

Video: Accuracy in Terms of Conditional Probability

$$\text{Accuracy} = P(\text{correct})$$

$$\text{Accuracy} = P(\text{correct} \cap \text{disease}) + P(\text{correct} \cap \text{normal})$$

$$\text{Using } P(A \cap B) = P(A|B) P(B)$$

$$\text{Accuracy} = P(\text{correct} | \text{disease}) P(\text{disease}) + P(\text{correct} | \text{normal}) P(\text{normal})$$

$$\text{Accuracy} = P(+ | \text{disease}) P(\text{disease}) + P(- | \text{normal}) P(\text{normal})$$