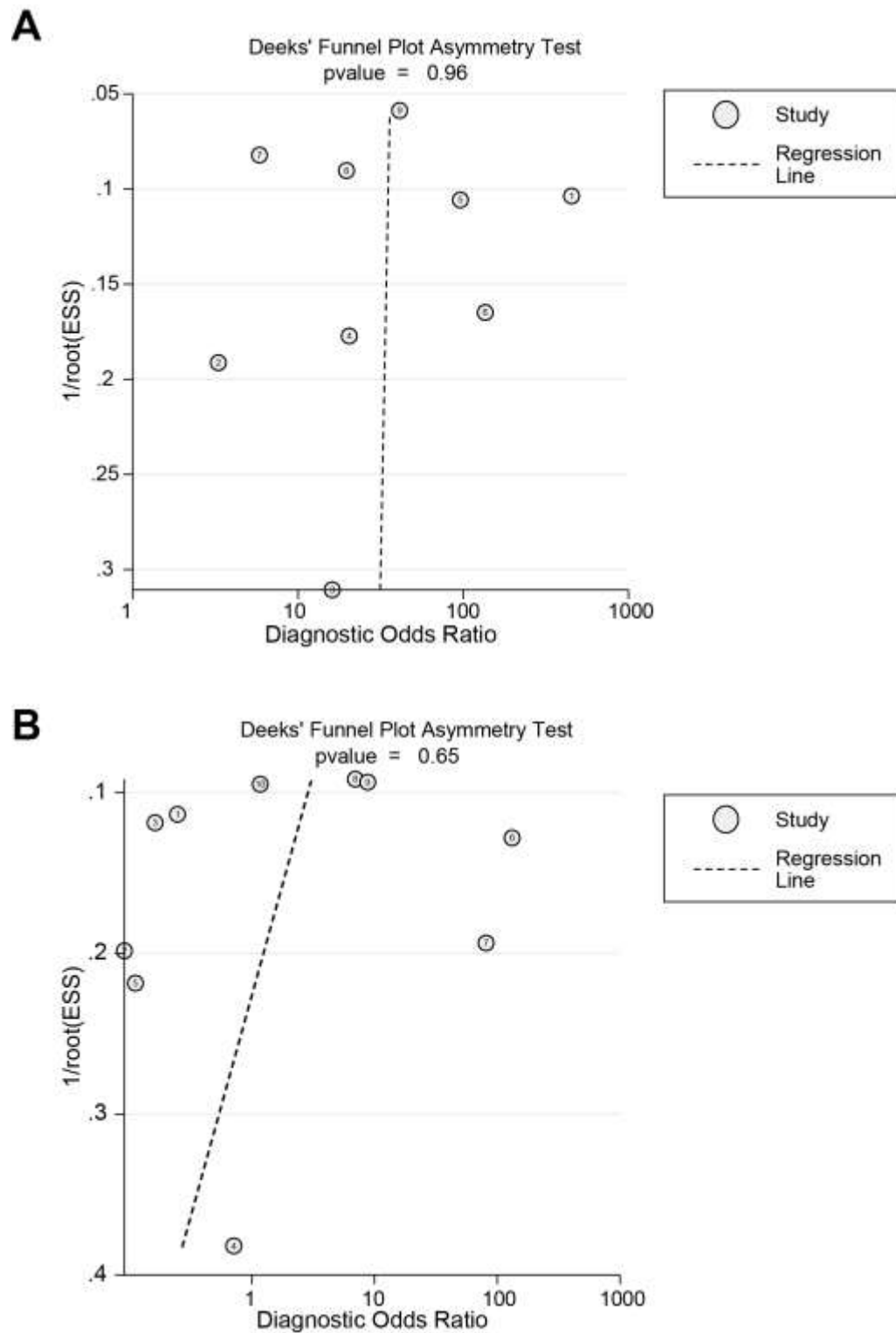
Non-SSLs include hyperplastic polyps (HPs), adenomas, adenocarcinomas, and other lesions. The histopathological diagnostic criteria for SSLs include the fourth and fifth editions of the WHO classification of tumors of the digestive system, depending on the included studies. AI algorithms are divided into image classification algorithms (ICAs) and object detection algorithms (ODAs). True positive (TP): The number of images or frames where both the prediction of CADx systems and the pathological diagnosis indicate SSLs. False positive (FP): The number of images or frames where the prediction of CADx systems indicates SSLs but the pathological diagnosis indicates non-SSLs. False negative (FN): The number of images or frames where the prediction of CADx systems indicates non-SSLs but the pathological diagnosis indicates SSLs. True negative (TN): The number of images or frames where the prediction of CADx systems indicates non-SSLs and the pathological diagnosis indicates non-SSLs.

Exclusion criteria

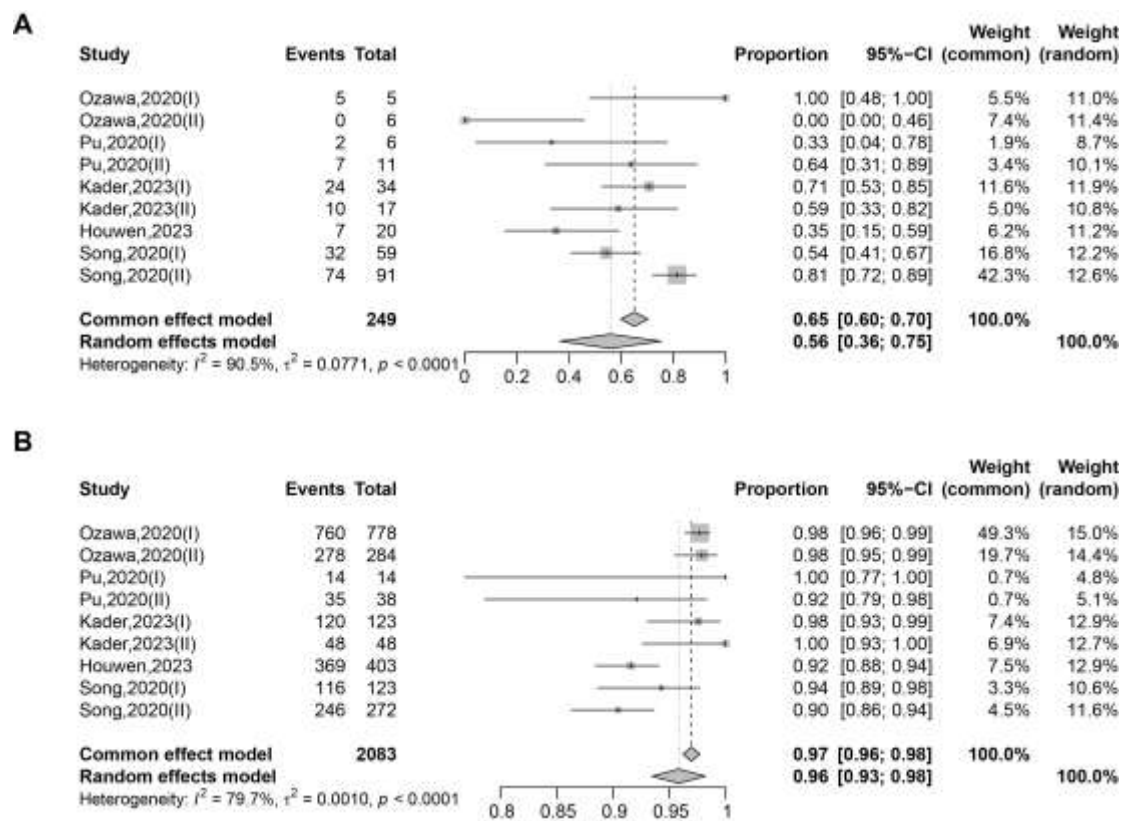
The exclusion criteria were as follows: lack of original data (such as review articles, systematic reviews or meta-analyses, letters to the editor, case reports, editorials, and research protocols); studies without the data needed to calculate the TP, FP, FN, and TN; lack of peer-reviewed papers; duplicate studies; unavailable histology; and conference abstracts and other non-full-text articles.



