FUS Treatment Approaches in the Prostate

(Data as of January 2016)

EDAP's Ablatherm HIFU

Transrectal Approach, Ultrasound Guidance

Regulatory/Research Status	# Patients Treated	Countries Where Approved	Key Publications/Trials
Ablatherm Maxis: CE marked in 2000	More than 45,000	Ablatherm Integrated Imaging approved	Thüroff S et al., Evolution and outcomes of 3 MHz High intensity focused
	patients treated via more	for sales in Canada, Korea, Brazil and	ultrasound therapy for localized prostate cancer over 15 years.
Ablatherm Integrated Imaging: CE marked	than 300 sites	Taiwan	
in 2005			Ganzer R et. al., Fourteen-year oncological and functional outcomes of
		Approved in Europe for prostate cancer	high-intensity focused ultrasound in localized prostate cancer.
510(k) cleared by FDA; sales started in the		(T1, T2) as first choice therapy for non-	
US in November 2015		candidates to surgery and as salvage	<u>Crouzet S et al.</u> , Whole-gland ablation of localized prostate cancer with
		therapy for local recurrence after	high-intensity focused ultrasound: oncologic outcomes and morbidity in
"Several research projects in progress"; sites		radiotherapy, brachytherapy, radical	1002 patients.
confidential		prostatectomy and HIFU	
			Feijoo, et. al, Focal High-Intensity Focused Ultrasound Targeted
		Approved in the US for Prostate Tissue	Hemiablation for Unilateral Prostate Cancer: A Prospective Evaluation of
		Ablation	Oncologic and Functional Outcomes.

EDAP's Focal One

Ultrasound with MRI-elastic Fusion Guidance

Regulatory/Research Status	# Patients Treated	Countries Where Approved	Key Publications/Trials
CE marked in 2013	3,000	Approved for sales in Canada	
		Approved in Europe for local treatment of prostate cancer	

Histosonics' Vortx Rx

Transperineal Approach, Image Guided via Transrectal Ultrasound

Regulatory/Research Status	# Patients Treated	Countries Where Approved	Key Publications/Trials
IDE approval from FDA; ITA approval from	25 patients treated	None	BPH trial (enrolling):
Health Canada (both for BPH safety study)			https://clinicaltrials.gov/ct2/show/NCT01896973?term=Histosonics+prostat
			<u>e&rank=1</u>
FDA also approved IDE supplement after			
system modifications were made to the			Note: "Histotripsy is a platform technology and the Company is currently
Vortx Rx; second safety study was set to			exploring clinical applications of histotripsy outside of BPH (solid tumor
begin Oct 2015 to test modifications			ablation, brain, cardiovascular)"

Profound Medical Corp.'s TULSA-PRO

Transurethral Approach, MRI Guided with Transurethral Ultrasound

Regulatory/Research Status	# Patients Treated	Countries Where Approved	Key Publications/Trials
Not yet approved; 3 sites participated in	30 patients treated in	None; anticipate CE mark/IDE approval in	Chin et al, "Magnetic Resonance Imaging-Guided Transurethral Ultrasound
Phase 1 trial in Canada, Germany, and US;	Phase 1 trial	early 2016; FDA approval late 2017	Ablation of Prostate Cancer: A Prospective Phase I Clinical Trial", European
Pivotal trial to begin in 2016			Urology (submitted 2015, pending revisions). Midterm results of the Phase I
	110 patients planned for		trial have been presented at several meetings and conferences, for example
	2016 Pivotal trial via 10+		at the 2014 FUS Symposium
	sites in Canada, Germany		
	and U.S.		Burtnyk et al, "Magnetic Resonance Image Guided Transurethral Ultrasound
			Prostate Ablation: A Preclinical Safety and Feasibility Study with 28-Day
			Follow-up",
			Chopra et al, "MR imaging-controlled transurethral ultrasound therapy for
			conformal treatment of prostate tissue: initial feasibility in humans".

InSightec's ExAblate

Transrectal Approach, MR Guidance

Regulatory/ Research Status	# Patients Treated	Countries Where Approved	Key Publications/Trials
InSightec is now involved in two main trials:	57 patients under various	None; investigational	Zini, Chiara et al. "Ultrasound- and MR-guided focused ultrasound surgery
'	feasibility trials		for prostate cancer."
Feasibility study in the US (5 of 40)			
patients have been treated to			Linder, Uri et al. "Focal magnetic resonance guided focused ultrasound for
date)			prostate cancer: Initial North American experience."
Phase III trial out of the US is pending to start in Europe, Canada and Korea			Woodrum, David et al. "Magnetic Resonance-Guided Thermal Therapy for Localized and Recurrent Prostate Cancer."
Canada ana Norca	1		Napoli, Alessandro et al. "Real-time Magnetic Resonance-guided High-
	1		intensity Focused Ultrasound Focal Therapy for Localised Prostate Cancer:
			Preliminary Experience."
			Cheng, C.W.S. et al. "Initial Experience with MR-guided Focused Ultrasound Ablation for Localized Low-Risk Prostate Cancer." European Society of Radiology (www.myESR.org). ECR 2011.

SonaCare Medical's Sonablate

Transrectal Approach, Ultrasound and MRI Fusion Guidance

Regulatory/Research Status	# Patients Treated	Countries Where Approved	Key Publications/Trials
Sonablate® has 510(K) clearance in the U.S.	15,000 patients treated	Sonablate® is authorized for sale in the	Ahmed, Hashim U. et al. "Focal Ablation Targeted to the Index Lesion in
under a De Novo regulatory	worldwide	United States.	Multifocal Localised Prostate Cancer: A Prospective Development Study."
Classification	(includes 4,000 US men		
	who travelled outside the	Sonablate® 500 is approved for sale in	Ahmed, Hashim U, Richard G Hindley, Louise Dickinson, Alex Freeman, Alex
Sonablate® 500, which has CE Marking and	US)	the following countries:	P Kirkham, Mahua Sahu, Rebecca Scott, Clare Allen, Jan Van der Meulen, and
has obtained regulatory		Europe : for soft tissue ablation including	Mark Emberton. "FocalTherapy for Localised Unifocal and Multifocal
authorization in more than 49 countries		treatment of prostate.	Prostate Cancer: a Prospective Development Study."
outside the U.S.		Argentina: Ultrasound surgery	
		Australia: Prostate treatment	<u>Uchida, Toyoaki et al. "Improved Outcomes with Advancements in High</u>
		Bahamas: Prostate cancer	Intensity Focused Ultrasound Devices for the Treatment of Localized
		Bermuda: Prostate cancer	Prostate Cancer."
		Brazil: Prostate treatment	
		Canada: Treatment of prostate including	
		BPH, localized prostate cancer, recurrent	
		prostate cancer	
		Costa Rica: BPH and prostate cancer	
		Dominican Republic: BPH and prostate	
		cancer	
		Ecuador: Ultrasound therapy	
		India: Ultrasound therapy	
		Israel: Prostate treatment	
		Japan: BPH	
		Mexico: Prostate treatment	
		Pakistan: Prostate treatment	
		Russia: prostate treatment	
		Trinidad: Prostate treatment	
		Uzbekistan: Treatment of prostate gland	
		Vietnam: Ultrasound treatment	