

Latest Treatments for an Enlarged Prostate

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About Your Speaker

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UNDERGRADUTE EDUCATION:

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Today's Agenda

- Overview of Benign Prostatic Hyperplasia (BPH)
- Diagnosing BPH
- BPH Treatment Options
- Prostate Artery Embolization
- Aquablation Therapy

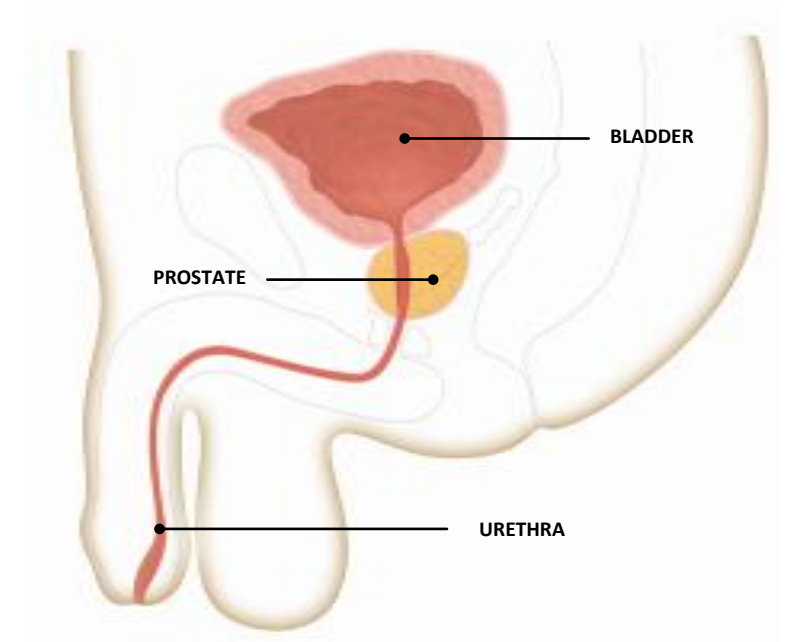
Overview of Benign Prostatic Hyperplasia (BPH)

What is a prostate?

- Walnut sized gland at the base of the male bladder
- Surrounds the urethra
- Produces fluid that transports sperm during ejaculation

What is Benign Prostatic Hyperplasia (BPH)?

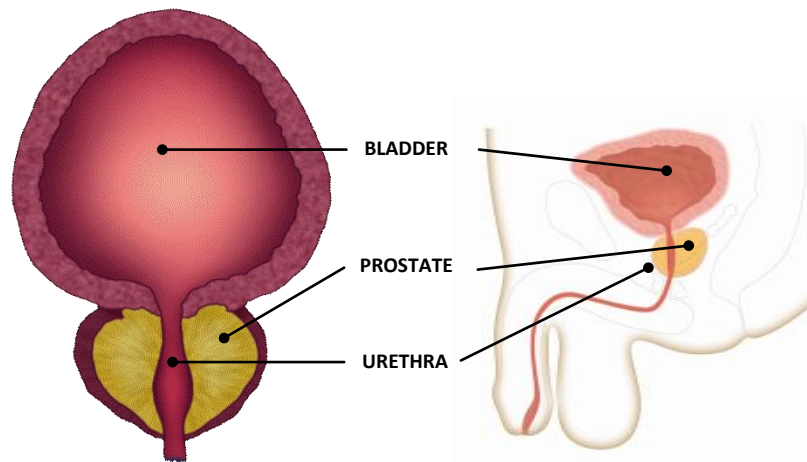
- BPH is a prostate that has grown to be larger than normal. The prostate grows with age and, as it continues to grow, it can cause lower urinary tract symptoms.
- BPH is NOT prostate cancer.



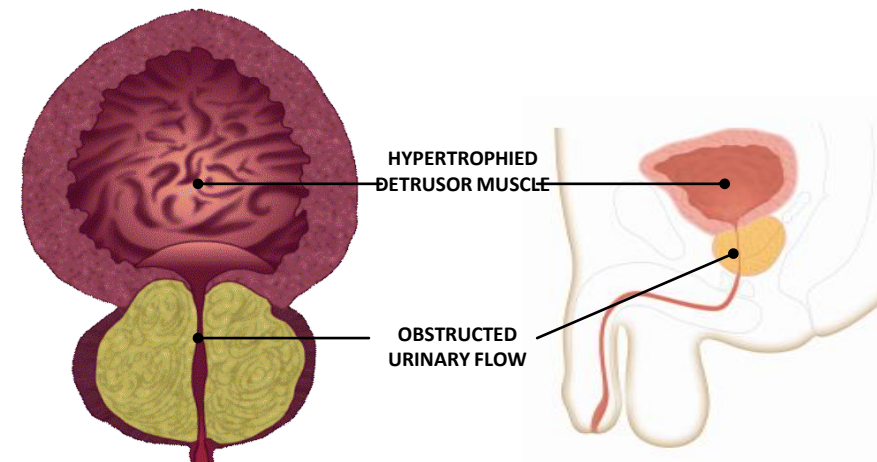
Normal vs. Enlarged Prostate:

- The prostate grows to a normal size in the teenage years and then begins to grow again around the age of 50.
- As the prostate enlarges, pressure can be put on the urethra and causes urinary problems.
- In general, the size of the prostate does not correlate to the severity of symptoms.

