

iScreen: A Tailored-Made Approach to Regular Screening Tests

Rafael F. CHIS^a, Smaranda I. CODREANU^a, Adrian RUS-DALALAU^b, Paula S. FERENCZI^c, and Flavia C. ANDRON^d

^a Medicine Faculty, University of Medicine, Pharmacy, Sciences and Technology „George Emil Palade” of Târgu Mureș, Romania

^b Industrial Engineering Faculty, University of Medicine, Pharmacy, Sciences and Technology „George Emil Palade” of Târgu Mureș, Romania

^c Medical Engineering Faculty, University of Medicine, Pharmacy, Sciences and Technology „George Emil Palade” of Târgu Mureș, Romania

^d Automatics and Applied Informatics Faculty, University of Medicine, Pharmacy, Sciences and Technology „George Emil Palade” of Târgu Mureș, Romania

E-mails: chisrafael98@gmail.com; smaranda.codreanu@yahoo.com; adrian.dalalau@gmail.com; ferenczi.paula@yahoo.com; flavia.andron@gmail.com

* Author to whom correspondence should be addressed

Abstract

Background: Romania has one of the highest rates of mortality from preventable diseases per 100.000 in the European Union and the highest rates of treatable causes of mortality. This problem further deepens when combined with an overall lack of access and advertising for national screening programs. *Materials and Methods:* Following the digitalization trend, we started by identifying the aforementioned problems so our idea aims to act as a digital assistant to both the people from the target group and family doctors. The platform is designed to provide screenings tests regarding four major disease categories: cancer (the 10 most common forms depending on the gender), diabetes, cardiovascular diseases and mental disorders. *Results:* The platform starts with the user's registration, followed by some easily accessible and short forms to gain input on personal data. The platform's sorting algorithm decides based on the user's data which are the risk levels for each of the common diseases that we aim to include for screening tests. Then, the user can access more information about the recommended medical investigations, check for any national screening programs available and even look into our partners' offers in an environment that works as a market platform. *Conclusion:* Screening tests save people's lives and ensuring a digital tool for them is a much needed product in modern times. With the help of the *iScreen* platform, the National Health System of Romania and especially family doctors would be able to reach out to a wide range of users without a significant increase in costs. The future prospects of such a platform are bright and it leaves space for further additions and upgrades along the road.

Keywords: Screening test; Digitalization; Healthcare; Platform; Life quality