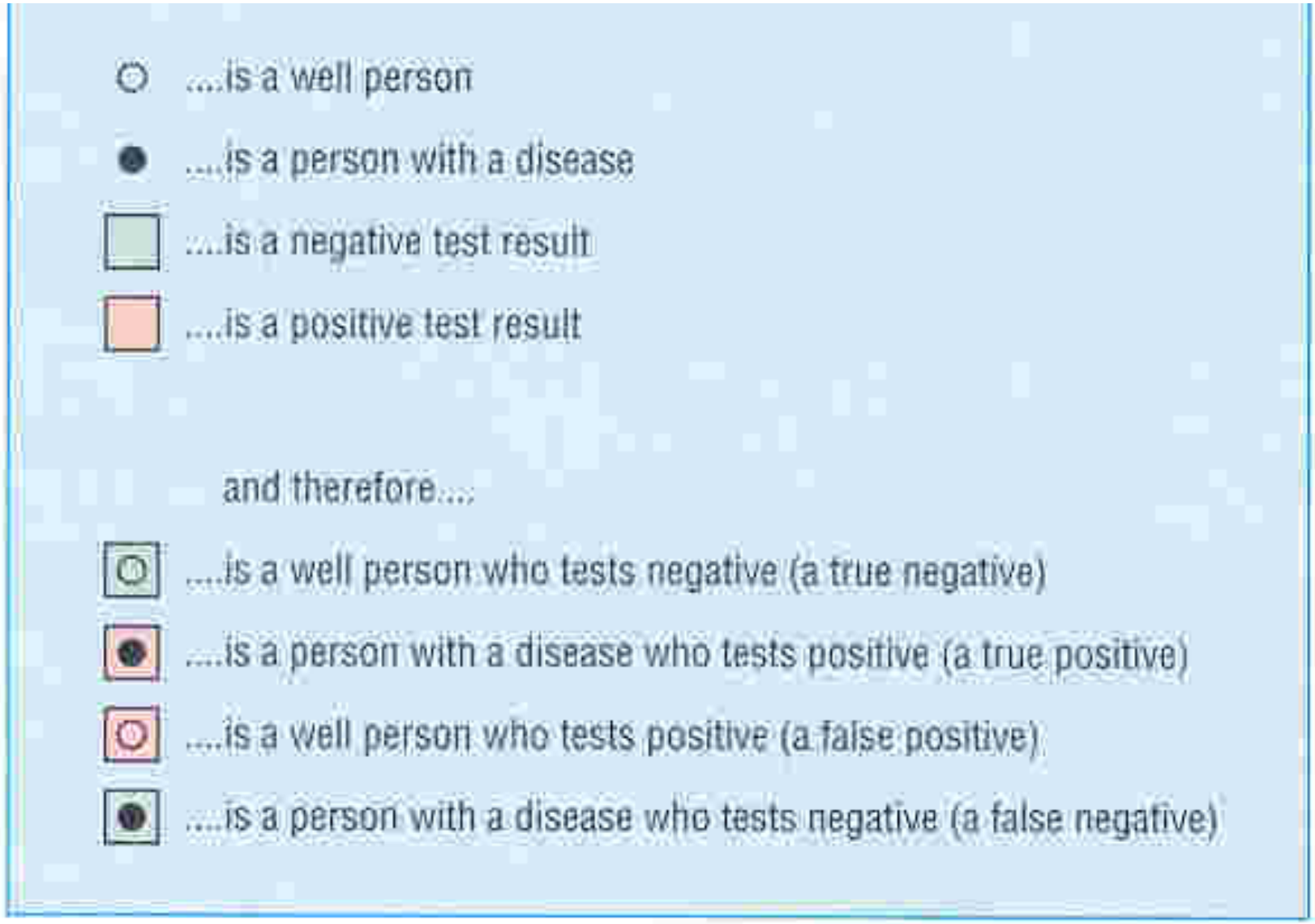
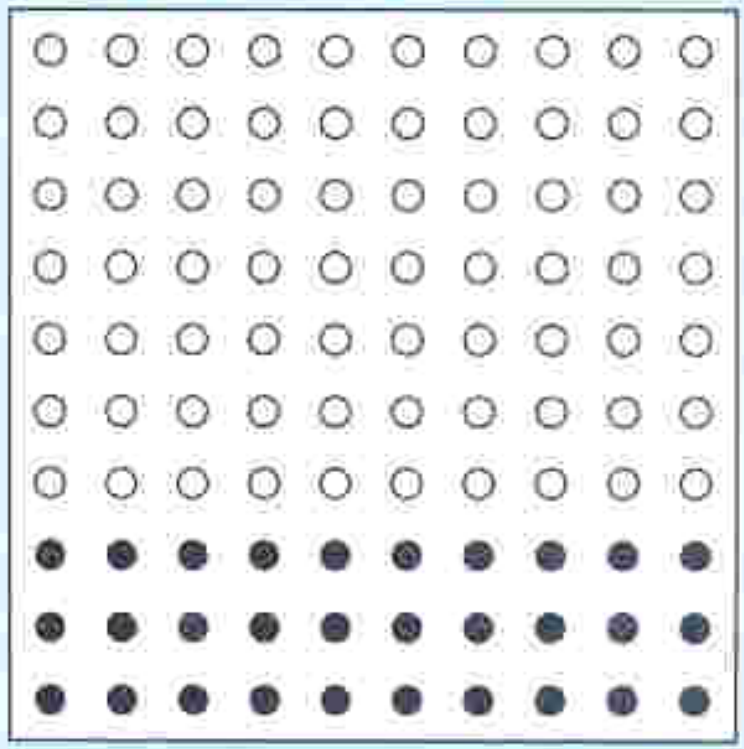