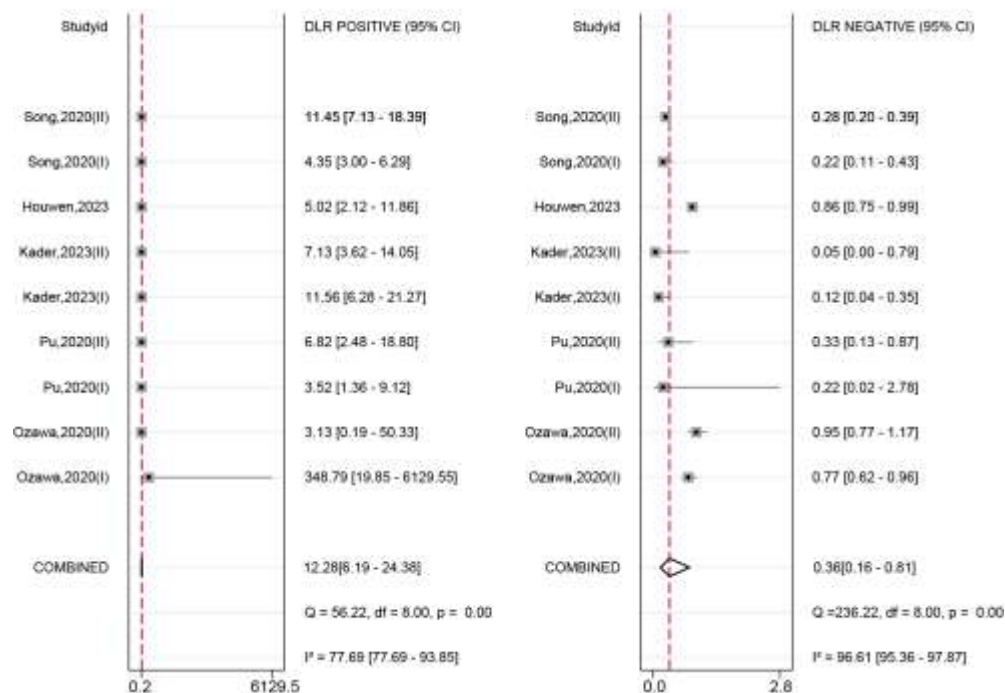
Supplementary Figure 1 Quality Assessment of Diagnostic Accuracy Studies-2 quality assessment of included studies.



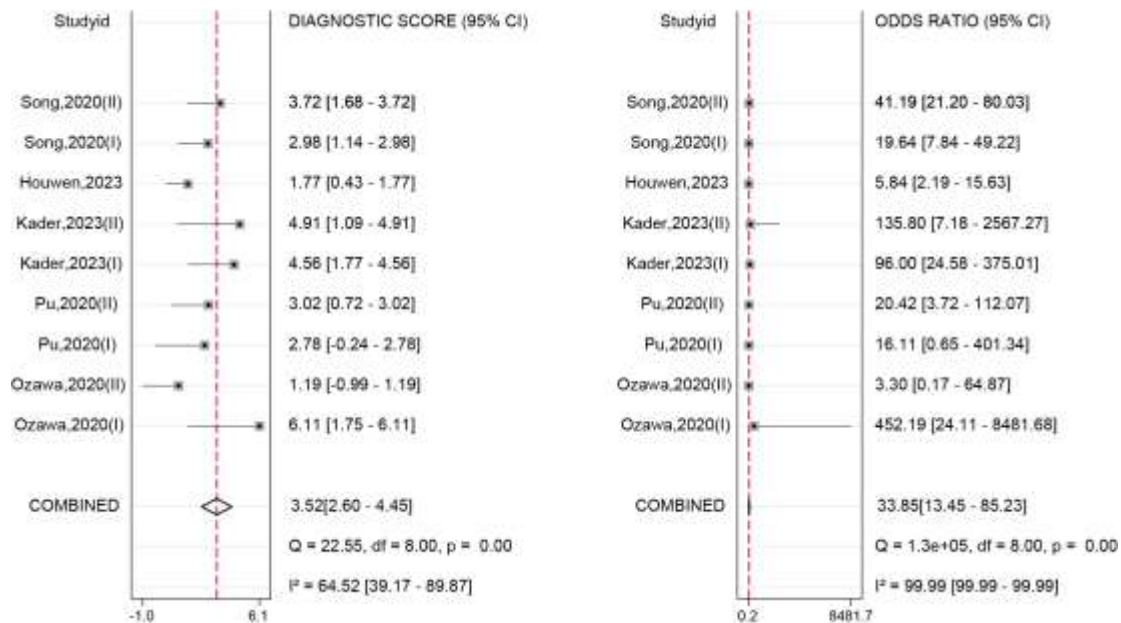
Supplementary Figure 2 Deeks' funnel plot asymmetry testing for publication bias. A) SSLs versus non-SSLs; B) SSLs versus HPs. SSLs, sessile serrated lesions; HPs, hyperplastic polyps.



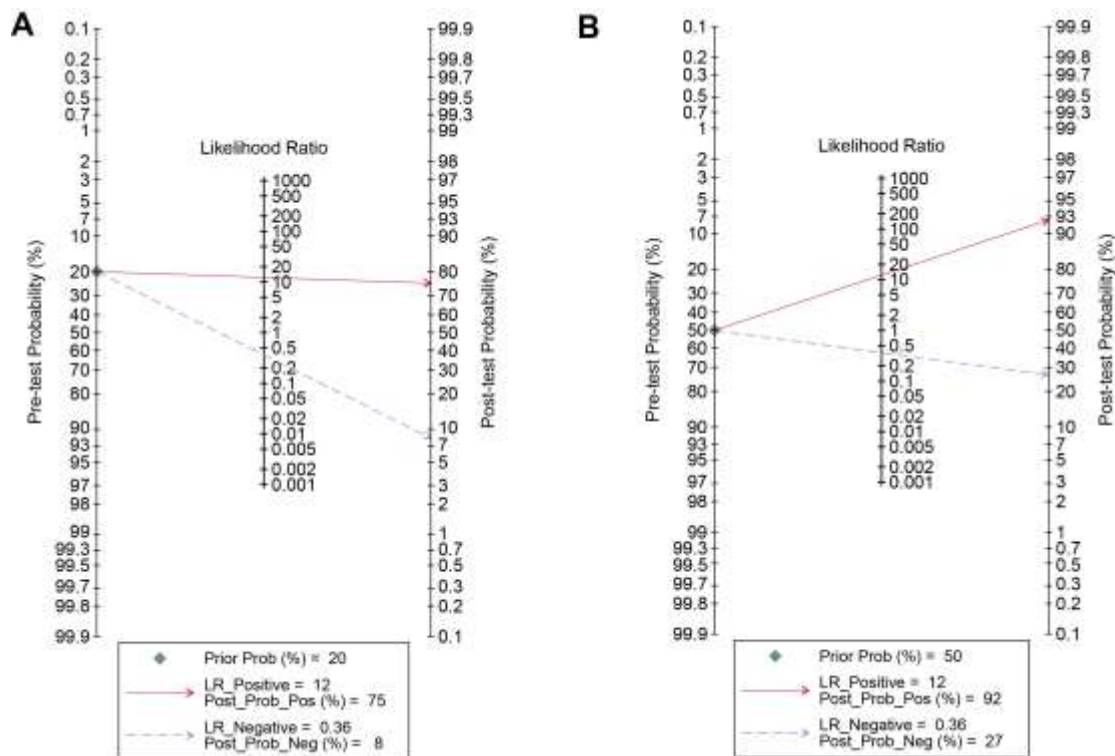
Supplementary Figure 3 Forest plots of PPV and NPV for SSLs versus non-SSLs. A) Pooled PPV; B) Pooled NPV. PPV, positive predictive value; NPV, negative predictive value; SSLs, sessile serrated lesions.



