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## PRELIMINARY RESULTS OF STUDYING GP73 AS A TUMOR MARKER IN PATIENTS WITH CHRONIC VIRAL HEPATITIS AND LIVER CIRRHOSIS OF VIRAL ETIOLOGY

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*Key words: GP73, chronic viral hepatitis, liver cirrhosis, tumor marker, hepatocellular carcinoma*

### Introduction.

Around 700,000 cases of verified hepatocellular carcinoma (HCC) are registered annually around the world. In terms of frequency of occurrence among cancer diseases, HCC ranks fifth, and among the causes of death in patients with cancer, it has moved from third to second place [1, 2, 3]. The incidence rate of HCC per 100 thousand population in different countries of the world ranges from 1.7 (Northern Europe, Canada) to 30.0 (China) [4, 5]. In some countries, 6000-8000 new cases of this pathology are diagnosed annually. Globally, hepatocarcinoma is registered three times more often in men than in women [6, 7]. Also, there is a significant difference in the prevalence of HCC among people of different races: Negroids are affected twice as often as Mongoloids, and Americans are affected twice as often as Hispanics. HCC is most often observed in patients with liver cirrhosis (LC) of HBV and HCV etiology, as well as in persons who abuse alcohol and suffer from fatty liver degeneration [8]. Considering that in the early stage of the disease HCC does not manifest itself clinically, in more than 50% it is verified very late, often against the background of the development of metastases in other organs. With early detection of tumor formation, the prognosis of the disease is relatively good and the five-year survival rate of patients is more than 70% [9, 10]. These data create the need to conduct research to find new inexpensive and practically accessible tumor markers for HCC for widespread screening. Particular attention is paid to the search for tumor markers to identify hepatocarcinoma, which would allow the tumor to be verified with a sufficiently high probability in the early stages of development, when instrumental research methods are still uninformative [11]. Considering the above, the study of new markers in the diagnosis of liver fibrosis/cirrhosis and HCC is one of the main directions of modern medicine.

The aim of this research: The purpose of this study was to study the diagnostic significance of the GP73 marker - as a tumor marker in the development of hepatocellular carcinoma in patients with chronic viral hepatitis B and C and liver cirrhosis of viral (HBV, HCV) etiology.

### Material and methods of research:

In the clinic of the Research Institute of Virology of the Republican Specialized Scientific and Practical Medical Center for Epidemiology, Microbiology, Infectious and Parasitic Diseases (Research Institute of Virology RSSPMCEMIPD) in 100 patients with chronic viral hepatitis (18 patients) and liver cirrhosis of viral (HBV, HCV) etiology (82 patients). The age of the patients ranged from 19 to 65 years (average age 40.7 years). There were 56.0% men, 44.0% women. In all patients, the content of AFP

(normal range from 0 to 5.8 IU/ml) and GP73 (considered elevated when >20 units) was studied as markers of the tumor process. Statistical processing of the research results obtained was carried out using a computer program designed for statistical data processing.

**Results:** Among the 100 patients examined, 48 had increased levels of both AFP and GP73. Among 48 patients, 5 (10.4%) patients were diagnosed with a liver tumor instrumentally (ultrasound examination - ultrasound, computed tomography - CT). These patients were hospitalized to undergo liver biopsy. Among 50 patients with a normal AFP level, 26 (52.0%) patients had a high GP73 level. Among these 26 patients, 17 (65.4%) were diagnosed with liver cirrhosis of HBV and HCV etiology, and 9 (34.6%) patients were diagnosed with chronic viral hepatitis B and C. In these 9 patients with chronic viral hepatitis, fibrosis of the 3rd degree (F3) was instrumentally detected in all of them. Among patients whose degree of fibrosis was F0 and F1, the level of GP73 was determined within normal limits. We can conclude that the GP73 protein is the most informative predictor of the formation of liver cirrhosis and the development of hepatocellular carcinoma in patients with chronic viral hepatitis B and C, as well as liver cirrhosis of HBV and HCV etiology.

**Conclusion:** Thus, the results of the study show that an increase in the level of GP73 in the blood is a predictor of the progression of liver fibrosis to cirrhosis and the development of hepatocellular carcinoma in patients with chronic viral hepatitis and liver cirrhosis of viral etiology.

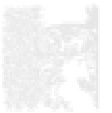
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