

# **Liver biopsy versus ultrasound in methotrexate-treated psoriasis: a decision analysis.**

**Title:** Liver biopsy versus ultrasound in methotrexate-treated psoriasis: a decision analysis.

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Before starting methotrexate therapy for cases of recalcitrant psoriasis, a liver biopsy has been usual in order to exclude cirrhosis and moderate or severe fibrosis, which are contraindications for methotrexate treatment. As mortality and morbidity of liver biopsy are not negligible, and as this invasive procedure is unpleasant for the patient and urges clinical admission, we evaluated the possibility of ruling out severe liver pathology by means of ultrasonography, which we compared to liver biopsy. We made this comparison by means of a decision tree. The advantages of this analysis are the clear definition of the decision problem and its alternatives, and the possibility of calculating the risk of each alternative, thus being able to choose the best diagnostic method. In this study, the results of various research groups are discussed, in which liver biopsy and liver ultrasound were compared. In our decision tree we used some of these results and other assumptions, based on comparable studies. We varied the biopsy mortality and the sensitivity of ultrasound to show the change in the risk of each alternative. Our analysis shows that the differences of expected values between the liver biopsy branch and the ultrasonography branch are relatively small. Therefore, we advise each center, which has at its disposal a specialist in liver ultrasonography, to re-evaluate its guidelines with regard to the detection of severe liver pathology before starting methotrexate for the treatment of psoriasis.