Normal Prostate Anatomy



Enlarged Prostate (BPH) Anatomy



Overview of BPH

Lower Urinary Tract Symptoms (LUTS) due to BPH:

- Ability to hold urine
- Emptying the bladder

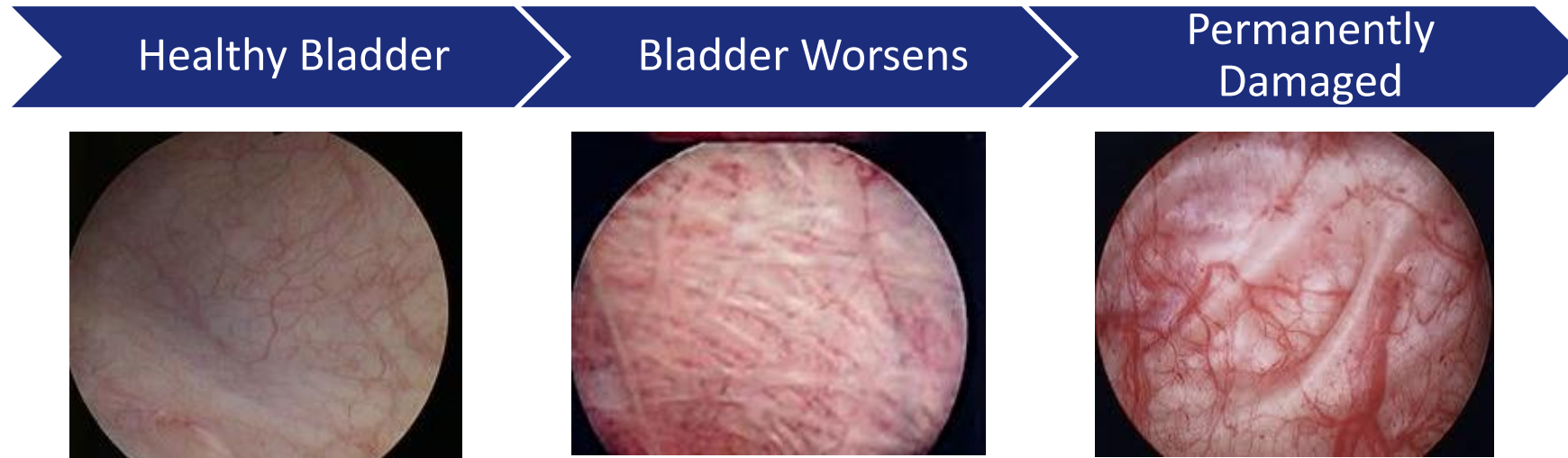
BPH (Benign prostatic hyperplasia)



BPH affects quality of life:

- Many men who suffer from BPH experience a reduction in quality of life
 - Avoiding travel
 - Interrupting leisure activity
 - Using bathroom stalls instead of urinals
 - Disrupting sleep patterns

For nearly half of men in the U.S. with BPH, their symptoms are severe enough to disrupt their lifestyle and cause them to seek treatment.



What happens if BPH is NOT treated?

- Bladder outlet obstruction results in irreversible bladder damage if left untreated.^{1,2}
- Lower urinary tract symptoms due to BPH often progress when left untreated.³
- 87% of men who elect watchful waiting experience a worsening of urinary symptoms over a 4-year time period.⁴

Not treating enlarged prostate can lead to loss of bladder function.

Overview of BPH

Many Men Go Untreated Due to Unwanted Side Effects



12M+ US MEN
actively managed
for BPH each year

40M

MEN

- ▶ In the US have BPH

6.7M

PHARMACEUTICALS/MEDICATIONS

- ▶ Suffer dosing adjustments and side effects

1.1M

PHARMACEUTICAL FALLOUT

- ▶ Delay surgery despite medication failure

400K

SURGERIES PER YEAR

- ▶ May compromise between safety and efficacy outcomes

83%

**OF MEN ARE NOT WILLING TO SACRIFICE SEXUAL
FUNCTION FOR SYMPTOM RELIEF²**

Vuichoud C, Loughlin KR. Benign prostatic hyperplasia: epidemiology, economics and evaluation. *Can J Urol*. 2015;22(suppl1):1-6.
Emberton M, Marberger M, de la Rosette J. Understanding patient and physician perceptions of benign prostatic hyperplasia in Europe: the Prostate Research on Behaviour and Education (PROBE) Survey. *Int J Clin Pract*. 2008;62(1):18-26. 3.
Kaplan SA. Factors in predicting failure with medical therapy for BPH. *Rev Urol*. 2005; 7(suppl 7):S34-S39.

Diagnosing BPH

How is an enlarged prostate diagnosed?

