

San Juan Bautista, because according to the Declaration of Helsinki and Resolution 008430 of October 4, 1993, the study under discussion was considered no risk research.

The authors declare that the present document contains no personal information that could identify patients.

### Financial disclosure

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### Conflict of interest

The authors declare they have no economic interest or known personal relationships that could have influenced the content of the present document.

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## Response to the Letter to the Editor on the study «Influence of socioeconomic and cultural factors in the etiology of cirrhosis of the liver»<sup>☆</sup>



### A propósito de la carta editorial sobre el estudio «Influencia de los factores socioeconómicos y culturales en la etiología de la cirrosis hepática»

We completely agree with the comments by Marca et al. on our article<sup>1</sup>, with respect to the importance that economic factors have on the etiologic variability of cirrhosis of the liver. Different publications have shown that greater purchasing power has influenced the modification of the epidemiologic panorama of the disease, showing that the number of cases due to chronic alcohol use or obesity has increased in the higher-income countries, whereas the increase in cases is due to the hepatitis B and C viruses in lower-income countries<sup>2–5</sup>.

They also believe that the economic factors in our study were not duly analyzed and that we should have included the incomes of the population group. In that regard, we would

like to emphasize the following: in Mexico, as in the countries of Central America and South America, the mean wage of the population is low, which can be applied to all the etiologic factors of cirrhosis<sup>6</sup>. However, we entirely agree with the fact that knowing the income of patients in each of the different etiologies is important, and it will be taken into account in the follow-up of our present study, which we consider a preliminary analysis, and should be corroborated with a higher number of cases, as well.

### Ethical considerations

The present document did not require informed consent or authorization by the Bioethics Committee of the *Universidad Veracruzana*, because according to the Declaration of Helsinki and Resolution 008430 of October 4, 1993, the study under discussion was considered no risk research.

### Financial disclosure

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### Conflict of interest

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## Significant variables in the etiology of liver cirrhosis<sup>☆</sup>



### Variables significantes en la etiología de la cirrosis hepática

We recently read the article by Roesch-Dietlen et al.<sup>1</sup> that detailed the factors that influence the development of cirrhosis of the liver, and we believe that certain points deserve to be mentioned.

We noted there is a difference between the number of samples included and those utilized (179 and 182)<sup>1</sup> in the study, which could cause confusion at the time of analysis, and thus, should be revised.

In addition, the Pearson coefficient obtained by the authors (0.089) for the B virus, C virus, and educational level variables<sup>1</sup> indicates there is no correlation, but the data utilized indicate the opposite.

Income is one of the variables analyzed by Roesch et al.<sup>1</sup>, referring only to patients with no income, which is not a correct categorization. We believe an income range classification (for example, number of times the minimum wage) would have been more adequate, such as that used in the study by Delfrade et al.<sup>2</sup>, which showed that incidence and mortality rates of alcoholic cirrhosis were higher, the lower the income level.

According to the article, the largest percentage of the population analyzed were men (57.1%) and single individuals (67.6%), and the predominant occupation was housewife, followed by retiree<sup>1</sup>, raising the question: what is the dif-

ference between housewife (35.2%) and unemployed (2.2%), if the study population is predominantly male and single?

A study conducted in Paraguay<sup>3</sup> coincides with the final result of the present study, stating that the predominant sex of the population was male and the main etiology of cirrhosis was chronic alcohol consumption. Diversely, in a study carried out in Colombia, the predominant sex of the population was female and the main cause of cirrhosis was hepatitis C, followed by nonalcoholic fatty liver disease (NAFLD), with alcohol as the fifth cause<sup>4</sup>. In addition, a study conducted in Peru found that male sex was predominant and the main cause of cirrhosis was nonalcoholic steatohepatitis (NASH), followed by chronic alcohol consumption<sup>5</sup>. Those data clearly show the influence of social and cultural factors on the development of cirrhosis.

Therefore, we believe that categorizing the variables and adequately using the statistical tools would make it possible to give the results their due importance, enrich the discussion, and arrive at more accurate conclusions.

### Authorship

The final version of the article was approved by all the authors and they equally participated in the research and/or preparation of the article.

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