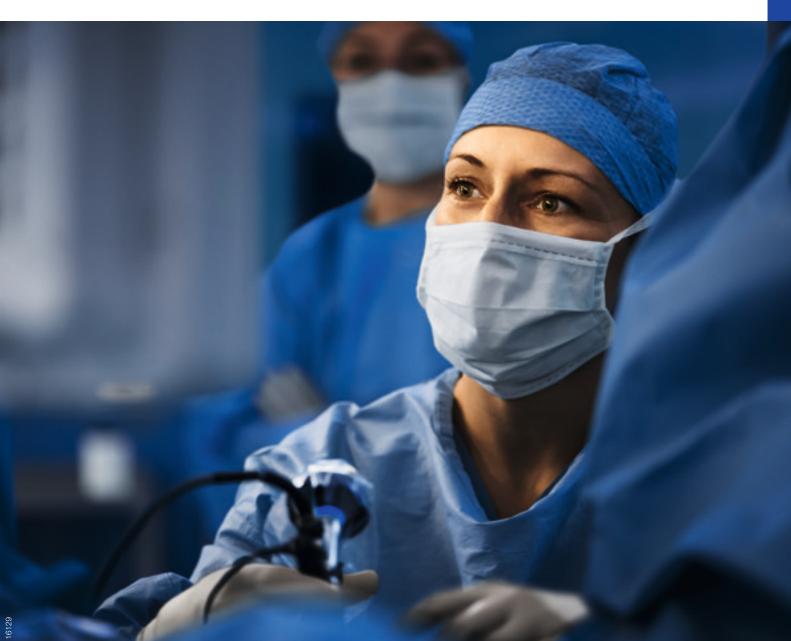


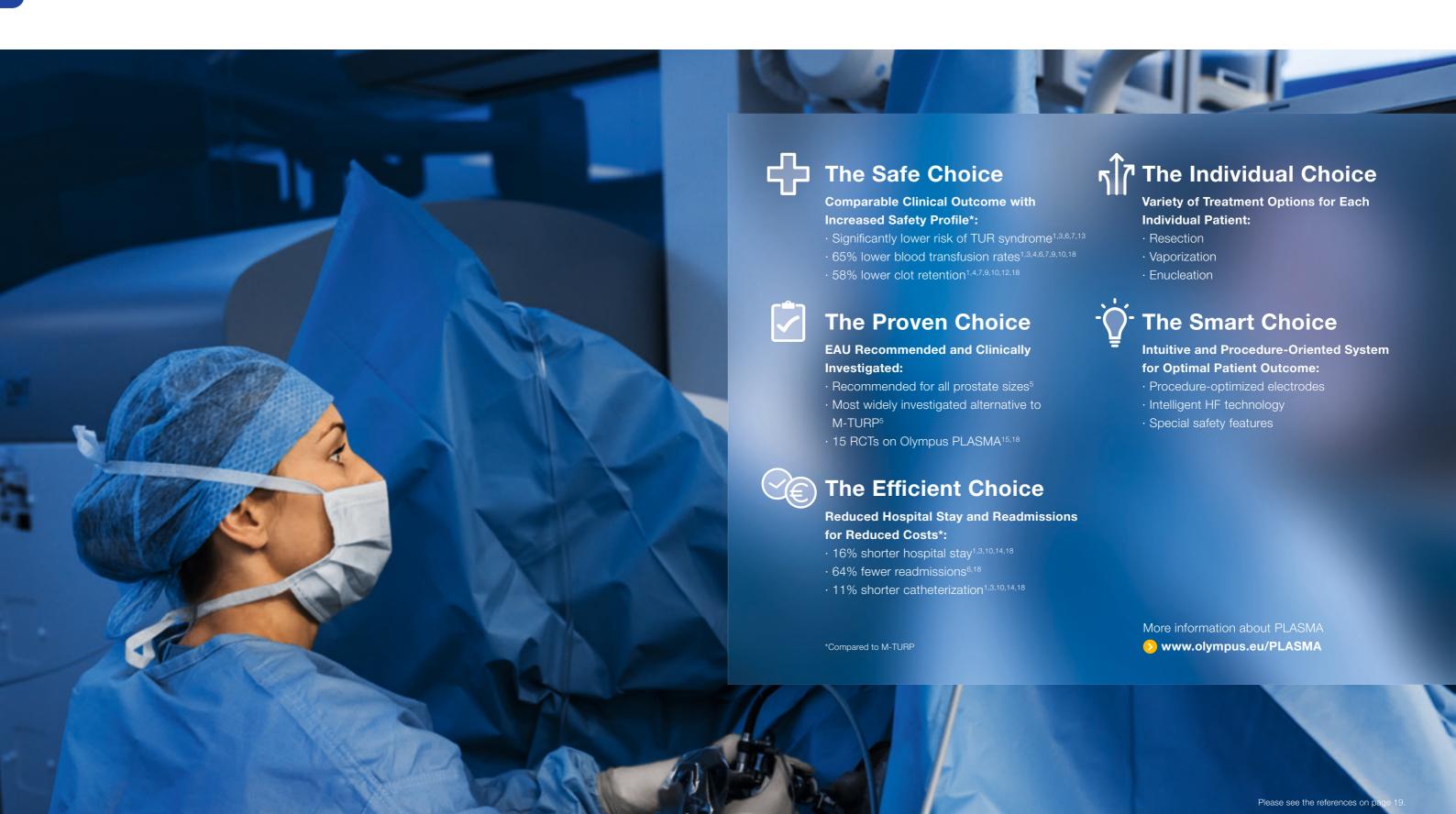


# YOUR CHOICE FOR BPH

Resection, Vaporization, Enucleation – Individual PLASMA Treatment



# PLASMA - YOUR CHOICE FOR BPH



# PLASMA - THE SAFE CHOICE



# **Comparable Clinical Outcome and Increased Safety Profile**

The PLASMA (TURis) system offers an equivalent efficacy to monopolar TURP<sup>8,15</sup> that includes maximum flow rate (Qmax), resection weight/radicality, PVR (Post-Void Residual), and IPSS (International Prostate Symptom Score)/IIEF-5 (International Index of Erectile Function). Clinical outcomes are followed for up to 36 months, which is the longest among the surgical options.<sup>10</sup>

Compared to monopolar technology, the PLASMA (TURis) system has a more favorable perioperative safety profile, especially regarding TUR syndrome occurrence, frequency of blood transfusions, and the clot retention rate.<sup>18</sup>

Monopolar

The strong safety profile of the PLASMA (TURis) system also results in a reduced average length of hospital stay, shorter catheterization times, and fewer postoperative readmissions.<sup>18</sup>