- Medical history
- Physical exam
 - Bladder scan (ultrasound)
 - Residual urine assessment
 - Digital rectal exam (DRE)
 - Approximate prostate size, texture, symmetry
- Symptoms – International Prostate Symptom Score (IPSS)
- Size and shape of prostate
 - Cystoscopy
 - Ultrasound (transrectal or transabdominal)
- Urine flow and bladder function
 - Uroflow
 - Urodynamics

Diagnosing BPH

International Prostate Symptom Score (IPSS)

0 to 7 points	Mild Symptoms
8 to 19 points	Moderate Symptoms
20 to 35 points	Severe Symptoms

- Incomplete bladder emptying
- Frequency
- Intermittency
- Urgency
- Weak stream
- Straining
- Nocturia

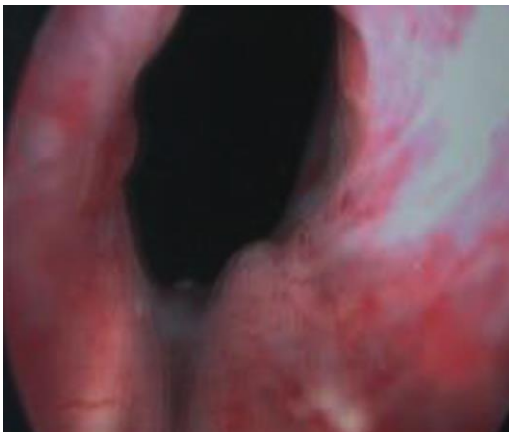
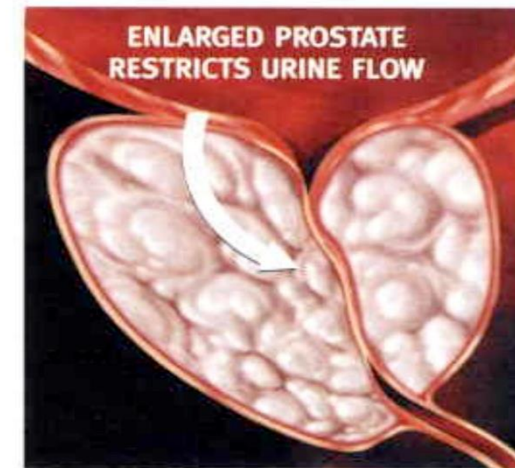
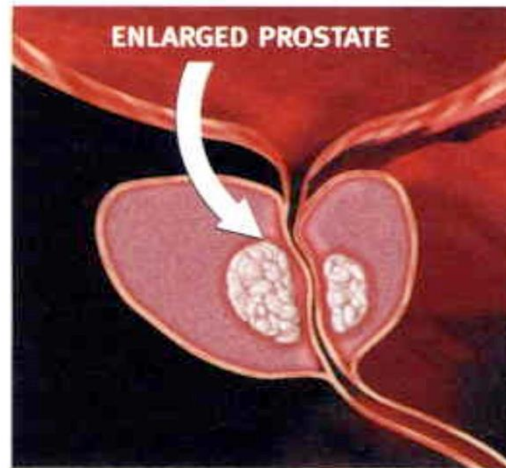
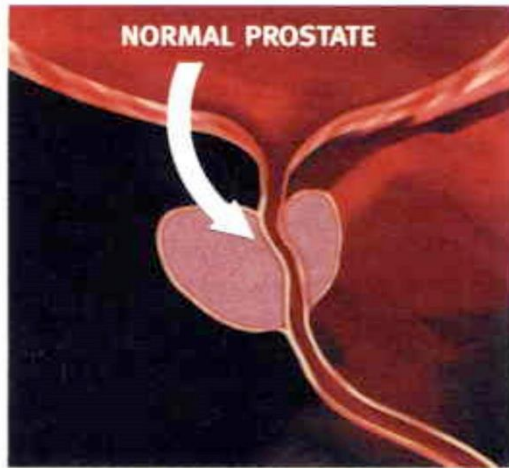
If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that?

During the last month, how many times did you get up at night to urinate?

How much of a bother is it to you?

Diagnosing BPH

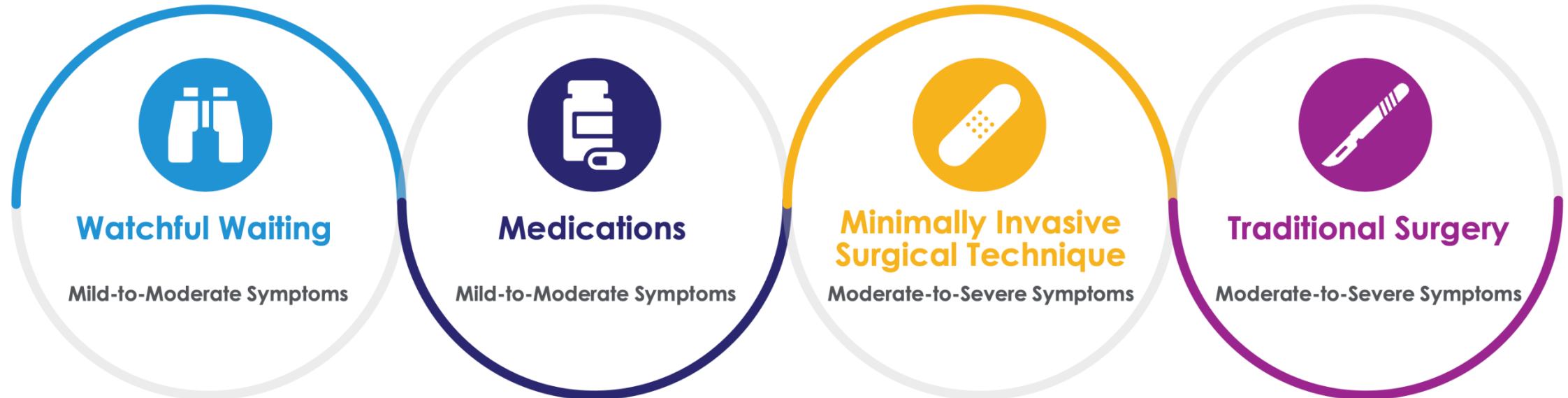
BPH Disease Progression - cystoscopy



BPH Treatment Options

BPH Treatment Options

Treatment Options – Every Patient is Unique



- No symptom relief
- As the prostate continues to grow symptoms worsen with time
- May cause **irreversible bladder damage**

