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Can We Accurately Assess Liver Fibrosis with Fibroscan® Using Fewer Valid Measurements?

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We read with great interest the article of Jang, et al.[1] in March 2012 of Yonsei Medical Journal. The authors challenged the manufacturers' recommendation for 10 measurements for liver evaluation using FibroScan® (Fibroscan device 502-EchoSens, Paris, France). They were seeking the minimum number of measurements which is needed for liver evaluation using FibroScan®. The authors concluded that 3 valid measurements (VMs) would provide the same result as 10 VMs. In our experience in Middle East Liver Disease Center, we agree that in many cases same results might be achieved with fewer numbers of VMs.

There is an important concern in reducing the number of measurements in clinic. At present, the detection of reliable evaluations is made based on a success rate of at least 60% and an interquartile range/median value less than 0.3 as reliable.[2] Although some researchers believe the above mentioned factors are not predictive of the accuracy,[3,4] no other criterion is available. The interquartile range can eliminate the effect of outlier and extreme measures, but with only 3 measurements, the results will be affected by such measurements.

Many health conditions can adversely affect the accuracy of Fibroscan®. Steatosis, metabolic syndrome, high body mass index (BMI), hepatic haemangioma and heart failure are examples of such cases.[5] In these subgroup of patients, accuracy of using 3 measurements could be different and lack of subgroup analysis could affect generalizability of the results. The average BMI of the participants in this study was in normal range which does not provide much evidence about the diagnostic accuracy of 3 VMs in patients with high BMI.

If the number of measurements is to be reduced, new criteria for detection of reliable evaluations should be studied and introduced, especially when there are chances of steatosis, metabolic syndrome or high BMI.

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