

# Angio CT/MR fusion and robotic-guided Microwave Ablation of the liver using Micromate™

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## Patient description

43-year-old female

Breast Cancer and Colon Carcinoma

Single metastasis in liver segment VIII, histologically proven secondary blastomatous lesion from breast cancer

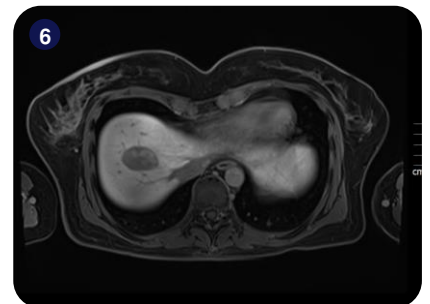
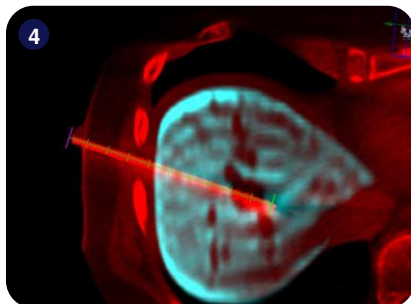
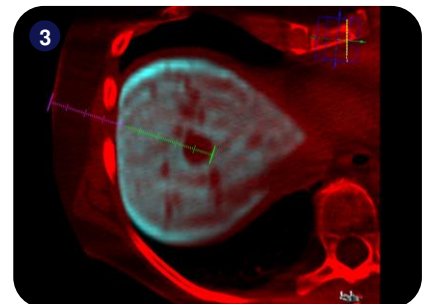
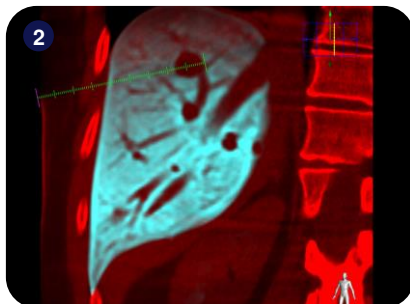
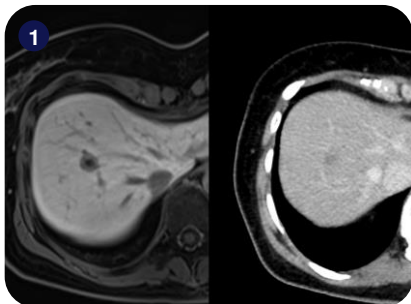
## Key Takeaways

Micromate™ helped the clinical team critically increase the likelihood of reaching the liver metastasis for treatment, whose texture rendered it almost undetectable in CT and US.

Micromate™'s live-imaging capabilities made operating soft tissue such as the liver more seamless, since they allow to compensate target displacement in real-time.

Surgical removal of the breast and colon primary tumor was the preferred treatment. The single liver metastasis was treated with a percutaneous, robotic-guided Microwave Ablation using Angio CT/MRI fusion, as the lesion was not detectable using Ultrasound or CT. Image fusion and planning were performed using a Philips Allura Xper FD20 angiography device and the Xper Guide planning software.

The Micromate™ device was gross-positioned near the predefined entry-point and remotely controlled for alignment to the surgical plan under fluoroscopic live imaging. After the robotic alignment, the 15G microwave needle was inserted along the predefined trajectory through the Micromate™ needle guide, again under fluoroscopic live imaging. Ablation was then performed with 100W of power for 4 minutes, resulting in an ellipsoid-shaped ablation zone with a good safety margin. Six months after treatment, the patient is in complete remission, showing no signs of vital tumor in the liver.



1) Pre-operative MRI and CT scan. MR clearly shows the metastasis in liver segment VIII, detectability on CT is low to none; 2-3) Coronal and transversal planes of fused AngioCT/MRI volumes with planned needle entry, path and target; 4) Microwave ablation needle positioned according to the surgical plan; 5) Clinical setup overview during the ablation step; 6) The final ablation zone as shown on follow-up MRI.