

INTRODUCTION

Serious gaming is defined as the use of game principles for the purposes of learning and training. The idea shares aspects with simulation generally, but explicitly emphasizes the added pedagogical value of fun and competition.

Computer applications provide students the opportunity to train clinical decision-making without any risk for the real patients and the elements of gamification makes learning more efficient and pleasant.

AIM OF THE STUDY

Our goal was to create an e-learning platform with interactive patients scenarios, which would have user-friendly interface and provides students maximal independence in clinical decision-making.

Aims of the pilot study:

- » **initial assessment** of students' interest in the project
- » to collect their **suggestions** for future improvements
- » to find and **fix potential errors**

APPLICATION

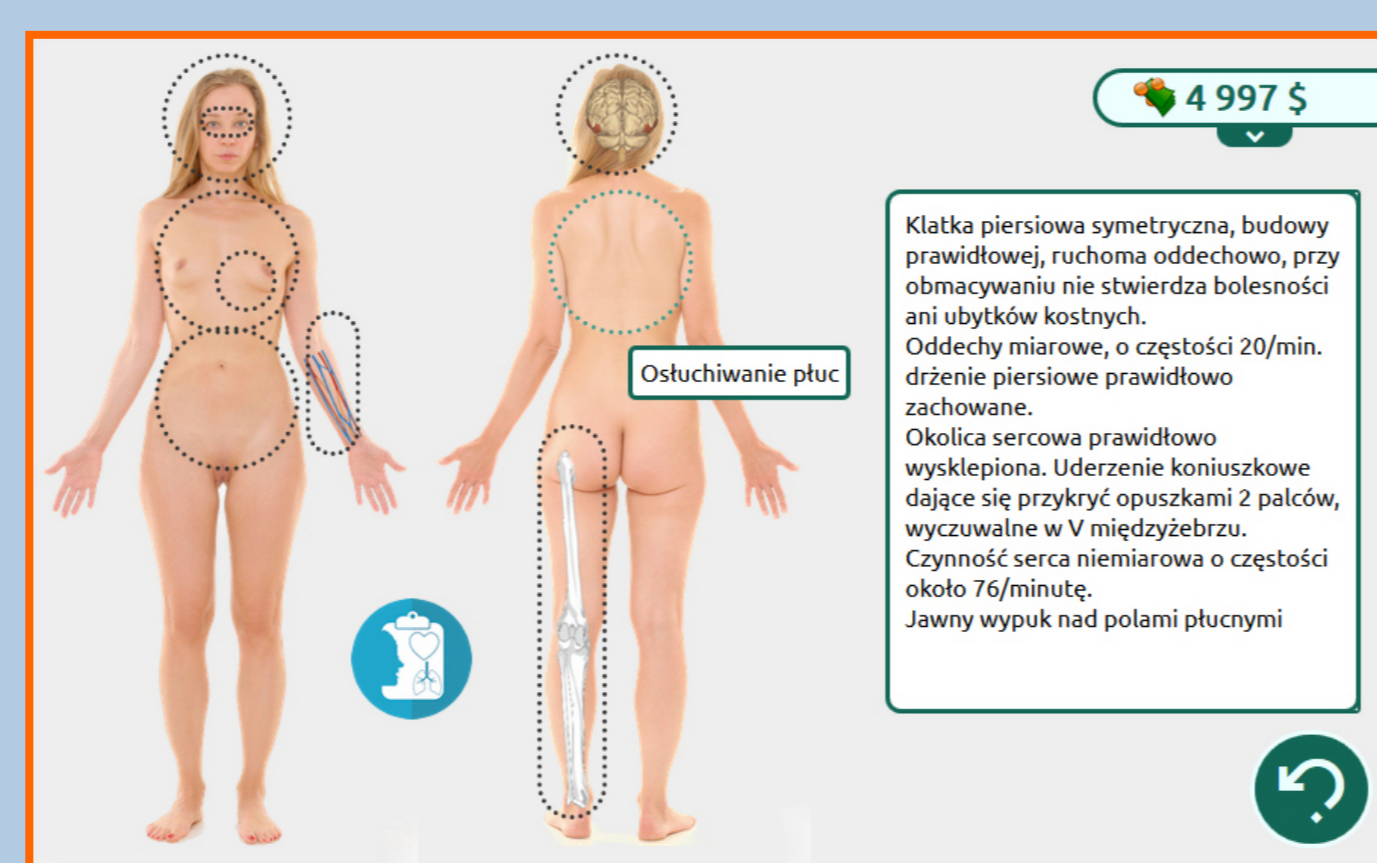
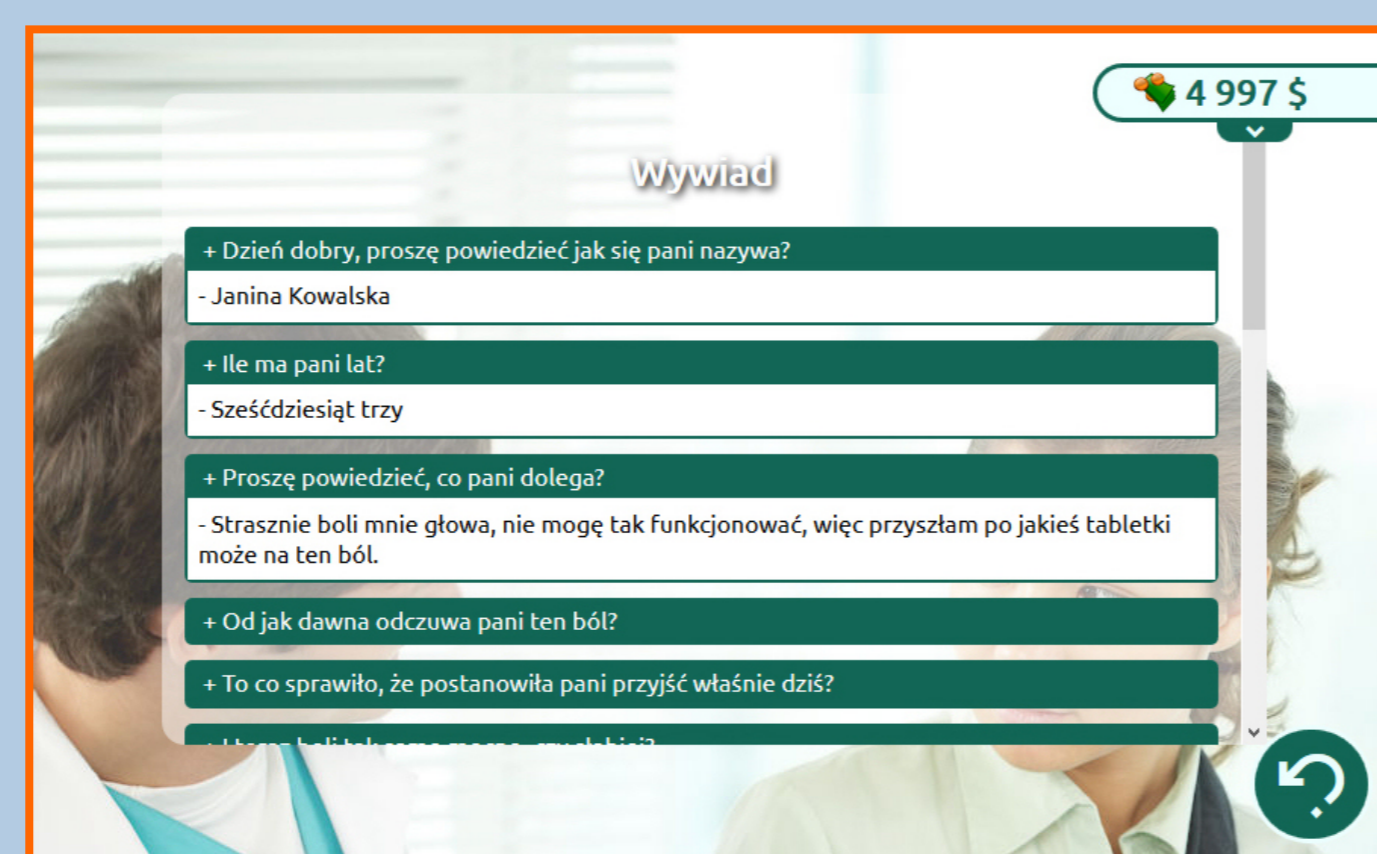
General information & User's interface

