Profound Medical

Customizable Incision-Free Therapies
Men's and Women's Health | Oncology

PROFOUND MEDICAL

CORPORATE PRESENTATION | April 2019

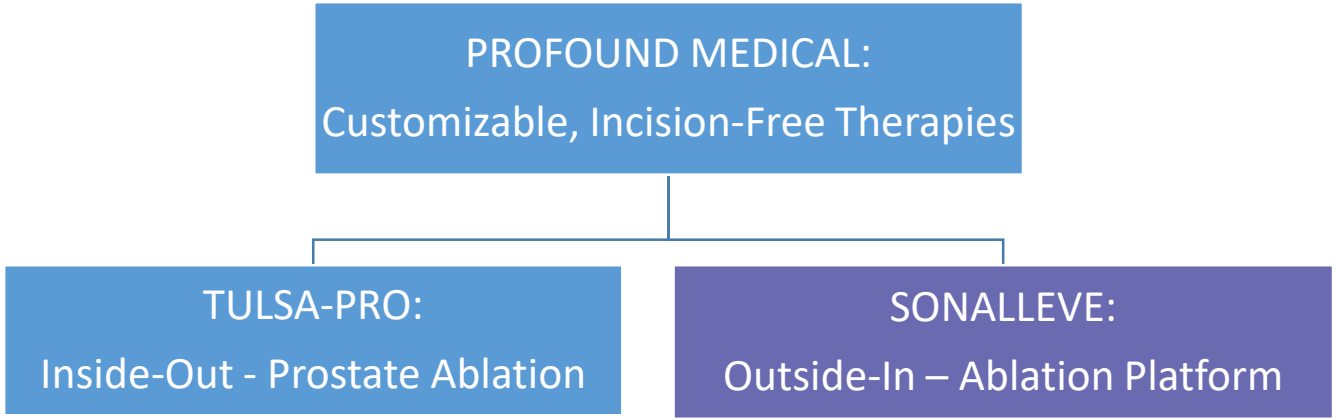
 | TSX: PRN | OTCQX: PRFMF

Creating Customizable Incision-Free Therapies By Combining **Three Powerful Modalities**

Real-time MRI imaging

Thermal ultrasound

Closed-loop temperature feedback control


PROFOUND MEDICAL:
Customizable, Incision-Free Therapies
TULSA-PRO:
Inside-Out - Prostate Ablation
SONALLEVE:
Outside-In – Ablation Platform

TULSA-PRO®

- CE Marked
- FDA Registration Study Recruitment Completed
  Presentation of One Year Result – AUA 2019

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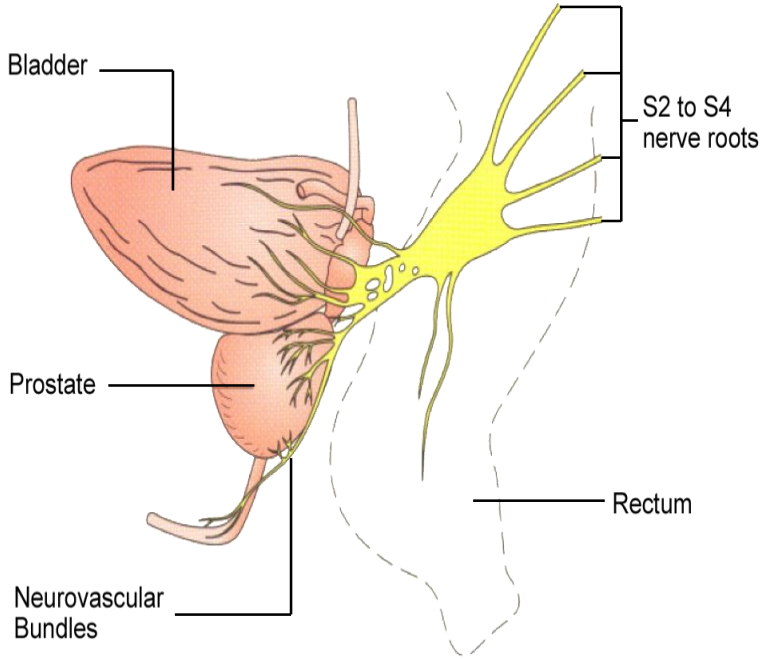
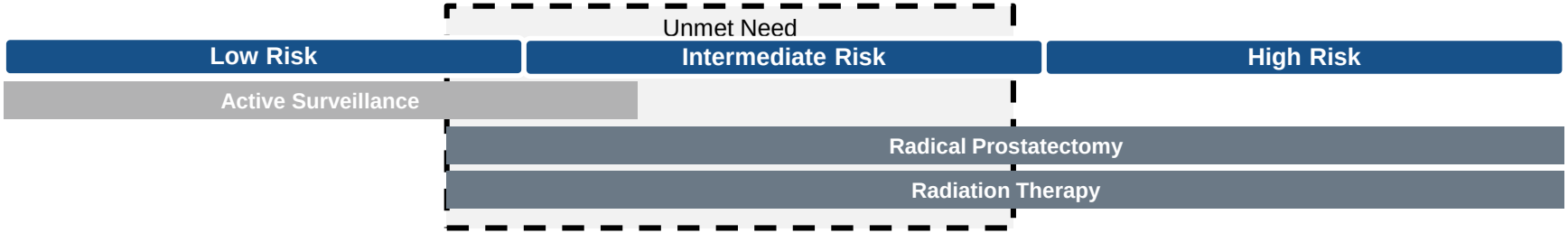
Prostate Disease and Management



Kirby (1997) An Atlas of Prostatic Diseases, The Encyclopedia of Visual Medicine Series.

Localized Prostate Cancer – **Unmet Need in Standard of Care**



ACTIVE SURVEILLANCE	RADICAL PROSTATECTOMY	RADIATION THERAPY
Selected Delayed Treatment	Invasive Surgery	Ionizing Radiation (multiple fractions, 8 weeks)
• Serial monitoring: Biopsy, PSA, DRE, MRI • Psychological distress • Biopsies painful with 3% risk of sepsis	• Urinary incontinence (severe): 16% (4-31%)[5] • Urinary stricture (req. Tx): 9% (3-26%) • Erectile dysfunction: 79% (25-100%)	• Bowel dysfunction: 25% (0-40%) • Urinary incontinence (severe): 4% (2-15%) • Erectile dysfunction: 63% (7-85%)
• >50% patients undergo prostatectomy or radiation within 5 years[3]	• Success depends on surgeon skill • Inpatient & Weeks recovery time	• Risk of secondary cancers • Delayed response and assessment of treatment success (2 years) • 30% patients fail treatment[1]
10 yr. cost: $29,000[2]	Surgery cost: $15,692[4]	Treatment cost: $27,564[4]

Opportunity for patients with organ confined disease for less invasive, function preserving targeted therapies that do not preclude additional intervention if needed in the future