Fig 1 Key to symbols



ig 2 Hypothetical population

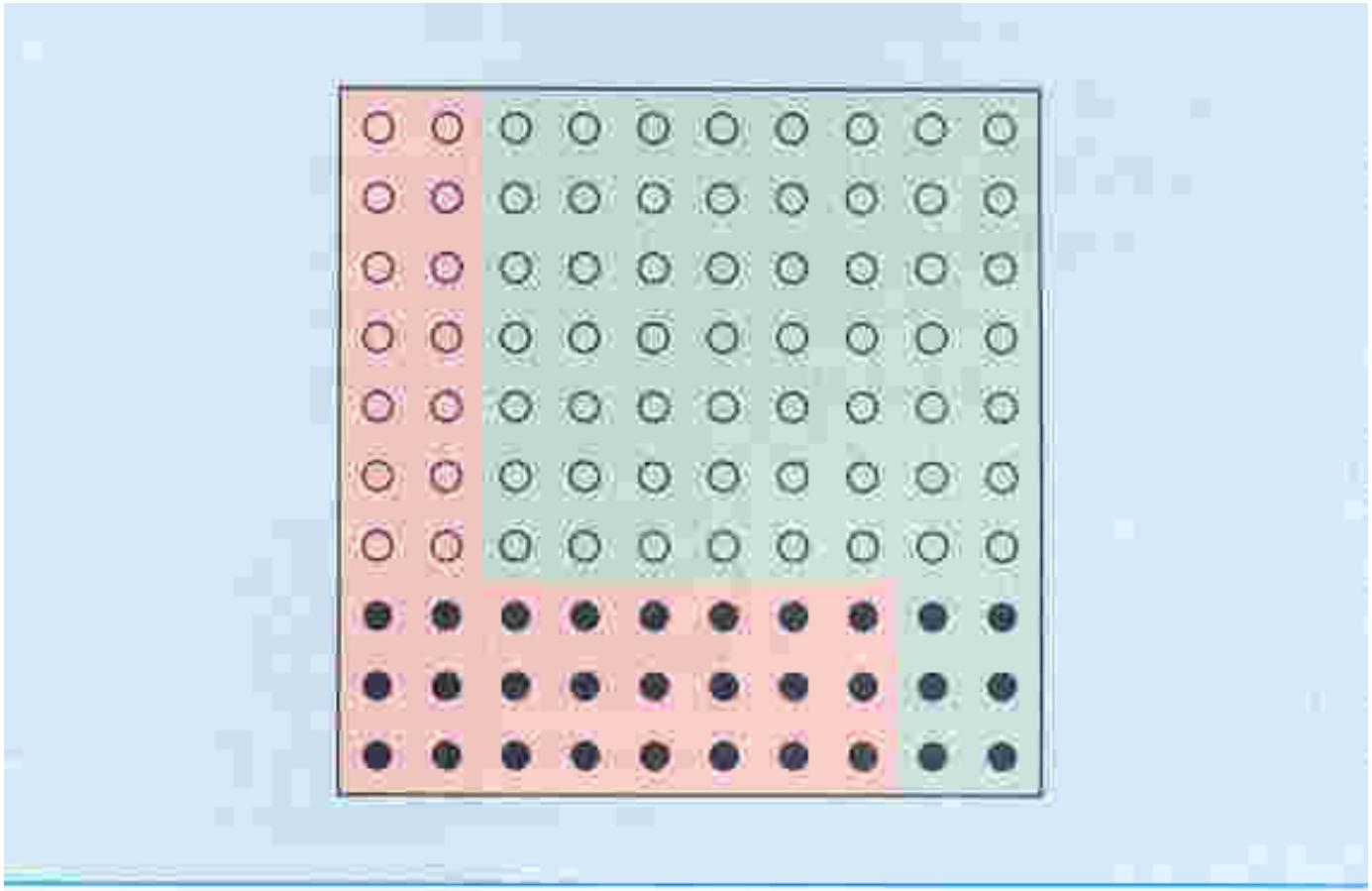


Fig 3 Results of diagnostic test on hypothetical population