- » 12 modules corresponding to elements of the diagnostic process
- » Order and number of ordered tests depend on the student
- » Limited budget
- » One medical case to solve - cerebellar stroke with typical symptomatology



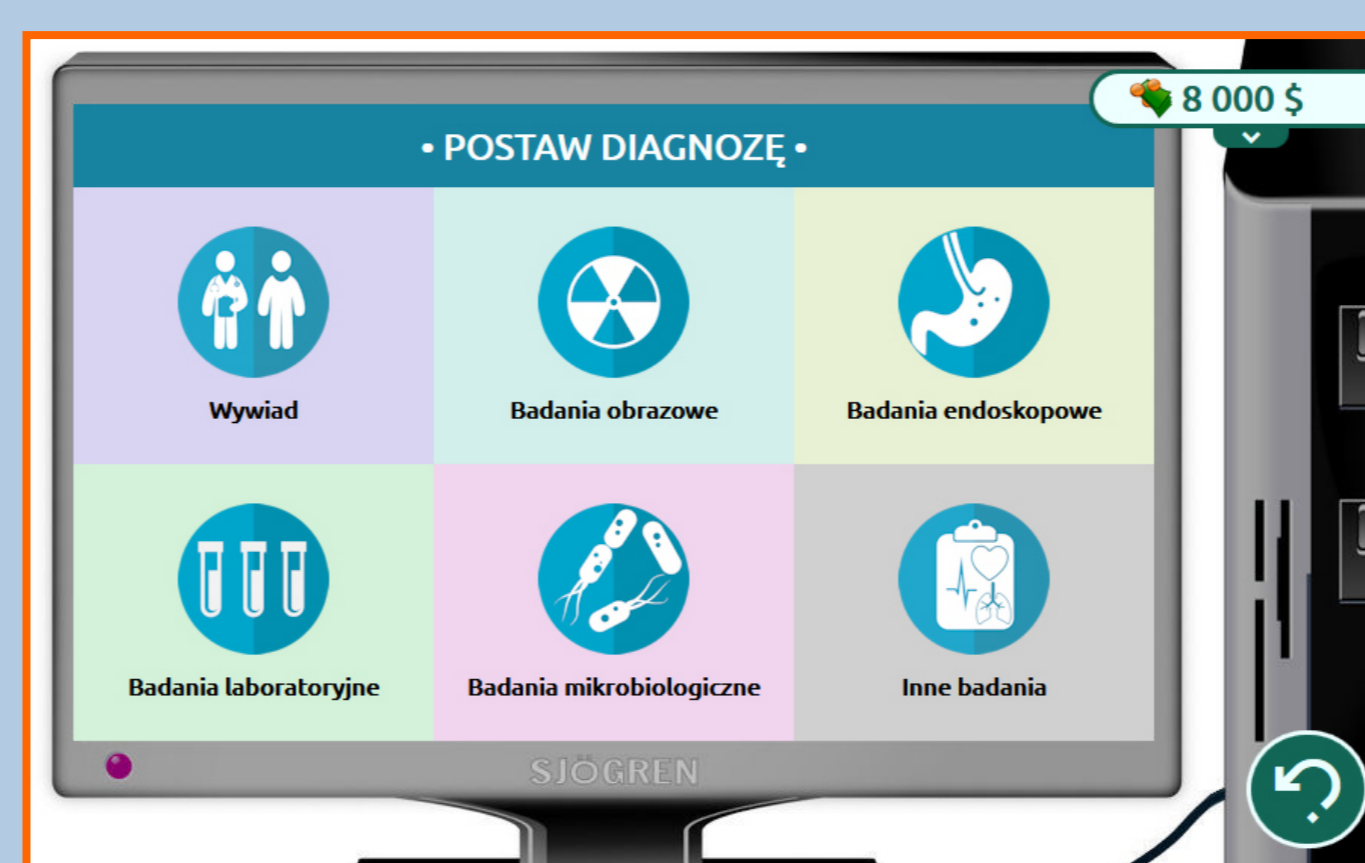
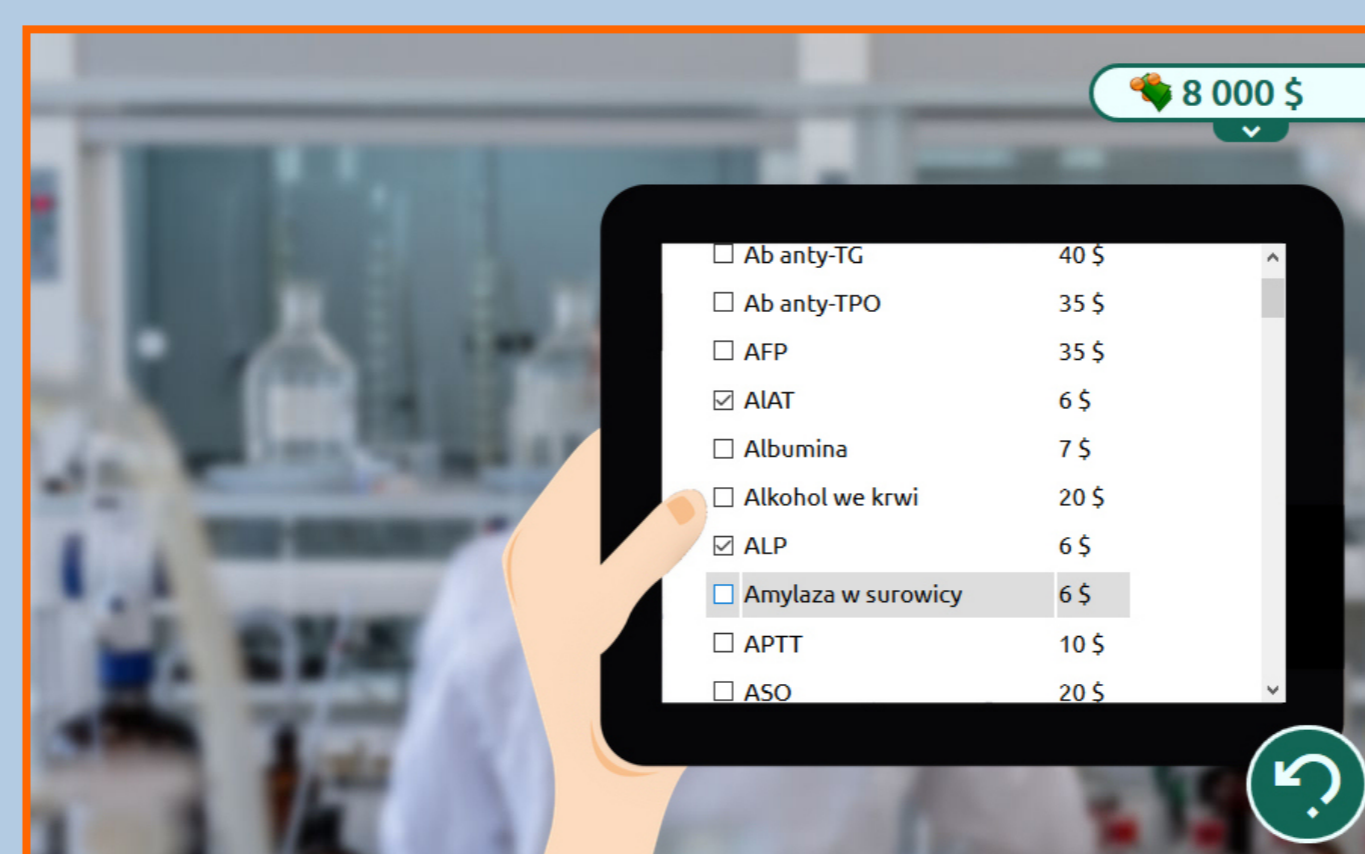
Medical history & Physical examination