PROFOUND MEDICAL

MR-Guided TULSA – Closed Loop Temperature Control

1. Transurethral directional ultrasound ablation

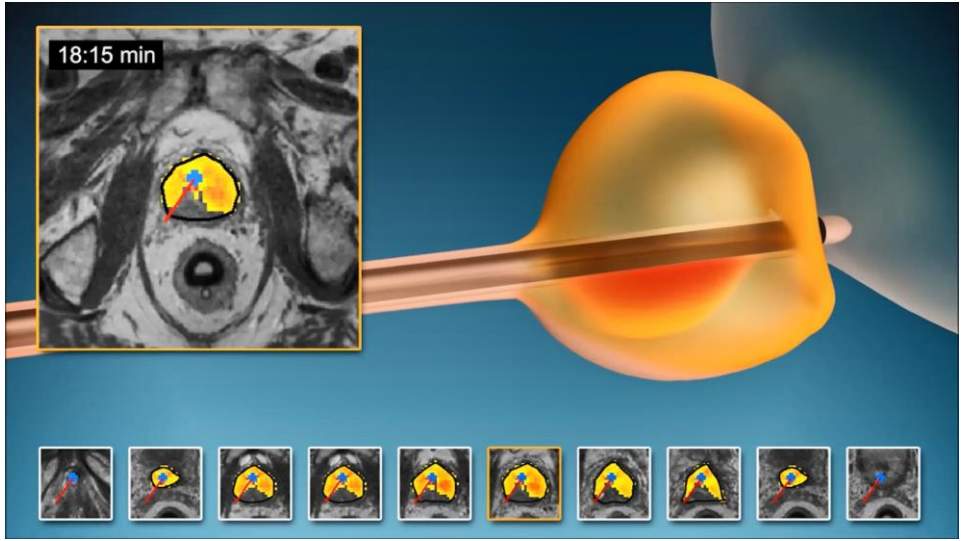
- Sweeping ultrasound, continuous rotation (no risk of cold spots between discrete sonications)
- Capable of treating large and small prostate volumes

2. Real-time MRI & Closed-loop thermal ablation

- Real-time temperature feedback provides millimeter accuracy

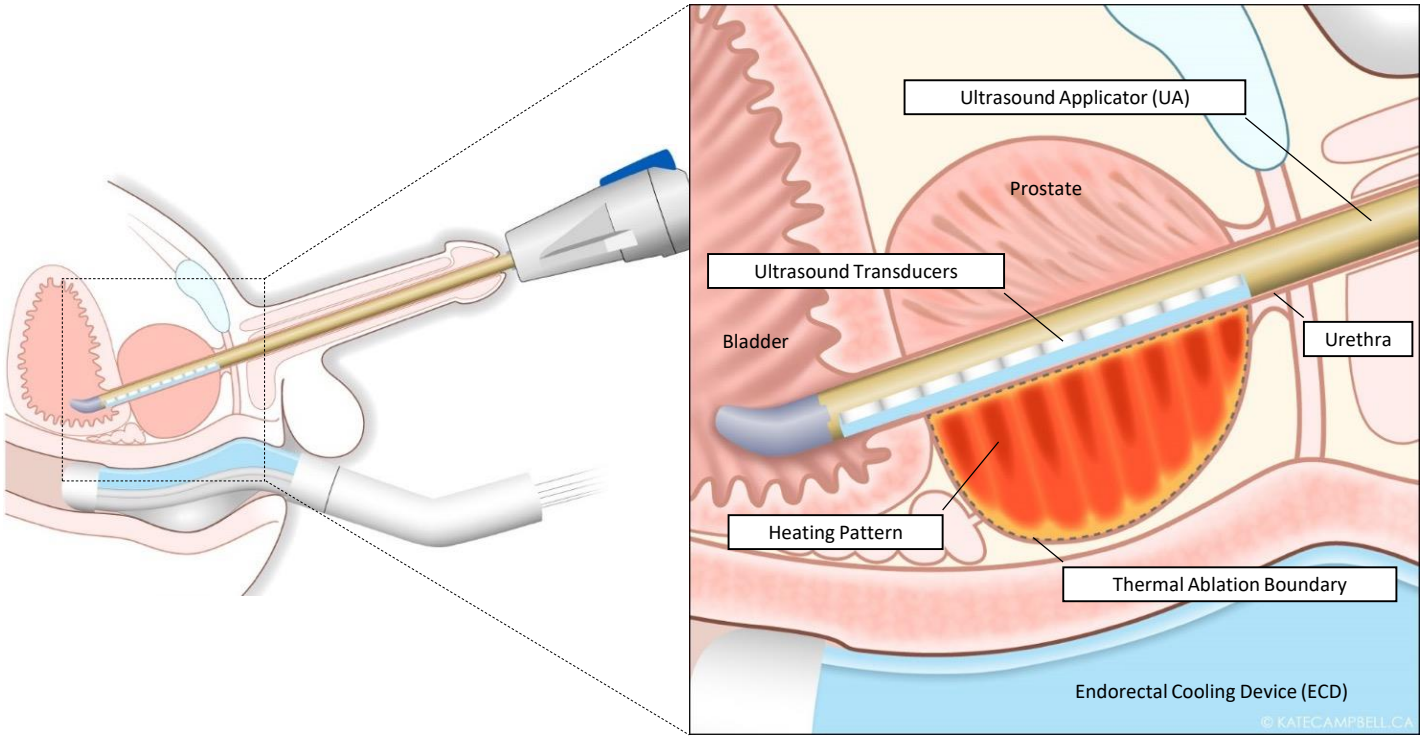
3. Urethra and rectum cooled

- Thermal protection of important anatomy



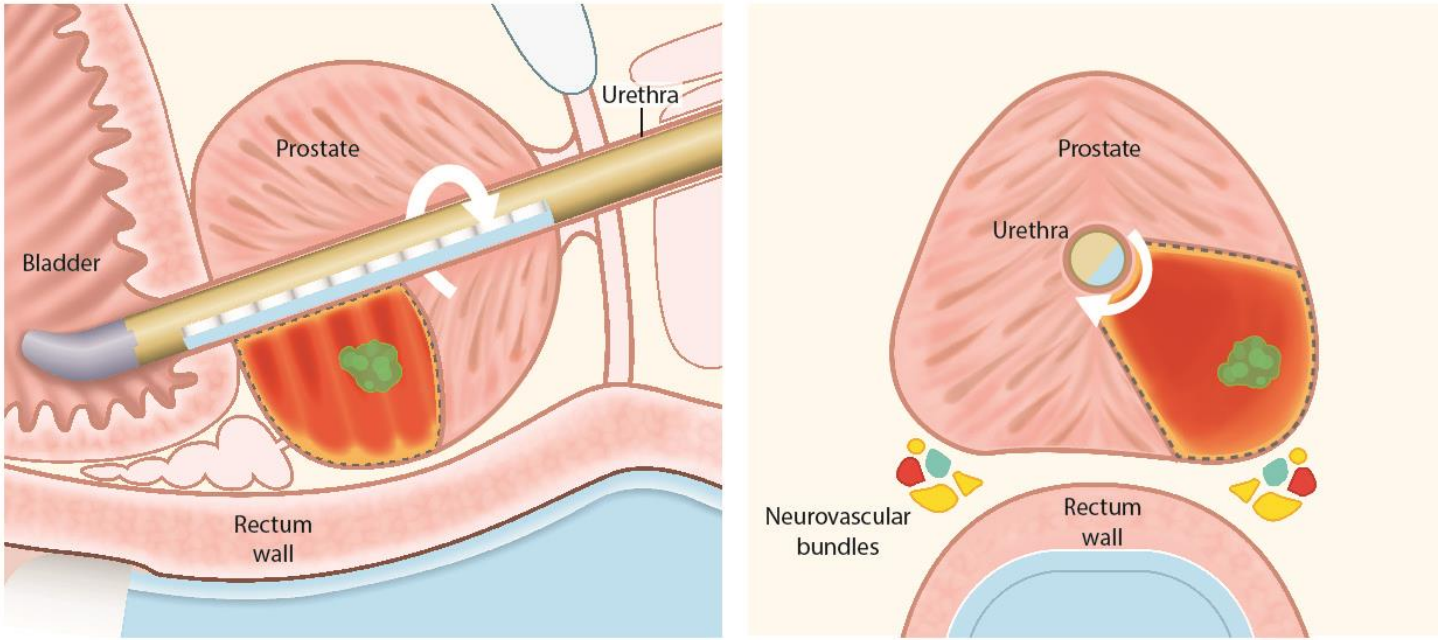
TULSA-PRO – Prostate Ablation From The Inside Out