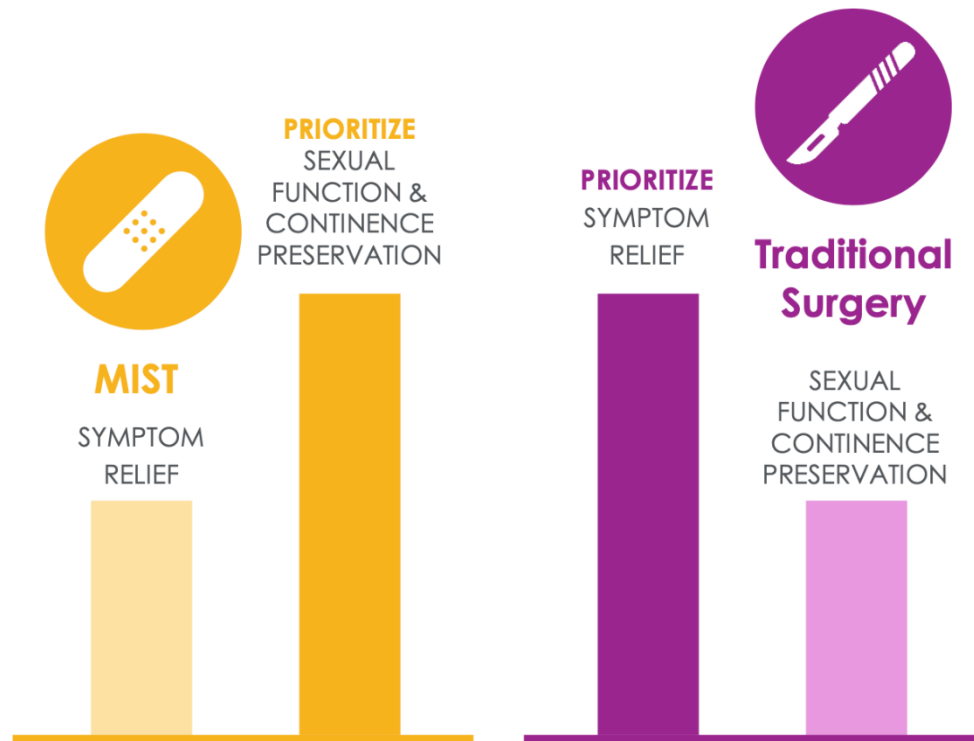
- Minimal symptom relief
- Common side effects may include dizziness, headache, fatigue, less libido, **erectile & ejaculatory dysfunction**³
- Over time, drugs may stop working

- **Moderate symptom relief**
- Typically, same day procedure, may be performed in office
- May not last⁴ & may require retreatment
- Size & shape limitations

- Significant long-term symptom relief^{5,6}
- Typically, requires overnight hospital stay
- High rates of irreversible complications - **sexual dysfunction & incontinence**⁵⁻¹²

BPH Treatment Options

BPH Treatments Trade-off Effectiveness and Sexual Side Effects



76%

Men feel BPH surgery requires a tradeoff between safety & efficacy²

83%

Men are not willing to sacrifice sexual function for symptom relief²

99%

Men say BPH impacts their quality of life²

So how many treatment options are there?

- Transurethral Resection of the Prostate (TURP)
- Simple prostatectomy
- Transurethral Incision of the Prostate (TUIP)
- Transurethral Vaporization of the Prostate (TUVP)
- Photoselective Vaporization of the Prostate (PVP)
- Prostatic Urethral Lift (PUL)
- Water Vapor Thermal Therapy (WVTT)
- Laser Enucleation
- Robotic Waterjet Treatment (RWT)
- Prostate Artery Embolization (PAE)
- Temporary Implanted Prostatic Devices (TIPD)

 **AQUABLATION**[®]
THERAPY

Prostate Artery Embolization (PAE)

Prostate Artery Embolization



What is Prostate Artery Embolization?

- Minimally invasive procedure performed by an Interventional Radiologist (doctor who uses X-rays and imaging to see inside the body and provide therapy without surgery).
- Using a small catheter in the artery supplying blood to the prostate, injects tiny particles to block the prostatic arterial flow to reduce prostatic blood supply.
- Results in gradual decrease in prostatic volume to decrease urinary symptoms.