- » Transcription of the full conversation with the patient
- » Interactive examination module available after finishing the quiz



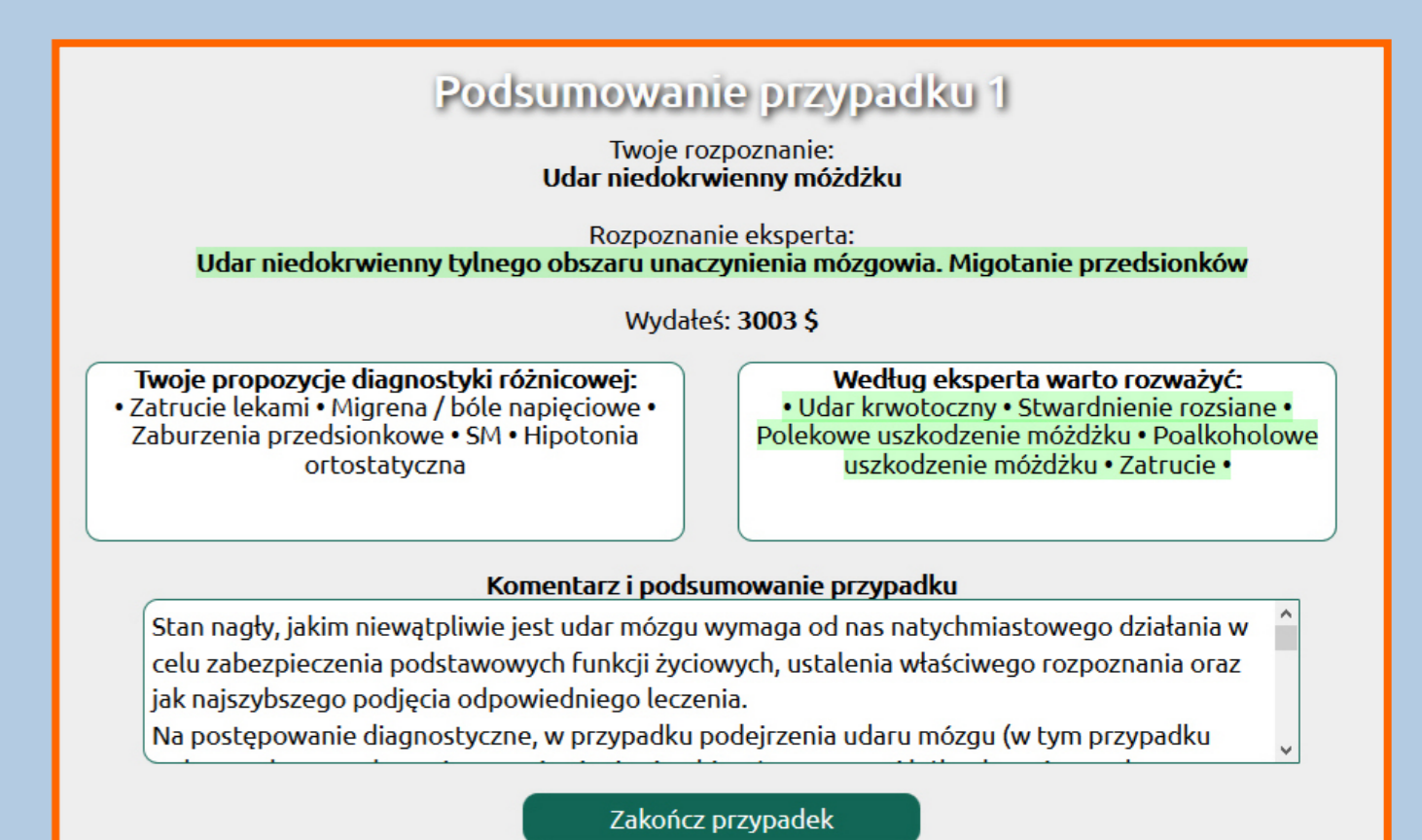
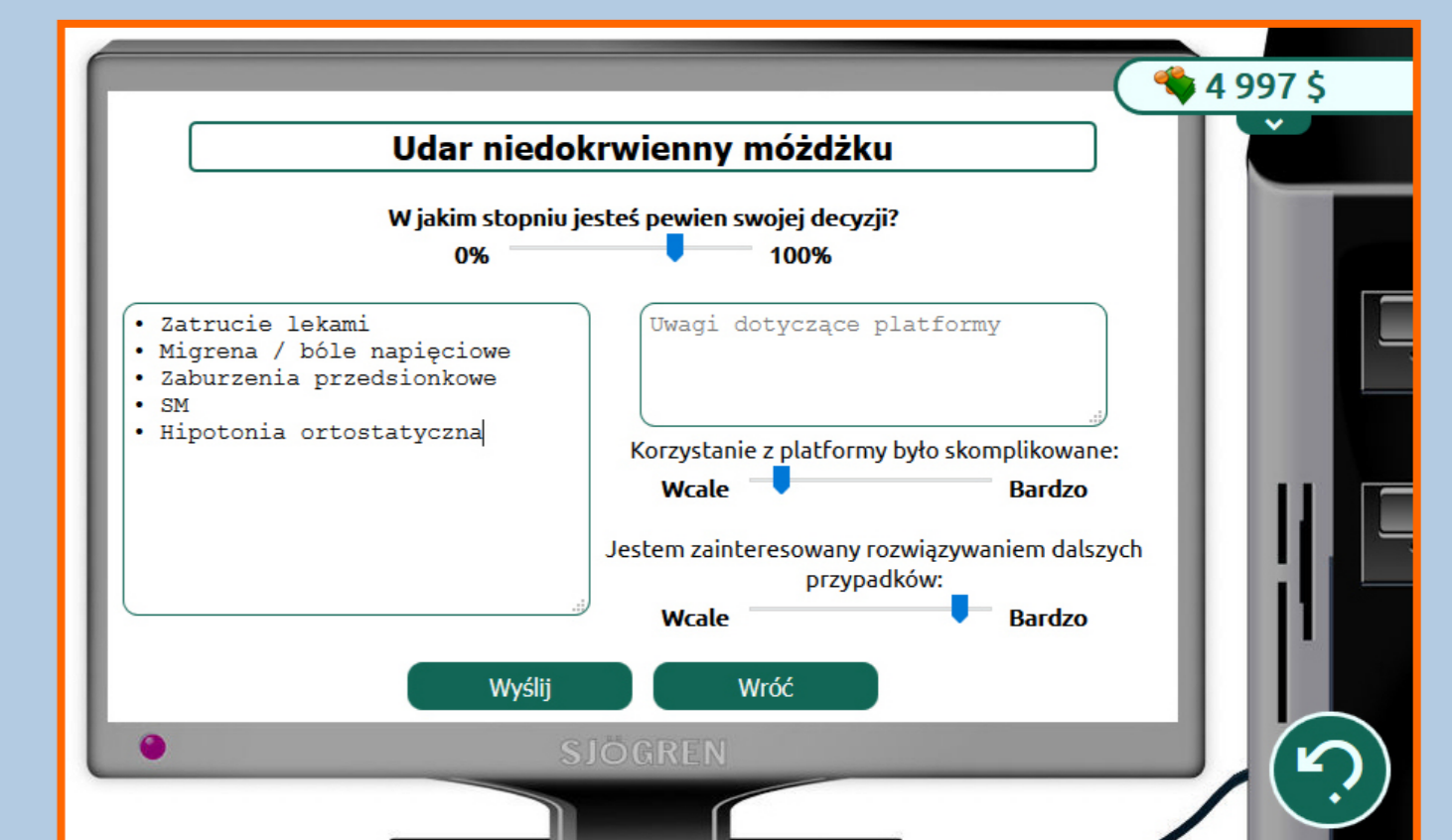
Additional tests