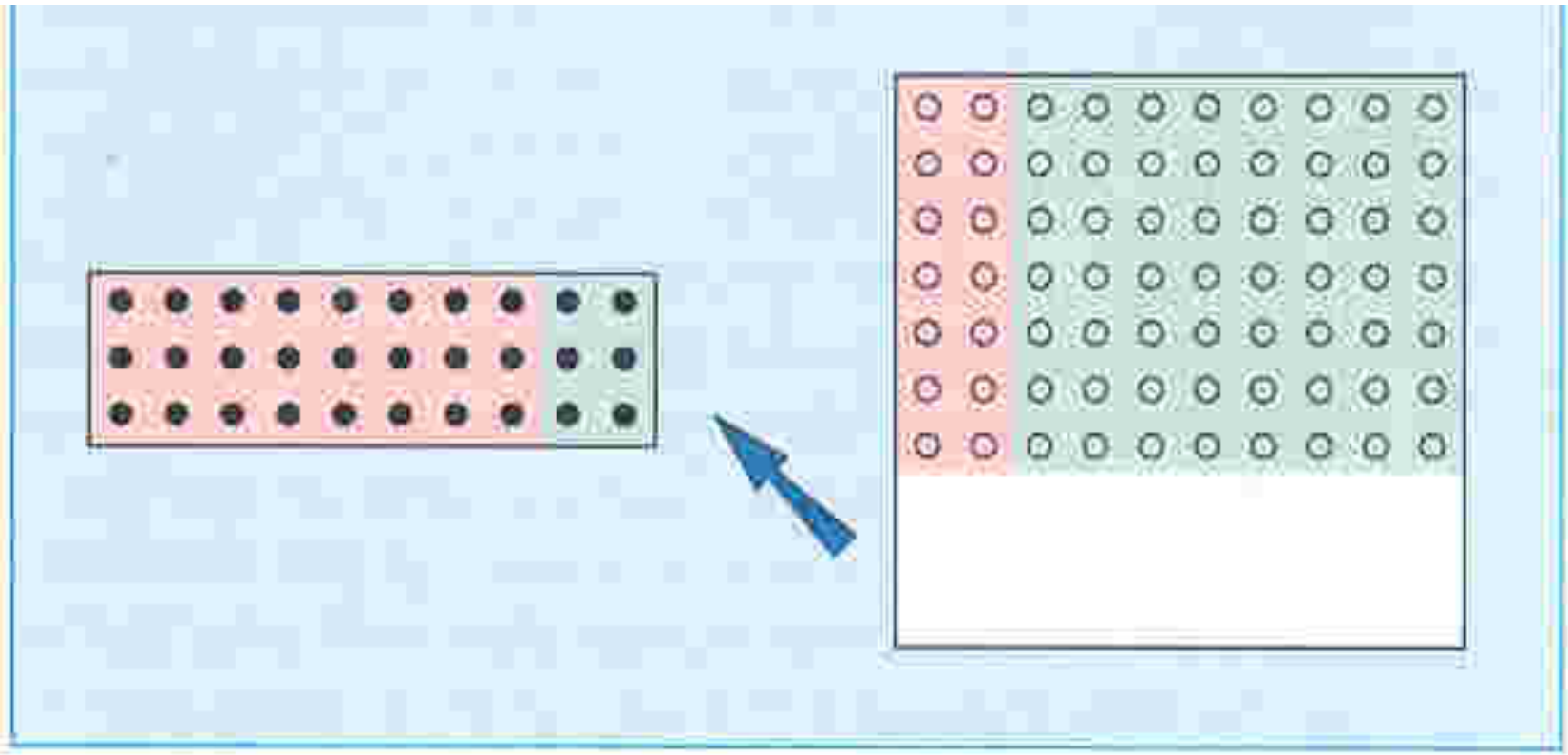


Fig 4 Sensitivity of test

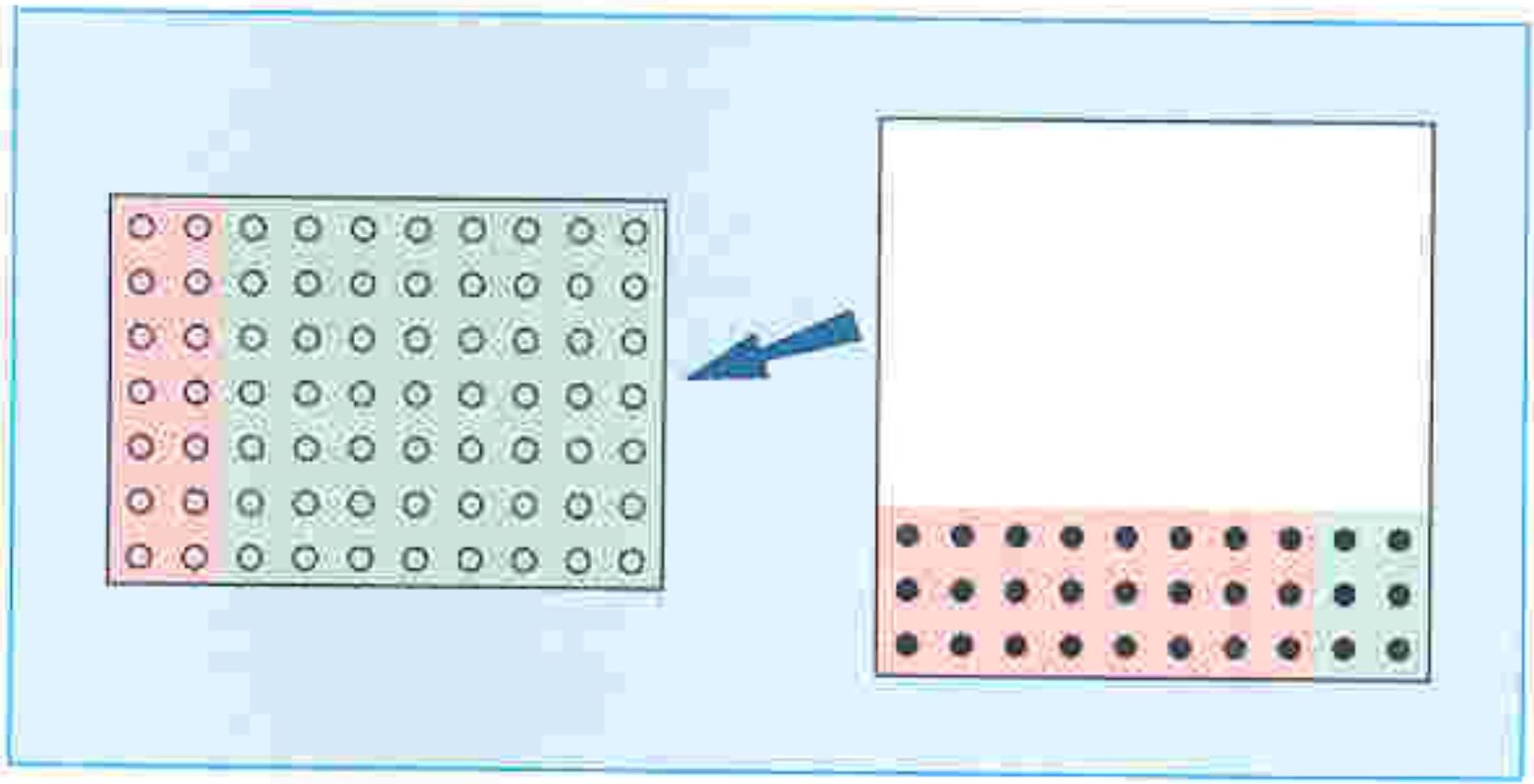