Monopolar

TUR Syndrome\*18
-100%





PLASMA





PLASMA

Blood Transfusion<sup>18</sup> -65%









Clot Retention<sup>18</sup>
-58%

\* The risk of fluid overload remains.











Please see the references on page 19.

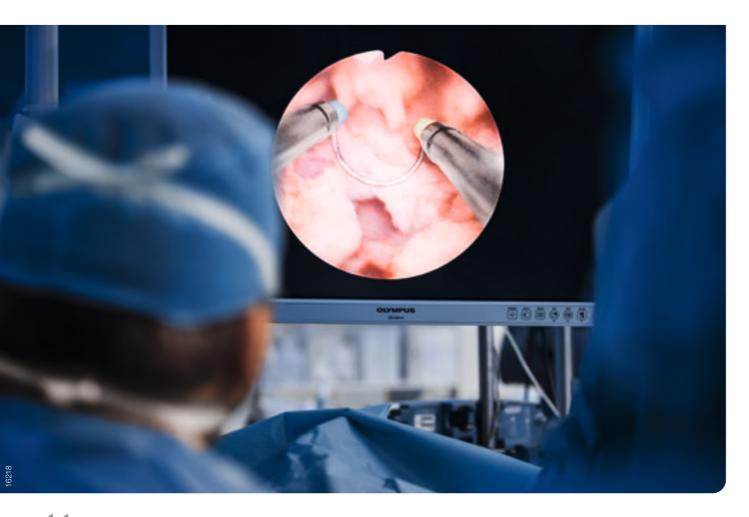
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# PLASMA - THE INDIVIDUAL CHOICE



# **Variety of Treatment Options for Each Individual Patient**

Olympus provides a full variety of premium-quality and innovative electrodes for PLASMA treatment in urology, thus enabling surgeons to perform exactly the procedures and operation techniques that achieve the best clinical results for each patient. With resection loops in different sizes and angles, oval and round vaporization buttons, and a special enucleation loop, the Olympus PLASMA system provides solutions for different prostate sizes and anatomies and different patient profiles, such as high-risk patients and patients who want the ability to maintain antegrade ejaculations. PLASMA, therefore, is the answer to the trend of more personalized treatments in surgery.



