

## **ACOUSTICS2008/632**

### **Ultrasound contrast agents: from concept to clinical use**

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Contrast ultrasound imaging techniques are of interest for almost every clinical application in all organs including not only liver and kidney but also superficial organs and brain or lungs. This technique is mainly powerful in terms of lesion detection and characterization especially for liver with diagnostic value greater than 90%. This was the case for all categories of lesions (with values nearly 100% for liver metastases, FNH) but the accuracy was slightly lower for HCC. Specific recommendations were established by EFSUMB for the use of contrast agents in liver, pancreas, kidney, trauma and brain imaging for a proper and safe use to improve diagnosis accuracy. On the other hand, contrast-enhanced ultrasound may be used in evaluating response to therapy. The follow-up of vascularization under specific targeted treatments offers the capacity to early diagnose positive or negative local response for an adaptation of therapeutic way before or in absence of tumour size changes. This non invasive method could be repeated without adverse events early after starting this therapy in order to depict local response or recurrence for a better adaptation of dose with a strong impact on cost and limitation of adverse events.