Whole Gland Ablation



TULSA-PRO – Targeted Ablation

Partial Gland Ablation

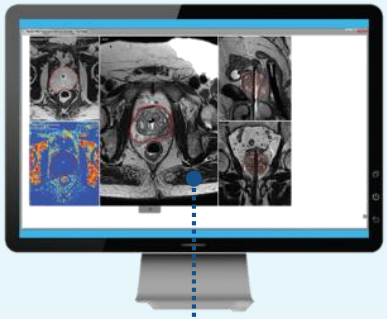


TULSA-PRO
Equipment

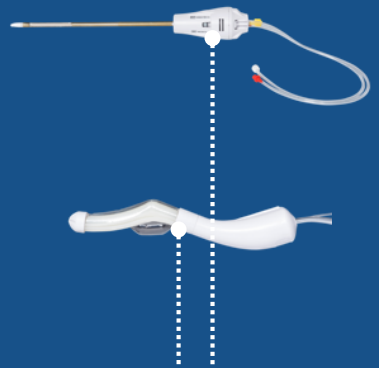
Compatible with MR from leading companies – Philips and Siemens

Robotic Arm,
Computer Hardware

Energy
System



Surgeon Console
Control Room

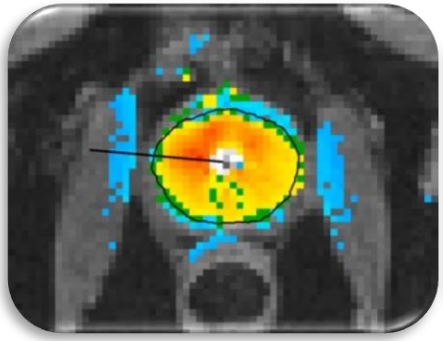


Disposable
Applicators

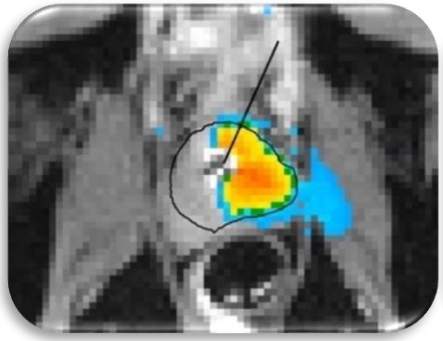
TULSA-PRO

Customizable, Predictable, Incision-Free

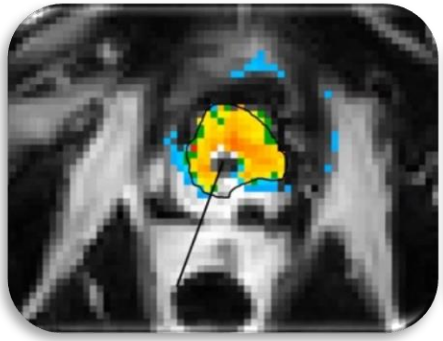
Whole Gland Ablation



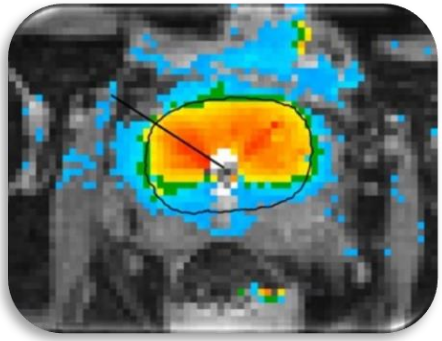
Targeted Ablation



Salvage Therapy Post Radiation Therapy Failure



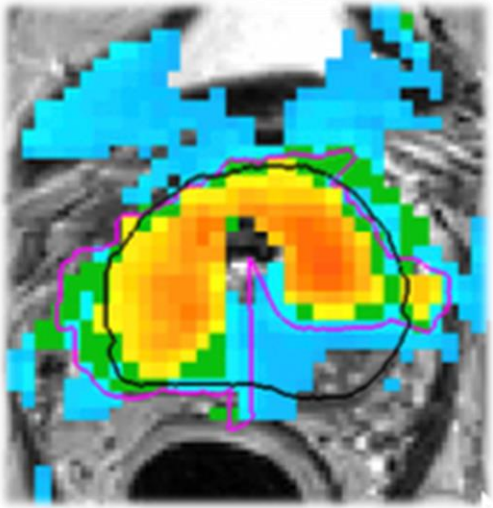
Benign Prostate Hyperplasia (BPH)



Example Prostate Tissue Ablation of Transition Zone & Suspicious Lesion

20% of men over 50, 60% of men over 60 have BPH

Profound technology specially suitable for large prostates >80 CC



Patient with BPH and early stage lesion

TACT – TULSA-PRO Ablation Clinical Trial for FDA 510(k)

Pivotal study of whole-gland ablation in a clinically-significant patient population

Study Population

- n = 115, 13 clinical sites, 5 countries
- 45 – 80 years old
- Low (33%) & intermediate risk (67%) prostate cancer

Ablation Treatment Plan

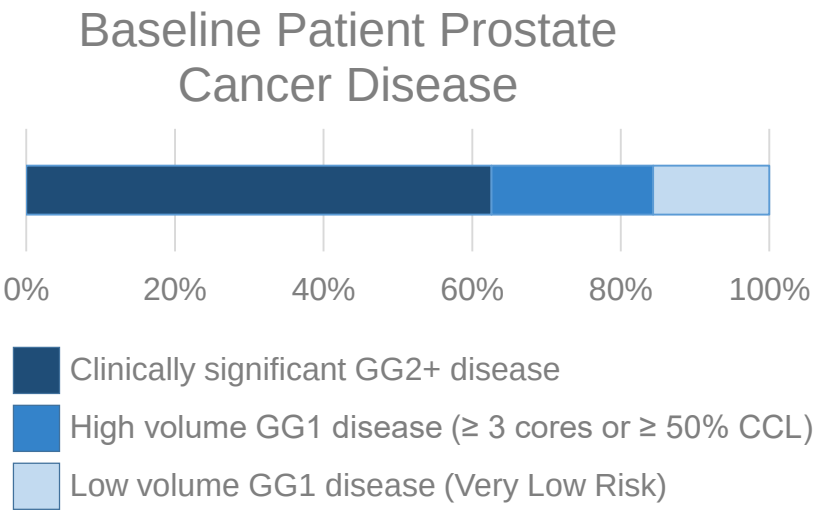
- Treatment intent was whole-gland ablation with sparing of the urethra and urinary sphincter
- Recommended by FDA to determine substantial equivalence with predicate devices and comparison with standard of care

Primary Endpoints (12 months)

- Safety: Frequency and severity of adverse events
- Efficacy: PSA reduction ≥ 75% (in > 50% of patients)

Secondary Endpoints (to 5 years)

