

Diagnostic Test Notes

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1 Diagnostic Test Metrics

		Reference Standard		Prediction / Diagnosis	
		A	~A		
Index Test	B	TP	FP	Pos. Pred. Value (PPV) $P(A B) = \frac{TP}{TP + FP}$	Posterior Odds (+) $\frac{P(A B)}{P(\sim A B)} = \frac{TP}{FP}$
				False Disc. Rate (FDR) $P(\sim A B) = \frac{FP}{TP + FP}$	
	~B	FN	TN	False Omis. Rate (FOR) $P(A \sim B) = \frac{FN}{TN + FN}$	Posterior Odds (–) $\frac{P(A \sim B)}{P(\sim A \sim B)} = \frac{FN}{TN}$
				Neg. Pred. Value (NPV) $P(\sim A \sim B) = \frac{TN}{TN + FN}$	
		Sensitivity $P(B A) = \frac{TP}{TP + FN}$	False Pos. Rate (FPR) $P(B \sim A) = \frac{FP}{TN + FP}$	Pos. Likelihood Ratio (+LR) $\frac{P(B A)}{P(B \sim A)} = \frac{TP(TN + FP)}{FP(TP + FN)}$	Diagnostic Odds Ratio $\frac{+LR}{-LR} = \frac{TP \cdot TN}{FP \cdot FN}$
		False Neg. Rate (FNR) $P(\sim B A) = \frac{FN}{TP + FN}$	Specificity $P(\sim B \sim A) = \frac{TN}{TN + FP}$	Neg. Likelihood Ratio (–LR) $\frac{P(\sim B A)}{P(\sim B \sim A)} = \frac{FN(TN + FP)}{TN(TP + FN)}$	
Overall Accuracy $P(B A)P(A) + P(\sim B \sim A)P(\sim A) = \frac{TP + TN}{TP + TN + FP + FN}$				Discrimination / Sorting	