

Table A

Table B

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Table A Validity criteria for papers reporting on the accuracy of C reactive protein in the detection of radiologically proved pneumonia (first research question of the study), or differentiation of bacterial from viral aetiology of lower respiratory tract infection (second research question)

Criteria for study validity	Positive score
Blind measurement of index test and reference test*	In both directions (+), only index or reference test (-), not measured independently (-) or not mentioned (?)
Avoidance of verification bias*	Assessment by reference standard independent from index test results (+), partly dependent (-) or not mentioned (?)
Spectrum of the disease*	Prospective clinical population (+) or case-control (-)
Avoidance of selection bias	Consecutive (+), non-consecutive (-) or not mentioned (?)
Index test interpreted independently of all clinical information	Explicitly mentioned in publication (+), not mentioned (?)
Avoidance of treatment paradox	[part 1] Measurement of reference standard before any interventions were started, without knowledge of test results (+), not mentioned (?)
	[part 2] Samples for reference standard taken on first day (+), not mentioned (?)
Criteria relevant to the applicability of the results	
Setting*	Enough information to identify setting (community through tertiary care) (+), not enough information (-)
Duration of illness	Duration mentioned (+), not mentioned (-)
Demographic information	Average or median age mentioned (+), not mentioned (-)

A plus, minus, or question mark were adjudged if criteria were present, absent, or not mentioned.

*Essential criteria defined by Lijmer et al.²³

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Table B performance of C-reactive protein in the detection of radiologically proven pneumonia (part 1) or bacterial aetiology of lower respiratory tract infection (part 2)

Author	Cut-off CRP	n≤ cut-off CRP	n>cut-off CRP	Prevalence	Sensitivity (95% CI)	Specificity (95% CI)	LR + (95% CI)	LR - (95% CI)
Part 1; detection of infiltrate								
Flanders et al.[17]	11	84	84	12%	0.85 (0.64 to 0.95)	0.55 (0.47 to 0.63)	1.88 (1.45 to 2.42)	0.27 (0.10 to 0.79)
	40	139	29		0.70 (0.48 to 0.86)	0.90 (0.84 to 0.94)	6.91 (3.95 to 12.1)	0.33 (0.17 to 0.65)
	100	160	8		0.35 (0.18 to 0.57)	0.99 (0.96 to 1.00)	51.8 (9.72 to 399)	0.65 (0.47 to 0.90)
Almirall et al.[34]	33	41	175	93%	0.83 (0.77 to 0.88)	0.44 (0.27 to 0.63)	1.48 (1.04 to 2.11)	0.38 (0.22 to 0.68)
	50	59	157		0.76 (0.69 to 0.81)	0.63 (0.39 to 0.82)	2.01 (1.06 to 3.81)	0.39 (0.25 to 0.62)
	100	102	114		0.55 (0.48 to 0.62)	0.75 (0.51 to 0.90)	2.20 (0.93 to 5.19)	0.60 (0.44 to 0.83)
Hopstaken et al.[37]	20	110	133	13%	0.91 (0.76 to 0.97)	0.51 (0.44 to 0.57)	1.84 (1.54 to 2.19)	0.19 (0.06 to 0.55)
	50	163	80		0.88 (0.72 to 0.95)	0.75 (0.69 to 0.81)	3.55 (2.71 to 4.65)	0.16 (0.07 to 0.42)
	100	197	46		0.69 (0.51 to 0.82)	0.89 (0.84 to 0.92)	6.04 (3.88 to 9.42)	0.35 (0.21 to 0.59)
Melbye et al. ('92)[38]	20	277	125	5%	0.80 (0.58 to 0.92)	0.72 (0.67 to 0.76)	2.80 (2.14 to 3.68)	0.28 (0.12 to 0.67)
	50	352	50		0.50 (0.30 to 0.70)	0.90 (0.87 to 0.93)	5.03 (2.95 to 8.56)	0.56 (0.36 to 0.86)
	100	391	11		0.10 (0.03 to 0.30)	0.98 (0.96 to 0.99)	4.24 (0.98 to 18.4)	0.92 (0.80 to 1.07)
Babu et al.[39]	20	27	33	50%	0.98 (0.86 to 1.00)	0.89 (0.73 to 0.96)	8.71 (3.25 to 23.4)	0.02 (0.00 to 0.29)
	35	30	30		0.98 (0.86 to 1.00)	0.98 (0.86 to 1.00)	61.0 (3.90 to 954)	0.02 (0.00 to 0.26)
	100	33	27		0.89 (0.73 to 0.96)	0.98 (0.86 to 1.00)	55.0 (3.51 to 862)	0.12 (0.04 to 0.31)
Melbye et al ('88)[40]	11	36	32	16%	0.82 (0.52 to 0.95)	0.60 (0.47 to 0.71)	2.03 (1.33 to 3.09)	0.31 (0.09 to 1.09)
	50	58	10		0.73 (0.43 to 0.90)	0.97 (0.88 to 0.99)	20.7 (5.07 to 84.8)	0.28 (0.12 to 0.74)
Part 2; discrimination between bacterial and viral aetiology								
Almirall et al.[34]	50	15	68	71%	0.86 (0.76 to 0.93)	0.29 (0.15 to 0.49)	1.22 (0.93 to 1.61)	0.47 (0.19 to 1.14)
	100	27	56		0.76 (0.64 to 0.85)	0.54 (0.35 to 0.72)	1.66 (1.05 to 2.63)	0.44 (0.24 to 0.79)
	120	34	49		0.71 (0.59 to 0.81)	0.71 (0.51 to 0.85)	2.44 (1.28 to 4.65)	0.41 (0.25 to 0.66)

