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**Improvements in liver diseases evaluation using transient
elastography for obese patients**

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Transient elastography (Fibroscan®), Echosens, Paris, France) is a non invasive and rapid technique used to assess liver fibrosis by measuring liver stiffness. Clinical interest of liver stiffness measurement using Fibroscan® has been demonstrated for chronic liver diseases in adult patients. Clinically, the liver stiffness evaluation can be tricky in obese patients due to their large subcutaneous fat thickness. Obesity is a growing public health concern which requires dedicated liver evaluation procedures due to the patients' morphology and/or the specific diseases associated with obesity. Our study aims to show how Fibroscan® can adapt for liver diseases evaluation in obese patients. Clinical adaptations dedicated to over-weighted patients are shown: ultrasound guidance procedure, development of a dedicated probe for patients with a large subcutaneous fat thickness, development of new algorithms based on attenuation of both ultrasonic and shear waves. Performance is assessed and clinical interest of each adaptation is discussed in over-weighted, obese and morbid obese patients (body mass index greater than 25). These new procedures dedicated to obese patients improve liver diseases assessment using Fibroscan®.