Enter the following into the FDA Calculator to calculate the positive predictive value (PPV) and negative predictive value (NPV) for 1 antibody test or 2 independent tests.

- % prevalence of SARS-CoV-2 in your community
- Sensitivity of EUA antibody test(s)
- Specificity of EUA antibody test(s)

- Positive predictive value (PPV)
- Negative predictive value (NPV)

- Lower sensitivity and specificity = lower PPV and NPV
- Lower disease prevalence = more false positive results and fewer false negative results
- Higher disease prevalence = fewer false positive results and more false negative results
Example 1: Comparisons of Disease Prevalence Rates & Testing Outcomes for Test with 95% Specificity

Population: 10,000

**KEY:**
- 100 positive results
- 100 false positive results
- 100 negative results
- 100 false negative results

**Disease prevalence is 10%**
- Sensitivity is 90%    |    Specificity is 95%

- **PPV 66.7%**
  - 1,350 positive
  - 450 false positive

- **NPV 98.8%**
  - 8,650 negative
  - 100 false negative

**Disease prevalence is 50%**
- Sensitivity is 90%    |    Specificity is 95%

- **PPV 94.7%**
  - 4,750 positive
  - 250 false positive

- **NPV 90.5%**
  - 5,250 negative
  - 500 false negative

[cdc.gov/coronavirus]
Example 2: Comparisons of Disease Prevalence Rates & Testing Outcomes for Test with 99% Specificity

Population: 10,000

**KEY:**
- 100 positive results
- 100 false positive results
- 100 negative results
- 100 false negative results

**Disease prevalence is 10%**
- Sensitivity is 90%
- Specificity is 99%

- Positive results: 990
- Negative results: 9,010
- False positive results: 90
- False negative results: 50

- PPV: 90.9%
- NPV: 98.9%

**Disease prevalence is 50%**
- Sensitivity is 90%
- Specificity is 99%

- Positive results: 4,550
- Negative results: 5,450
- False positive results: 50
- False negative results: 500

- PPV: 98.9%
- NPV: 90.8%

[Source: cdc.gov/coronavirus]
Glossary

► Positive Predictive Value (PPV): Probability that people who test positive are truly positive.

► Negative Predictive Value (NPV): Probability that people who test negative are truly negative.

► Sensitivity: Ability of the test to correctly identify those with the disease (true positive rate).

► Specificity: Ability of the test to correctly identify those without the disease (true negative rate).