



Predicting Pneumonia in Acute Cough Illness

Element	Sensitivity (%)	Specificity (%)	Likelihood Ratio Positive*	Likelihood Ratio Negative†
Fever	44	79	2.1	0.71
Productive cough	79	38	1.3	0.55
Purulent phlegm	65	52	1.4	0.67
Oral temperature >100°F	27	94	4.5	0.77
Heart rate >100 beats/min	17	92	2.1	0.90
Respiratory rate >25 breaths/min	28	92	3.5	0.78
Rhonchi	15	90	1.5	0.94
Rales	19	93	2.7	0.87
Egophony	4	99.5	8.0	0.96
Increased fremitus	8	99.1	8.9	0.93
Pleural rub	4	99.5	8.0	0.96
Local dullness to percussion	4	99.5	8.0	0.96

*Positive likelihood ratios of 2, 5, and 10 increase the probability of disease by 15%, 30%, and 45% respectively.

†Negative likelihood ratios of .5, .2, and .1 decrease the probability of disease by 15%, 30%, and 45% respectively.

From: Diehr P, Wood RW, Bushyhead J, Krueger L, Wolcott B, Tompkins RK. Prediction of pneumonia in outpatients with acute cough—a statistical approach. *J Chronic Dis.* 1984;37:215-25. (PMID: [6699126](#))