Fig 5 Specificity of test

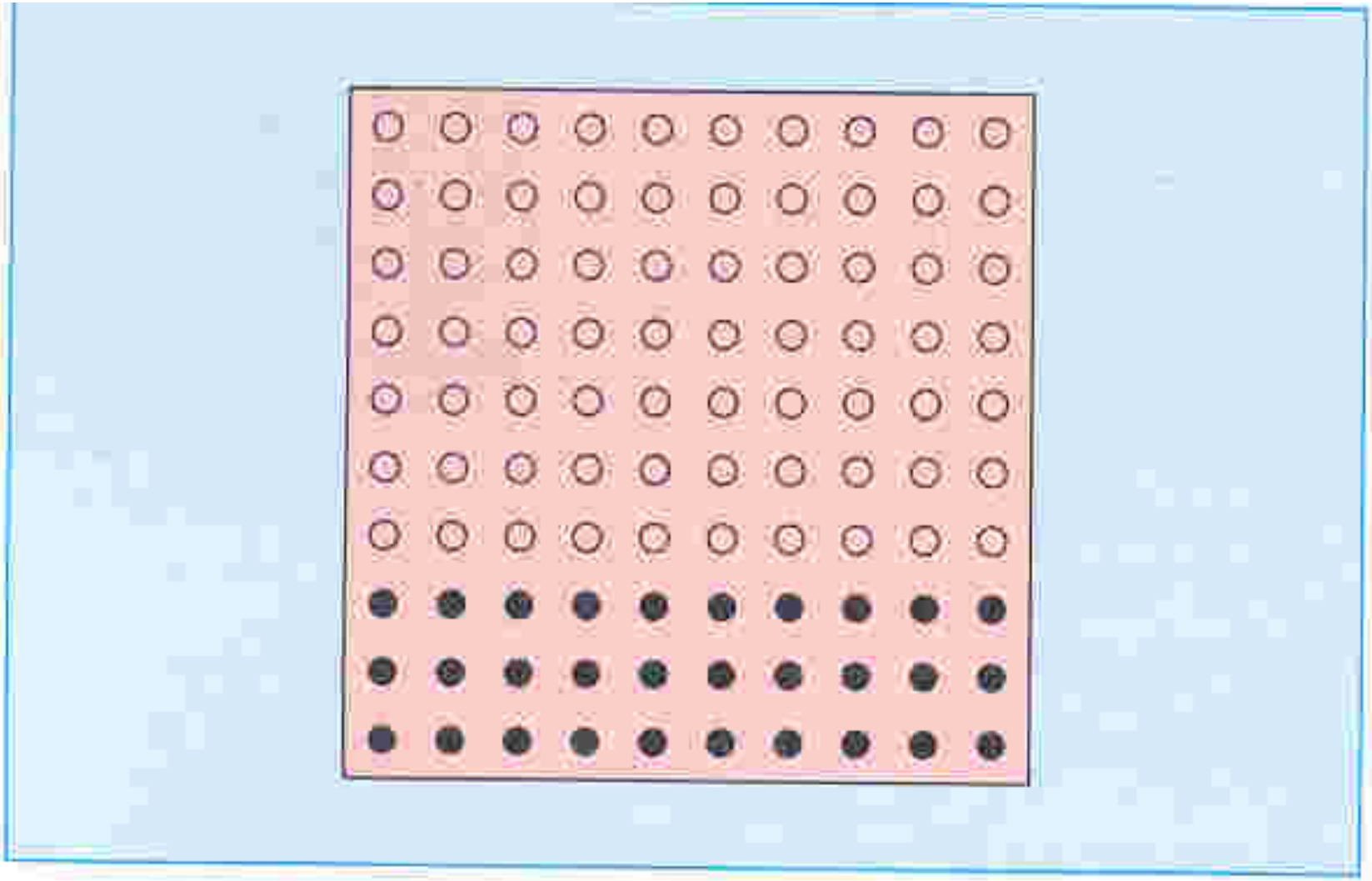


Fig 6 Test with 100% sensitivity

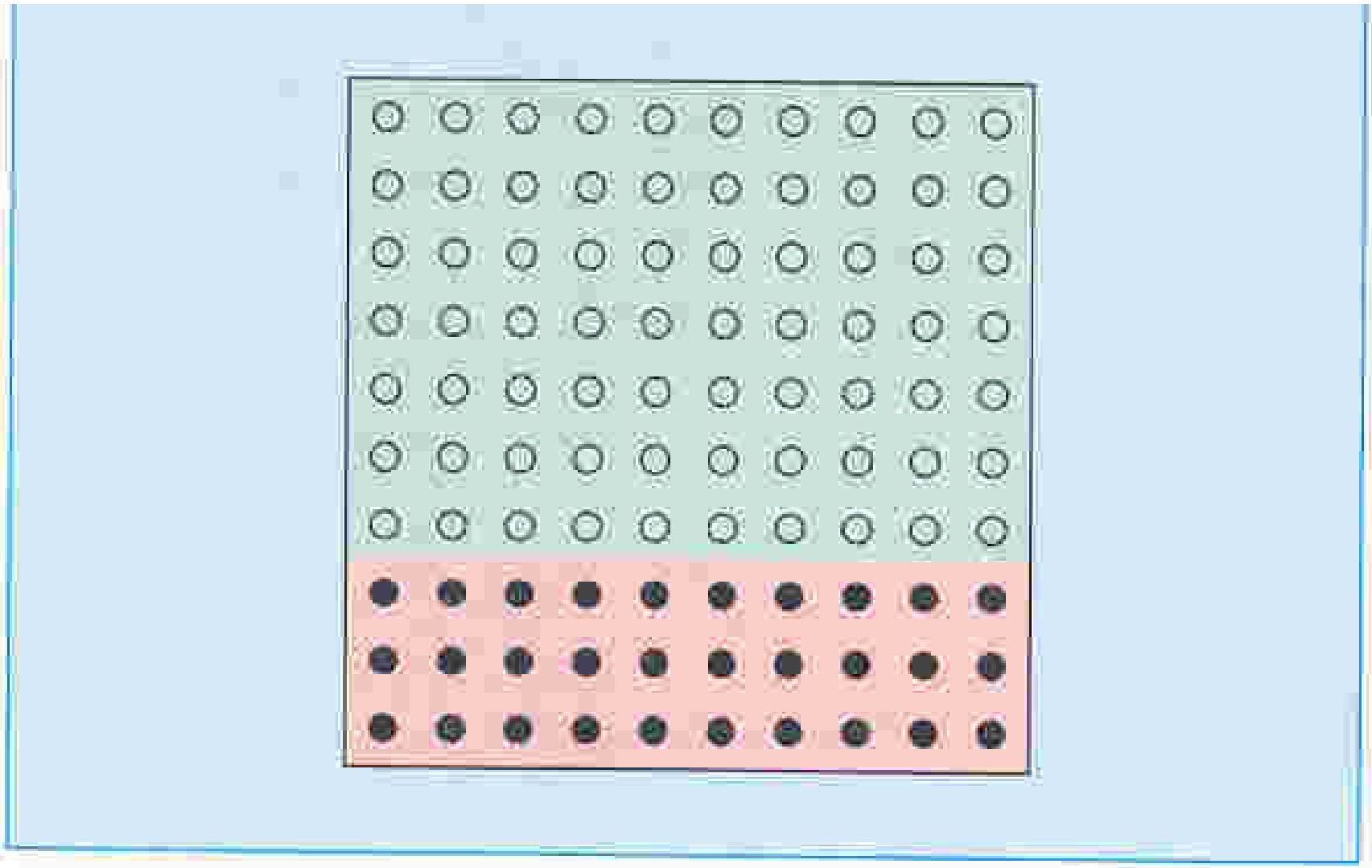