With PLASMA each surgeon can offer the best-fitting treatment option to his patient by being able to perform a resection, a vaporization, or an enucleation, depending on the patient's needs and profile, and even change the technique during the procedure. (January 2017)

Prof. Dr. Jörg Raßler Urology Department, St. Elisabeth-Krankenhaus, Leipzig

#### **PLASMA Resection**

Transurethral resection remains the most common treatment for BPH and NMIBC. For PLASMA resections, bipolar HF current is used to create the PLASMA corona that vaporizes prostatic or vesical tissue.

# **Benefits**

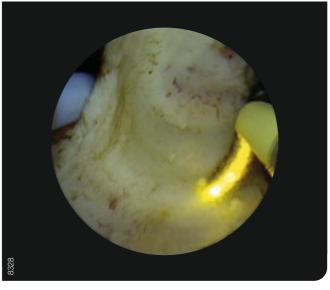
- · Strong safety profile compared to monopolar resection (valid for all PLASMA procedures)<sup>5</sup>
- · High tissue ablation rate<sup>23,24,25</sup>
- · More precise cutting and coagulation compared to monopolar resection<sup>26</sup>
- · Short learning curve<sup>27</sup>
- Enables preservation of sexual function, including antegrade ejaculation, via the ejaculation-preserving resection technique<sup>28</sup>
- · High-quality pathological samples

#### **Recommended Resection Electrodes**

Apart from applying various technical approaches (Nesbit, Barnes, etc.), resections can be done using a wide variety of color-coded electrodes for prostate and bladder procedures. The choice will depend on the procedure and telescopes used. Specifically,

- · small loop electrodes are particularly suitable for treating flat bladder tumors;
- · medium loop electrodes are the standard loop and used in over 80% of TURs;
- · large loop electrodes, due to their size, can facilitate faster and smoother operations, especially for large prostates; and
- · angled loop electrodes enable better access to the anterior bladder wall.





Please see the references on page 19.

# PLASMA - THE INDIVIDUAL CHOICE

#### **PLASMA Vaporization**

PLASMA vaporization provides a safe, easy-to-use solution for TUR tissue management procedural needs in which energized gas smoothly vaporizes the tissue. The vaporization electrode's new, optimized oval shape, combined with the easy-to-learn "hovering technique," enables effective, fast ablating and virtually bloodless smooth tissue vaporization.

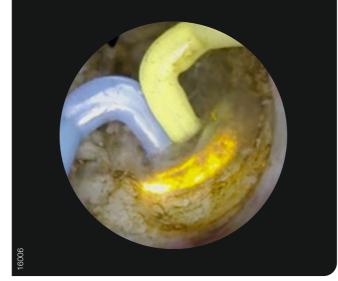
#### **Benefits**

- · Ideal for smaller to medium-sized prostates
- · Fewer severe complications compared to TURP6
- · Fewer readmissions compared to TURP7
- · Shorter hospital stays compared to TURP<sup>21</sup>
- · Continuous, safe hemostasis
- · Potential for day-case surgery due to shorter catheterization period and shorter hospital stay<sup>21</sup>
- · Demonstrated use in patients on anticoagulants<sup>22</sup>
- · Clear, unobstructed view through operations as the tissue and laser impulses do not impair vision
- · Significantly lower material cost compared to photoselective vaporization (PVP)

# **Recommended Vaporization Electrodes**

With its optimized shape the new Plasma-OvalButton allows 21% faster vaporization compared to the existing PlasmaButton (round).\*





#### **PLASMA Enucleation**

This revolutionary technique uses the natural anatomy by "peeling" prostate tissue out of the capsule. Once the right layers have been located, each prostate lobe is peeled off in one piece. For complete enucleation the lobes are pushed into the bladder, where they are fragmented by a morcellator.

In the case of incomplete enucleation the removed lobes are still connected with the capsule through an adenoma bridge and are then resected with a PLASMA loop. For the treatment of large prostates, transurethral enucleation with bipolar (TUEB) provides an alternative to laser enucleation.