Outcomes of PAE:

- Significant improvement in urinary tract symptoms
 - 9-21 point improvement in International Prostate Symptom Score (IPSS)
- Improved urinary flow rate
- 20-30% decrease in central gland volume
- Data to date suggests a durable result for majority of patients
 - 20% recurrence within 5 years
 - 30-60% recurrence within 10 years

Prostate Artery Embolization

Benefits of PAE:

- Does not require general anesthesia
- Lower risk of sexual side effects and urinary incontinence compared with traditional surgical procedures
- Option for patients who are not surgical candidates, patients unable to discontinue blood thinners, patients hesitant to consider a resection procedure
- Minimal discomfort

Considerations of PAE:

- No tissue removal - slower and more gradual improvement in symptoms compared to traditional therapy
- Retreatment rate up to 20% at 5 years
- Newer procedure... limited long-term data

Aquablation Therapy

Aquablation Procedure

Aquablation Therapy is a Game-changing Robotic-assisted Procedure That Removes Prostate Tissue Using the Power of Water



REAL-TIME IMAGE GUIDANCE

Real-time ultrasound imaging combined with cystoscopic view provide a multidimensional view of the prostate



PERSONALIZED TREATMENT PLANNING

Advanced planning software to map the treatment area & identify tissue to protect and obstructive tissue to resect



ROBOTIC-ASSISTED EXECUTION

Robotic-assisted execution of the waterjet along the treatment plan results in precise tissue resection



HEAT-FREE WATERJET RESECTION

Heat-free waterjet precisely removes prostate tissue and minimizes thermal damage to surrounding tissue

Aquablation Therapy - the only ultrasound guided, robotic-assisted, heat-free waterjet for the treatment of BPH.



Aquablation Procedure

Aquablation Therapy Proven Safe & Effective in Clinical Studies^{1,2}

>99%

Of men preserved
erectile & orgasmic
function, sexual
desire, intercourse
satisfaction or overall
sexual satisfaction

89%

Of men preserved
ejaculatory function
with Aquablation
therapy

>99%

Of men did not have
incontinence after
Aquablation therapy

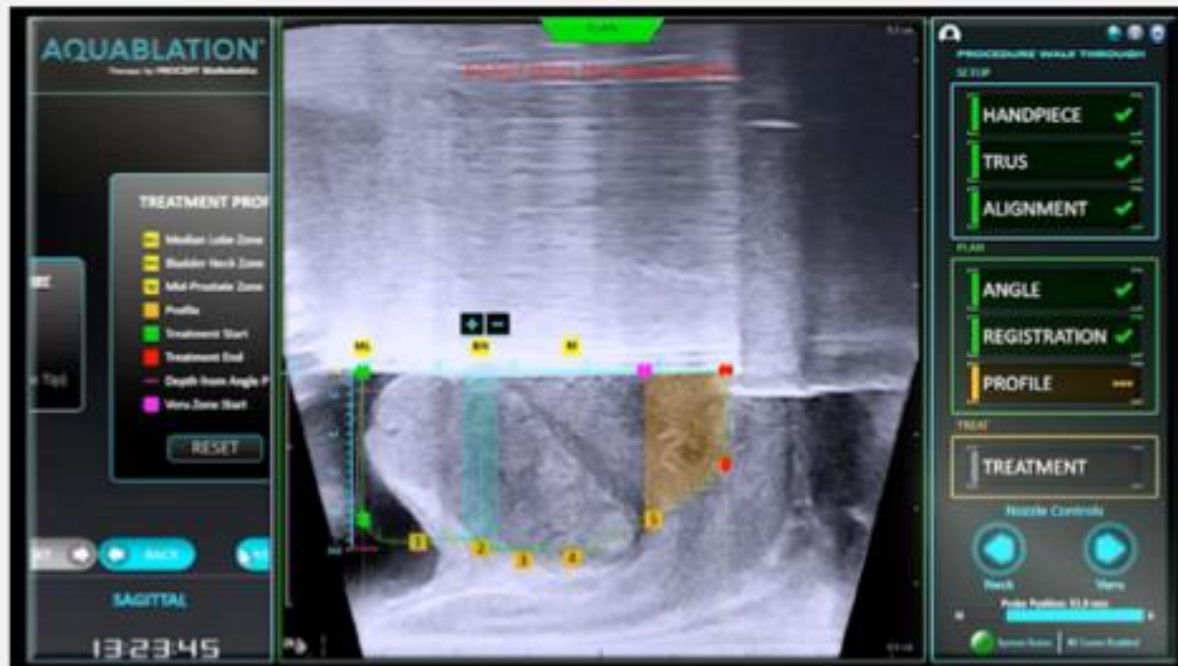
94%

Of men did not require
additional treatment
with medications or
surgery 5-years after
Aquablation therapy

Aquablation Therapy – How it Works Part 1

1

REAL-TIME SURGICAL PLANNING



With the help of ultrasound guidance, watch how surgeons create a detailed treatment plan for which tissue to **protect** and which tissue to **resect**.

