As a high quality graduate statistics student answering this exam question:

(B) Not Valid.

The statement is not valid because having different sample sizes between groups does not prevent us from making valid statistical comparisons. Statistical methods are specifically designed to account for different sample sizes. What matters is that:

1) The patients were randomly selected from the larger population (reducing selection bias)

2) Patients were randomly assigned to treatment groups (controlling for confounding variables)

3) The sample sizes (100 and 150) are both sufficiently large for statistical inference

From the dotplots, we can see that the new formula appears to provide faster relief (distribution centered around 40-50 minutes) compared to the old formula (distribution centered around 60-70 minutes).

Statistical tests like t-tests, ANOVA, or appropriate non-parametric alternatives can properly account for the different sample sizes when comparing the two treatments. The unequal sample sizes might affect statistical power, but they don't invalidate the comparison itself.