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Aquablation for benign prostatic hyperplasia in large prostates (80-150mL): 2-year results

Zorn K.¹, Bidair M.², Trainer A.³, Arther A.³, Kramolowsky E.⁴, Doumanian L.⁵, Elterman D.⁶, Kaufman, Jr. R.P.⁷, Lingeman J.⁸, Krambeck A.⁸, Eure G.⁹, Badlani G.¹⁰, Plante M.¹¹, Euchio E.¹², Gin G.¹², Goldberg L.¹³, Patterson R.¹³, So A.¹³, Humphreys M.¹⁴, Kaplan S.¹⁵, Motola J.¹⁵, Roehrborn C.¹⁶

1. University of Montreal Hospital Center, Montreal, Canada; 2. San Diego Clinical Trials, San Diego, USA; 3. Adult Pediatric Urology & Urogynecology, Omaha, USA; 4. Virginia Urology, Richmond, USA; 5. University of Southern California, Los Angeles, USA; 6. University of Toronto, Toronto, Canada; 7. Albany Medical College, Albany, USA; 8. Indiana University Health Physicians, Indianapolis, USA; 9. Urology of Virginia, Virginia Beach, USA; 10. Wake Forest School of Medicine, Winston-Salem, USA; 11. University of Vermont Medical Center, Burlington, USA; 12. VA Long Beach Healthcare System, Long Beach, USA; 13. University of British Columbia, Vancouver, Canada; 14. Mayo Clinic Arizona, Scottsdale, USA; 15. Icahn School of Medicine at Mount Sinai, New York, USA; 16. UT Southwestern Medical Center, Dallas, USA

INTRODUCTION

Prostate resection of patients with LUTS remains the gold standard for surgical treatment of BPH for prostates up to 80 mL. For prostates larger than 80 mL, the treatment options diminish, while complication rates increase.

We aimed to present 2-year safety and efficacy data from a multicenter prospective study of Aquablation in treatment of symptomatic men with BPH and prostate volumes 80 - 150 mL. (Figure 1)

MATERIALS and METHODS

101 men with moderate-to-severe BPH symptoms and prostate sizes of 80 – 150 mL underwent Aquablation in a prospective multicenter international clinical trial (16 sites and 24 surgeons).

