**Likelihood Ratios**

**General Rules for Interpreting Likelihood Ratios (LRs)**

A LR greater than 1 increases the probability that the target disease is present, and a LR less than 1 decreases the probability that the target disease is present.

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| **LR** | **Interpretation** |
| 10 | Increases the pretest probability of disease by ~ 45% |
| 5 | Increases the pretest probability of disease by ~ 30% |
| 2 | Increases the pretest probability of disease by ~ 15% |
| 1 | No change in the likelihood of disease |
| 0.5 | Decreases the pretest probability of disease by ~ 15% |
| 0.2 | Decreases the pretest probability of disease by ~ 30% |
| 0.1 | Decreases the pretest probability of disease by ~ 45% |

**Common Diseases, Tests and Likelihood Ratios**

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| **Disease** | **Test/Result** | **Likelihood Ratio** |
| Acute cholecystitis | Abdominal ultrasound | LR(+) 23.8  LR(−) 0.05 |
| Acute intracranial bleed | Head CT | LR(+) 23.8  LR(−) 0.05 |
| Acute myocardial infarction | ST elevation on at least one electrocardiographic lead | LR(+) 11.2 |
| Acute myocardial infarction | Serial troponins | LR(+) 17  LR(−) 0.04 |
| Acute pancreatitis | Lipase | LR(+) 87  LR(−) 0.13 |
| Acute pulmonary embolism | Pulmonary CT angiography | LR(+) 24.1  LR(−) 0.07 |
| Alcohol abuse and dependence | CAGE criteria: 3 of 4 positive | LR(+) 13.3 |
| Aortic stenosis (moderate to severe) | Late-peaking systolic murmur | LR(+) 24.2  LR(−) 0.3 |
| Appendicitis | Abdominal CT | LR(+) 24.0  LR(−) 0.06 |
| Ascites | Fluid wave present | LR(+) 5.0  LR(−) 0.6 |
| Breast cancer | Mammogram | LR(+) 8.7  LR(−) 1.4 |
| Breast cancer | Clinical breast examination | LR(+) 3.8  LR(−) 0.69 |
| *Clostridium difficile* colitis | *C. difficile* toxin–positive | LR(+) 19.6  LR(−) 0.02 |
| Heart failure | Estimated central venous pressure >12 cm H2O on examination | LR(+) 10.4  LR(−) 0.1 |
| Iron-deficiency anemia | Serum ferritin <60 ng/mL (60 µg/L) | LR(+) 24.4  LR(−) 0.15 |
| Dementia | Mini-Mental State Examination score <26/27 | LR(+) 2.5 |
| Strep throat | Positive result on rapid strep antigen detection test | LR(+) 15.2 |
| SLE | Antinuclear antibody | LR(+) 4.5  LR(−) 0.125 |
| SLE | Anti–double-stranded DNA antibody (>1:80) | LR(+) 73  LR(−) 0.27 |

SLE = systemic lupus erythematosus

Adapted from: McGee, Steven. *Evidence-Based Physical Diagnosis*. Philadelphia: Elsevier Saunders; 2012.