

# 肝纖維化的超聲彈性評估 Ultrasound Elasticity Evaluation for Liver Fibrosis

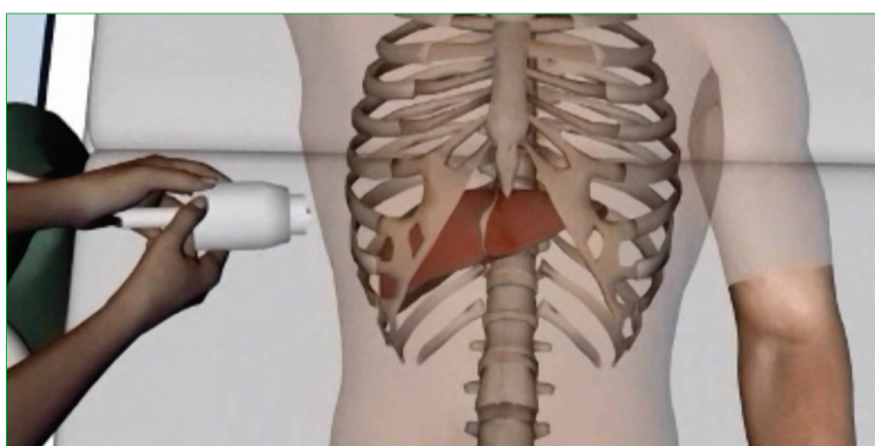
有效、即時、無創性的肝硬度測量

A reliable, real-time, non-invasive liver elasticity measurement

現時，肝纖維化是非常普遍的疾病，並且會導致肝硬化、肝功能失調及肝癌。肝纖維化主要是由飲酒、乙型和丙型肝炎、脂肪肝引起。目前，肝組織切片分析是肝纖維化診斷的黃金標準，但它是有創性的，而且結果只代表很小的區域，同時還會引起出血甚至更嚴重的併發症。最近，肝纖維化與肝硬度之間的相關性得到了廣泛的報導，現已證明肝組織硬度的無創測量能有效地評估肝纖維化。



用於肝纖維化評估的便攜式的超聲成像及彈性測量系統，包括超聲掃描儀、控制器及探頭  
The compact ultrasound imaging and elasticity measurement system for liver fibrosis evaluation. This includes an ultrasound scanner, a control box and probe



利用本發明的超聲探頭作無創的肝硬度測量  
Operation of ultrasound probe for non-invasive liver elasticity measurement

Liver fibrosis is a very common disease and may lead to cirrhosis and ultimately loss of liver function or cancer. It is often caused by alcoholism, hepatitis B and C, and fatty liver disease. Currently, liver biopsy is a gold standard for liver fibrosis diagnosis, but it is invasive. It represents only a small region of tissue, and may also cause complications. Recently, the correlation between liver fibrosis and its stiffness has been widely reported. Non-invasive liver elasticity measurement has been proved to be a reliable method for fibrosis evaluation.

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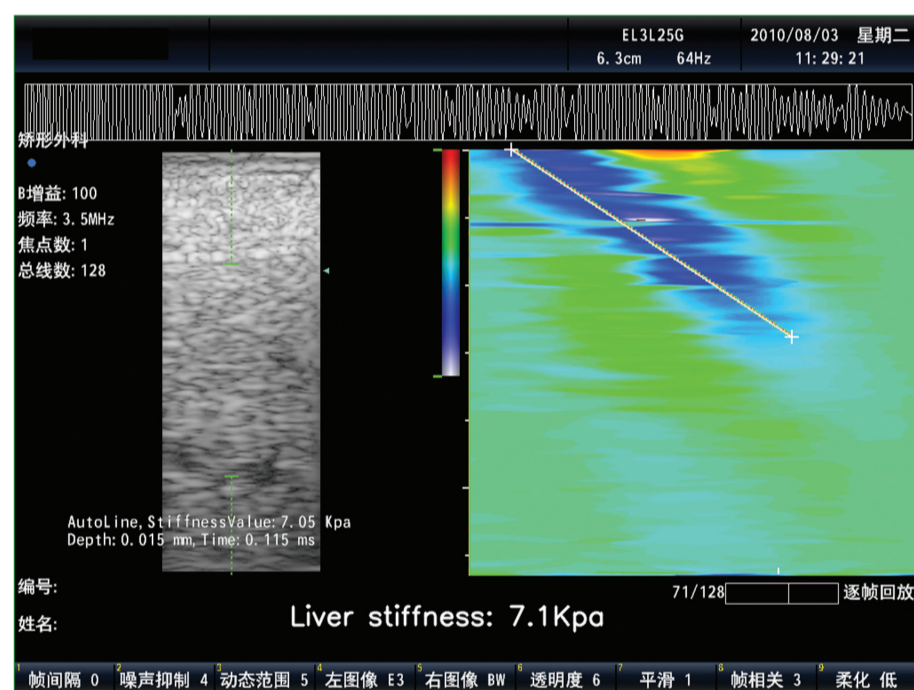
專利編號及國家：US2010/0240994 (美國), ZL 200910139336.5 (中國)

## 特色與優點

- 無創肝硬度測量
- 在硬度測量中的即時圖像引導
- 提供肝組織的超聲圖像
- 肝臟硬度測量區域的準確定位
- 高成本效益

## 應用

這一創新技術可用於肝纖維化的無創評估及其它組織的彈性測量。在硬度測量中的即時超聲圖像能讓操作者知道肝臟被測量的具體部位並可用於評估其它肝病，如脂肪肝。肝纖維化的及早診斷及給予適當的治療可以預防肝硬化。



用於肝纖維化評估的超聲系統之軟件界面  
Software interface for evaluation of liver fibrosis with ultrasound imaging and elasticity measurement

Patent No: US2010/0240994 (US), ZL 200910139336.5 (China)

## Special Features and Advantages

- Non-invasive liver elasticity measurement
- Real-time image guiding during measurement
- Ultrasound imaging for liver
- Locating the measurement zone in liver accurately
- Cost effective

## Application

This novel technique can be adopted for non-invasive evaluation of fibrosis and stiffness of livers and other tissues. Real-time ultrasound images are provided during the measurement so that operator can know exactly which part of liver being measured, and also evaluate other liver problems such as fatty liver. Early diagnosis of liver fibrosis together with suitable treatment can help to prevent liver cirrhosis and cancer.