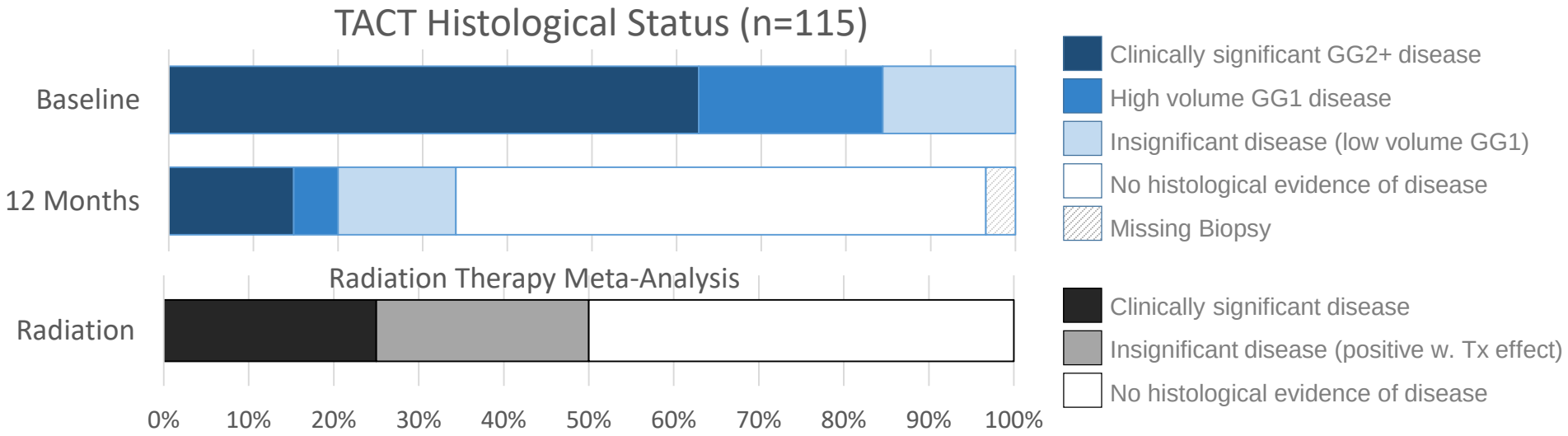
- Prostate volume reduction at 1 year
- Prostate biopsy at 1 year in all patients
- Multi-parametric MRI at 1 year (Central Radiology Lab, Cleveland Clinic)
- Functional Disability: EPIC, IIEF, IPSS



Prostate **Ablation Efficacy** – Histological Response

TACT Biopsy Outcomes (1-year, 10-core TRUS, High Sampling Density 0.4 cc / core)

- Only 4 of 115 follow-up biopsies are missing, all due to patient refusal
- Among men with pre-treatment intermediate-risk GG2 prostate cancer, 54 of 68 (79%) were free of GG2 disease
- Of men with one-year biopsy data, 72 of 111 (65%) had complete histological response and were free of any disease
- 41% (16 of 39) of positive biopsies were clinically insignificant (Very Low Risk)
- Multivariate Analysis: Among men w. pre-Tx GG2 disease and w/o calcifications at screening, **51 of 60 (85%)** were free of GG2 disease



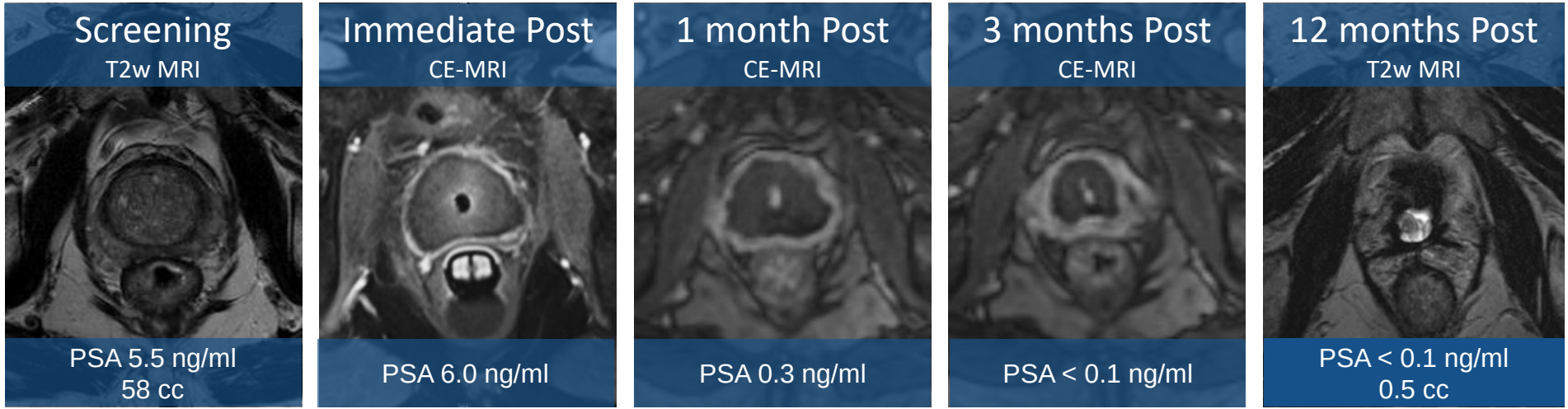
Prostate **Ablation Efficacy** – Volume Reduction on MRI

Prostate Volume significantly reduced demonstrating effective prostate ablation

- Median perfused prostate volume decreased from 41 cc to 4 cc, on MRI at 1 year (interim analysis by local radiologists)
- Prostate volume reduction to be re-assessed by Central Radiology Core Lab, as per TACT protocol
- Prostate ablation confirmed on Contrast Enhanced MRI immediately after TULSA and during follow-up

Follow-up Prostate MRI predicts clinically significant disease on biopsy

- Multivariate Analysis: Absence of PIRADS ≥ 3 lesion at 1-year multi-parametric MRI has **92% Negative Predictive Value** for absence of GG2 disease on 1-year biopsy (interim analysis by local radiologists, to be re-assessed by Central Radiology Core Lab)



Prostate **Ablation Efficacy** – PSA

PSA Primary efficacy endpoint resolutely met

- Primary endpoint of PSA reduction ≥75% was achieved in 110 of 115 (96%)
- Median (IQR) PSA reduction was 95% (91-98%)
- Median PSA nadir was 0.34 (0.12-0.56) ng/ml

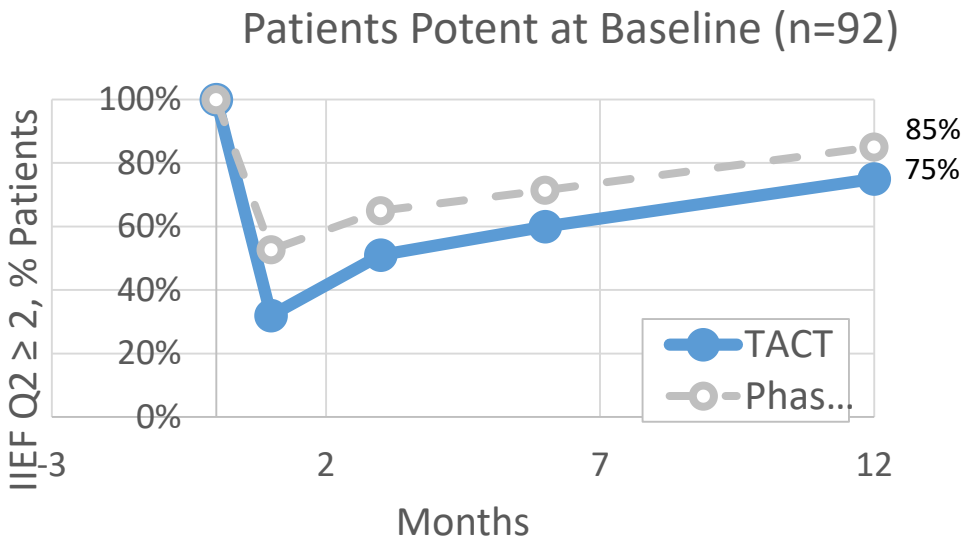
	Pre-Treatment	1 Month	3 Month	6 Month	12 Month	PSA NADIR
N	115	113	115	115	115	115
Median	**6.26**	**0.53**	**0.46**	**0.53**	**0.53**	**0.34**
IQR	4.65 – 7.95	0.30 – 1.19	0.17 – 0.95	0.20 – 1.00	0.28 – 1.25	0.12 – 0.56
Average	**6.72**	**0.90**	**0.77**	**0.77**	**0.93**	**0.51**
T-Test against baseline		<0.001	<0.001	<0.001	<0.001	<0.001

