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### Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jhep.2020.05.016>.

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## The risk-benefit assessment of liver biopsy in times of non-invasive screening for liver fibrosis

To the Editor:

During the past few decades medical research in almost every field has focused on developing diagnostic methods that are not only less invasive and time-consuming, but also more cost-effective, which has led to a potential oversight when it comes to the irreplaceable role that a liver biopsy as we know it today still has.

Therefore, with intense and consuming interest we read the meta-analysis by Serra-Burriel *et al.*<sup>1</sup> and found ourselves in full agreement on the idea of “preventive hepatology” by creating and implementing a unique diagnostic algorithm that would include a non-invasive assessment of patients at risk at the primary care level. Although it has many advantages, one should bear in mind the economic setting and healthcare structure in which the research was conducted. For example, healthcare systems in developing countries are facing numerous challenges, some of which are reflected in timely and widespread implementation of modern technology, such as transient elastography, mostly due to funding shortages. Consequently, under such circumstances, despite being invasive, “traditional” diagnostic tools should not be neglected easily, especially those we are familiar with.

Our preliminary, prospective, single-center study included a total of 123 consecutive patients, who underwent the

ultrasonography-assisted percutaneous liver biopsy during the patients' hospital stay. Indications included grading of inflammation and staging of fibrosis, while in the majority of patients, biopsy was used to confirm a suspected diagnosis and exclude overlapping etiology. Each patient gave their written consent and was given a carefully constructed questionnaire to fill in, which encompassed demographic data, a visual analogue scale (VAS) of both anticipated and experienced pain, questions regarding post-procedural pain and its duration, presence of fear and its nature prior to the intervention itself. Patients were taught how to use the VAS scoring from 0 to 10, to grade the intensity of pain. On that scale, the left endpoint, 0, was defined as no pain, while the right endpoint, 10, was considered to be the greatest pain the patient could imagine. A complete blood count was completed several hours following the procedure, while control abdominal ultrasonography was performed the day after. For continuous variables, the mean and standard deviation or median and range were calculated depending on the normality of data distribution. Categorical data were presented as frequencies. Wilcoxon test was used to determine a statistical difference in anticipated and experienced pain. Our group of patients comprised 78 females (63.41%) and 45 males (36.59%), with a mean age of 51 ( $\pm 14.88$ ) and a mean body mass index of 25.92 ( $\pm 4.93$ ). Pathohistological findings included non-alcoholic steatohepatitis in 44.71% (n = 55), toxic lesion in 16.26% (n = 20), primary biliary cholangitis in

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16.26% (n = 20), autoimmune hepatitis in 7.31% (n = 9), primary sclerosing cholangitis and haemochromatosis in 1.63% (n = 2) each, Wilson's disease, HCV, Budd-Chiari syndrome, and amyloidosis in 1 patient (0.81%), whereas in 8.94% (n = 11) normal liver tissue was detected. According to Metavir staging system, no fibrosis was detected in 39.84% (n = 49), while F1 stage was noted in 16.26% (n = 20), F2 in 11.38% (n = 14), F3 in 4.88% (n = 6) and F4 in 27.64% (n = 34) of patients. Procedure-related complications which included hemorrhage, pulmonary complications, peritonitis and septicemia were not recorded in our cohort. Experienced pain intensity (median 2, range 0–7) was lower compared to that anticipated (median 4, range 0.5–6), and that result was statistically significant ( $p < 0.001$ ). Besides possible complications, one of the main conditions associated with biopsy itself is post-procedural pain, which was experienced by 47.15% of patients (n = 58), with the median duration of pain lasting 1 hour post-intervention (range 15 minutes to 24 hours). More than one-third of patients (n = 45, 36.59%) experienced no fear prior to the intervention, while in 38.21% (n = 47) of patients fear originated from the intervention itself, in 20.33% (n = 25) from the diagnosis, while only 4.88% (n = 6) of patients feared possible biopsy-related complications.

As the most common major complication, recently published studies reported bleeding incidence ranging from 0.63% to 1.88%.<sup>2–4</sup> Even though studies' sample size, type of needle used, possible complication-contributing factors, as well as the definition of complication itself differ, one could come to a conclusion that severe complications, including bleeding in the first place, remain rare. That said, there are no recent studies which reflect on patient's perspective of and expectations from the procedure itself. Our results have revealed that a patient's objective prior to undergoing liver biopsy differs greatly from their experience, which highlights the importance of providing the patient with adequate information about the intervention.

To conclude, in the era when we are eagerly awaiting new developments to occur and up-to-date-practice algorithms to be established, our idea was to highlight that with every step forward, we must carefully assess what it is that we are leaving behind. In experienced hands and for the correct indications, the liver biopsy carries on being an irreplaceable diagnostic tool with a good safety profile.

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### Conflict of interest

The authors declare no conflicts of interest that pertain to this work.

Please refer to the accompanying ICMJE disclosure forms for further details.

### Authors' contributions

I. Ilic: Design of the letter; Analysis and interpretation of data; Drafting of the manuscript; Approval of the final version of the manuscript. T. Milovanovic: Conception and design of the letter; Interpretation of data; Drafting of the manuscript; Approval of the final version of the manuscript.

### Supplementary data

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## Health status of patients with autoimmune liver disease during SARS-CoV-2 outbreak in northern Italy

To the Editor:

During the COVID-19 pandemic, questions have arisen regarding the risk to patients with autoimmune conditions receiving immunosuppressive therapies. There is mounting evidence that

severe COVID-19 is characterized by an imbalanced multi-system immune-inflammatory response to the pathogen by the host, and acknowledged risk factors for poorer outcome are older age and preexisting non-respiratory chronic proinflammatory conditions such as obesity, hypertension, diabetes and cardiovascular disease.<sup>1</sup>

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