Fig 7 Perfect test

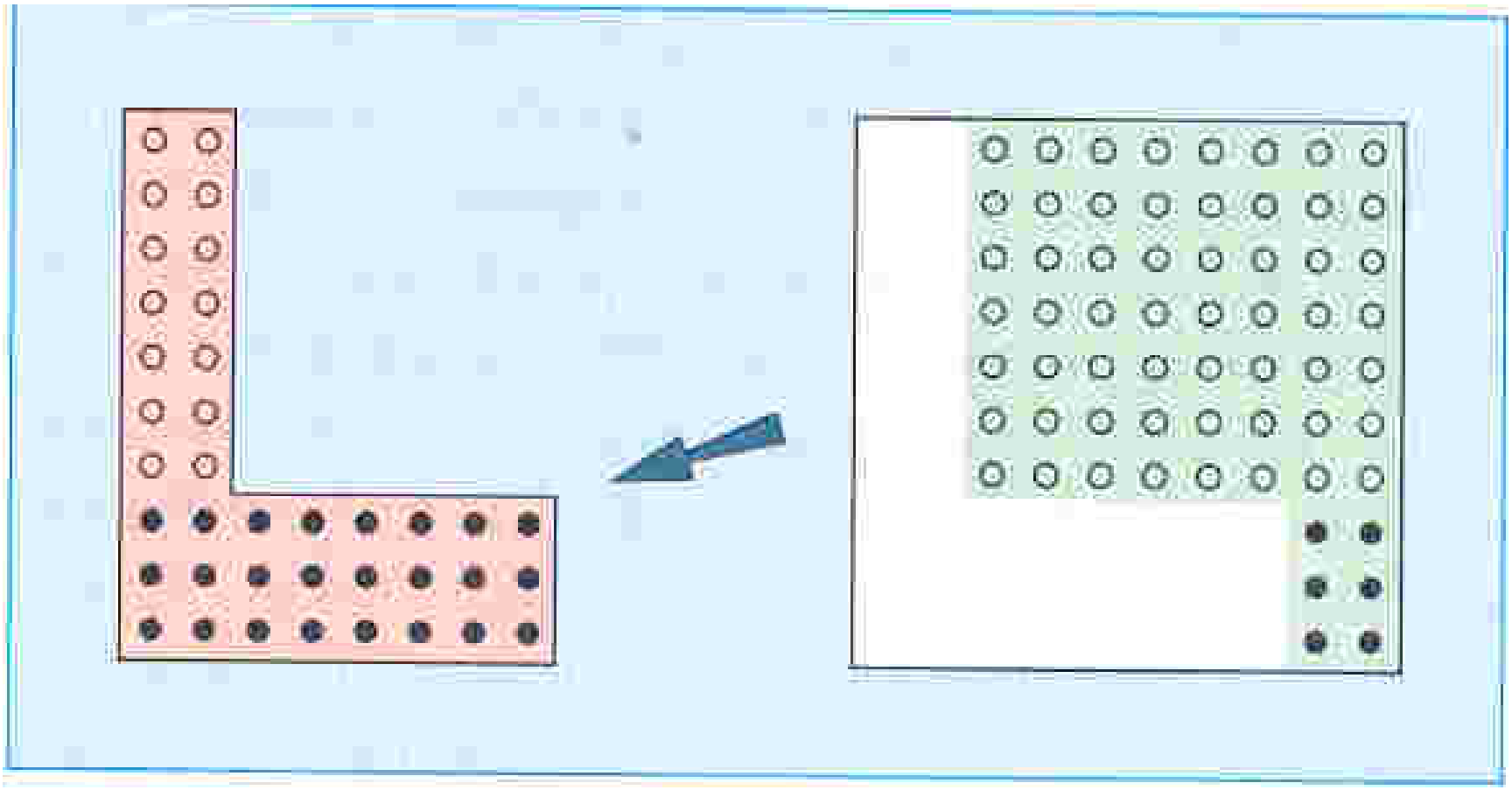


Fig 8 Positive predictive value

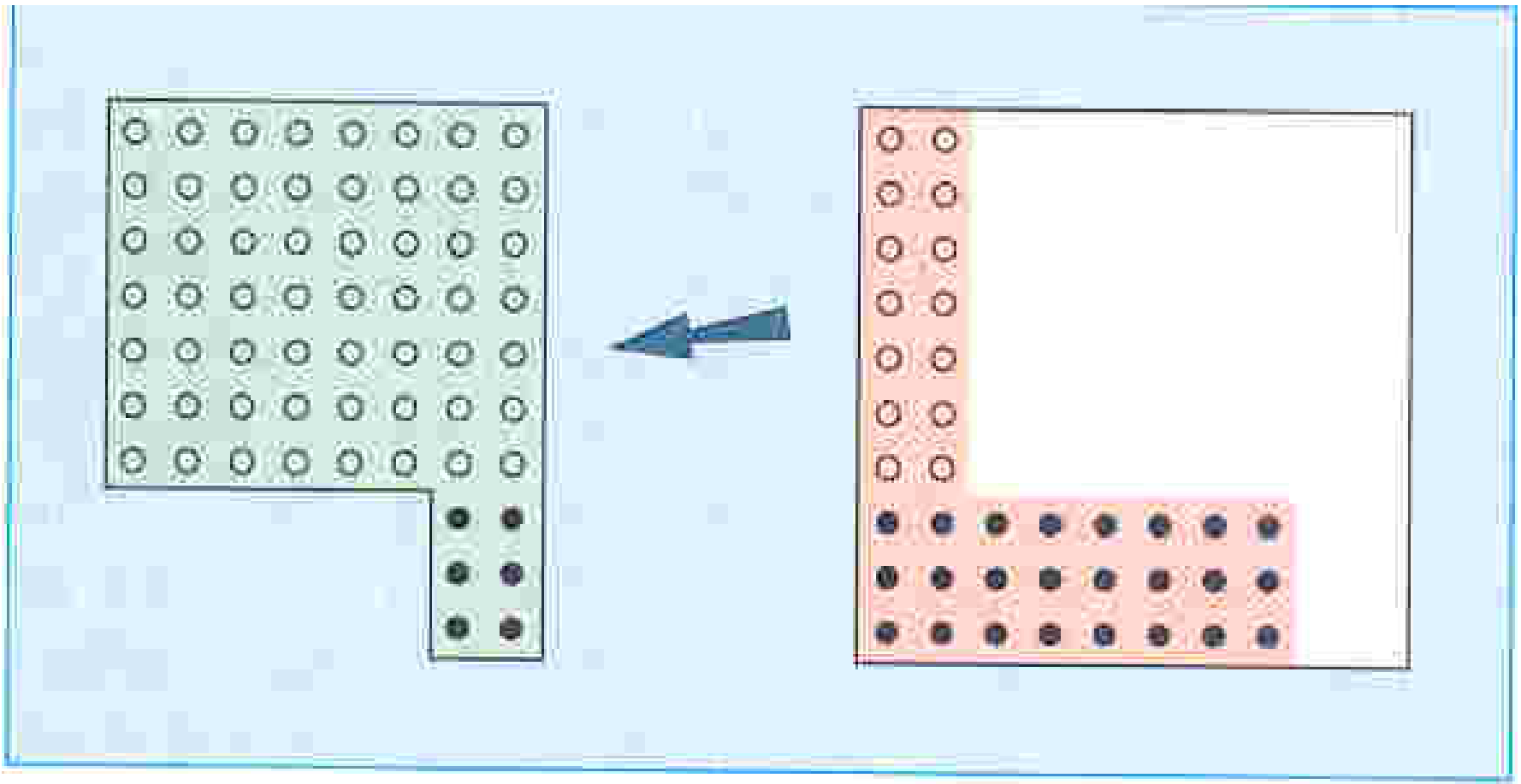


