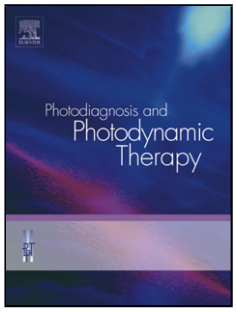

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Evaluation of liver fibrosis using Raman Spectroscopy and Infrared Thermography: a pilot study

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HIGHLIGHTS

- Raman spectroscopy and thermography were evaluated to detect early pathological signs of liver fibrosis
- Raman spectroscopy combined with PCA-LDA is relatively simple, fast and may have potential utility in the evaluation of liver fibrosis.
- Thermal imaging results show thermal behaviour of the liver tissue during fibrosis and may provide a novel non-invasive way of distinguishing among different stages of liver fibrosis.
- Raman spectroscopy and thermography could be used to detect fibrosis in *ex vivo* liver samples

Abstract. Liver fibrosis is a pathological process that can escalate to cirrhosis and then liver failure which are major public health concerns that affect hundreds of millions of people in both developed and developing countries. Detection of liver fibrosis during its earlier stages is a matter of great importance which would allow to prevent the development of cirrhosis in patients with