Introduction: There is a problem related the number of 3rd year medical students who pass the faculty examination but fail the National Licensing Examination step 1 (NLE1), therefore screening material for such a group is needed.

Purpose: To determine the sensitivity level of the screening material that investigates the medical students who get a low score in the pre-clinical course.

Method: The data was collected by using a cross sectional study. The population was 2nd and 3rd year medical students. There were 2 main materials, the first was created from the grade of the Basic Sciences in the 1st and the 2nd year students. The medical students was divided into 2 groups: the risk group in second year students was those who received D+, D, E and C in at least 2 subjects. The risk group in 3rd year students was those who got D+, D, E and C in at least 3 subjects. The material was tested by a screening test with NLE 1, which was accepted for standard score, and a diagnostic test was used for analysis.

Results: Both materials showed high sensitivity levels at 91.2%, and 95.9%. The positive predictives were 96.7% and 80.3%.

Conclusion: Both screening test materials can extract the high risk medical students’ failure in NLE, which can be used for surveillance and setting an intervention program to help them.