

## **FOCUSSED ULTRASOUND (HIFU) IN THE TREATMENT OF PROSTATE CANCER: ENERGY EFFICACY CORRELATION**

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**INTRODUCTION:** For evaluation of an efficacy quotient, PCa patients who underwent HIFU treatment (Ablatherm®\*) at two centers with different treatment protocols were analyzed.

**MATERIAL & METHODS:** 31 patients at each center with comparable inclusion-, treatment- and follow up data were included in the study (T1-2,Nx;Mo,PSAi<20ng/ml) and treated at 3.0 MHz with software 2.32, 5 sec lesions duration, 5 sec delay. Follow up consisted of DRE, TRUS, PSA and sextant biopsies.

n = 62 (31/31)	Gleason 2-4	Gleason 5-7	Gleason >7	T 1 / T 2a	T 2b
Lvon	10%	67%	23%	74%	26%
München	16%	78%	6%	77%	23%
	AGE	TRUS (cc)	PSAi (ng/ml)	pos. biopsy	ASA
Lyon	72,7 ( 56-85 )	37,8 ( 8-90 )	8,9 ( 2,1-19,8 )	33,8 ( 17-100 )	2.0 ( 1- 3 )
München	70,0 ( 59-84 )	21,5 ( 5-50 )	8,5 ( 0,4-14,7 )	43,3 ( 17-100 )	2,3 ( 1- 3 )
	lesion No.: (L)		treatment duration (min)		
Lyon	498 ( 238 - 924 )		80 ( 38 - 146 )		
München	733 ( 256 - 1.411 )		110 ( 41 - 223 )		

### **RESULTS:**

Definiton "THERAPY SUCCESS": PSA Nadir < 4 + negative biopsies

Last follow up	PSA < 4	weeks:	neg. Biopsies	weeks:	PSA + biopsies
Lyon	26 (84%)	Ø 36 (-95)	23 (74%)	Ø 23 (-78)	21 (68%)
München	28 (90%)	Ø 32 (-85)	27 ( 90%)	Ø 26 (-57)	26 (87%)
	PSA < 1				PSA<1 + biopsy
Lyon	19 (61%)	Ø 36 (-95)			15 (48%)
München	20 (65%)	Ø 32 (-85)			20 (65%)

**CONCLUSION:** 3 times higher application of energy / treatment results in a significantly more effective treatment outcome judged by histology and PSA.

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