

VISUALIZING THE INVISIBLE

SonoWand Invite™ presentation 2010

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Fundamental Surgical Needs

- Distinguish lesion from surrounding landmarks
- Safely guide surgical instruments to the region of interest for resection
- Control the result of resection and vascular repair
- **Do Radical Resection with Minimal Morbidity**



Intraoperative Imaging...

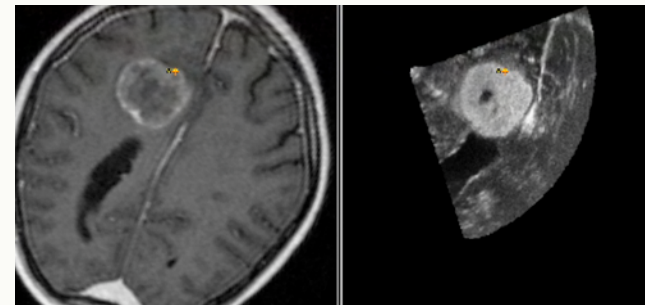
...is the only alternative that can fulfill these needs



Intraoperative Ultrasound

SonoWand Invite™

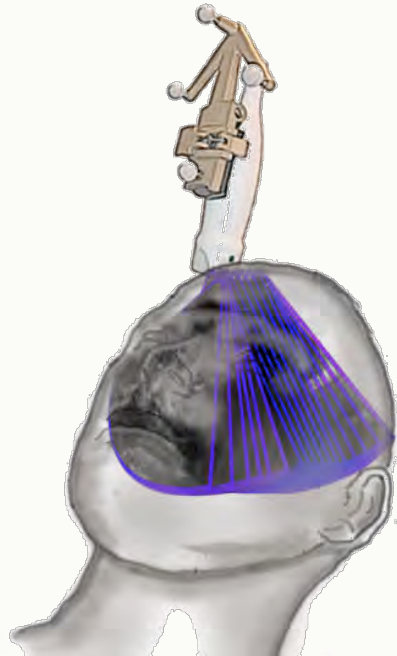
- Tight integration of imaging and navigation in one unit
- State-of-the-art integrated ultrasound scanner
- High image quality
- Ergonomic and modern design
- Compact and Easy to move



4

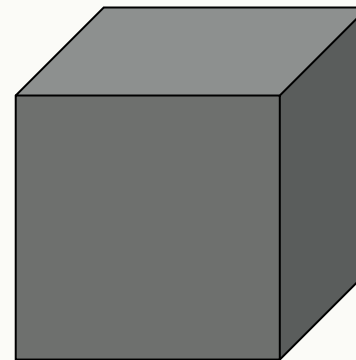
Rapid update of your 3D map

Freehand scanning



≈ 10 sec.

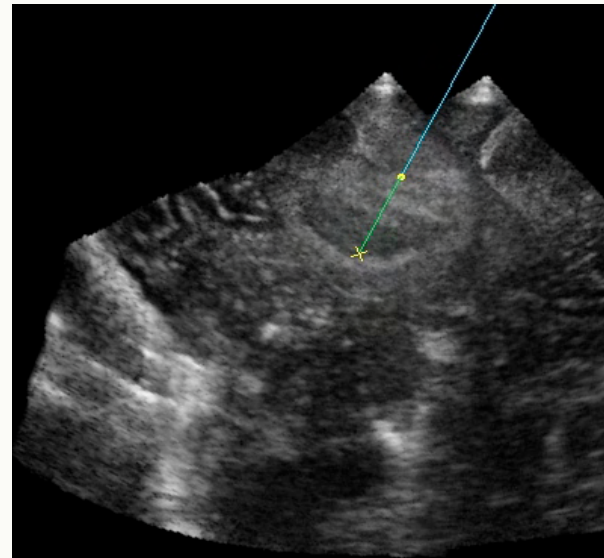
3D reconstruction



≈ 10 sec.

5

Clinical navigation accuracy



The mean navigation error for sonowand intraoperative ultrasound is less than 1,4 mm

