**2 X 2 TABLE WORKSHEET**

<table>
<thead>
<tr>
<th>Test Results</th>
<th>Reference Standard</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disease Present</td>
<td>Disease Absent</td>
<td></td>
</tr>
<tr>
<td>Test positive</td>
<td>TP</td>
<td>FP</td>
<td></td>
</tr>
<tr>
<td>Test negative</td>
<td>FN</td>
<td>TN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TP + FN</td>
<td>FP + TN</td>
<td></td>
</tr>
</tbody>
</table>

**Sensitivity (Sens) =**  
\[
\frac{TP}{TP + FN}
\]

**Specificity (Spec) =**  
\[
\frac{TN}{FP + TN}
\]

**Likelihood ratio for positive test (LR+) =**  
\[
\frac{Sens}{1-\text{Spec}} = \frac{\text{True positive rate}}{\text{False positive rate}} = \frac{TP}{TP + FN} = \frac{FP}{FP + TN}
\]

**Likelihood ratio for negative test (LR-) =**  
\[
\frac{1 - Sens}{Spec} = \frac{\text{False negative rate}}{\text{True negative rate}} = \frac{FN}{TP + FN} = \frac{TN}{FP + TN}
\]

Abbreviations: FN, false negative; FP, false positive; TN, true negative; TP, true positive.

Sensitivity is the proportion of people with a positive test result among those with the target condition.

Specificity is the proportion of people with a negative test result among those without the target condition.

Note: Positive Predictive Value and Negative Predictive Value vary with changes in prevalence of the disease, so these are not the preferred measures.