



Laboratory Tests for Identifying a Pleural Effusion as an Exudate

Test	Notes*
Fluid protein >3 g/dL	Sensitivity, 93%; specificity 85%; +LR, 6.2; -LR, .08. A useful test in characterizing pleural fluid; transudates are typically low-protein effusions, whereas exudates classically have higher protein content.
Fluid protein/serum protein ratio >0.5	Sensitivity= 93%; specificity = 97%; +LR = 31; -LR=.07. Another useful test to help characterize a transudate (<0.5) or exudate (>0.5).
Fluid LDH >200 IU/L	Sensitivity = 72%; specificity = 100%. -LR = .28. Depending on the particular laboratory's normal reference range, a fluid LDH >200 (or >2/3 the upper limit of normal) suggests an exudate.
Fluid LDH/serum LDH ratio >0.6	Sensitivity = 88%; specificity = 96%; +LR = 22; - LR = .23. Using measurements of serum protein and LDH, 99% of pleural effusions may be characterized correctly. Exudates are typically characterized by ratio >0.6.

+ LR = positive likelihood ratio; - LR = negative likelihood ratio; IU = international units; LDH = lactic dehydrogenase.

*+LR ratios of 2, 5, and 10 increases the probability of an exudate by 15%, 30% and 45% respectively.

-LR ratios of 0.5, 0.2, and 0.1 decrease the probability of an exudate by 15%, 30% and 45% respectively.