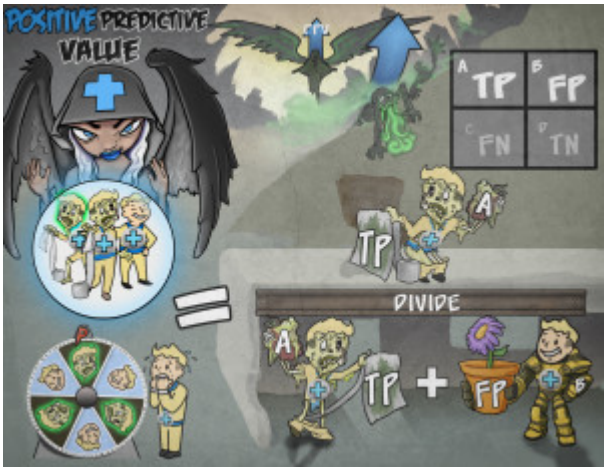
Positive Predictive Value (PPV)

Positive predictive value refers to the probability that a person with a positive test result actually has the tested disease. PPV allows for clinicians to explain to patients the likelihood of a positive result being truly positive. The formula to calculate PPV is True Positives (TP) divided by the sum of True Positives (TP) and False Positives (FP), or PPV = TP / (TP + FP).



PLAY PICMONIC

Proportion of Positive Tests that are True Positive

Proportion of Positives who are TP-true-positives with disease

A positive test result does not necessarily mean a patient has the disease; a false positive may still occur. More false positives will lower the PPV.

Probability that Person with Positive Test has Disease

Probability-spinner showing Positive-tests as Healthy or Diseased

This refers to the probability of having a disease out of all the people who tested positive for it.

Formula

TP (True Positives)

TP is diseased from A-apple

A true positive is a person who has a disease and tests positive for the disease. TP will be the numerator in the formula.

Divided by /

Divide

True positives (TP) will be the numerator that is divided by the calculated denominator below.

All Positive Test Results

All Positives

The denominator is the sum of all positive results for a given test. This will include people who do not have a disease but test positive for a disease, otherwise known as a false positive.

TP + FP

TP-true-positive Plus Flower-Pot-false-positive

Add the number of true positives to the number of false positives to obtain the denominator in the equation.

Considerations

Varies Directly with Prevalence

Positive-angel Increases with Increased Prevalence of Disease

Prevalence is the amount of patients who are currently affected by a disease. A common disease will have a high prevalence, while a rare disease will have a low prevalence. As the prevalence of a disease increases, the positive predictive value increases. High prevalence diseases also have a high pretest probability, and both directly correlate with a higher PPV.