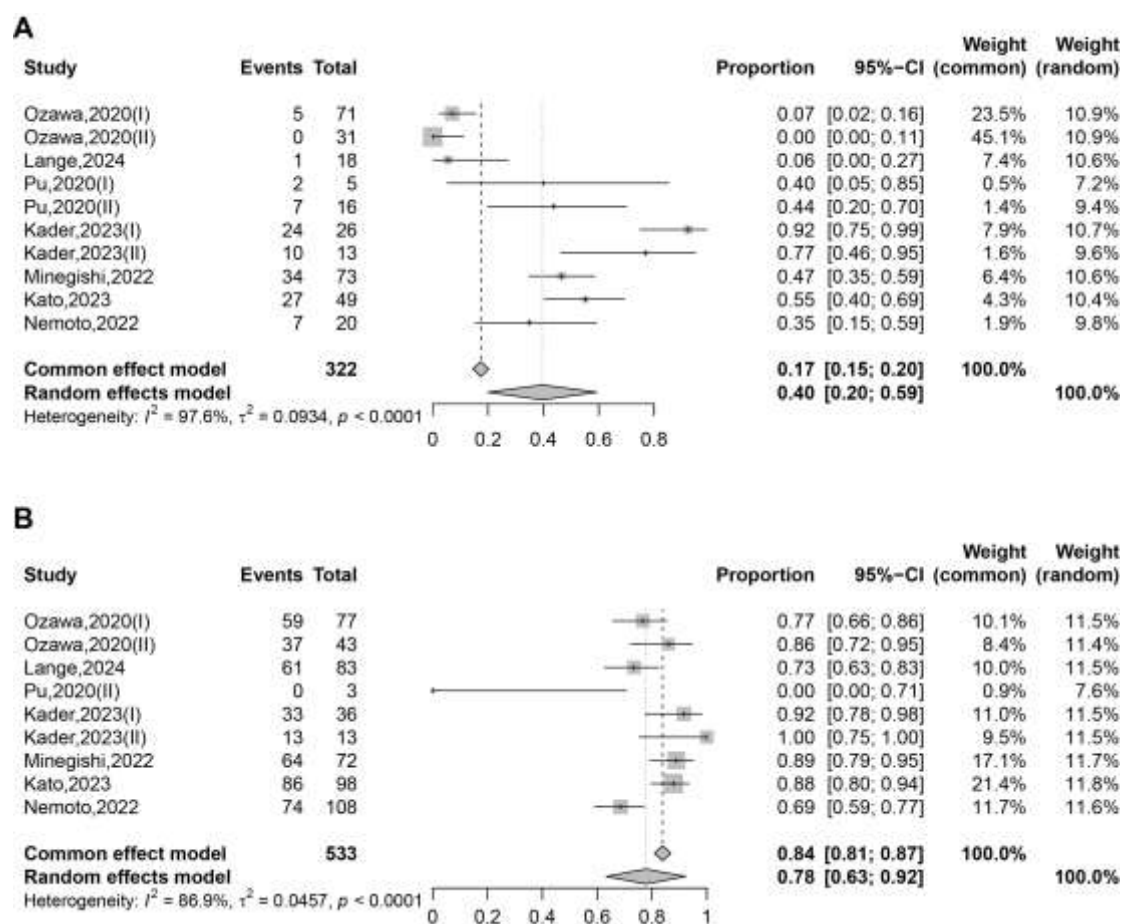
Supplementary Figure 4 Forest plots of LR+ and LR- for SSLs versus non-SSLs. LR, likelihood ratio; SSLs, sessile serrated lesions.



Supplementary Figure 5 Forest plots of DOR for SSLs versus non-SSLs. DOR, diagnostic odds ratio; SSLs, sessile serrated lesions.

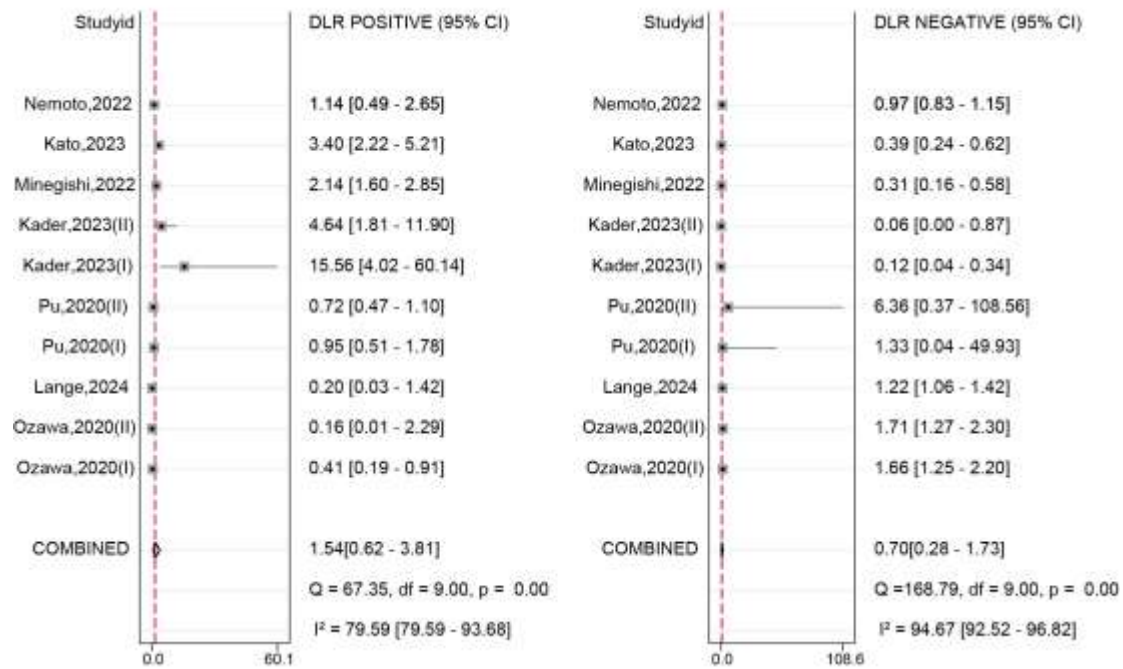


Supplementary Figure 6 Fagan plots depicting the impact of a positive or negative result of CADx systems on pretest probabilities of SSLs versus non-SSLs. A) 20% pretest probabilities; B) 50% pretest probabilities. CADx, computer-aided diagnosis; SSLs, sessile serrated lesions.

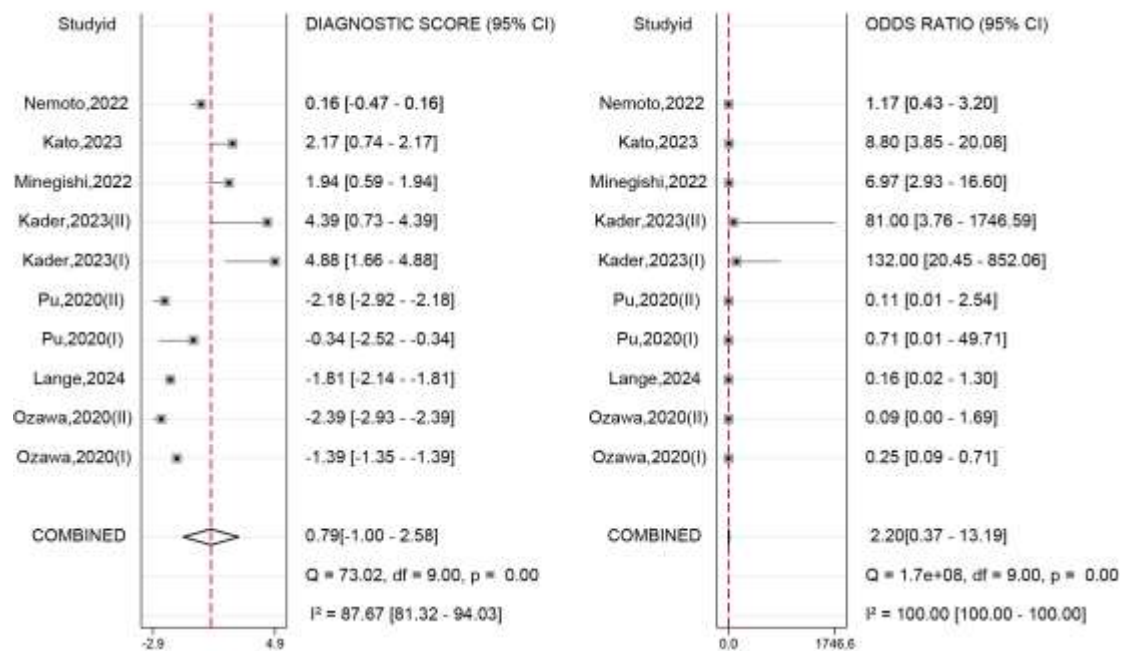


Supplementary Figure 7 Forest plots of PPV and NPV for SSLs versus HPs.

