

# **Use the contrast-enhanced ultrasound in the monitoring of the effect of liver tumors treatment by radiofrequency ablation.**

## **Summary**

High quality imaging is crucial for the treatment of liver tumors by the percutaneous radiofrequency ablation. Imaging methods are used for planning, navigation of the intervention and monitoring after treatment. An early detection of residual tumor tissue or recurrence affect significantly the quality of life and life expectancy of the patients.

Contrast enhanced ultrasound (CEUS) seems to be a suitable method for monitoring the locoregional treatment mainly because zero radiation impact on patient and allows the highly accurate real-time assessment of vascularization.

The aim of my work was to verify the ability of CEUS to detect residual tumor tissue or tumor recurrence in the field of changes after radiofrequency ablation.

We evaluated the group of 73 patients, who were treated by radiofrequency ablation (RFA) for liver cancer. CEUS reached in our group the overall sensitivity 77.27 %, and in the group of colorectal cancer metastases 83.33 %. We compared CEUS with results of computed tomography (CT), which is the most commonly used method for monitoring the treatment. CEUS and CT results are similar.

Based on this study, the CEUS appears to be a suitable method for monitoring the locoregional therapy. We have included it as a standard component of percutaneous radiofrequency ablation.

Key words: liver, radiofrequency ablation, contrast media, ultrasonography.