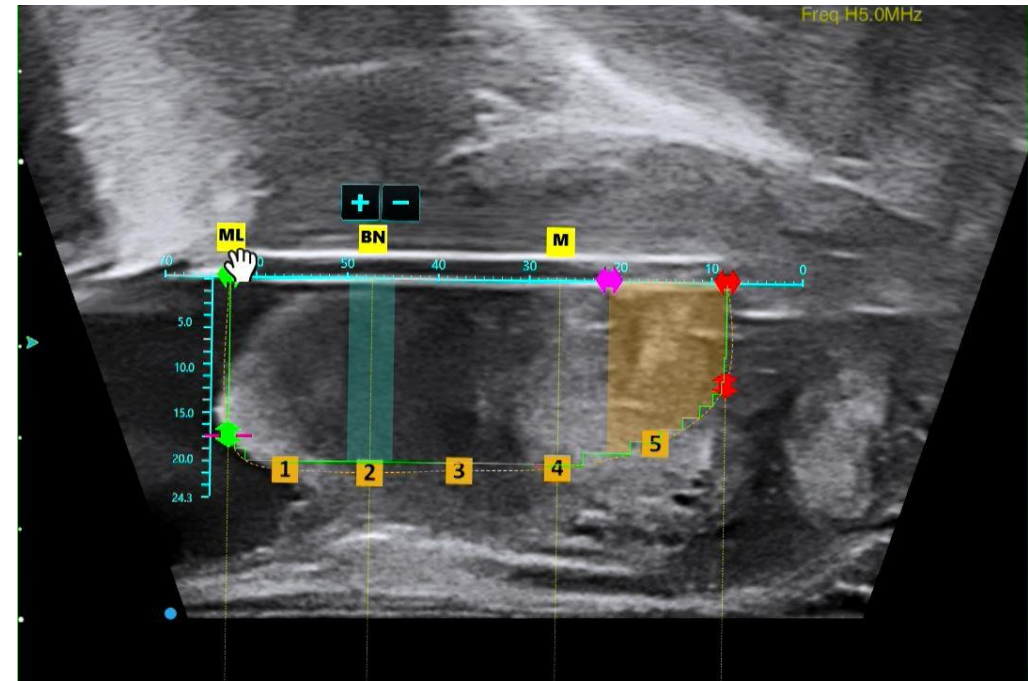
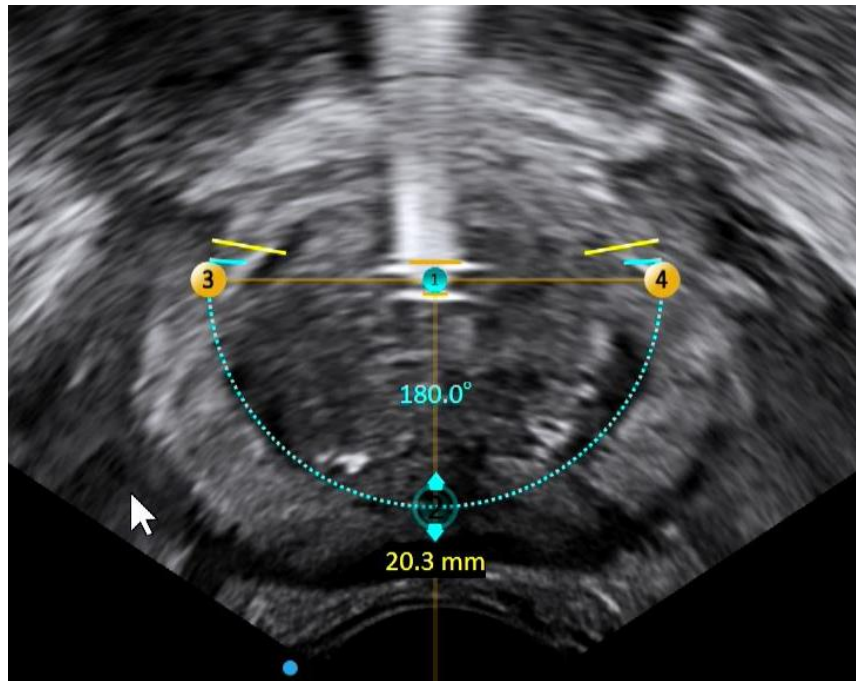
Protect the areas responsible for sexual function and continence.
Resect obstructive prostate tissue.

