Diagnostic Test Calculator

This calculator can determine diagnostic test characteristics (sensitivity, specificity, likelihood ratios) and/or determine the post-test probability of disease given given the pre-test probability and test characteristics. Given sample sizes, confidence intervals are also computed.

Fill out one of the sections below on the left, and then click on the 'Compute' button. Sections you don't fill out will be computed for you, and the nomogram on the right will display the probability that a patient has the disease after a positive or negative test.

Numbers of patients with and without the disease who test positive and negative:

	Disease present	**Disease absent**	**Total**
Test positive	20	11	31
Test negative	6	64	69
Total	25	75	100

Compute

or
disease prevalence, test sensitivity, and test specificity (and, optionally, sample size):

Prevalence (e.g. 0.10):	0.250000
Sensitivity (e.g. 0.80):	0.780
Specificity (e.g. 0.80):	0.850
Total sample size:	100

Compute

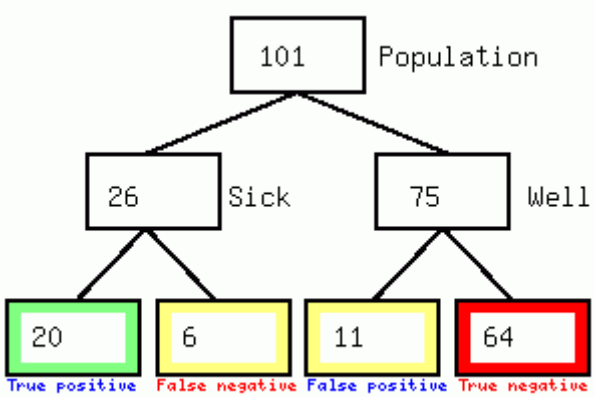
or
disease prevalence, positive likelihood ratio, and negative likelihood ratio (and, optionally, sample size):

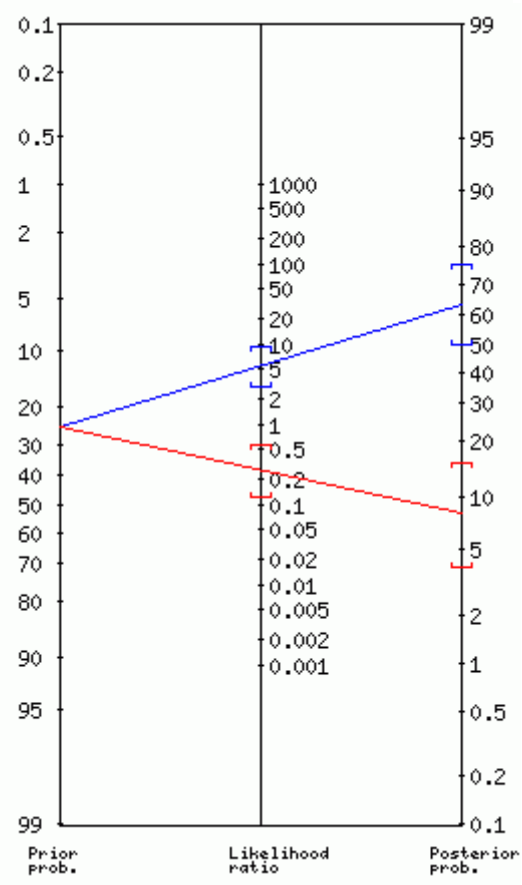
Prevalence (e.g. 0.10):	0.250000
+LR (e.g. 4):	5.20
-LR (e.g. 0.01):	0.26
Total sample size:	100

Compute

Optional information:

Your local prevalence (e.g. 0.10):	0.2500
Probability of disease at or above which you would be **comfortable** treating with no further testing (e.g. 0.8)	





Prior probability (odds): 25% (0.3)

POSITIVE TEST:
Positive Likelihood ratio: 5.20
95% confidence interval: [2.92,9.26]
Posterior probability (odds): 63% (1.7)
95% confidence interval: [49%,76%]
(~ 1 in 1.6 with positive test are sick)

NEGATIVE TEST:
Negative Likelihood ratio: 0.26
95% confidence interval: [0.12,0.54]

Probability of disease at or below which you would be **comfortable** managing with no futher treatment or testing (e.g. 0.25)	
Probability of disease at or above which you would treat (comfortable or not) and below which you would not treat, if there were no further options (e.g. 0.4)	

Recompute

Clear Entries

Posterior probability (odds): 8% (0.1)
95% confidence interval: [4%,15%]
(~ 1 in 1.1 with negative test are well)

Odds = Probability / (1-Probability)
+LR = Sensitivity / (1 - Specificity)
-LR = (1 - Sensitivity) / Specificity
Posterior Odds = Prior Odds x LR

Embeddable URL: http://araw.mede.uic.edu/cgi-bin/testcalc.pl?DT=20&Dt=6&dT=11&dt=64&2x2=Compute

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