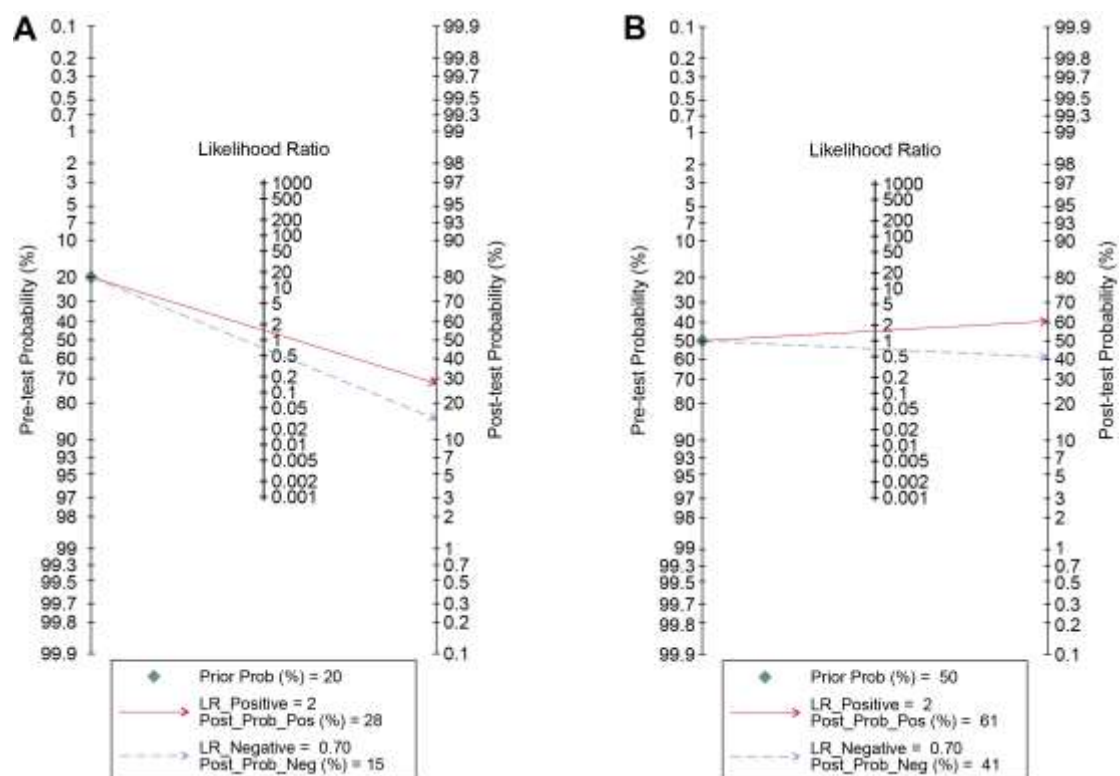
A) Pooled PPV; B) Pooled NPV. PPV, positive predictive value; NPV, negative predictive value; SSLs, sessile serrated lesions; HPs, hyperplastic polyps.



Supplementary Figure 8 Forest plots of LR+ and LR- for SSLs versus HPs.
 LR, likelihood ratio; SSLs, sessile serrated lesions; HPs, hyperplastic polyps.

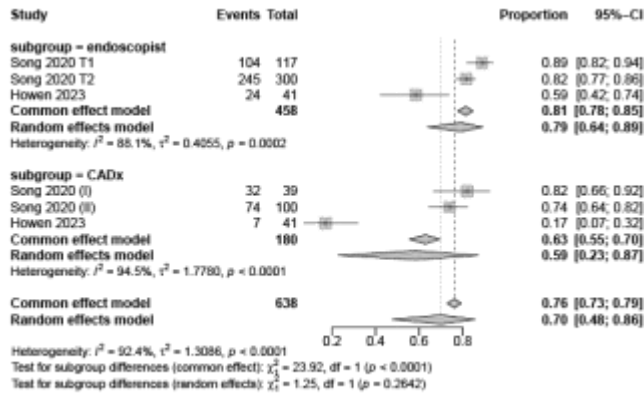


Supplementary Figure 9 Forest plots of DOR for SSLs versus HPs. DOR, diagnostic odds ratio; SSLs, sessile serrated lesions; HPs, hyperplastic polyps.

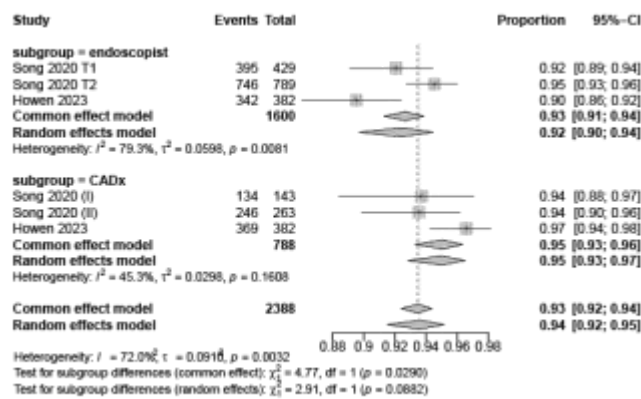


Supplementary Figure 10 Fagan plots depicting the impact of a positive or negative result of CADx on pretest probabilities of SSLs versus HPs. A) 20% pretest probabilities; B) 50% pretest probabilities. CADx, computer-aided diagnosis; SSLs, sessile serrated lesions; HPs, hyperplastic polyps.

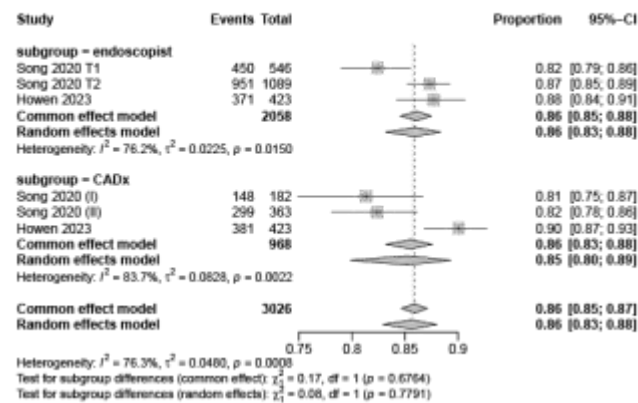
A-Sensitivity



B-Specificity

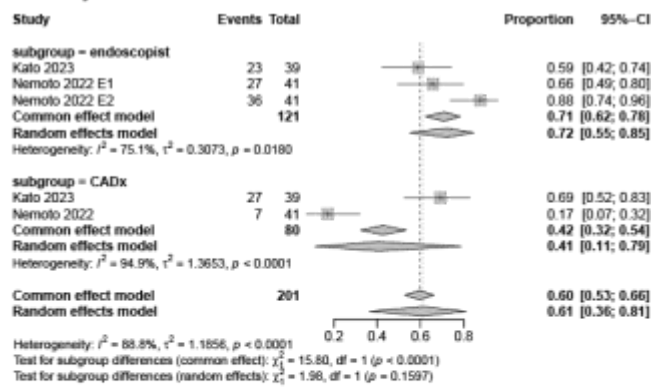


C-Accuracy

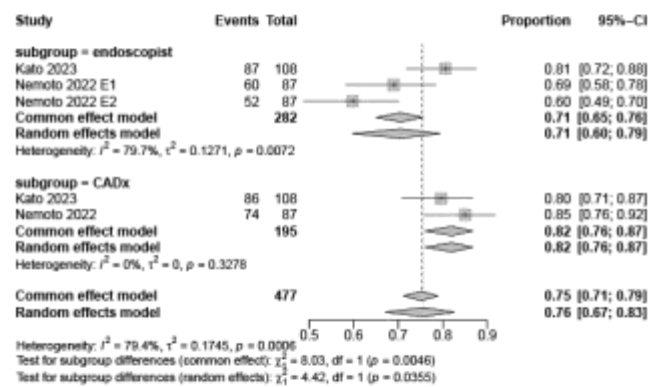


Supplementary Figure 11 Forest plots of sensitivity and specificity of endoscopists diagnostic performance for SSLs versus non-SSLs. A) sensitivity; B) specificity; C) accuracy. SSLs, sessile serrated lesions; HPs, hyperplastic polyps.