Fig 9 Negative predictive value

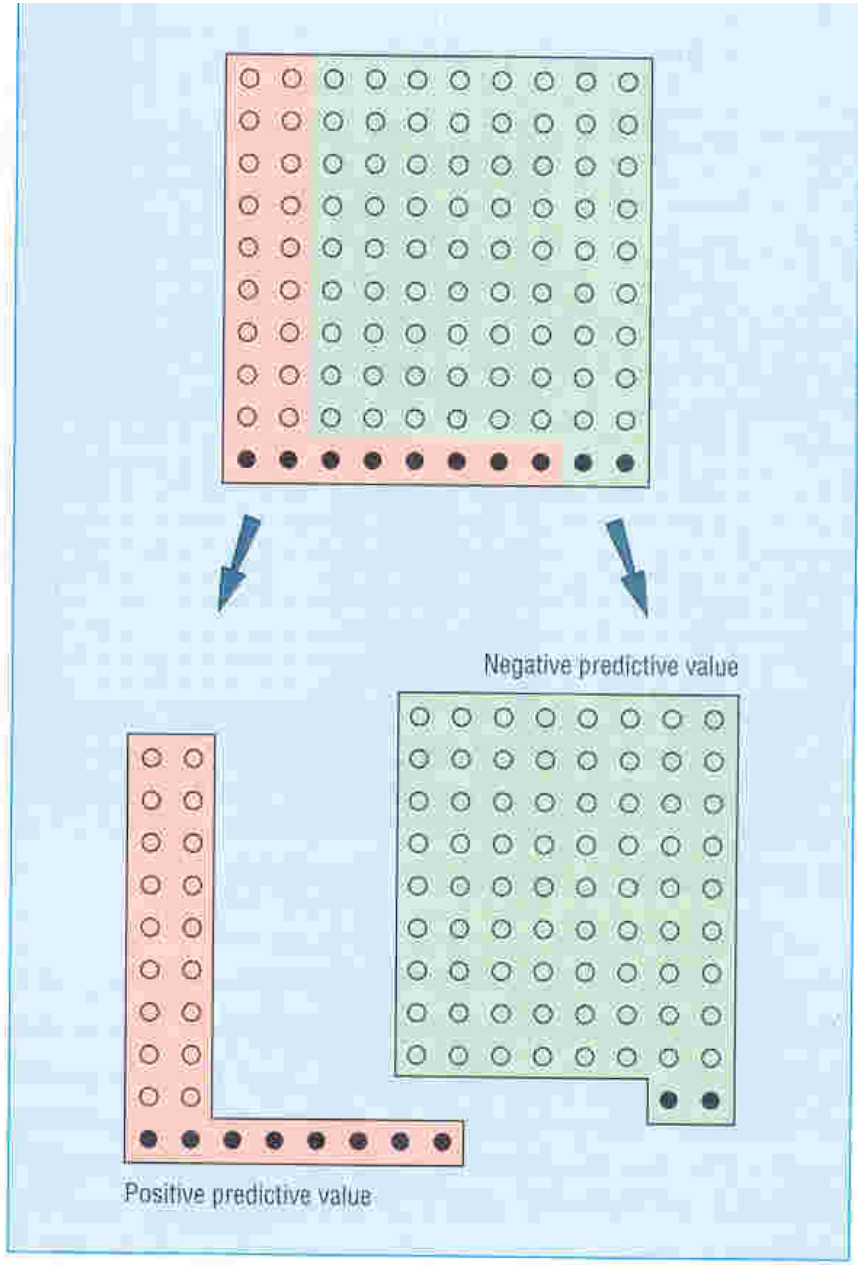


Fig 10 Results of testing population with disease prevalence of 10%