- » Access to over 135 additional tests (i.a. CT, MRI, US, laboratory tests)
- » Each test has its own cost based on a real price lists



Diagnosis & Survey

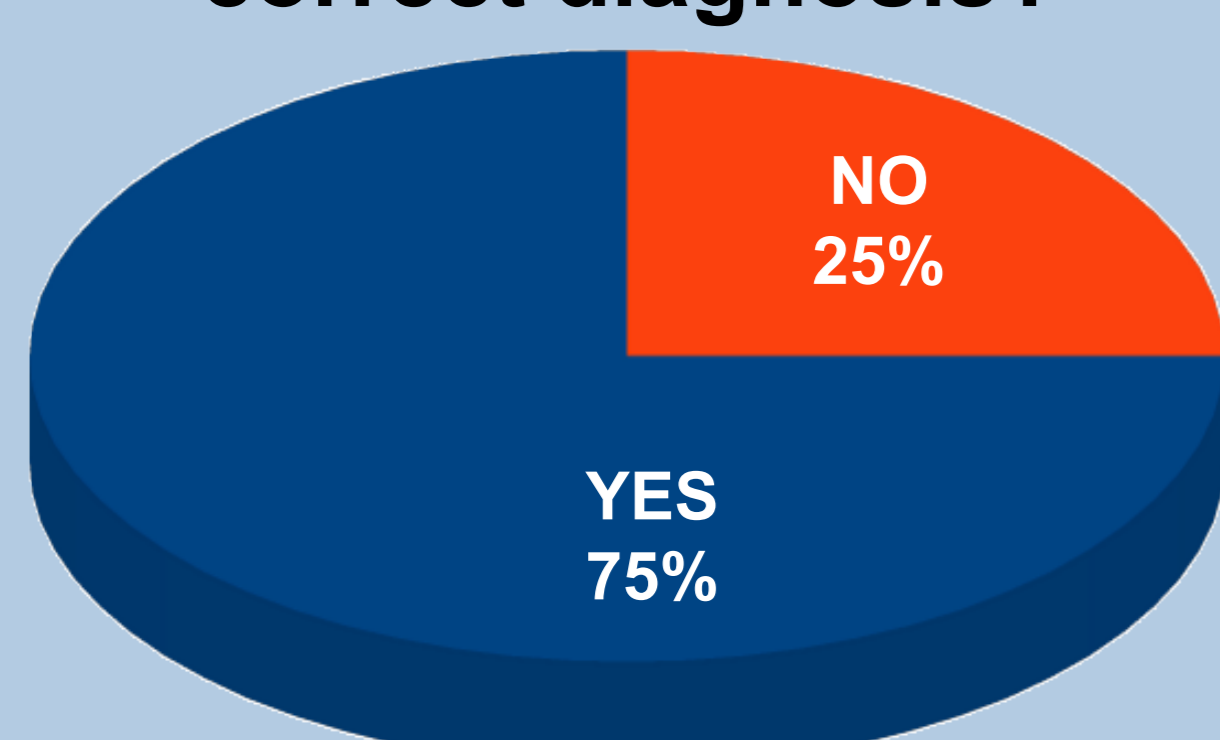
- » Form consisting of main diagnosis with its confidence level and differential diagnosis
- » Short questionnaire assessing i.a. the user-friendliness of the interface and students' interest in solving further cases