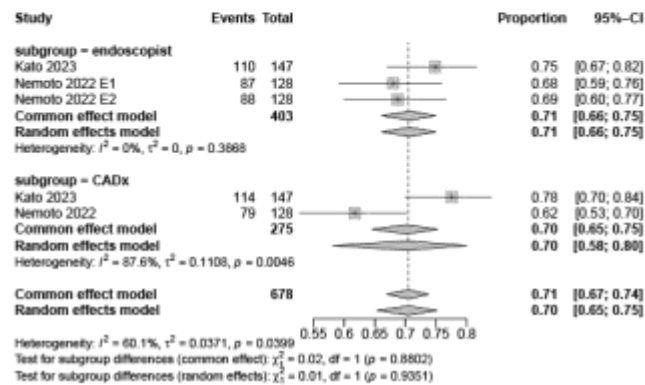
A-Sensitivity



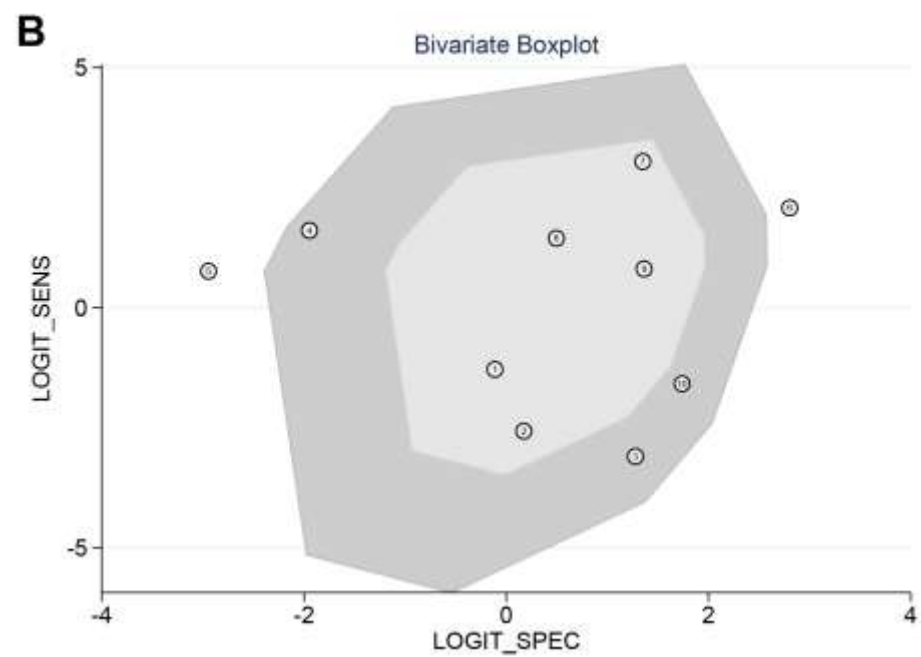
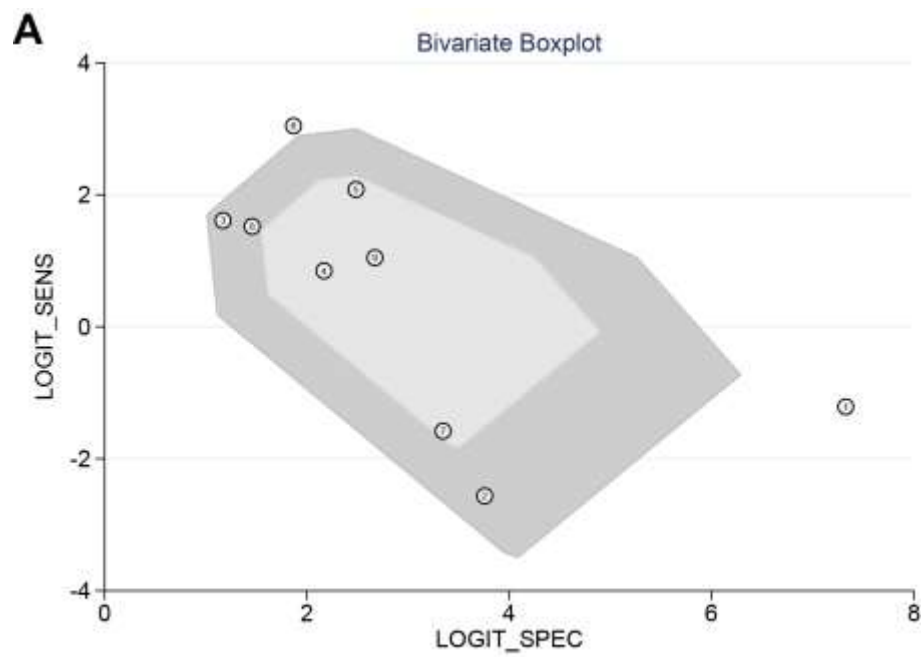
B-Specificity



C-Accuracy



Supplementary Figure 12 Forest plots of sensitivity and specificity of endoscopists diagnostic performance for SSLs versus HPs. A) sensitivity; B) specificity; C) accuracy. SSLs, sessile serrated lesions; HPs, hyperplastic polyps.



Supplementary Figure 13 Bivariate boxplots to investigate heterogeneity with most studies clustering within the median distribution. A) SSLs versus non-SSLs; B) SSLs versus HPs. SSLs, sessile serrated lesions; HPs, hyperplastic polyps.

Supplementary Table 1 Search strategies for Medline (through PubMed)

No.	Query	Results
#1	"sessile serrated lesion"[All Fields]OR("sessile"[All Fields] AND "serrated"[All Fields]AND"lesion"[All Fields])OR"sessile serrated polyp"[All Fields]OR("sessile"[All Fields] AND "serrated"[All Fields]AND"polyp"[All Fields]) OR "sessile serrated adenoma"[All Fields] OR ("sessile"[All Fields] AND "serrated"[All Fields] AND "adenoma"[All Fields])OR "SSL"[All Fields] OR "SSP"[All Fields]OR "SSA"[All Fields]OR "SSAP"[All Fields]OR "SSA/P"[All Fields]OR "serrated lesion"[All Fields] OR "serrated polyp"[All Fields]OR "serrated adenoma"[All Fields]	35,903
#2	"artificial intelligence"[MeSH Terms] OR("artificial"[All Fields] AND "intelligence"[All Fields])OR"artificial intelligence"[All Fields]	302,388
#3	"machine learning"[MeSH Terms]OR("machine"[All Fields] AND "learning"[All Fields]) OR "machine learning"[All Fields]	200,583
#4	"deep learning"[MeSH Terms]OR("deep"[All Fields] AND "learning"[All Fields]) OR "deep learning"[All Fields]	104,297
#5	"machine intelligence"[All Fields]OR"supervised learning"[All Fields] OR "semi-supervised learning"[All Fields]OR "unsupervised learning"[All Fields] OR "automated pattern recognition"[All Fields]OR "learning vector"[All Fields] OR "vector machine"[All Fields]	68,989

#6	"neural networks, computer"[MeSH Terms]OR("neural"[All Fields] AND "networks"[All Fields]AND"computer"[All Fields])OR"computer neural networks"[All Fields]OR"convolutional neural networks"[All Fields] OR "support vector machine"[All Fields] OR"CNN"[All Fields] OR "SVM"[All Fields] OR "deep unified network"[All Fields]	145,304
#7	"diagnosis, computer assisted"[MeSH Terms]OR("diagnosis"[All Fields] AND "computer assisted"[All Fields]) OR "computer-assisted diagnosis"[All Fields] OR ("diagnosis"[All Fields] AND "computer"[All Fields] AND "assisted"[All Fields]) OR"diagnosis computer assisted"[All Fields] OR ("diagnosis"[All Fields] AND "computer aided"[All Fields])OR "computer-aided diagnosis"[All Fields] OR ("diagnosis"[All Fields] AND "computer"[All Fields] AND "aided"[All Fields]) OR"diagnosis computer aided"[All Fields] OR "CADx"[All Fields]	140,126
#8	2 OR 3 OR 4 OR 5 OR 6 OR 7	563,277
#9	1 AND 8	1,308