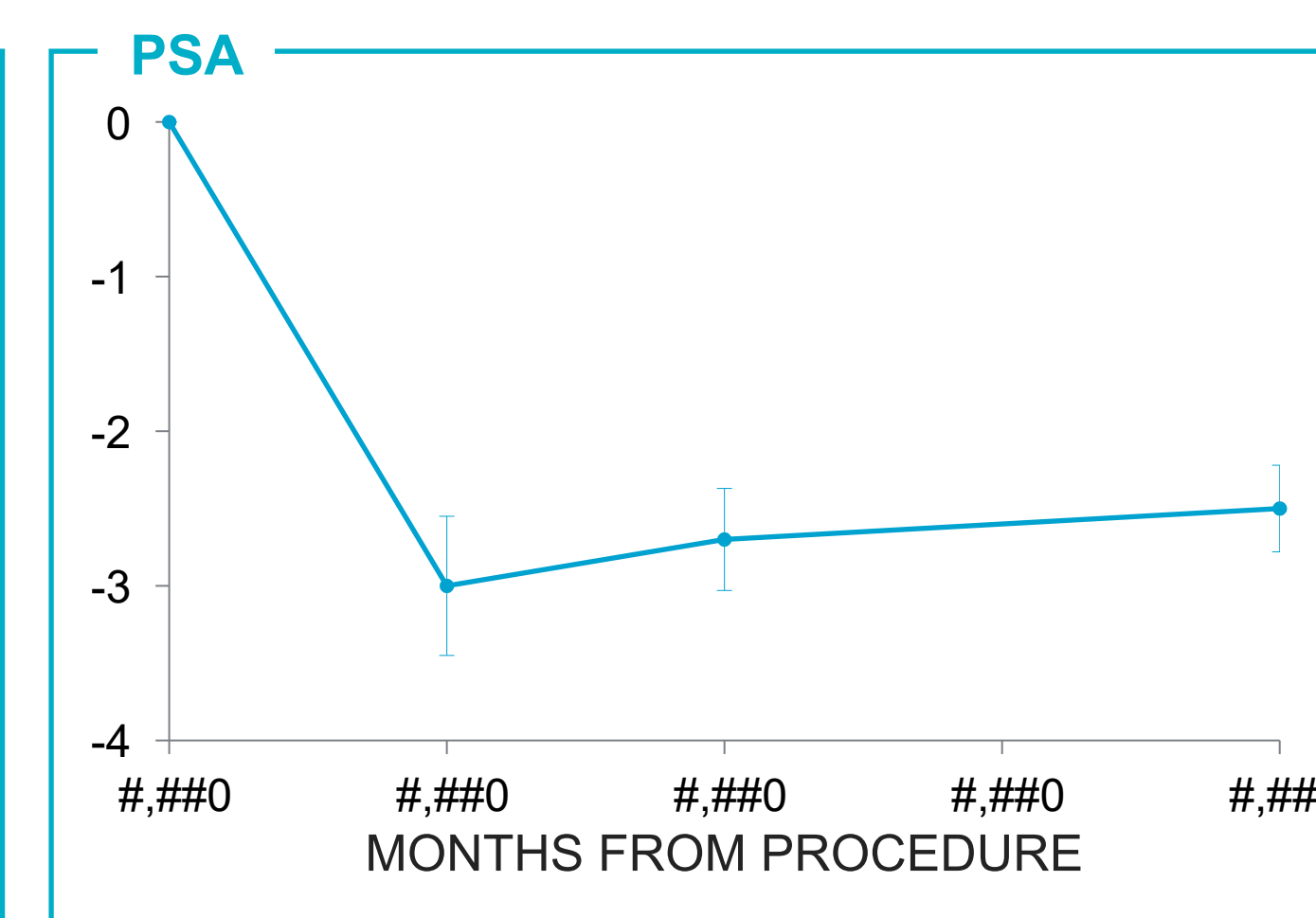
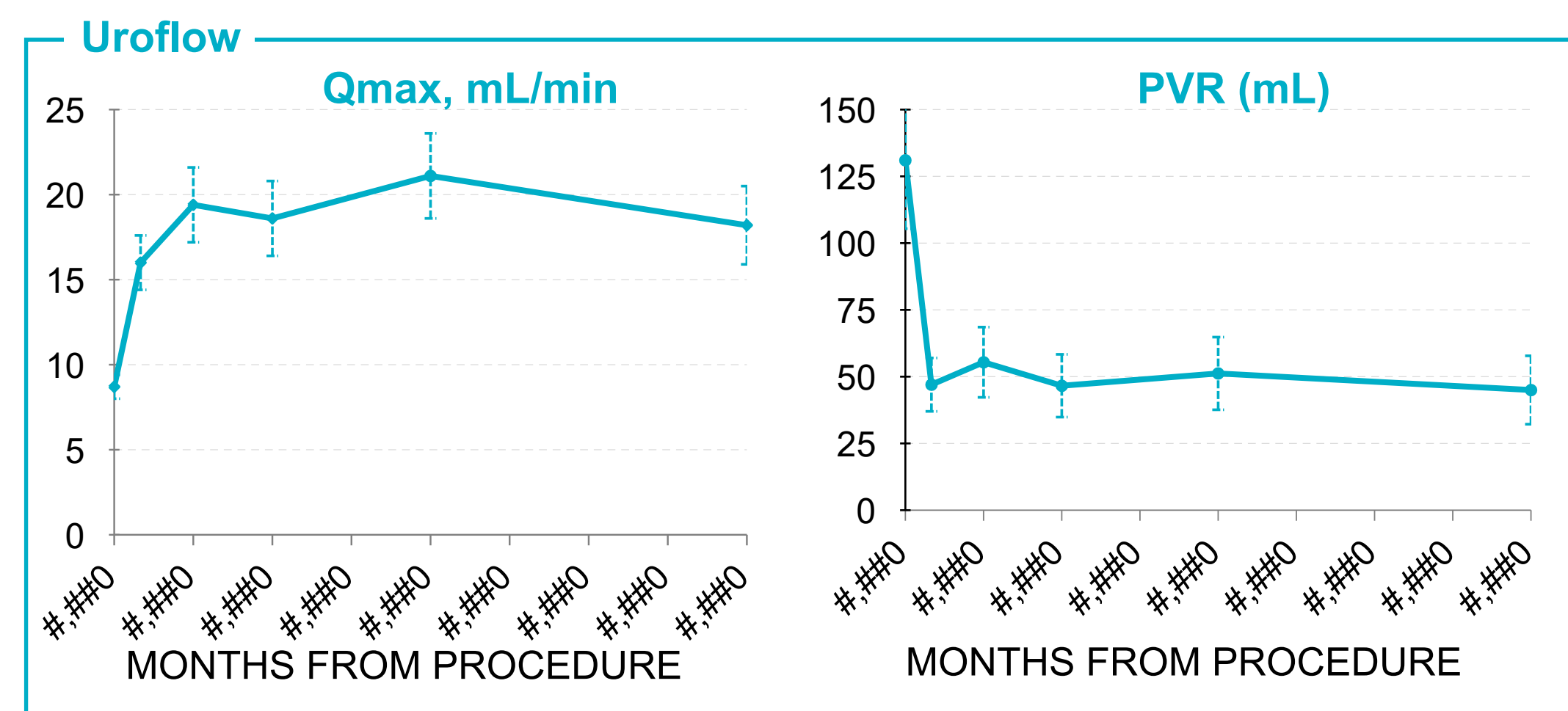
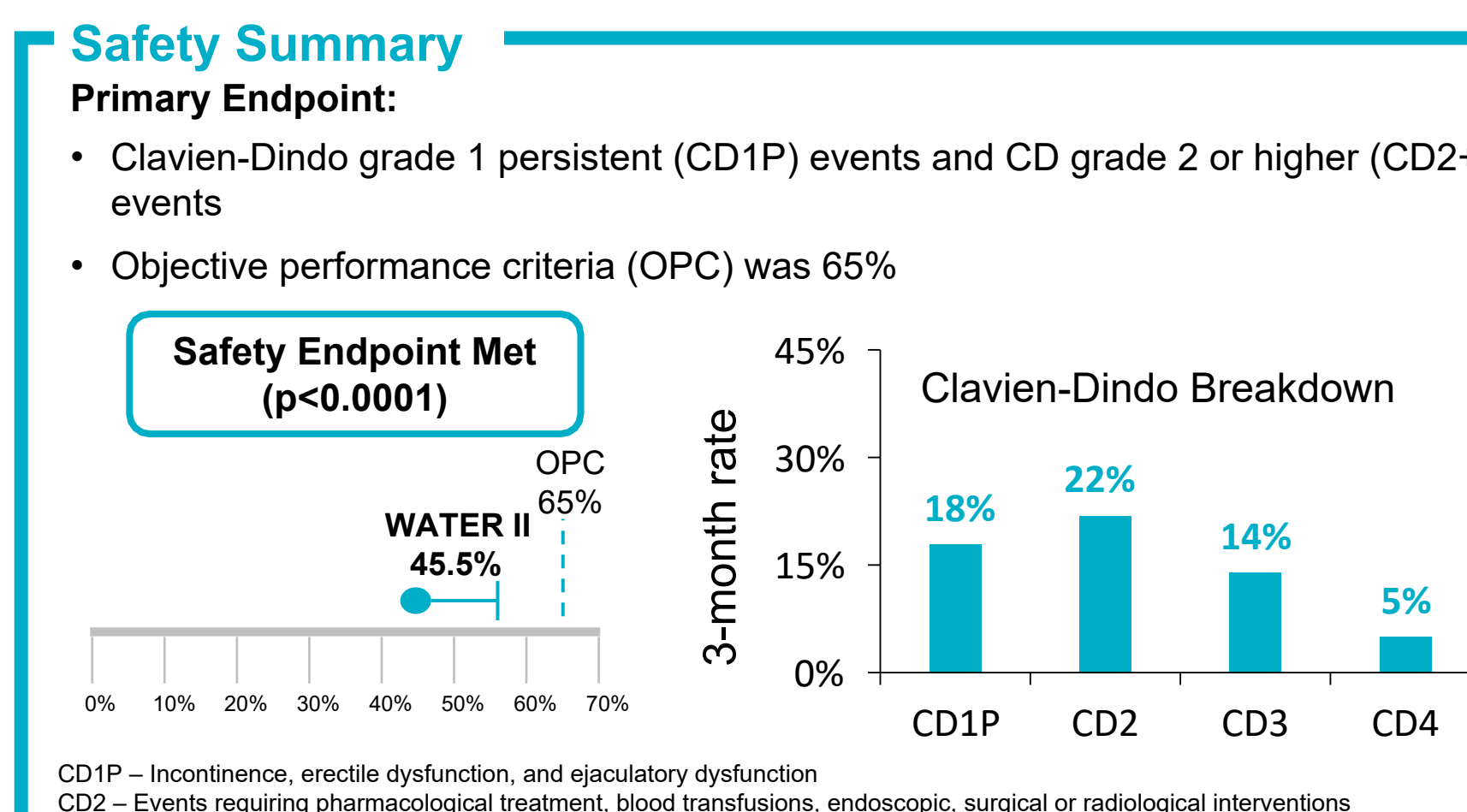
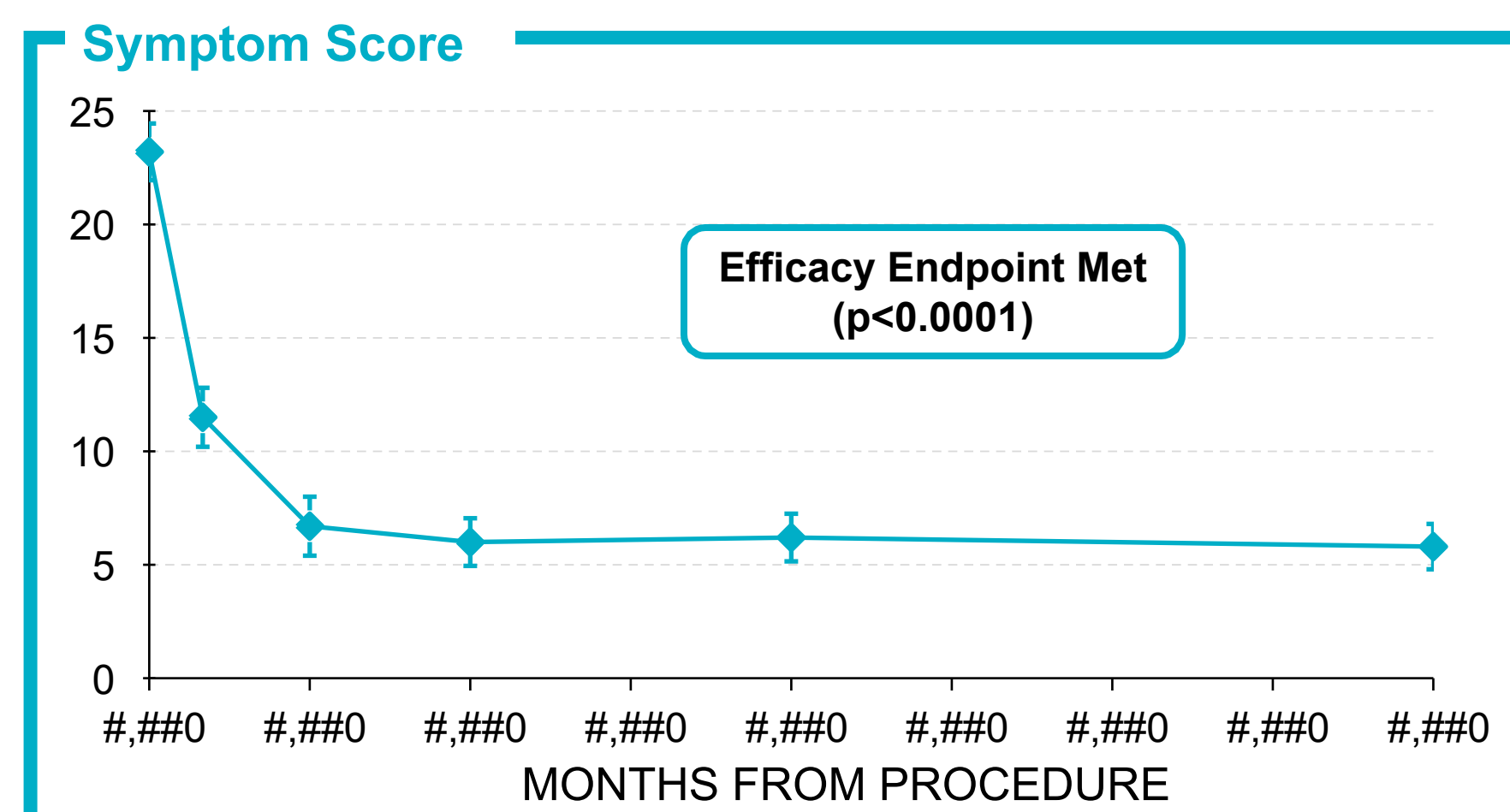
The primary safety endpoint was the occurrence of persistent CD Grade 1 or Grade 2 or higher operative complications at 3 months. The primary efficacy endpoint was the reduction in IPSS score at 3 months. Study follow-up is at 1 month, 3 months, 6 months, 1 year, and 2 years.