Aquablation Procedure

Aquablation Therapy – How it Works Part 1

1

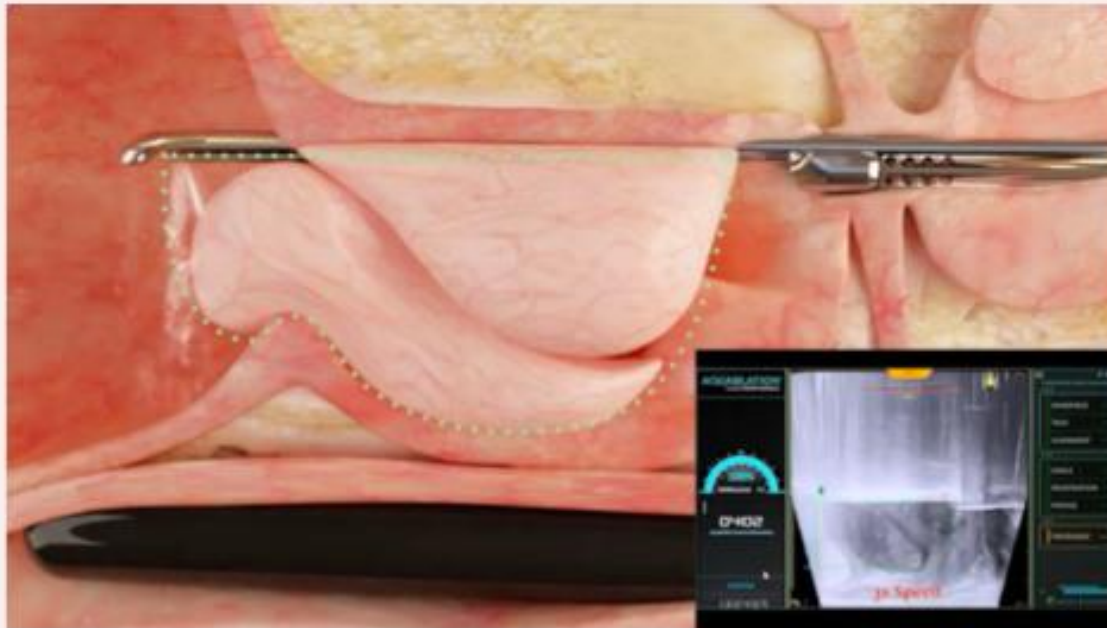
REAL-TIME SURGICAL PLANNING



Aquablation Therapy – How it Works Part 2

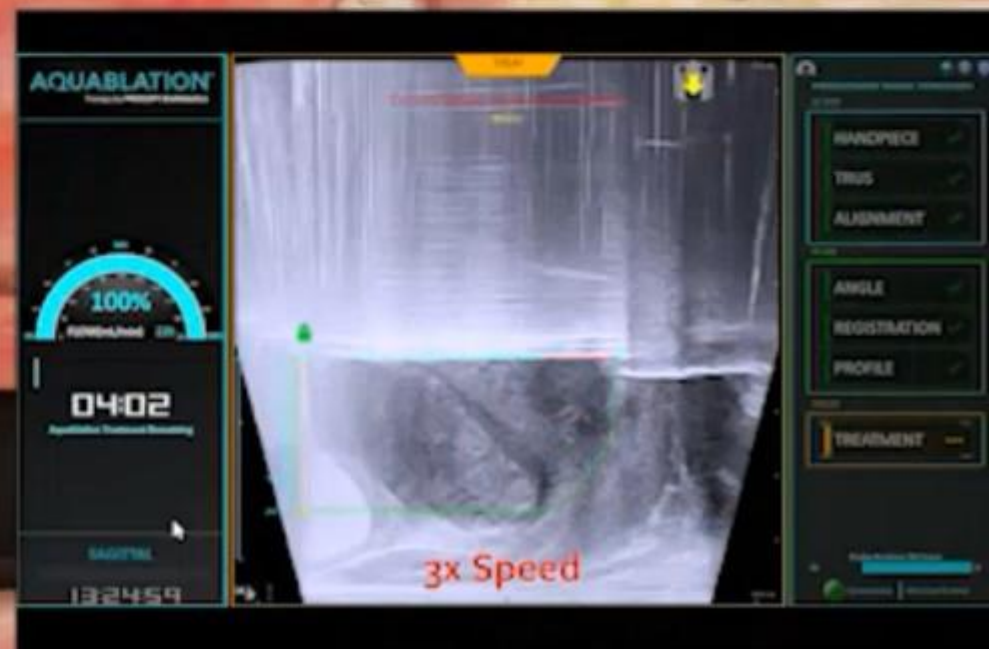
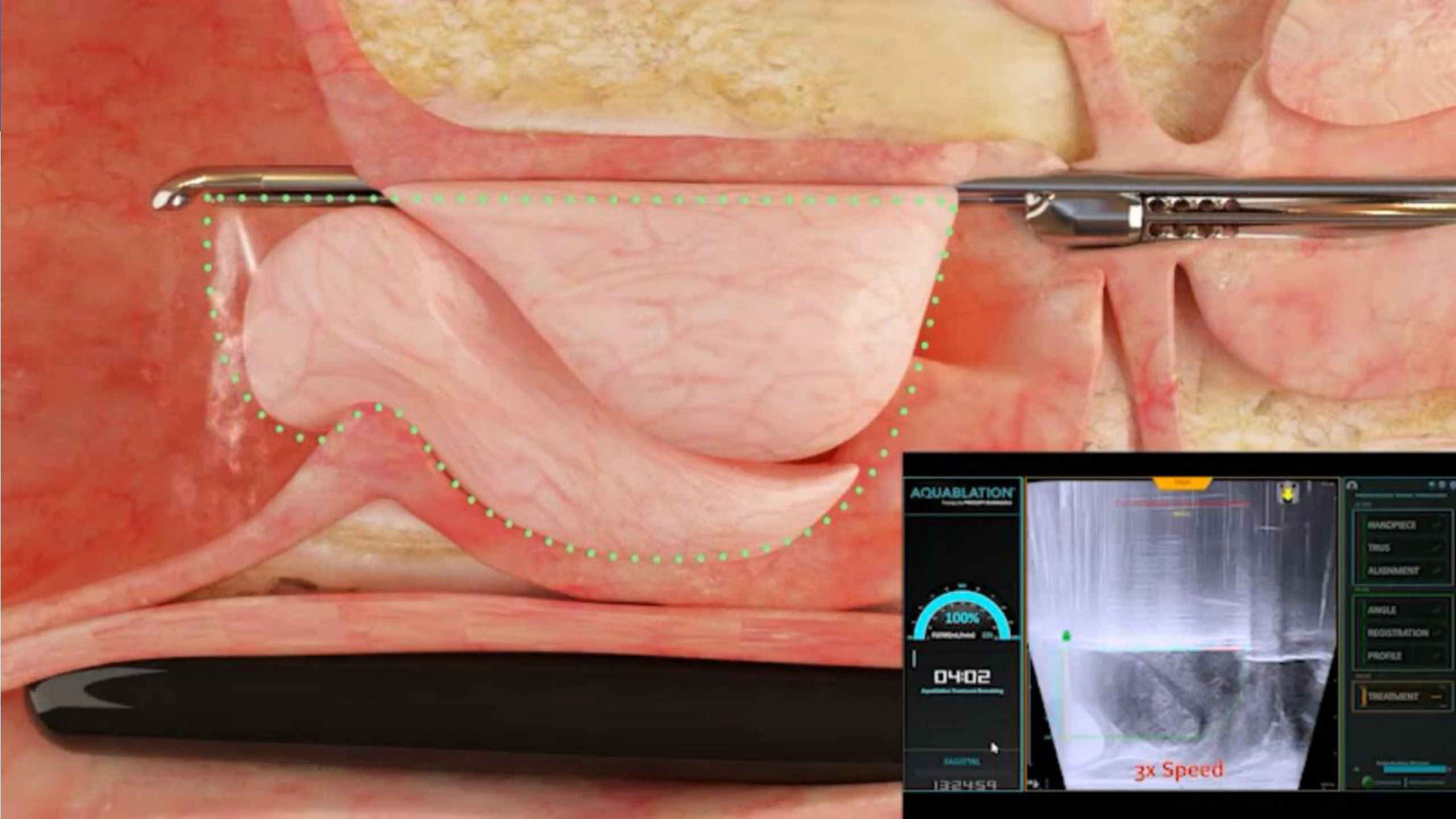
2