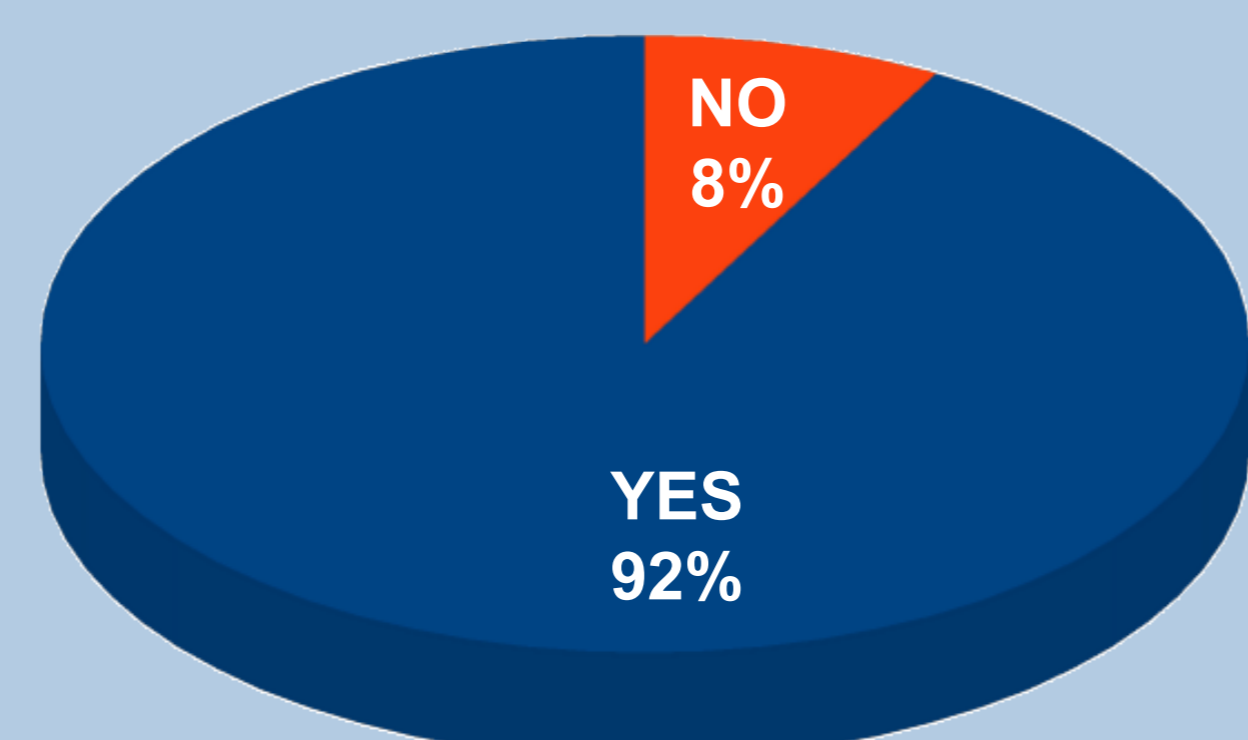
RESULTS

- » **20** students of different years and universities were invited to participate in the study, **18** of them registered in the application
- » **12** students finished the case and completed the survey

Did the students make the correct diagnosis?



Are they interested in solving further cases?



User-friendliness of the interface was:



CONCLUSIONS

Created platform still needs some fixes, especially related to the case structure. Despite this, the project was well received by students, who were interested in further using of the application. We consider online serious games to be an up-and-coming solution that provides freedom to try out students' ideas without negative repercussions.

REFERENCES

1. Cain J, Piascik P: *Are Serious Games a Good Strategy for Pharmacy Education?*, American Journal of Pharmaceutical Education, 2015;79(4):47
2. Kononowicz AA et al.: *Virtual patients – what are we talking about? A framework to classify the meanings of the term in healthcare education*, BMC Medical Education. 2015;15:11