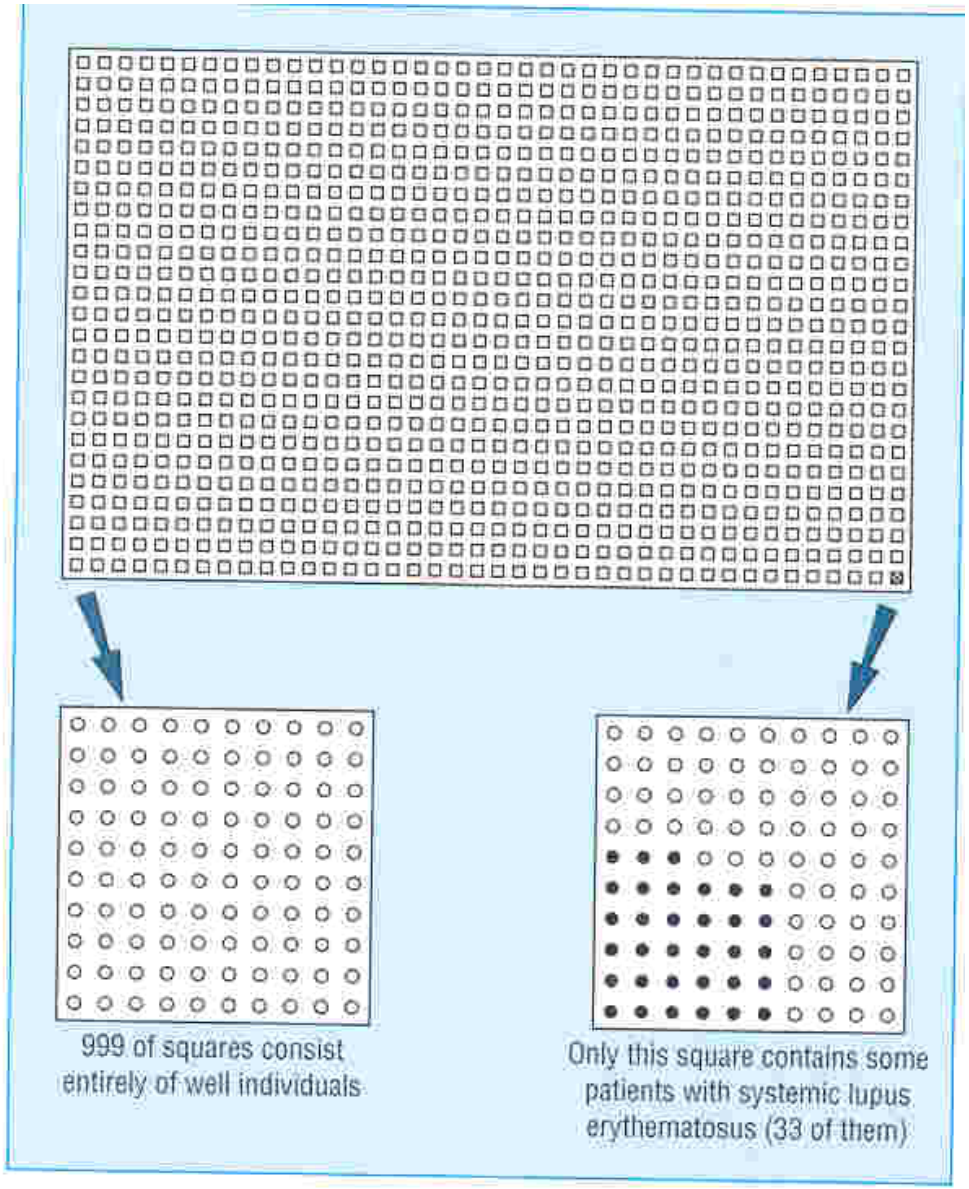
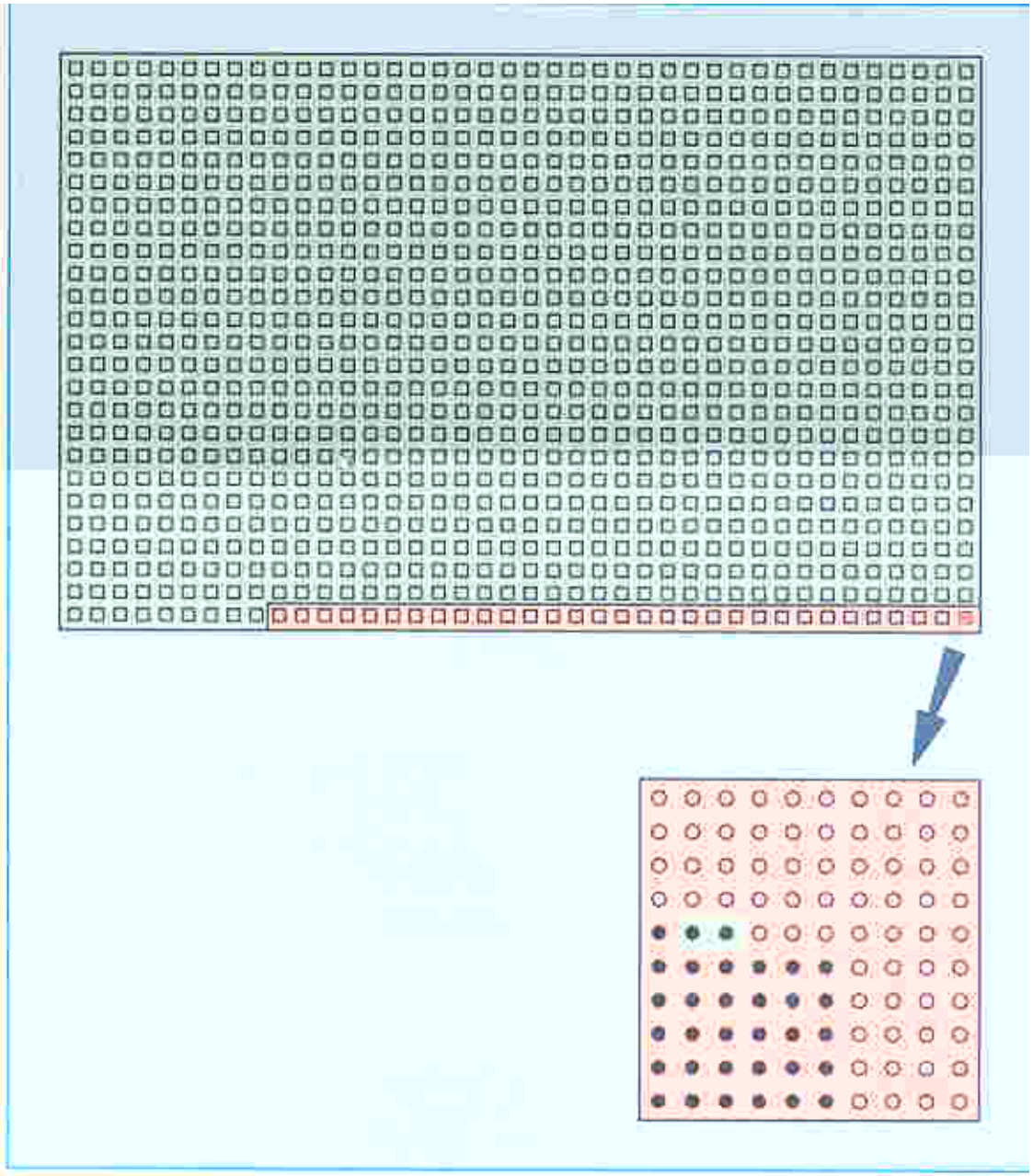
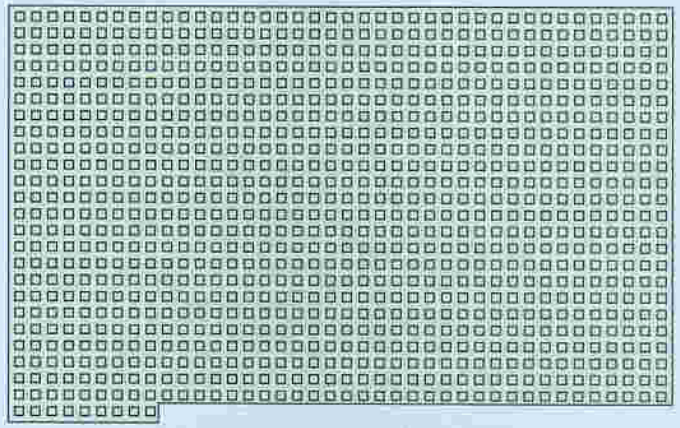


