Surgeons challenge the Status Quo every day. Trying to make the impossible possible. So do we. CAScination’s navigation technology is designed to assist surgeons in this everyday challenge. It combines CAS-ONE seamlessly combines the precision of latest 3D model based stereotactic image guidance with intra-operative ultrasound imaging.

CAS-ONE - Thinking liver surgery differently
CAS-ONE - Ultimately user-friendly
CAS-ONE - With integrated Ultrasound

CAS-ONE - The unique solution for
• stereotactic open liver surgery
• stereotactic laparoscopic surgery
• stereotactic percutaneous interventions
We believe that during surgery you should have all available patient information at your fingertips. CAS-ONE is the only image guidance system that provides seamlessly integrated state of the art sonography technology. No need to switch between different systems and monitors during the intervention.

Features
- 128 bit, 5-10 MHz intraoperative probe
- B-, doppler, power-, acoustic mode
- Fully adjustable image parameters
- Integrated navigation reference
- Screenshot and screencasting
- Convenient 24” touch screen viewing
- Optional: Interface to BK Ultrasound
Ultrasound Based Patient Alignment

CAS-ONE is the only navigation system providing precise patient-to-image registration through sonography.

Enhance your orientation in the situs by fusing preoperative image data with real-time intraoperative ultrasound imaging.

This combination allows for augmentation of the native sonography view with features otherwise not visible such as vascular structures, functional volumes and lesions.

Alignment of the image data with the patient using sonography additionally enables seamless, intuitive, and precise navigation.

Features
- Automatic sonography based registration
- Precise MeVis-to-anatomy registration
- Augmentation of Sonography with 3D data
- Comparison of pre- and intra-operative situation
- 3D navigated imaging
Navigated Ablation of Vanishing Lesions

CAS-ONE enables precise and reproducible ablation treatments based on preoperative imaging and with stereotactic guidance.

Complete tumour ablation while avoiding critical vessels is certainly challenging.

CAS-ONE guides you to where you need to be, precisely and quickly.

Integrated ablation volume prediction helps to identify the optimal energy and time settings, allowing you deliver the right amount of energy exactly where you need it. Peace of mind!

Features
- Minimally invasive tumor ablation
- Support of different ablation systems
  - Microwave ablation
  - Radio frequency ablation
- Precise guidance to individual lesions
- Free selection of needle trajectories
- Prediction of optimal energy delivery
Through precise intraoperative alignment of the patient and with its available preoperative imaging and by means of ultrasound co-registration, the CAS-ONE Liver system can compute an overlay of any medical imagery onto the current available ultrasound image. This enhances ultrasound beyond its existing modes and can co-register any modality to the situs such as CT, MRI or PET together with segmentation- and simulation information as well as planning data.

Ultrasound can now be fused with any available 3D image modality and display:

- Invisible lesions
- Vascular structures
- Segmental borders
- Functional volumetry
- Hot spots such as from PET
- Liver function (i.e. HEF)
- Any information from 3D modalities

Ubersound displaying...

... invisible lesions  ... segmental borders  ... hot spots from PET
Latest presentations on conferences

- Enhanced ultrasound with navigation leads to improved liver lesion identification and needle placement
  R. C. Martin
  AHPBA Congress, Miami Beach, March 2015

- Laparoscopic computer-navigated ablation of liver metastases
  Swiss Surgical Congress, Bern, May 2014

- Preliminary experience with multiple microwave ablation facilitated by computer-assisted liver navigation in advanced neuroendocrine liver metastasis
  IHPBA, Seoul, March 2014

Journal articles

- A multiple microwave ablation strategy in patients with initially unresectable colorectal cancer liver metastases - A safety and feasibility study of a new concept
  European Journal of Surgical Oncology, 2014; 40:1488-1493

- A navigation system for open liver surgery: design, workflow and first clinical applications
  V.M. Banz, M. Baechtold, S. Weber, M. Peterhans, D. Inderbitzin, D. Candinas
  World J Gastroenterol 2014 October 28; 20(40): 14992-14996

- Computer-assisted liver surgery: clinical applications and technological trends
  Peterhans M, Oliveira T, Banz V, Candinas D, Weber S

- How to operate a liver tumor you cannot see
  Langenbecks Arch Surg. 2009 May; 394(3):489-94

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