

Table 1. Characteristics of the studies included in the meta-analysis

Author	Year	Region	Population	Simple size(n)	Endoscopy Devices for index test (RAC)	Reference standard for H.pylori infection	Prevalence of H.pylori infection(%)	TP	TN	FP	FN	Sensitivity[95% CI]	Specificity[95% CI]
Alaboudy A ^[17]	2011	Egypt	Adults	390	Standard Endoscopy	·IHC testing of gastric tissues in 184 patients ·Serum H.pylori IgG antibody in 206 patients	58.7	185	22	95	2	0.99[0.96-1.00]	0.19[0.12-0.27]
Anagnostopoulos GK ^[18]	2007	United Kingdom	Adults	95	HD Magnifying Endoscopy	·Histological tissues testing with HE and toluidine blue stain ·Histological tissues for a CLO or CLO test	27.4	26	64	5	0	1.00[0.87-1.00]	0.93[0.84-0.98]
Cho J H ^[19]	2013	Korea	Adults	617	Standard Endoscopy	·RUT of gastric tissues ·Histological tissues testing with Giemsa stain	42	335	230	28	24	0.93[0.90-0.96]	0.89[0.85-0.93]
Garcés-Durán R ^[20]	2019	Spain	Adults	140	HD Endoscopy	·Histological tissues testing with Giemsa stain ·IHC in negative histologic study for H.pylori ·RUT of gastric tissues	31.4	44	47	49	0	1.00[0.92-1.00]	0.49[0.39-0.59]
Gonen C ^[21]	2009	Turkey	Adults	129	HD Magnifying Endoscopy	·Histological tissues testing with Giemsa stain ·RUT of gastric tissues · ¹⁴ C-UBT	76	84	24	5	14	0.86[0.77-0.92]	0.83[0.64-0.94]
Hidaka N ^[22]	2010	Japan	Children	87	·Standard Endoscopy (small caliber) ·Magnifying Endoscopy in 8 patients	·UBT ·RUT ·SAT	29	25	57	5	0	1.00[0.86-1.00]	0.92[0.82-0.97]
Inui M ^[23]	2020	Japan	Adults	576	Standard Endoscopy	· ¹³ C-UBT ·Serum H.pylori IgG antibody ·Histological tissues testing with Giemsa stain	15.3	88	144	34	0	1.00[0.96-1.00]	0.30[0.25-0.34]
Katake Y ^[24]	2013	Japan	Adults	723	HD Endoscopy	·Serum H.pylori antibody test ·Histological tissues testing with HE and any special stains (Giemsa, Warthin-Starry) and IHC	70.5	506	189	24	4	0.99[0.98-1.00]	0.89[0.84-0.93]
Kato T ^[25]	2013	Japan	Adults	275	HD Endoscopy	·Histological tissues testing with HE staining	52.7	131	60	65	9	0.94[0.88-0.97]	0.48[0.39-0.57]

						·Immunostaining in negative histologic study for H.pylori							
Machado R S ^[26]	2008	Brazil	Children and adolescents	99	Standard Endoscopy(paediatric)	·Histological tissues testing with HE and Giemsa stain	32.3	31	59	8	1	0.97[0.84-1.00]	0.88[0.78-0.95]
Na S ^[27]	2011	Korea	adults	263	Standard Endoscopy	·RUT of gastric tissues							
						·RUT of gastric tissues	51.3	131	53	75	4	0.97[0.93-0.99]	0.41[0.33-0.50]
Nakayama Y ^[28]	2004	Japan	Children and young adult(8-29)	52	Standard Endoscopy	· ¹³ C-UBT	38.5	20	29	3	0	1.00[0.83-1.00]	0.91[0.75-0.98]
						·Serum H.pylori IgG antibody							
						·Histological tissues testing with Giemsa stain							
Tatewaki M ^[29]	2010	Japan	15-71 yrs	1875	Transnasal Endoscopy	·Serum H.pylori antibody test	36.8	665	1166	19	25	0.96[0.95-0.98]	0.98[0.98-0.99]
						·Histological tissues testing with IHC stain							
Terao S ^[30]	2015	Japan	Adults	743	Standard Endoscopy	·Serum H.pylori antibody test	60	412	21	27	34	0.92[0.90-0.95]	0.07[0.04-0.11]
						·RUT of gastric tissues				6			
						·Histological tissues testing							
						· ¹³ C-UBT							
Yagi K ^[31]	2002	Japan	14-86 yrs	557	·Standard Endoscopy in 162 patients	·Histological tissues testing with HE and Giemsa stain	69.8	381	153	15	8	0.98[0.96-0.99]	0.91[0.86-0.95]
					·Magnifying Endoscopy in 301 patinets	·The culture of histological tissues							
						·RUT of gastric tissues							

RAC: Regular arrangement of collecting venules; H.pylori: Helicobacter pylori; TP: True positives; TN: True negatives; FP: False positives; FN: False negatives; HD: High Definition; IHC: Immunohistochemistry; CLO: Campylobacter-like organism; RUT: rapid urease test; UBT: urea breath test; SAT: stool antigen test; HE: hematoxylin-eosin.