Fig 11 Prevalence of systemic lupus erythematosus





No of true negatives = 96 900

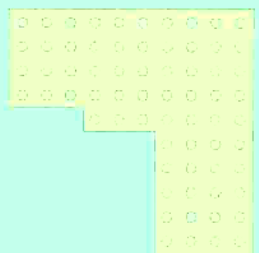
No of false negatives = 2

Negative predictive value = $\frac{96\,900}{96\,900 + 2}$

= 99.99%

No of true positives = 31

No of false positives = 3067

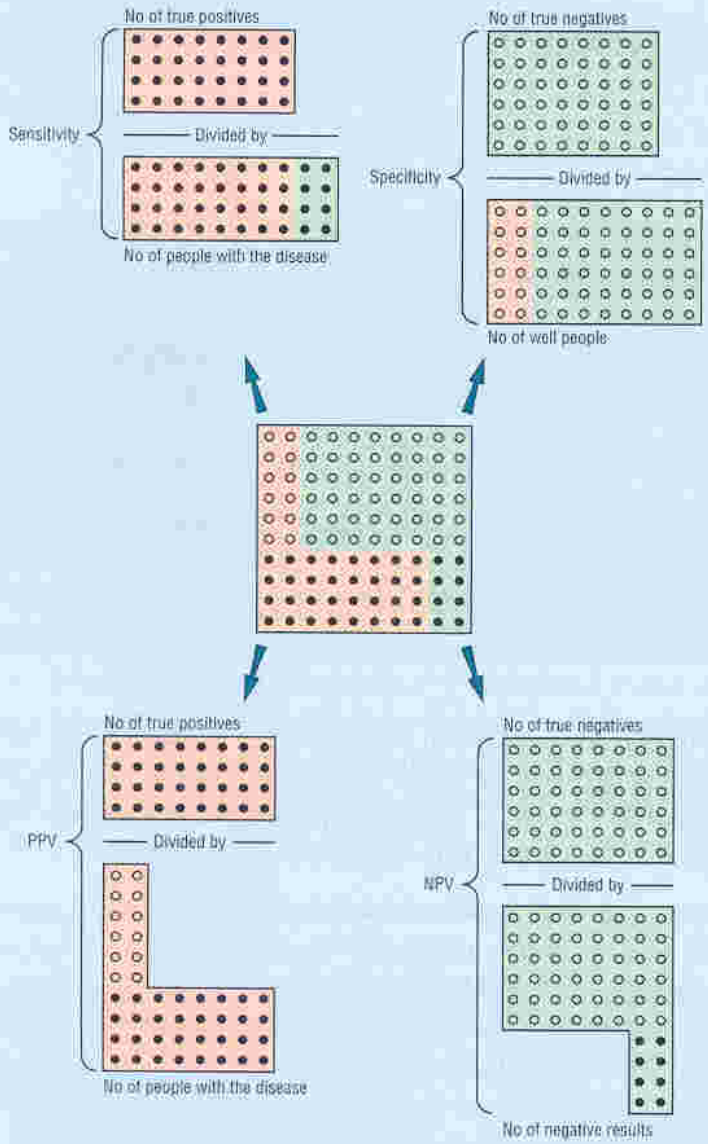


Positive predictive value = $\frac{31}{31 + 3067}$

= 1%

g 12 (cont) Results of antibody incidence test in systemic lupus erythematosus, showing negative and positive predictive values

Summary points



- For a given test, the lower the prevalence of the disease, the lower the positive predictive value
- Since most diseases have a low prevalence in the general population, even a test with an apparently good sensitivity and specificity (>90%) may have a very low positive predictive value
- However, if this test is applied to a person with symptoms or signs of the disease, the positive predictive value will be higher, as that person is from a population with a higher prevalence of the disease