Supplementary Table 2 Search strategies for Embase

No.	Query	Results
#1	'sessile serrated adenoma'/exp	988
#2	'colonic sessile polyp' OR 'rectal sessile adenoma' OR 'rectal sessile polyp' OR 'sessile adenoma,	2,423

	rectum' OR 'sessile polyp, rectum' OR 'sessile serrated lesion' OR 'sessile serrated polyp' OR 'sessile serrated adenoma'	
#3	ssl OR ssp OR ssa OR ssap	50,377
#4	'machine learning'/exp	597,727
#5	'learning machine' OR 'learning machines' OR 'machine learning'	222,607
#6	#4 OR #5	620,387
#7	'artificial intelligence'/exp	145,612
#8	'machine intelligence' OR 'artificial intelligence'	165,836
#9	#7 OR #8	197,153
#10	'deep learning'/exp	82,679
#11	'hierarchical learning' OR 'deep learning'	108,378
#12	#10 OR #11	108,690
#13	'artificial neural network'/exp	136,957
#14	'algorithmic neural network' OR 'ann (artificial neural network)' OR 'ann analysis' OR 'ann approach' OR 'ann method' OR 'ann methodology' OR 'ann methods' OR 'ann model' OR 'ann modeling' OR 'ann modelling' OR 'ann models' OR 'ann output' OR 'ann technique' OR 'ann techniques' OR 'ann training' OR 'anns (artificial neural networks)' OR 'artificial neural networks' OR 'artificial nn' OR	77,329

	'artificial nns' OR 'computational neural network' OR 'computer neural network' OR 'computer neural networks' OR 'computerized neural network' OR 'connectionist model' OR 'connectionist network' OR 'connectionist neural network' OR 'connectionist system' OR 'mathematical neural network' OR 'neural network (artificial)' OR 'neural network (computer)' OR 'neural network algorithm' OR 'neural network model' OR 'neural networks (computer)' OR 'neural networks, computer' OR 'artificial neural network'	
#15	#13 OR #14	144,108
#16	'computer assisted diagnosis'/exp	1,691,523
	'automatic diagnosis' OR 'computer diagnosis' OR 'computer-assisted diagnosis' OR 'computer-assisted image interpretation' OR 'computer-assisted radiographic image interpretation'	
#17	OR 'diagnosis, computer' OR 'diagnosis, computer-assisted' OR 'image interpretation, computer-assisted' OR 'radiographic image interpretation, computer-assisted' OR 'computer assisted diagnosis'	45,174
#18	#16 OR #17	1,692,620
#19	'computer aided diagnosis' OR cadx	7,986
#20	#6 OR #9 OR #12 OR #15 OR #18 OR #19	2,360,885
#21	#1 OR #2 OR #3	51,731

#22	#20 AND #21	3,469
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Supplementary Table 3 Search strategies for Cochrane library

No	Query	Results
#1	(sessile serrated lesion):ti,ab,kw (Word variations have been searched)	250
#2	(sessile serrated polyp):ti,ab,kw (Word variations have been searched)	271
#3	(sessile serrated adenoma):ti,ab,kw (Word variations have been searched)	289
#4	(SSL):ti,ab,kw (Word variations have been searched)	179
#5	(SSP):ti,ab,kw (Word variations have been searched)	530
#6	(SSA):ti,ab,kw (Word variations have been searched)	937
#7	(SSAP):ti,ab,kw (Word variations have been searched)	45
#8	(serrated lesion):ti,ab,kw (Word variations have been searched)	388
#9	(serrated polyp):ti,ab,kw (Word variations have been searched)	461
#10	(serrated adenoma):ti,ab,kw (Word variations have been searched)	474
#11	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10	2084
#12	MeSH descriptor: [Artificial Intelligence] explode all trees	3565
#13	(artificial intelligence):ti,ab,kw (Word variations have been searched)	3055

#14	#12 OR #13	5728
#15	MeSH descriptor: [Machine Learning] explode all trees	1156
#16	(machine learning):ti,ab,kw (Word variations have been searched)	3544
#17	#15 OR #16	3909
#18	MeSH descriptor: [Deep Learning] explode all trees	376
#19	(Deep Learning):ti,ab,kw (Word variations have been searched)	1919
#20	18 OR #19	442255
#21	MeSH descriptor: [Neural Networks, Computer] explode all trees	686
#22	(computer neural networks):ti,ab,kw (Word variations have been searched)	1029
#23	(convolutional neural networks):ti,ab,kw (Word variations have been searched)	615
#24	(support vector machine):ti,ab,kw (Word variations have been searched)	609
#25	#21 OR #22 OR #23 OR #24	2098
#26	MeSH descriptor: [Diagnosis, Computer-Assisted] explode all trees	2488
#27	(computer-assisted diagnosis):ti,ab,kw (Word variations have been searched)	6252
#28	(computer-aided diagnosis):ti,ab,kw (Word variations have been searched)	416
#29	(CADx):ti,ab,kw (Word variations have been searched)	30
#30	#26 OR #27 OR #28 OR #29	7596

#31	(CNN):ti,ab,kw (Word variations have been searched)	321
#32	(SVM):ti,ab,kw (Word variations have been searched)	322
#33	#31 OR #32	636
#34	#14 OR #17 OR #20 OR #25 OR #30 OR #33	454289
#35	#11 AND #34	712

Supplementary Table 4 Study Characteristics for SSLs versus HPs

Author, Year	Design#	Center	Country	Endoscopy type	Polyp size	WHO histology criteria	AI segm/ Class. Type	Real time	Imaging video es	Imaging type	Image set, n	Patient, n	SSL imag e set, n	SSL, n (%)	SSL LD, n (%)	MV HP, n (%)
Ozawa, 2020 (I)	R	Sing le	Japan	Olympus	NA	2010	SSD/O DA	N	Imaging es	WLI	783	174	23	7(2)	NA	NA
Ozawa, 2020 (II)	R	Sing le	Japan	Olympus	NA	2010	SSD/O DA	N	Imaging es	NBI	290	174	6	7(2)	NA	NA
Lange, 2024	P	Multiple	Netherlands	Fujifilm	NA	2019	CAD EYE/O	Y	Video s	BLI	101 &	119	23 &	23(9)	NA	NA

(3)							DA									
Pu, 2020 (I)	R	Sing le	Japan	Olym pus	NA	2010	DenseN ets/ICA	N	Imag es	NBI	20	NA	2	2(1 0)	NA	NA
Pu, 2020 (II)	R	Sing le	Japan	Fujifil m	NA	2010	DenseN ets/ICA	N	Imag es	BLI	49	NA	10	10(20)	NA	NA
Kader, 2023 (I)	P	Sing le	UK	Olym pus	NA	2019	Resnet1 01/ICA	N	Video s	NBI	157 &	199	27 &	27(17)	NA	NA
Kader, 2023 (II)	P	Sing le	UK	Olym pus	NA	2019	Resnet1 01/ICA	N	Video s	NBI	65 &	31	10 &	10(15)	NA	NA
Minegis hi, 2022	P	Sing le	Japan	Olym pus	NA	2019	YOLO v3/OD A	Y	Imag es	NBI	145	NA	42	42(29)	NA	NA
Kato, 2023	R	Sing le	Japan	Olym pus	<10	2019	YOLO v3/OD A	N	Imag es	NBI	500	385	39	39(8)	NA	NA
Nemoto, 2022	R	Sing le	Japan	Fujifil m,	NA	2010	ResNet- 50/ICA	N	Imag es	WLI	400	NA	41	41(19)	NA	87 (40)

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pus

represents a retrospective (R) or prospective (P) study.

& represents the use of video data.

AI artificial intelligence; WHO, World Health Organization; UK, united kingdom; SSD, Single Shot MultiBox Detector; ODA: object detection algorithm; ICA: image classification algorithm; WLI: white light images; NBI: narrow band imaging; BLI: blue light imaging; NA: not available; SSLs: sessile serrated lesions; HPs: hyperplastic polyps; SSLD, SSL with dysplasia; Y, yes; N, no; non-SSLs: mainly including adenomas, hyperplastic polyps, adenocarcinomas, etc.

