

SUMY STATE UNIVERSITY  
MEDICAL INSTITUTE



«**BIOMEDICAL  
PERSPECTIVES**»

**ABSTRACT BOOK**

International Scientific and Practical Conference  
of Students, Postgraduates and Young Scientists

(Sumy, October 16-18, 2019)

Sumy  
Sumy State University  
2019

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
SUMY STATE UNIVERSITY  
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## CORRELATION BETWEEN THE RESULTS OF CALCULATING DIFFERENT TYPES OF FIBROTEST USING THE MOBILE APPLICATION FOR ANDROID

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**Introduction.** Chronic infection with hepatotropic viruses causes a long-term inflammatory process, necrosis, fibrosis, and may lead to the development of liver cirrhosis and hepatocellular carcinoma. It is the degree of severity of liver fibrosis that shows the state of functional capacity of this organ. Lately, non-invasive liver diagnostic methods are gaining in importance. This is due to the minimal financial cost and the ability to quickly get an indicative result for any patient.

**The aim of the study.** To establish correlations between the results of various noninvasive screening methods (Fibrotest METAVIR, APRI-test and FIB-4) that were calculated using the Android mobile app.

**Materials and methods.** 72 people who had a diagnosis of chronic viral hepatitis C took part in the study. They had a clinical and biochemical blood test, as well as a blood test for Fibrotest METAVIR. Fibrotest METAVIR, APRI-test and FIB-4 were calculated using the Android application.

The statistical processing was done using the Microsoft® Office program package and the SPSS Statistics program 23. Correlation relations were studied using the Spirman correlation coefficient.

**Research results.** In the group of examined patients, the majority were men (70.83%) compared to females (29, 17%). According to the results of calculation the degree of fibrosis by the Fibrotest METAVIR method, the majority of patients had F2 (36.11%); fibroz F4 and F0 twice less frequently (by 18.06%); 2,6 times less often - F1 (13,89%) and 3,25 less often - F3 (11,11%). In calculating of the APRI-test and FIB-4, the majority of patients showed low probability of significant fibrosis.

In calculating the Spirman correlation coefficient, it was found that the APRI-test and FIB-4 had direct correlations with Fibrotest METATVIR ( $p < 0.01$ ;  $r = 0.358$  and  $r = 0.473$ , respectively), but the binding force was higher when calculating the value using FIB-4. In both versions of the Chaddock scale, the binding force was moderate.

**Conclusions.** Thus, among the examined, the highest number were men with an average degree of fibrosis. The obtained direct proportional relationships indicate that the higher the value of the APRI test and FIB-4, the higher the degree of fibrosis by the method of Fibrotest in METAVIR. Therefore these indices provide information not only about the probability of significant fibrosis, but also directly on the degree fibrosis.

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НАУКОВЕ ВИДАННЯ

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### ABSTRACT BOOK

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