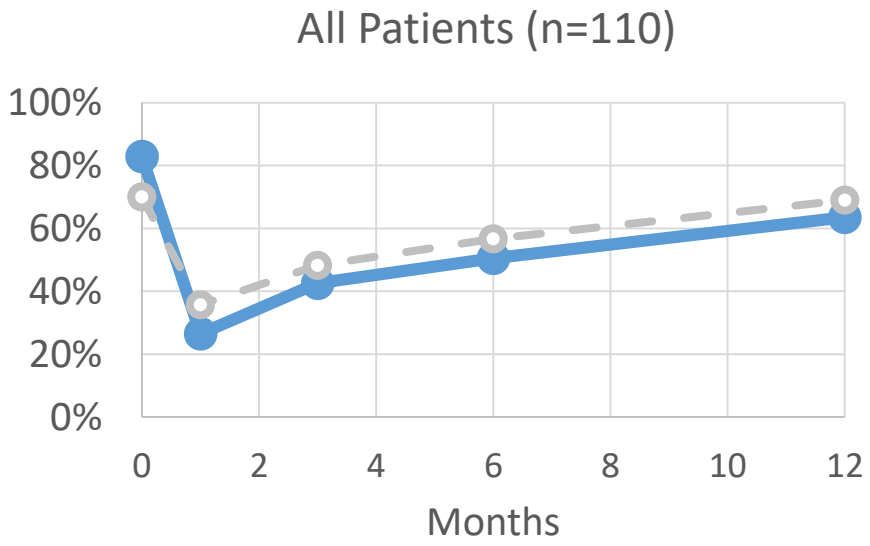
Missing values are interpolated using the LVCF method for the first timepoint after treatment.

TACT **Erectile Function** – Surgeon & Patient Reported

Erectile Function, at one year:

- 23% surgeon-assessed moderate erectile dysfunction (CTCAE Grade 2, intervention such as medication indicated)
- 0% any occurrence of severe erectile dysfunction (CTCAE Grade 3, intervention such as medication not helpful)
- 75% (69/92) of previously potent patients maintained erections sufficient for penetration (Patient reported, IIEF Q2 ≥ 2)
- Trend and recovery similar to Phase I

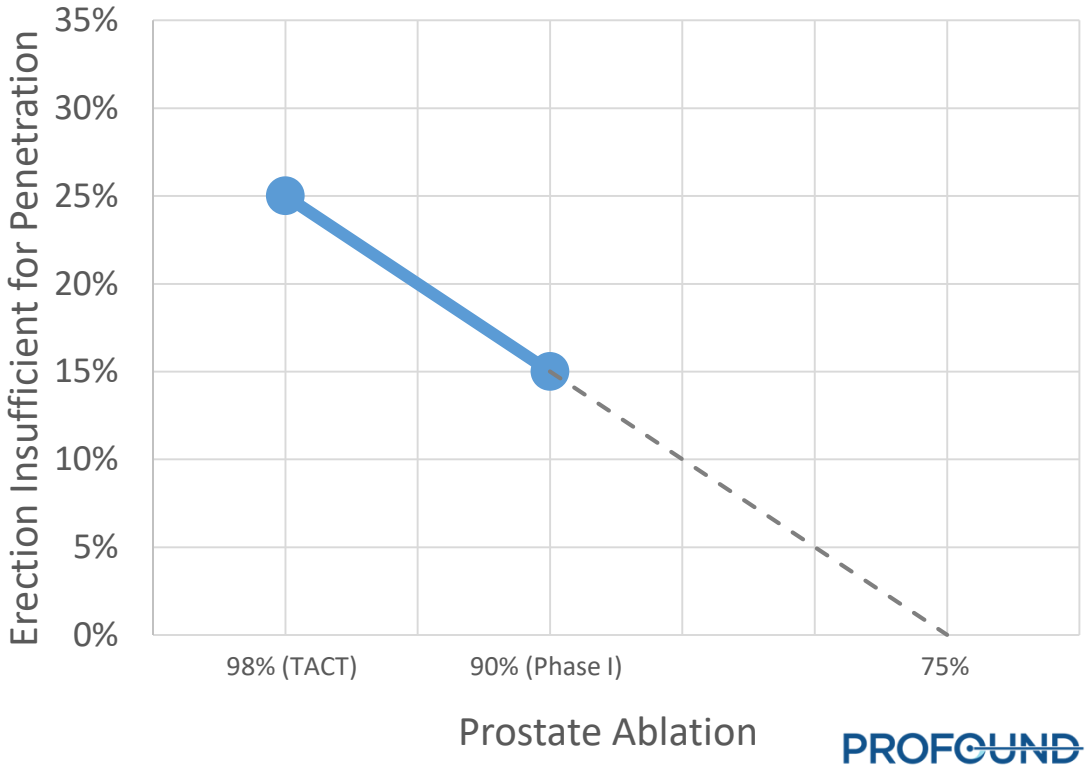




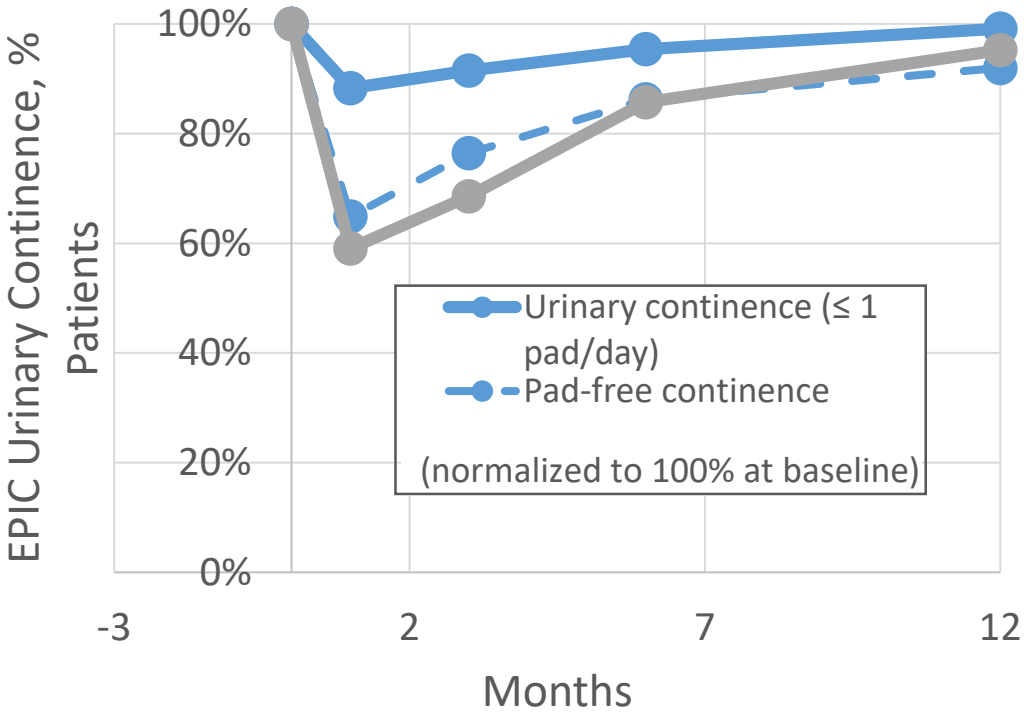
Erectile Function – Control of Treatment Margin

