

Sample size calculation for Sensitivity & Specificity Studies

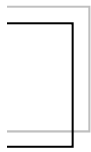
Instruction:

Enter five values in yellow areas only. Then, read the sample size in blue colour box.
If you want to know how it is calculated, read the explanation in the next sheet.

Expected Sensitivity	0.80	◀ From literature or pilot study
Expected Specificity	0.58	◀ From literature or pilot study
Expected Prevalence	0.46	◀ From literature or pilot study
Desired Precision	0.10	◀ Researcher's judgment
Confidence level	95%	◀ 95% is recommended.

~~To achieve the precision of 0.1 for 'Sensitivity', we need 'the total sample size' of~~
= 135 ◀ Warning: This sample size will not give the precision of 0.1 for
With this sample size, the precision for 'Specificity' will be
= 0.113

To achieve the precision of 0.1 for 'Specificity', we need 'the total sample size' of
= 175 ◀ This is preferable as it will give the precision of 0.1 or less for
With this sample size, the precision for 'Sensitivity' will be
= 0.0874



f
r Specificity.

f
both Sensitivity and Specificity.

		+ Dis -	
Sen= 0.80	50	30	
	13	42	
Prevalence= 0.46	63	72	135
Precision=	0.100	0.113	
	Sen	Spec	

		+ Dis -	
	65	39	
	16	55	0.58 =Spec
Prevalence= 0.46	81	94	175
Precision=	0.087	0.100	
	Sen	Spec	