Prat et al.[41]	20	14	62	63%	0.88 (0.75 to 0.94)	0.29 (0.15 to 0.47)	1.23 (0.95 to 1.59)	0.44 (0.17 to 1.13)
	60	28	48		0.81 (0.68 to 0.90)	0.68 (0.49 to 0.82)	2.53 (1.45 to 4.40)	0.28 (0.15 to 0.53)
	100	29	37		0.63 (0.48 to 0.75)	0.61 (0.39 to 0.80)	1.61 (0.87 to 2.99)	0.61 (0.37 to 1.03)
Requejo et al.[42]	+/-	183	72	17%	0.99 (0.90 to 1.00)	0.87 (0.82 to 0.91)	7.70 (5.46 to 10.9)	0.01 (0.00 to 0.20)
Garcia Vazquez et al.[43]	No usable quantitative data available							
Virkki et al.[36]	40	88	127	62%	0.66 (0.58 to 0.74)	0.53 (0.42 to 0.64)	1.42 (1.09 to 1.84)	0.63 (0.46 to 0.86)
	80	122	93		0.52 (0.44 to 0.61)	0.72 (0.61 to 0.80)	1.84 (1.26 to 2.70)	0.67 (0.53 to 0.83)
	120	155	60		0.36 (0.28 to 0.44)	0.85 (0.76 to 0.91)	2.42 (1.37 to 4.27)	0.75 (0.65 to 0.88)
Hedlund et al.[44]	No usable quantitative data available							
Heiskanen et al.[45]	20	69	61	77%	0.46 (0.37 to 0.56)	0.50 (0.33 to 0.67)	0.92 (0.61 to 1.40)	1.08 (0.72 to 1.61)
	40	108	22		0.16 (0.10 to 0.24)	0.80 (0.63 to 0.91)	0.80 (0.34 to 1.86)	1.05 (0.86 to 1.28)
	60	119	11		0.08 (0.04 to 0.15)	0.90 (0.74 to 0.97)	0.80 (0.23 to 2.83)	1.02 (0.90 to 1.17)
Nohynek et al.[46]	20	22	62	64%	0.74 (0.61 to 0.84)	0.27 (0.14 to 0.44)	1.01 (0.77 to 1.32)	0.97 (0.46 to 2.05)
	40	51	33		0.41 (0.29 to 0.54)	0.63 (0.46 to 0.78)	1.11 (0.63 to 1.96)	0.94 (0.66 to 1.33)
	80	68	16		0.24 (0.15 to 0.37)	0.90 (0.74 to 0.97)	2.41 (0.75 to 7.78)	0.84 (0.70 to 1.02)
Ortqvist et al.[47]	No usable quantitative data available							
Korppi et al. ('92)[48]	20	117	92	53%	0.52 (0.43 to 0.61)	0.65 (0.55 to 0.73)	1.47 (1.06 to 2.02)	0.75 (0.59 to 0.95)
	40	158	51		0.36 (0.27 to 0.45)	0.88 (0.80 to 0.93)	2.93 (1.63 to 5.26)	0.73 (0.63 to 0.86)
	80	188	21		0.15 (0.09 to 0.22)	0.95 (0.89 to 0.98)	2.88 (1.10 to 7.57)	0.90 (0.82 to 0.98)
Kerttula et al.[49]	80	13	46	92%	0.85 (0.73 to 0.92)	0.91 (0.52 to 0.99)	10.2 (0.71 to 145)	0.17 (0.09 to 0.33)
McCarthy et al.[50]	No usable quantitative data available							