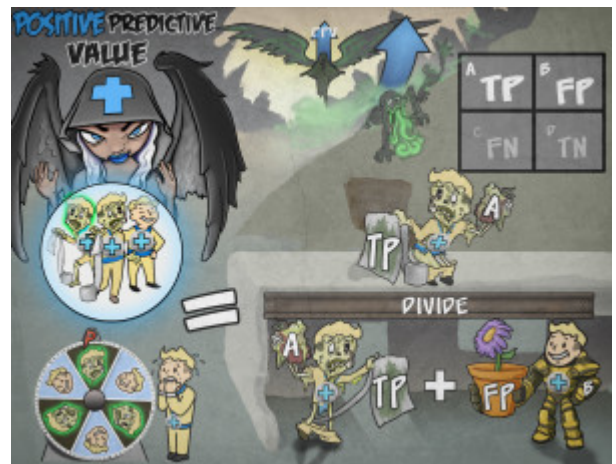


## Positive Predictive Value (PPV)

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  $PPV = TP / (TP + FP)$ .



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### 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.