

## HIFU Ablation of Tumors in Solitary Testis

G. Schatzl, C. Kratzik, M. Marberger

Department of Urology, University of Vienna, Austria

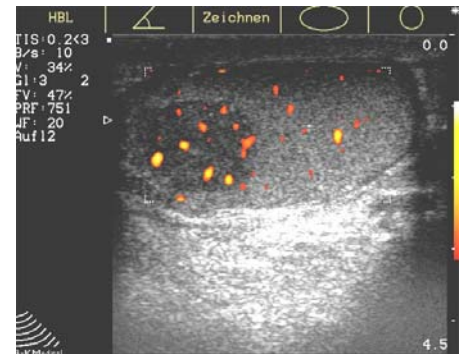
Presented at the 3<sup>rd</sup> International Symposium on Therapeutic Ultrasound, Lyon/France 23.06.03

**Objective:** Surgical removal of tumors in solitary testes frequently results in orchiectomy and the need for chronic androgen replacement. Percutaneous ultrasound guided ablation of the tumor with high intensity focused ultrasound (HIFU) permits pinpoint destruction of the tumor without loss of surrounding parenchyma. In combination with subsequent irradiation of 20 Gray to eradicate peripheral CIS it appears as a viable treatment alternative

**Material and Methods:** 7 men with a tumor in a solitary testis were treated since 1993. In all, the contralateral testis was removed because of malignant germ cell tumors. The tumor was treated with transcutaneous HIFU in general anesthesia administering 1600-2000 W/cm<sup>2</sup> with a 4.0 MHz transducer.

For the treatments the Sonablate<sup>®</sup>500 HIFU-system (Focus Surgery Inc., Indianapolis/USA) was used.

After 6 weeks a course of prophylactic local irradiation of the testis with 18-20 Gy followed.



J.N., pre HIFU

**Results:** 1 patient refused postoperative irradiation and promptly developed a recurrent tumor within 6 months. All other patients were treated according to protocol and are tumor free at 3-93 months (mean 42 months) follow-up. No patient needed any form of androgen replacement and the sexual function is normal in all.



J.N., 24h post HIFU



J.N., 14d post HIFU



J.N., 5 yrs post HIFU

**Conclusion:** HIFU and low dose irradiation is a safe and effective approach for tumors in solitary testes