RESULTS

Baseline Demographics	Aquablation (n=101)	
	Mean	SD
Age	67.5	6.6
IPSS	23.2	6.3
Prostate volume, mL	107.4	20.2
Middle Lobe, %	72	
Intravesical Component, %	95	
Qmax, mL/sec	8.7	3.4
PVR, mL	131	125
MSHQ-EjD, range 0-15	8.1	3.9
IIEF-5 (SHIM), range 0-25	15.1	7.4
PSA (ng/dL)	7.1	5.9

Procedure Results

	Aquablation (n=101)
Spinal : General Anesthesia	82% : 18%
TRUS In / Catheter In	55 ± 19 minutes
Aquablation Resection Time	8 ± 3
Average Number of Passes	1.8
Length of Stay	1.6 ± 1



CONCLUSIONS

Aquablation is a reasonable surgical alternative in patients with larger prostate volumes, with high levels of efficacy coupled with:

- low operative times and lengths of hospital stay
 - maintenance of ejaculatory function
 - acceptable complication and transfusion rates.
- Aquablation met both primary safety and efficacy endpoints.

• **Operating room time efficiency remained extremely favorable in this study with larger prostates.**

• Aquablation demonstrates a short learning curve (avg. 0.5 cases/surgeon in this study) by replicating WATER Study results in a more complex patient population.

• Combination of robotics and image guidance significantly reduces tissue removal time dependency from operator, prostate anatomy and prostate size.

• **Durable outcomes at 2 years, with a low average annual retreatment rate of 1% (n=2, 1.9% overall BPH surgical retreatment rate)**

ACKNOWLEDGEMENTS

The WATER II Study was funded by PROCEPT BioRobotics

Figure 1

Contour Planning with the AQUABEAM® Robotic System