Supplementary Table 5 Quality assessment of included studies

Author	risk of bias				applicability concerns			
	Patient Selection	Index Test	Reference Standard	Flow Timing	and	Patient Selection	Index Test	Reference Standard
Houwen 2023	#	*	*	#		#	*	#
Kader 2023	#	*	*	#		#	#	#

Kato 2023	#	*	#	#	#	#	#
Lange 2024	#	*	*	#	#	#	#
Minegishi 2022	#	*	*	*	#	#	#
Nemoto 2022	#	*	*	#	#	#	#
Ozawa 2020	#	*	#	#	#	#	#
Song 2020	#	*	*	*	#	#	#
Zorron 2020	#	*	*	#	#	#	#
# low concern \$ high concern *unclear concern							

Supplemental Table 6 Subgroup meta-analyses according to prespecified variables possibly influencing sensitivity and specificity

Variable	Sensitivity (95%CI)	P value	Specificity (95%CI)	P value
SSLs vs non-SSLs				
Publication time				
2020 Y (n=6)	0.60 (0.23 - 0.97)	0.42	0.95 (0.90 - 1.00)	0.73
2023 Y (n=3)	0.75 (0.34 - 1.00)		0.93 (0.83 - 1.00)	
Multicenter/Monocenter				
Monocenter studies (n=8)	0.72 (0.55 - 0.89)	0.02	0.94 (0.89 - 1.00)	0.13
Multicenter studies (n=1)	0.17 (-0.15 - 0.49)		0.97 (0.88 - 1.00)	
Region				
Asia (n=6)	0.60 (0.23 - 0.97)	0.42	0.95 (0.90 - 1.00)	0.73
Europe (n=3)	0.75 (0.34 - 1.00)		0.93 (0.83 - 1.00)	
Retrospective/Prospective				
Retrospective (n=5)	0.56 (0.14 - 0.98)	0.37	0.96 (0.90 - 1.00)	0.59
Prospective (n=4)	0.75 (0.41 - 1.00)		0.93 (0.85 - 1.00)	
Type of scope				

Olympus (n=8)	0.65 (0.34 - 0.96)	0.87	0.95 (0.90 - 1.00)	0.13
Fujifilm (n=1)	0.72 (-0.05 - 1.00)		0.91 (0.66 - 1.00)	
Histology criteria of WHO				
The 4th edition (n=7)	0.52 (0.24 - 0.79)	0.01	0.95 (0.91 - 1.00)	0.62
The 5th edition (n=2)	0.95 (0.82 - 1.00)		0.90 (0.74 - 1.00)	
AI classification type				
Object detection algorithm(n=3)	0.17 (0.08 - 0.26)	0.00	0.99 (0.98 - 1.00)	0.00
Image classification algorithm(n=6)	0.80 (0.73 - 0.86)		0.89 (0.82 - 0.96)	
Real time/Non-real time				
Real time (n=1)	0.17 (-0.15 - 0.49)	0.02	0.97 (0.88 - 1.00)	0.13
Non-real time (n=8)	0.72 (0.55 - 0.89)		0.94 (0.89 - 1.00)	
Images/Videos				
Images (n=6)	0.60 (0.23 - 0.97)	0.69	0.95 (0.90 - 1.00)	0.66
Videos (n=3)	0.75 (0.34 - 1.00)		0.93 (0.83 - 1.00)	
Image type				
NBI (n=7)	0.70 (0.41 - 1.00)	0.34	0.92 (0.86 - 0.98)	0.05
Non-NBI (n=2)	0.47 (-0.17 - 1.00)		0.99 (0.97 - 1.00)	

SSLs vs HPs				
Publication time				
2020-2022 Y (n=6)	0.44 (-0.03 - 0.91)	0.27	0.48 (0.23 - 0.72)	0.07
2023-2024 Y (n=4)	0.72 (0.25 - 1.00)		0.84 (0.70 - 0.98)	
Multicenter/Monocenter				
Monocenter studies (n=9)	0.63 (0.34 - 0.93)	0.00	0.63 (0.40 - 0.85)	0.34
Multicenter studies (n=1)	0.03 (-0.09 - 0.15)		0.79 (-0.34 - 1.00)	
Region				
Asia (n=7)	0.48 (0.04 - 0.93)	0.30	0.53 (0.29 - 0.77)	0.09
Europe (n=3)	0.73 (0.18 - 1.00)		0.86 (0.70 - 1.00)	
Retrospective/Prospective				
Retrospective (n=6)	0.41 (-0.04 - 0.86)	0.18	0.49 (0.19 - 0.78)	0.13
Prospective (n=4)	0.75 (0.33 - 1.00)		0.81 (0.62 - 1.00)	
Type of scope				
Olympus (n=7)	0.72 (0.40 - 1.00)	0.06	0.66 (0.41 - 0.92)	0.66
Fujifilm (n=3)	0.21 (-0.17 - 0.59)		0.56 (0.12-1.00)	
Histology criteria of WHO				

The 4th edition (n=5)	0.34 (-0.10 - 0.78)	0.14	0.41 (0.11 - 0.70)	0.06
The 5th edition (n=5)	0.73 (0.37 - 1.00)		0.80 (0.64 - 0.97)	
AI classification type				
Object detection algorithm(n=5)	0.26 (-0.11 - 0.64)	0.02	0.66 (0.38 - 0.94)	0.86
Image classification algorithm(n=5)	0.83 (0.53 - 1.00)		0.62 (0.26 - 0.97)	
Real time/Non-real time				
Real time (n=2)	0.32 (-0.37 - 1.00)	0.30	0.71 (0.31 - 1.00)	0.64
Non-real time (n=8)	0.62 (0.22 - 1.00)		0.62 (0.36 - 0.87)	
Images/Videos				
Images (n=7)	0.48 (0.04 - 0.93)	0.51	0.53 (0.29 - 0.77)	0.04
Videos (n=3)	0.73 (0.18 - 1.00)		0.86 (0.70 - 1.00)	
Image type				
NBI (n=6)	0.80 (0.57 - 1.00)	0.01	0.69 (0.43 - 0.95)	0.51
Non-NBI (n=4)	0.22 (-0.06 - 0.49)		0.54 (0.16 - 0.91)	

SSLs, sessile serrated lesions; HPs, hyperplastic polyps;Y,year; WHO, World Health Organization; AI, artificial intelligence; NBI, narrow band imaging.

Supplemental Table 7 Sensitivity analysis of CADx systems to differentiate SSLs versus non-SSLs and SSLs versus HPs

Sensitivity analyses	Pooled estimate	95% Confidence Interval	Heterogeneity (I ²)	P value
SSLs vs non-SSLs				
Overall				
Sensitivity	0.66	0.35-0.87	91.08	<0.01
Specificity	0.95	0.87-0.98	93.95	<0.01
LR+	12.28	6.19-24.38	77.69	<0.01
LR-	0.36	0.16-0.81	96.61	<0.01
Diagnostic Odds Ratio	33.85	13.45-85.23	99.99	<0.01
Removing "Ozawa, 2020 (I)"				
Sensitivity	0.71	0.37-0.91	90.73	<0.01
Specificity	0.92	0.86-0.95	88.54	<0.01
LR+	8.86	6.35-12.36	58	<0.01
LR-	0.31	0.12-0.85	97.09	<0.01
Diagnostic Odds Ratio	28.32	9.99-80.32	99.94	<0.01
Removing "Ozawa, 2020 (II)"				
Sensitivity	0.72	0.44-0.89	91.29	<0.01

Specificity	0.94	0.84-0.98	94.02	<0.01
LR+	12.10	5.29-27.69	75.61	<0.01
LR-	0.30	0.13-0.68	95.99	<0.01
Diagnostic Odds Ratio	40.65	16.23-101.78	99.99	<0.01
Removing "Pu, 2020 (I)"				
Sensitivity	0.60	0.30-0.85	92.16	<0.01
Specificity	0.96	0.89-0.98	94.56	<0.01
LR+	13.53	6.53-28.04	81.24	<0.01
LR-	0.41	0.20-0.87	97.19	<0.01
Diagnostic Odds Ratio	32.69	12.66-84.39	100	<0.01
Removing "Pu, 2020 (II)"				
Sensitivity	0.65	0.30-0.89	92.16	<0.01
Specificity	0.95	0.87-0.98	94.77	<0.01
LR+	13.25	6.06-28.99	81.11	<0.01
LR-	0.36	0.14-0.93	97.02	<0.01
Diagnostic Odds Ratio	36.47	12.14-109.51	100	<0.01
Removing "Kader, 2023 (I)"				

Sensitivity	0.60	0.29-0.85	91.03	<0.01
Specificity	0.95	0.86-0.98	94.74	<0.01
LR+	11.89	5.46-25.87	78.84	<0.01
LR-	0.42	0.19-0.90	96.17	<0.01
Diagnostic Odds Ratio	28.50	10.67-76.12	99.97	<0.01
Removing “Kader, 2023 (II)”				
Sensitivity	0.58	0.30-0.82	91.46	<0.01
Specificity	0.95	0.87-0.98	94.63	<0.01
LR+	12.34	5.75-24.52	80.16	<0.01
LR-	0.44	0.22-0.85	96.68	<0.01
Diagnostic Odds Ratio	28.24	11.59-68.85	99.99	<0.01
Removing “Houwen, 2023”				
Sensitivity	0.72	0.51-0.86	87.27	<0.01
Specificity	0.94	0.85-0.98	93.95	<0.01
LR+	12.94	5.64-29.70	77.16	<0.01
LR-	0.30	0.17-0.53	96.53	<0.01
Diagnostic Odds Ratio	43.46	26.06-72.49	87.15	<0.01