Effect of treatment margin on erectile function

- MRI guided treatment planning and closed-loop temperature control provide customizable prostate ablation
- Phase I and TACT studies show effect of treatment margin on erectile function
- Additional investigation may provide quantitative guidance for control of treatment margin



TACT **Urinary Incontinence** – Surgeon & Patient Reported



Urinary Incontinence, at 1 year (n=112):

- 2.6% surgeon-assessed moderate urinary incontinence (CTCAE Grade 2, pads indicated)

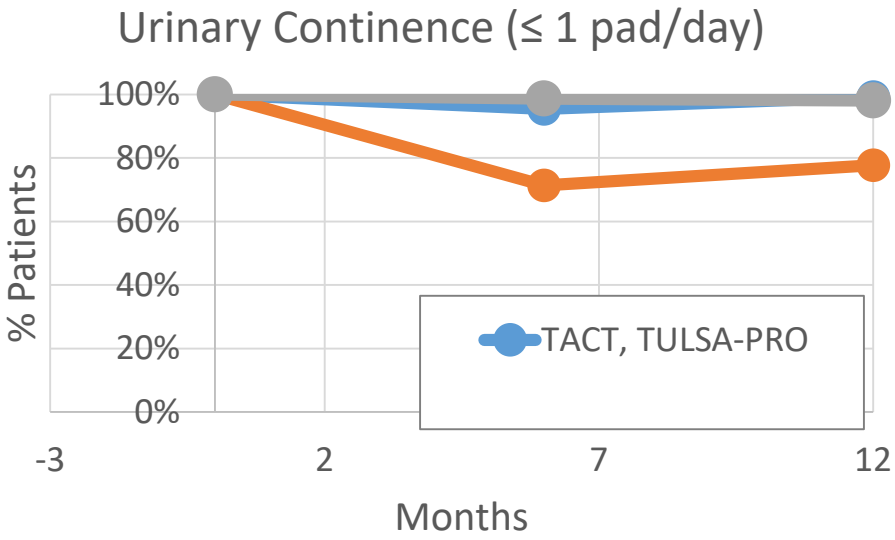
EPIC Patient Reported:

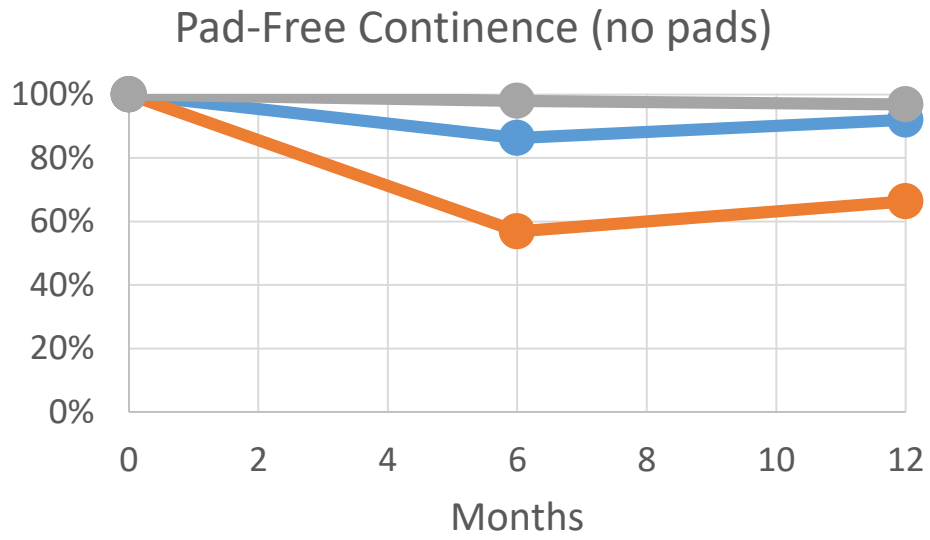
- <1% (1/112) are incontinent (EPIC, > 1 pad / day)
- 3.8% increase in patients with daily leakage (EPIC, leak ≥ 1 time / day)
- 7% (8/112) wear 1 pad / day (preventative)

Urinary Incontinence – Context to PIVOT

Urinary Incontinence (Pad use), at one year:

- TULSA Urinary Continence (≤ 1 pad/day) similar to Observation (control) arm of PIVOT study
- TULSA Pad-Free Continence (no pads) only 5%-points lower than Observation (control) arm of PIVOT study
- TULSA continence outcomes markedly superior to Radical Prostatectomy arm of PIVOT study
- PIVOT: Wilt *et al*, The New England Journal of Medicine, 2017





Real World Context and Outcomes

	Prostatectomy [1-4]	Radiation [1-5]	HIFU [6-8]	TULSA (TACT)
Biopsy / Histology	16 – 24% Pos. Surg. Margin (Meta-Analysis, Tewari *et al* 2012) 10 – 15% Pos. Surg. Margin (RCT, Yaxley *et al* 2016) 24% Pos. Surg. Margin (ProtecT, Hamdy *et al* 2016)	50% Negative (Complete response) 25% Insignificant disease (Positive w. treatment effect) 25% Positive clinically significant Pca (Meta-Analysis Page 5, Approx. No.)	59 – 61% Negative (Complete response, FDA IDE Studies DEN150011 & K153023, Intent to treat analysis) 63% Negative, after 40% having repeat HIFU and 39% ADT (n=774, Crouzet *et al* 2013)	65% Negative (Complete response) 14% Insignificant disease (GG1, ≤2 cores, < 50% CCL) 21% Positive clinically significant Pca
Erectile Dysfunction erections insufficient for penetration	79% *(Range: 25 – 100%)*	63% *(Range: 7 – 85%)*	58% *(Range: 38 – 67%)*	20% – 25% - Grade 2 medication indicated. No Grade 3 ED
Urinary Incontinence moderate to severe	15% *(Range: 0 – 50%)*	4% *(Range: 2 – 15%)*	3% *(Range: 3 – 22%)*	2.6% - Grade 2 pads indicated. No Grade 3 Incontinence
Urethral Stricture moderate to severe	9% *(Range: 3 – 26%)*	2% *(Range: 1 – 9%)*	35% *(Range: 9 – 35%)*	2.6%
GI Toxicity, moderate to severe diarrhea, urgency, incontinence, fistula	15% *(Range: 0 – 24%)*	25% *(Range: 0 – 40%)*	7% *(Range: 1 – 21%)*	No GI Toxicity

References

1. Thompson (Chair) *et al,* AUA prostate cancer clinical guideline update panel, J Urol 2007
2. Resnick et al, Prostate Cancer Outcomes Study (PCOS), NEJM 2013
3. Potosky *et al*, Prostate Cancer Outcomes Study (PCOS), J NCI 2004
5. Budaus *et al*, Review, Eur Urol 20012
6. FDA IDE Study K153023
7. FDA IDE Study DEN150011