Intraoperative Ultrasound eliminates the challenge with brainshift

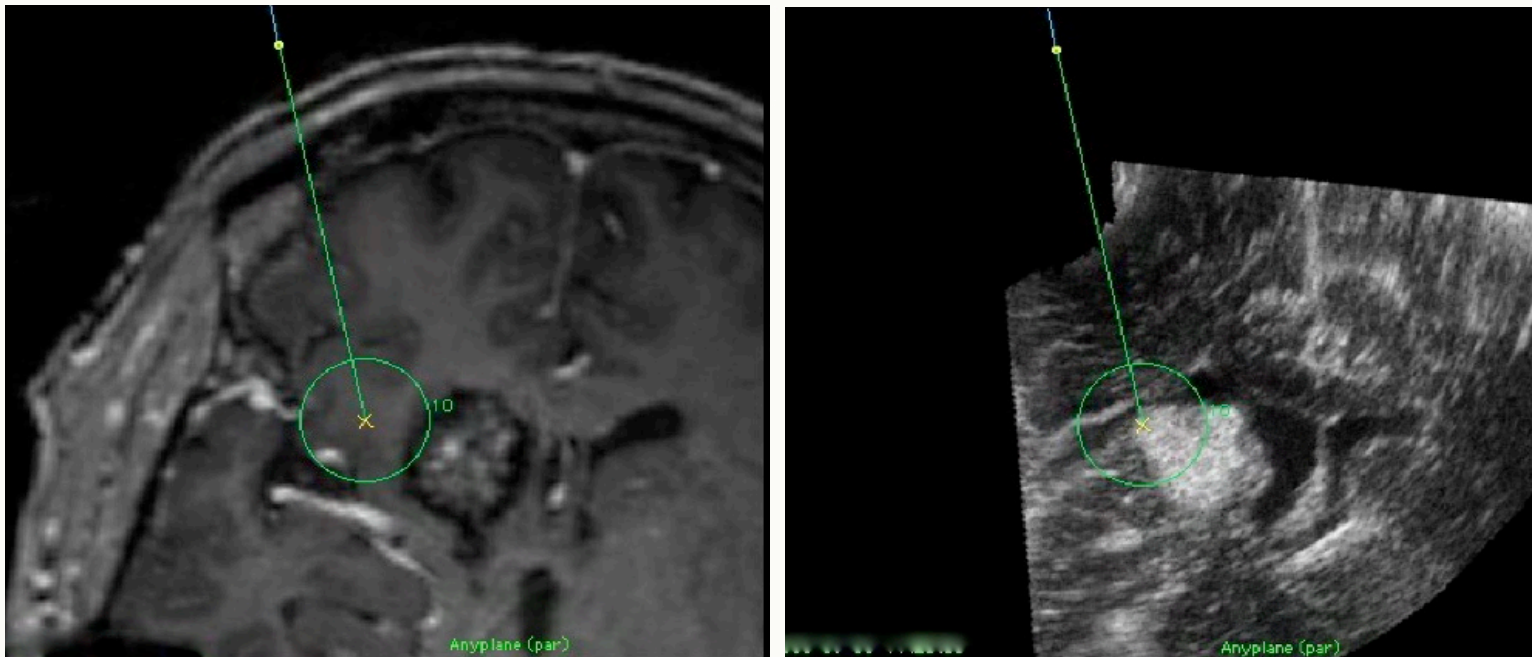
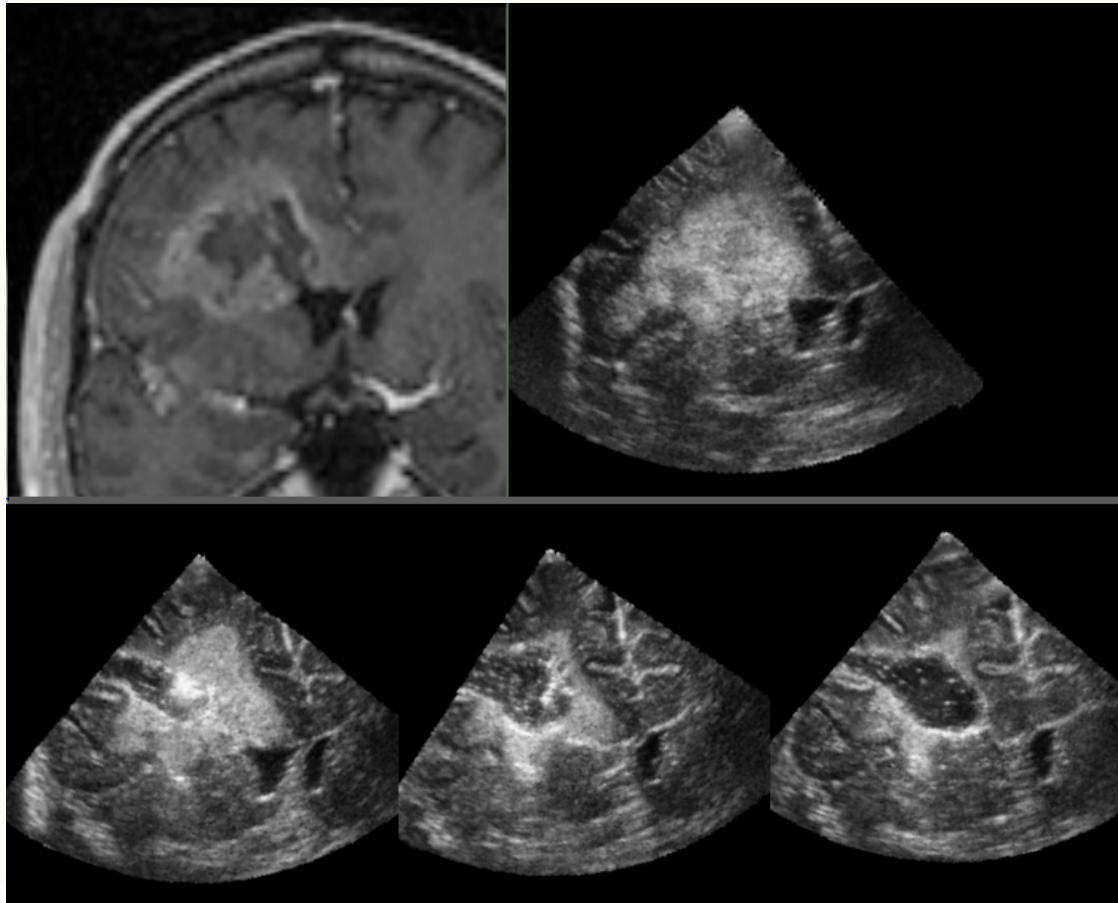


Image showing brainshift of about 8 mm

Resection control during surgery

Glioblastoma



Intraoperative imaging - More radical resection

“Our subjective experience was that residual tumor tissue was discovered through the last 3D ultrasound scan in 53% of the cases in which resection otherwise was considered complete. Therefore, a more radical resection was achieved in these cases because of ultrasound imaging” [1].

[1] Neuronavigation by Intraoperative Three-dimensional Ultrasound: Initial Experience during Brain Tumor Resection. G. Unsgåraard et al. Neurosurgery, Vol. 50, No. 4, April 2002, Page 804-812.



Acknowledgement

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THANK YOU!

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