Removing "Song, 2020 (I)"				
Sensitivity	0.64	0.28-0.89	91.14	<0.01
Specificity	0.96	0.89-0.98	91.52	<0.01
LR+	14.49	6.97-30.10	68.22	<0.01
LR-	0.37	0.14-0.97	96.02	<0.01
Diagnostic Odds Ratio	38.86	12.33-122.50	100	<0.01
Removing "Song, 2020 (II)"				
Sensitivity	0.65	0.29-0.89	90.90	<0.01
Specificity	0.95	0.86-0.98	94.92	<0.01
LR+	12.63	5.55-28.76	79.18	<0.01
LR-	0.37	0.14-0.96	95.74	<0.01
Diagnostic Odds Ratio	34.11	10.59-109.86	99.95	<0.01
Outlier studies removed				
Sensitivity	0.64	0.30-0.88	91.25	<0.01
Specificity	0.93	0.86-0.96	89.98	<0.01
LR+	8.62	6.05-12.28	63.20	<0.01
LR-	0.38	0.16-0.93	97.22	<0.01

Diagnostic Odds Ratio	22.41	8.54-58.80	99.92	<0.01
SSLs vs HPs				
Overall				
Sensitivity	0.55	0.21-0.85	91.22	<0.01
Specificity	0.64	0.41-0.82	91.58	<0.01
LR+	1.54	0.62-3.81	79.59	<0.01
LR-	0.70	0.28-1.73	94.67	<0.01
Diagnostic Odds Ratio	2.20	0.37-13.19	100	<0.01
Removing "Ozawa, 2020 (I)"				
Sensitivity	0.61	0.22-0.90	91.39	<0.01
Specificity	0.65	0.38-0.85	89.12	<0.01
LR+	1.74	0.67-4.54	78.25	<0.01
LR-	0.60	0.20-1.80	95.42	<0.01
Diagnostic Odds Ratio	2.89	0.40-21.20	100	<0.01
Removing "Ozawa, 2020 (II)"				
Sensitivity	0.64	0.29-0.88	91.59	<0.01
Specificity	0.64	0.36-0.85	92.34	<0.01

LR+	1.77	0.75-4.20	82.00	<0.01
LR-	0.57	0.21-1.52	95.27	<0.01
Diagnostic Odds Ratio	3.13	0.53-18.44	100	<0.01
Removing "Lange,2024"				
Sensitivity	0.64	0.30-0.88	89.91	<0.01
Specificity	0.61	0.34-0.83	91.80	<0.01
LR+	1.66	0.69-3.97	80.57	<0.01
LR-	0.59	0.21-1.63	94.15	<0.01
Diagnostic Odds Ratio	2.82	0.45-17.79	100	<0.01
Removing "Pu, 2020 (I)"				
Sensitivity	0.49	0.17-0.82	92.01	<0.01
Specificity	0.69	0.49-0.84	92.59	<0.01
LR+	1.61	0.57-4.54	80.84	<0.01
LR-	0.73	0.32-1.69	95.66	<0.01
Diagnostic Odds Ratio	2.20	0.34-14.13	100	<0.01
Removing "Pu, 2020 (II)"				
Sensitivity	0.52	0.16-0.86	92.05	<0.01

Specificity	0.72	0.58-0.83	91.98	<0.01
LR+	1.90	0.69-5.24	74.11	<0.01
LR-	0.66	0.25-1.72	95.69	<0.01
Diagnostic Odds Ratio	2.89	0.41-20.44	100	<0.01
Removing "Kader, 2023 (I)"				
Sensitivity	0.50	0.16-0.84	90.89	<0.01
Specificity	0.59	0.36-0.78	90.07	<0.01
LR+	1.21	0.50-2.93	78.71	<0.01
LR-	0.86	0.37-1.96	92.02	<0.01
Diagnostic Odds Ratio	1.41	0.26-7.79	100	<0.01
Removing "Kader, 2023 (II)"				
Sensitivity	0.46	0.18-0.78	91.66	<0.01
Specificity	0.60	0.33-0.82	91.59	<0.01
LR+	1.16	0.46-2.96	80.15	<0.01
LR-	0.89	0.43-1.85	93.41	<0.01
Diagnostic Odds Ratio	1.31	0.25-6.85	100	<0.01
Removing "Minegishi, 2022"				

Sensitivity	0.52	0.16-0.86	91.09	<0.01
Specificity	0.63	0.35-0.84	93.39	<0.01
LR+	1.40	0.47-4.19	80.61	<0.01
LR-	0.77	0.29-2.05	93.41	<0.01
Diagnostic Odds Ratio	1.83	0.23-14.33	100	<0.01
Removing "Kato, 2023"				
Sensitivity	0.54	0.16-0.88	91.80	<0.01
Specificity	0.61	0.33-0.83	92.00	<0.01
LR+	1.37	0.48-3.88	77.18	<0.01
LR-	0.76	0.27-2.15	94.03	<0.01
Diagnostic Odds Ratio	1.81	0.23-14.26	100	<0.01
Removing "Nemoto, 2022"				
Sensitivity	0.61	0.23-0.89	89.85	<0.01
Specificity	0.60	0.34-0.82	90.53	<0.01
LR+	1.54	0.60-3.94	81.66	<0.01
LR-	0.64	0.21-1.99	96.00	<0.01
Diagnostic Odds Ratio	2.40	0.31-18.29	100	<0.01

Outlier studies removed				
Sensitivity	0.46	0.11-0.86	91.80	<0.01
Specificity	0.68	0.55-0.79	89.66	<0.01
LR+	1.46	0.49-4.37	75.47	<0.01
LR-	0.79	0.32-1.96	93.43	<0.01
Diagnostic Odds Ratio	1.85	0.25-13.78	100	<0.01

SSLs, sessile serrated lesions; HPs, hyperplastic polyps; CADx, computer-aided diagnosis; LR+, positive likelihood ratio; LR-, negative likelihood ratio.

Supplementary Table 8 Meta regression analysis for possible factor affecting the specificity of CADx in distinguishing SSLs from non-SSLs and HPs

Factors	Specificity (SSL versus non-SSLs)				Specificity (SSL versus HPs)			
	Univariate Analysis		Multivariate Analysis		Univariate Analysis		Multivariate Analysis	
	P	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)

Publication time (vs. Year 2020-2022)	0.89	0.87(0.14-5.39)	-	-	0.02	3.91(1.27-12.09)	0.58	2.38(0.11-50.08)
Multicenter (vs. Monocenter)	0.53	2.18(0.19-25.34)	-	-	0.62	1.81(0.17-19.16)	-	-
Europe (vs. Asia)	0.89	0.87(0.14-5.39)	-	-	0.054	3.82(0.98-14.99)	0.75	1.52(0.12-19.60)
Prospective (vs. Retrospective)	0.89	0.87(0.14-5.39)	-	-	0.14	2.96(0.69-12.60)	-	-
Olympus (vs. Fujifilm)	0.68	1.77(0.12-27.09)	-	-	0.97	0.97(0.18-5.31)	-	-
Criteria 2019(vs. 2010)	0.55	0.54(0.07-3.98)	-	-	0.054	3.63(0.98-13.52)	0.68	1.65(0.15-18.62)
ICA (vs. ODA)	<0.01	0.16(0.06-0.42)	-	-	0.59	1.48(0.36-6.16)	-	-
Real time (vs. Non-real time)	0.53	2.18(0.19-25.34)	-	-	0.85	1.19(0.19-7.41)	-	-
Images (vs. Videos)	0.89	1.14(0.19-7.04)	-	-	0.054	0.26(0.07-1.03)	0.75	1.52(0.12-19.60)
NBI (vs. Non-NBI)	0.22	0.24(0.02-2.30)	-	-	0.60	1.52(0.32-7.34)	-	-

CI, confidence interval; SSLs, sessile serrated lesions; HPs, hyperplastic polyps; ICA, image classification algorithms; NBI, narrow band imaging.