TULSA-PRO Inside-Out Prostate Ablation

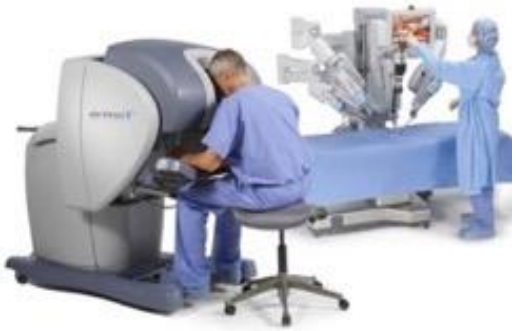
Customizable
Leading to flexibility to treat various prostate conditions to meet each patient's exact need

Predictable
Leading to confidence and high throughput

Incision-free
Leading to fast patient recovery

	Prostatectomy	Radiation	TULSA
Treatment type	Whole gland	Typically whole gland, limited customization possible	Customized to exact need of the patient
Outcome	Predictable	Not known for up to 2 years	Immediately confirmed and predictable even for partial gland therapy
Procedures/day	2 typically, 3 if longer day	Multiple sessions - 20 to 40 over 4 - 8 weeks	Consistently 4 in a routine day. Higher possible
Patient recovery	Weeks	Deterioration over time	2 days

Adding TULSA-PRO As A Treatment Option



Whole gland removal

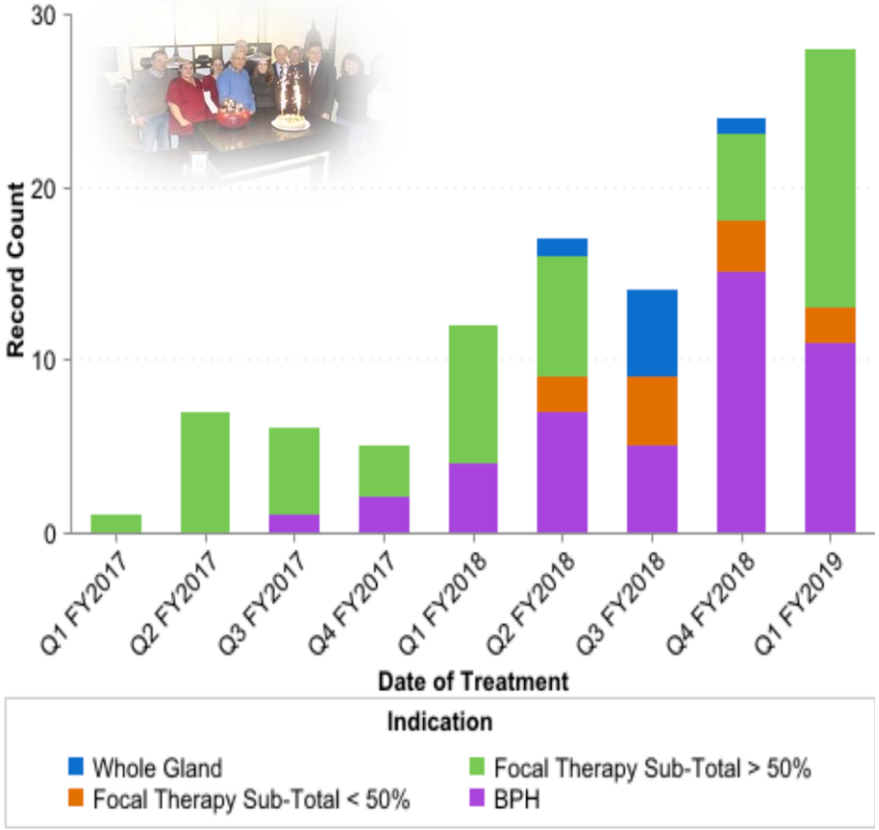
Whole gland radiation, multiple sessions

Disease targeted ablation

Potential to Expand Urologist Practice

- Potential to keep radiation candidates “in practice”
- Treat patients - large prostates, BPH, high volume disease
- TULSA-PRO – significantly less intervention time

TULSA-PRO In Commercial Use – Example From Europe



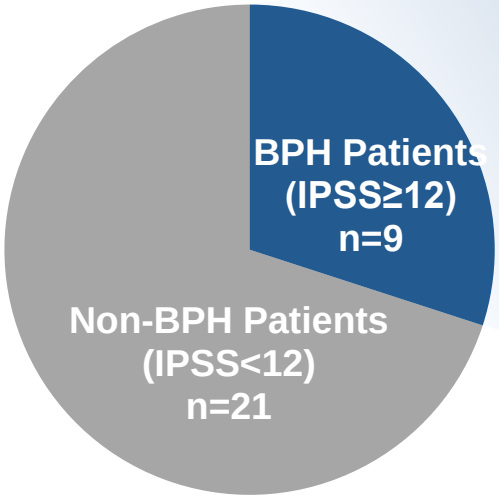
- Initiated Q1-2017
- Methodically increased usage
- Discovered potential to treat BPH patients – Q3-2017
- Streamlined procedure – routinely 4 patients per day
- Increased utilization rate in 2019

TULSA-PRO For BPH

Retrospective Analysis

- Physicians involved in the TULSA trial observed strong anecdotal results in patients with BPH
- A retrospective examination of the quantitative results has shown a consistent trend

TULSA Phase 1 Study (n=30)



BPH Patients in Prior Study

- There were 9 patients in the Phase 1 study who had at least moderately symptomatic BPH
- Determined by International Prostate Symptoms Score (IPSS) ≥ 12, in addition to cancer at baseline

Feasibility
of TULSA-PRO for BPH

Retrospective subgroup analysis of 9/30 Phase I patients with IPSS ≥12 suggests similar urinary symptom relief as other surgical techniques

Characteristics	Baseline	12 months	Change (%)
IPSS	16.1 ± 3.8	6.3 ± 5.0	-9.8 ± 5.0 (58 ± 34%)
IPSS QoL	2.8 ± 1.1	0.8 ± 1.0	-2.0 ± 1.7 (66 ± 48%)
Prostate Volume (cc)	54 ± 23	14 ± 5	-40 ± 24 (70 ± 19%)
Peak flow (Qmax, ml/s)	14.5 ± 4.1	21.9 ± 12.7	+7.4 ± 13 (60 ± 93%)

No Grade 3 adverse events, erectile function (IIEF) stable from 15±9 to 16±9,
% Patients with erections sufficient for penetration (IIEF Q2 ≥2): from 7/9 to 8/9 men

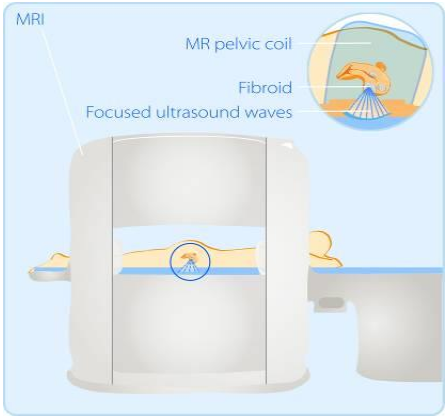
SONALLEVE

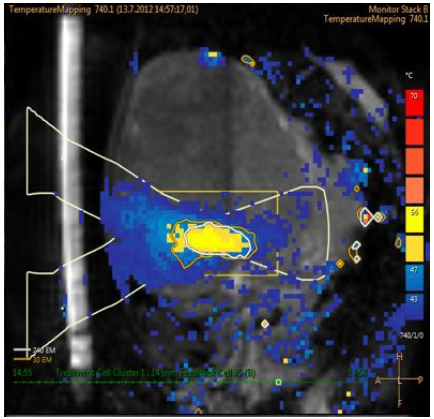
Technology platform for:

- Uterine Fibroid Treatment
- Bone Metastasis Pain
- Pediatric bone
- Hyperthermia

Over 200 publications from leading US and European clinicians and hospitals

CE Marked
CFDA Approved





Uterine Fibroid

Symptom Relief & Durability

In normal commercial use, over 85% of patients experienced sustained symptom improvement

Months post-procedure	Patients available for follow-up	Symptom improvement		
		Improved	No relief	Worse
3 months	105	90 (85.7%)	14 (13.3%)	1 (1%)
6 months	99	92 (92.9%)	7 (7.1%)	0
12 months	89	78 (87.6%)	11 (12.4%)	0

Durability of the therapeutic effect compared to other uterine preserving treatments

Need for alternative treatment	@ 12 month	@ 24 month	References
Myomectomy	10.6 %	13-16.5 %	1,2,3,4
UAE (Uterine Artery Embolization)	7-10 %	12.7-23.7 %	5,6,7
MR-HIFU/MRgFUSNPV >60%	6 %	13 %	8

"Volumetric MR-guided high-intensity focused ultrasound ablation of uterine fibroids: treatment speed and factors influencing speed," M. J. Park, Y. S. Kim, B. Keserci, H. Rhim, and H. K. Lim, Eur Radiol, vol. 23, no. 4, pp. 943–950, Apr. 2013. 1. Gorny KR, Woodrum DA et al. Magnetic resonance–guided focused ultrasound of uterine leiomyomas: review of a 12-month outcome of 130 clinical patients. J Vasc Interv Radiol 2011 2. Subramanian S, Clark MA, Isaacson K. Outcome and resource use associated with myomectomy. Obs & Gyn.2001; 98: 583-587 3. Nezhat FR, Roemisch M, et al. Recurrence rate after laparoscopic myomectomy. Am Assoc Gynecol Laparosc. 1998;5: 237-240 4. Rossseti et al. Long term results of laparoscopic myomectomy: recurrence rate in comparison with abdominal myomectomy. Hum Reprod. 2001:16:770-774 5. Donidot et al. Recurrence of leiomyomata after laparoscopic myomectomy. J Am Assoc Gynecol Laparosc. 2001;8: 495-500 6. Spies JB, Bruno J, et al. Long-term outcome of uterine artery embolization of leiomyomata. Obstet Gynecol. 2005; 106: 933-939 7. Goodwin SC, Spies JB, et al. Uterine artery embolization for treatment of leiomyomata: long-term outcomes from FIBROID registry. Obstet & Gynecol. 2008; 111: 22-32 8. Sharp HT. Assessment of new technology in the treatment of idiopathic menorrhagia and uterine leiomyomata. Obstet Gynecol. 2006;108: 990–1003

PROFOUND MEDICAL

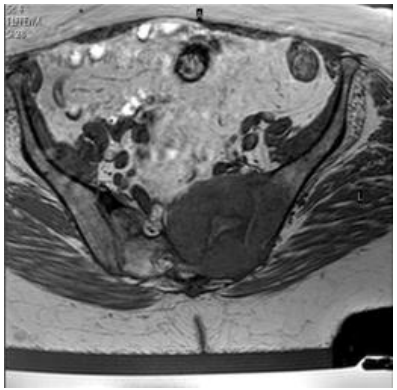
Sonalleve: Bone Metastasis Pain Therapy

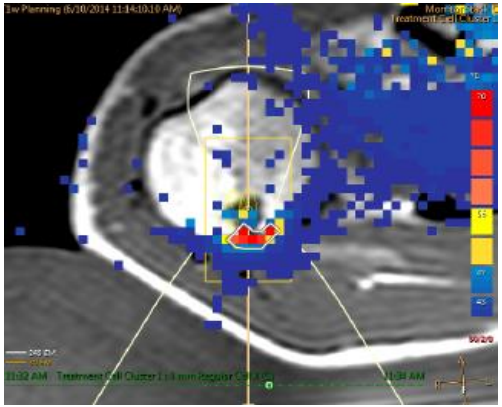
Non-invasive alternative to radiotherapy

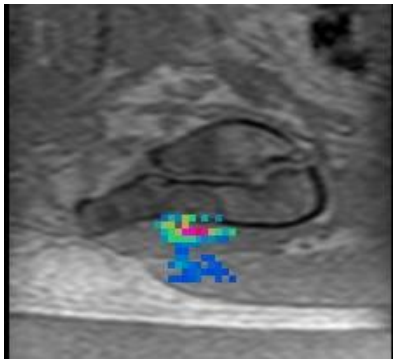
Most patients with slow growing tumors develop bone metastasis in the later stage of the disease.

Bone changes and malformations irritate nerve endings creating significant pain for patients.

- Radiotherapy standard of care for bone mets, but 20-30% of patients do not respond
- Sonalleve as non-invasive alternative to radiotherapy
- Heating of bone surface, ablation of periosteal nerves
- Quick pain relieve in 2-3 days, vs. radiotherapy typical 3 weeks

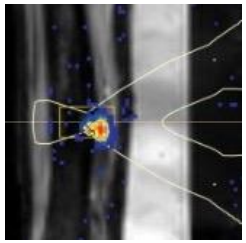






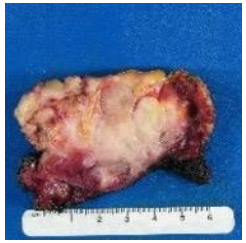
Exploring Further Indications on Current Platform

Pediatrics, Hyperthermia



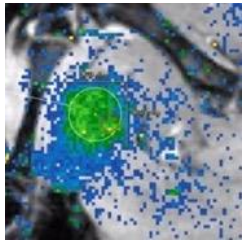
Pediatrics: Osteoid osteoma

- Very painful, benign bone tumor in children and young adults
- MR-HIFU very effective, immediate pain relief and bone restructuring
- Standard of care is radiofrequency ablation (RFA, invasive)



Pediatrics: Desmoid tumors (Fibromatosis)

- Benign aggressively growing tumors, everywhere in the body
- Can cause severe (bulk) symptoms
- Surgery (+/- radiotherapy) is standard of care, but high risk of recurrence
- Successful MR-HIFU treatments presented as individual case studies



Hyperthermia

- Increase tumor sensitivity to Radiation and Chemo Therapy
- Local heating to 40 – 43°C, precise control of temperature and lesion size
- Adjuvant therapy to chemotherapy or radiation therapy
- Enabling technology for Local Drug Delivery

Adoption Strategy

TULSA-PRO

1. Limited launch in Europe
   - Confirmation of business model, value proposition & additional clinical data generation
2. US– 510(k) file – Q2-2019
   - TACT complete data release at podium presentation at AUA – May 5-2019
3. Full launch in US and Europe – H2, 2019
   - Leverage agreements with Philips and Siemens for capital sales
   - Direct sales to build recurring revenue model – per patient kit

Sonalleve

1. Pilot launch in China
   - CFDA approved in May 2018, launched in September 2018
   - Leverage distribution agreement with Philips and its installed base of MR's in China
   - Initial focus – key opinion leading reference sites

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