REMOVE OBSTRUCTING PROSTATE TISSUE



Next, a **robotic-assisted** heat-free waterjet follows the treatment plan to **precisely resect** obstructive prostate tissue and **protect** the areas responsible for **sexual function** and **continence**.

This advanced technology helps ensure **precise**, **consistent** and **predictable** removal of prostate tissue.



NT PASS COMPLETE

DITIONAL PASS

QUABLATION
COMPLETE

SAGITTAL

Monday, February 26, 2025

7:10:07



2/26/2025 8:09:39 AM
25022601
7.9 cm PROCEPT SF
B_Gain 50dB
Freq H6.6MHz

HANDPIECE

TRUS

ALIGNMENT

PLAN

ANGLE

REGISTRATION

PROFILE

TREAT

TREATMENT

Nozzle Controls



Neck



Vert

Nozzle Position: 20.6 mm

70



System Status | 100% Connected

TREATMENT PASS COMPLETE

ADDITIONAL PASS

AQUABLATION
COMPLETE

SAGITTAL

Feb. 26, 2025

COMPLETE



2/26/2025 11:30:21 AM
25022601 PROCEPT SF
7.9 cm
B_Gain 50dB
Freq 5.0MHz

SESSION ID: 310****

PROCEDURE STEPS

SETUP

HANDPIECE ✓

TRUS ✓

ALIGNMENT ✓

PLAN

ANGLE ✓

REGISTRATION ✓

PROFILE ✓

TREAT

TREATMENT ✓

Nozzle Controls



Neck



Vero

Nozzle Position: 20.7 mm

70

System Status | Stick Connected

What to expect after Aquablation Therapy:

- As with most BPH procedures, you will wake up with a catheter to allow the urethra to heal.
- Patients may be discharged the same day or stay overnight in the hospital.
- Patients may experience mild burning during urination for the first few weeks.
- Patients may resume normal activities once approved by their doctor.
- Your doctor will provide specific discharge instructions and advise on signs and symptoms that may require further medical attention.

**Most symptoms resolve within 2-4 weeks after Aquablation therapy.
(of course, individuals vary)**

Remember... there are many options for BPH treatment!

**Medical care should be tailored to the individual.
Please come talk with your friendly Urologist so we can
help determine what might work for you.**

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Questions?

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Additional sources and thanks to:

Procept Aquablation team – especially Max and Tom – slides, videos, support, humor – they do it all!

AUA Guidelines: Management of Lower Urinary Tract Symptoms Attributed to Benign Prostatic Hyperplasia. [https://www.auanet.org/guidelines-and-quality/guidelines/benign-prostatic-hyperplasia-\(bph\)-guideline](https://www.auanet.org/guidelines-and-quality/guidelines/benign-prostatic-hyperplasia-(bph)-guideline)

Colorado Urology and my amazing partners who provide compassionate and thoughtful care to our patients daily.



Boulder Community Health Foundation

Over 40 Years of Community Impact

**Enhancing the quality and availability
of health care in our community**

COMMUNITY

We believe everyone should have a fair and just opportunity to reach their full health potential, both physically and mentally.

PATIENTS

We believe providing the community with the highest value in health care requires an innovative, patient-centered environment.

WORKFORCE

We believe it's imperative to invest in the professional growth and physical and mental health of BCH's greatest asset—the staff and physicians providing care to the community.

Learn more at **bch.org/foundation**



Latest Treatments for an Enlarged Prostate

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