



Factors Influencing Liver Injury in Chronic Hepatitis C



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Introduction

Hepatitis C is caused by the hepatitis C virus (HCV), an enveloped, single-stranded RNA virus transmitted primarily through blood exposure. Chronic HCV infection leads to persistent liver inflammation, which can result in scarring (fibrosis) over time. In some cases, chronic infection can also lead to hepatocellular carcinoma (HCC).

Objectives

This study aims to evaluate the impact of various factors—alcohol consumption, smoking, sex, and genotype—on liver fibrosis progression in patients with chronic HCV infection. Additionally, we seek to assess the importance of these factors in disease progression and determine the best management strategies to optimize patient outcomes.

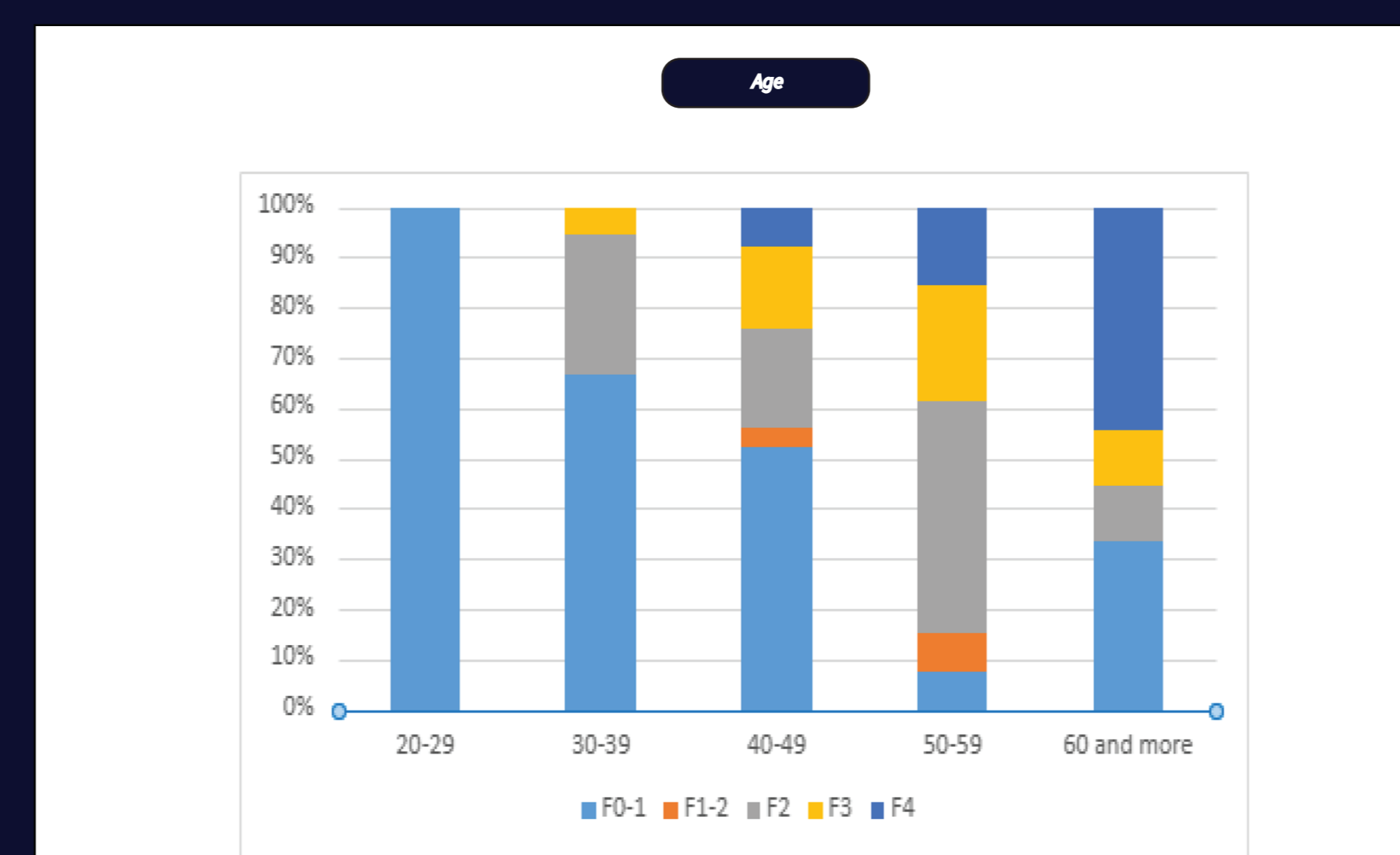
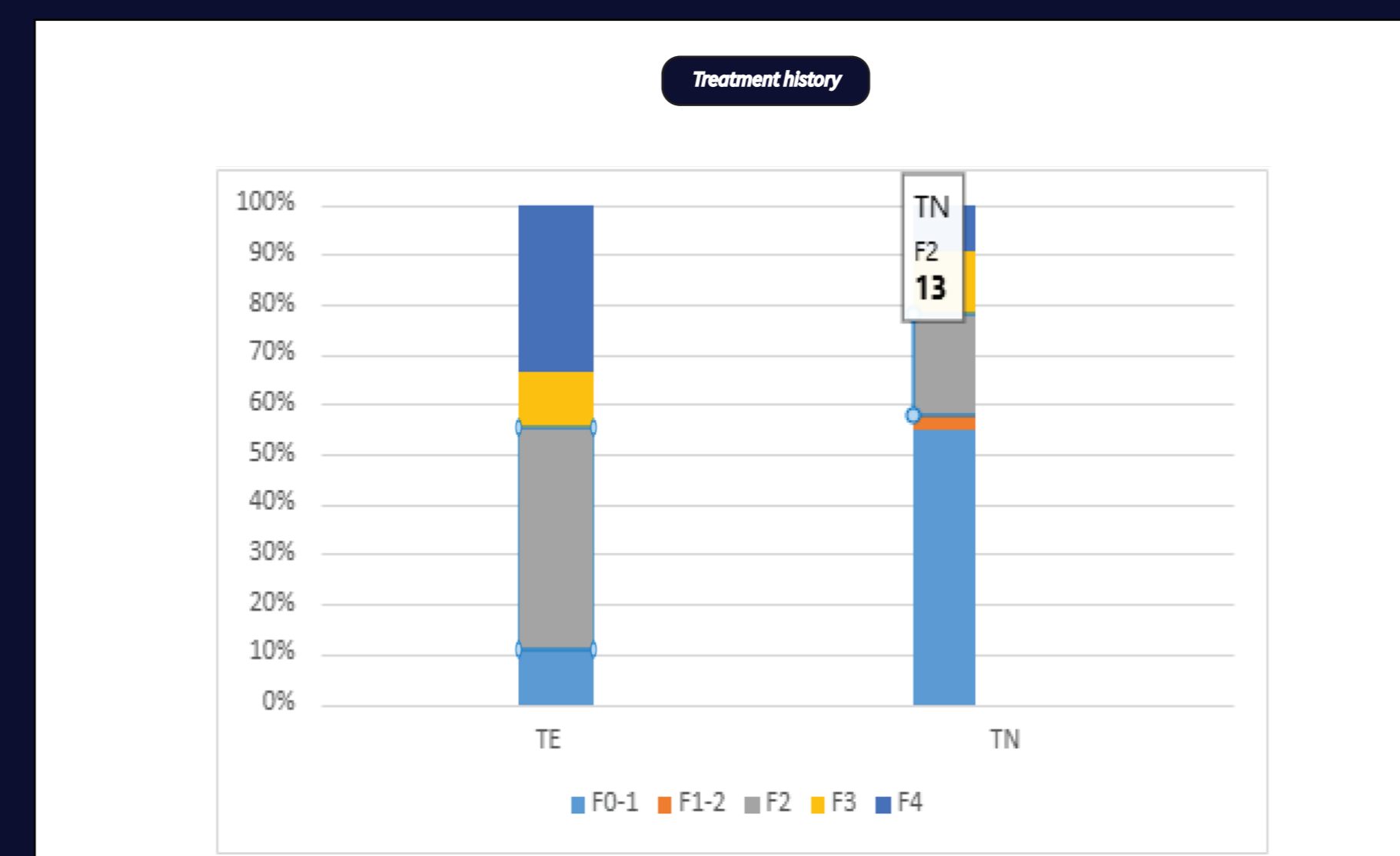
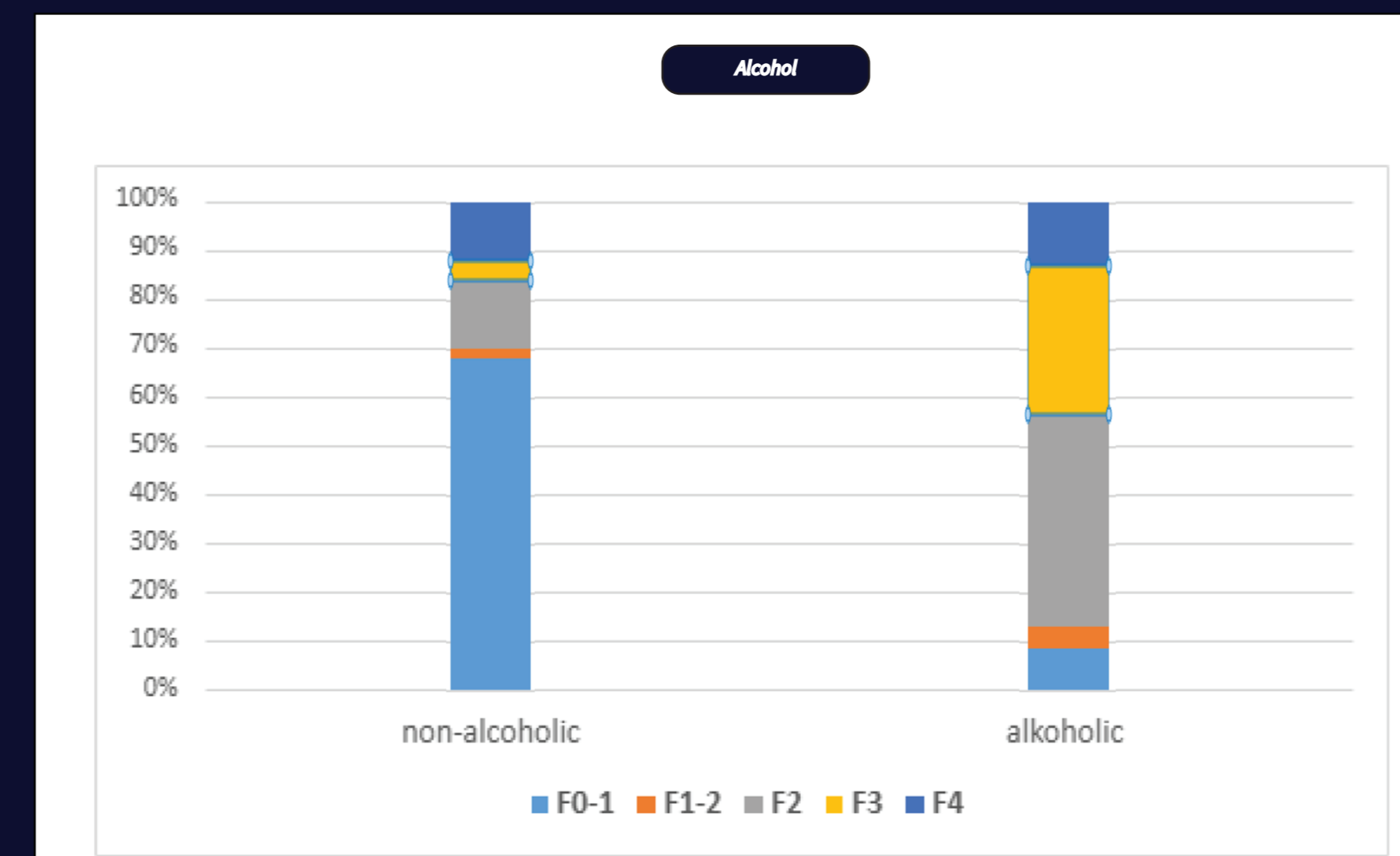
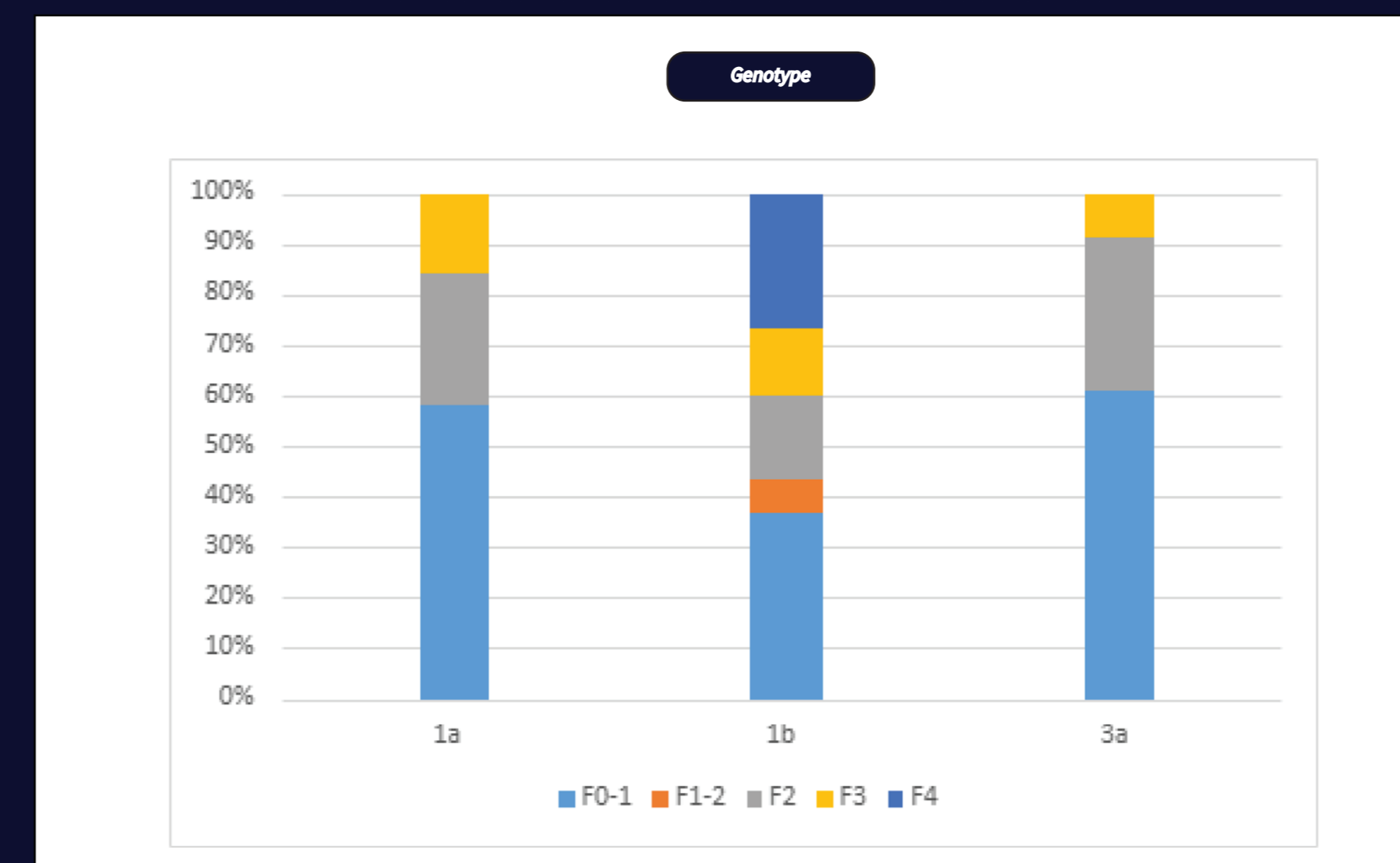
Methodology

A cohort of 80 patients diagnosed with liver fibrosis between 2020 and 2024 was investigated. We employed the cohort study method, to assess the influence of the selected risk factors on liver fibrosis.

Reference:

Harrison's Principles of Internal Medicine, Twenty-First Edition, the European Association for Gastroenterology, Endoscopy & Nutrition , patients data from 2nd internal clinic of FNOL between the years 2020 to 2024

Figure 1: the effect of different factors (e.g. genotype, alcohol, treatment history and age) on liver fibrosis



Results

By cohort, and specifically Fisher's Exact Test, we realized that Fisher's Exact Test for genotype, treatment history, alcohol and age are respectively $p=0.004/0.0001/0.034/0.017$ which shows their significant effect on the liver fibrosis. In spite of sex, cigarette which are not significant.

Conclusion

Identifying and understanding the influence of modifiable risk factors—such as alcohol consumption and smoking—can enhance disease management and slow its progression. Implementing preventive measures targeting these external factors may improve patient outcomes and reduce the overall burden of chronic hepatitis C-related liver disease.

Aknowledgement: For all analyses and IBM SPSS Statistics for Windows, Version 23 (Armonk, NY: IBM Corp.) was the software used