Report on Clinical Accuracy and Utility

25 August, 2017

1. Introduction

Welcome to the NIHR Diagnostic Evidence Co-operative Newcastle's Clinical Diagnostic Accuracy and Utility application report. The results of your analysis are reported below.

The test detects the condition with sensitivity 80% and specificity 80%. These accuracy statistics were measured in a study population size of 300 where the prevalence of was 40%.

Figure 1. is a plot of the post-test probability of having againist the pre-test probability of having , the prevalence. The green and orange ribbons represent the 95% confidence interval around these values.

The vertical line indicated the pre-test probability or prevalenceof (40%). Where this cuts the green and orange lines, give the probabilities that if the result of is negative, then is absent, and if the the result is positive, then is present.

Figure 2. shows how decisions are made with information from a diagnostic test. The clinical utility of the test is the net benefit to patients, and is determined by the outcomes which follow from the management decisions made on the basis of the test's results. Thus, the first step to assessing clinical utility is to understand the factors that determine decision-making.

The threshold for decision making to <e.g. treat> is 0.5. This is shown by the orange line. The threshold for <e.g. do not treat> is 0.5. This is shown by the green line.

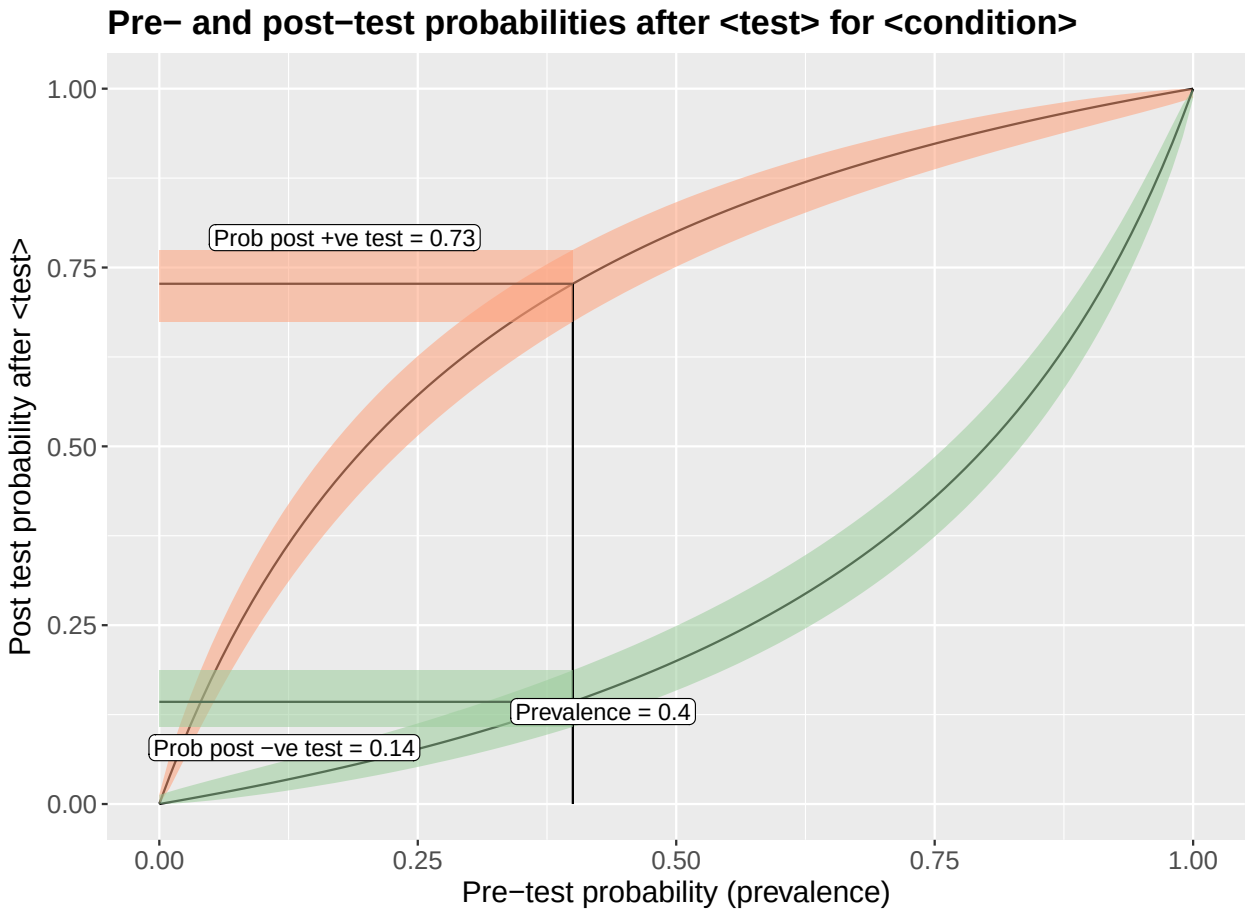

Figure 1: Post test probabilities

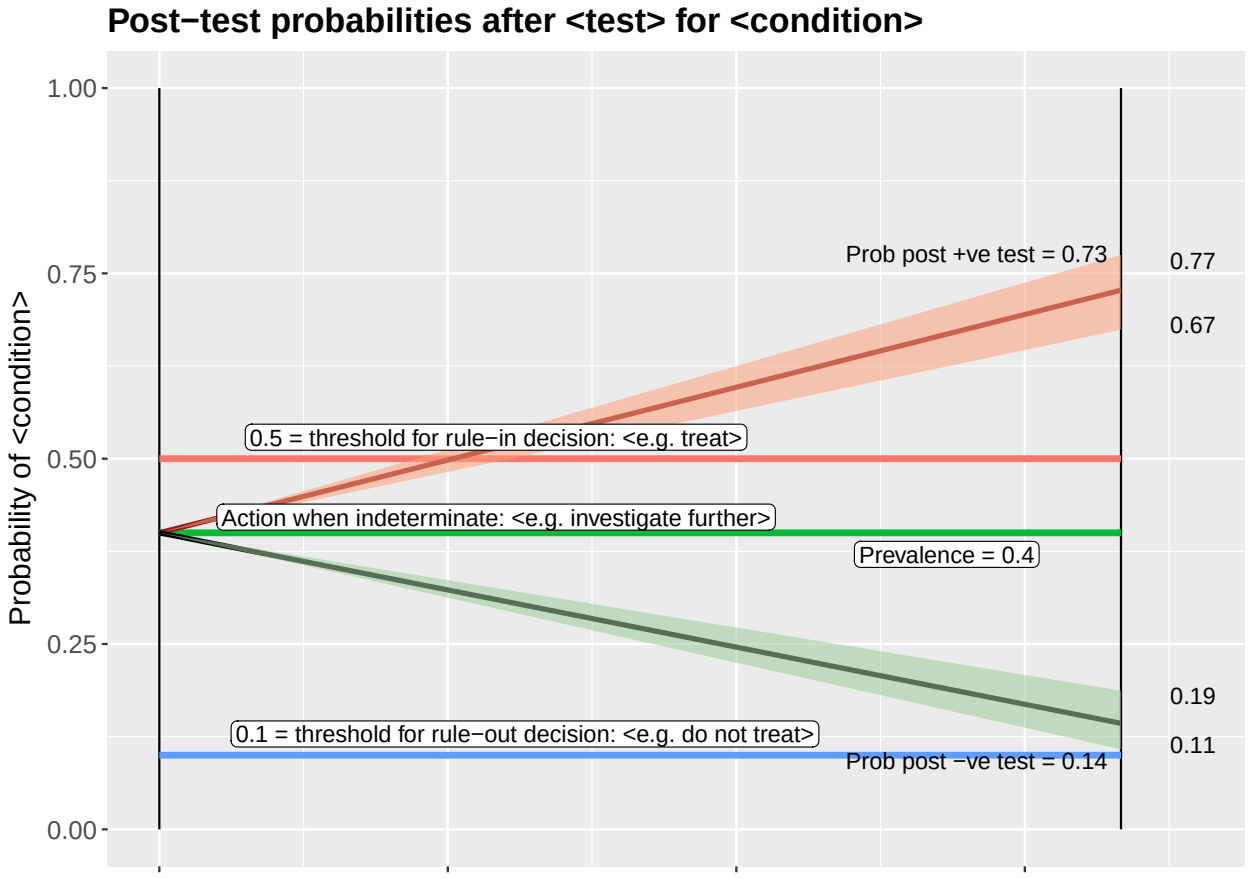

Figure 2: Clinical decision making thresholds