#### **Benefits**

- · Treatment of any prostate gland size with excellent tissue preservation for pathologic examination
- · Complete excision of obstructing adenoma down to the prostate capsule if needed
- · Minimum intraoperative blood loss<sup>29,30</sup>
- · Shorter catheterization time and hospital stay compared to resection and open prostatectomy (OP)<sup>11,29</sup>

# Plasma Enucleation Compared to Bipolar Resection

- · Greater resected prostate weight<sup>29</sup>
- · Better results in long-term postoperative improvement in IPSS, QoL, Qmax, and PVR (36, 48, 60 months)<sup>29</sup>

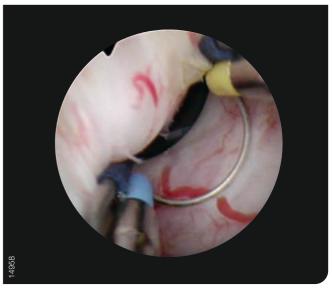
# **Plasma Enucleation Compared to Open Prostatectomy**

- · Less decrease in hemoglobin and fewer blood transfusions<sup>11</sup>
- · Higher International Index of Erectile Function score (IIEF-5) after 12 months<sup>11</sup>
- $\cdot$  Reduced complications, shorter convalescence, and satisfactory follow-up symptoms  $^{19}$

# **Recommended Enucleation Electrode**

The TUEB electrode's wire loop can be used to locate the layers and coagulate any bleeding. The black runner (spatula) is used to gently peel off the prostate lobes.





\* Olympus internal lab testing



# PLASMA - THE PROVEN CHOICE



# **EAU Recommended and Clinically Investigated**

# **EAU Guideline 2016**

For all prostate sizes, PLASMA (TURis / bipolar resection) is one of the recommended first-choice treatment. For larger prostates, PLASMA enucleation is equally recommended as HoLEP and open prostatectomy.

	Prostate Volume	
< 30 mL	30–80 mL	> 80 mL
TUIP <sup>1</sup>	TURP <sup>1</sup>	Open prostatectomy <sup>1</sup>
TURP	Laser enucleation	HoLEP <sup>1</sup>
	Bipolar enucleation	Bipolar enucleation <sup>1</sup>
	Laser vaporization	Laser vaporization
	PU lift	Thulium enucleation
	TUMT	TURP
	TUNA	

<sup>1</sup>Current standard / first choice (The alternative treatments are presented in alphabetical order below.)
Note: It is strongly recommended to read the full text to see the current position of each treatment in detail.

# PLASMA treatment options

Surgical Treatment – Transurethral Resection of the Prostate and Transurethral Incision of the Pro	state	
Recommendations	LE	GR
B-TURP achieves short- and mid-term results comparable to those of M-TURP.	1a	А
B-TURP has a more favorable perioperative safety profile than M-TURP.	1a	Α
OPs or EEPs such as holmium laser or bipolar enucleation are the first-choice surgical treatment for men with a substantially enlarged prostate (e.g., > 80 mL) and moderate-to-severe LUTS.	1a	А

# **Evidence Supporting Olympus PLASMA (TURis)**

- · B-TURP is the most widely and thoroughly investigated alternative to M-TURP
- The evidence available to date includes 15 good-quality randomized controlled trials done specifically on Olympus PLASMA (TURis)<sup>15,18</sup>
- Recent meta-analyses showed that TURis reduces the risk of TUR syndrome, the need for blood transfusions, and the clot retention rate compared to M-TURP<sup>15,18</sup>
- Due to this improved safety standard the TURis system may reduce the length of hospital stay and readmissions after the surgery<sup>6,18</sup>
- · Mid-term results (up to 30 months) show sustained results for TURis compared to M-TURP<sup>14</sup>

# Comparison of Greenlight Laser XPS 180W and Olympus PLASMA to Current Standard of Care

# **Number of Existing Randomized Controlled Trials (RCT)**

Greenlight Laser XPS 180W N=1<sup>2,16</sup>



PLASMA (TURis) N=15<sup>15,18</sup>



#### **Number of Patients Involved in These RCTs**

Greenlight Laser XPS 180W

 $N=281^{2,16}$ 



PLASMA (TURis)



Schematic drawings have been adapted in relationship to the original data

The amount of high-quality evidence for TURis overwhelms that of Greenlight Laser XPS 180W.

12

# PLASMA - THE SMART CHOICE



# **Intuitive and Procedure-Oriented System for Optimal Patient Outcome**

Through the optimized interaction between the PLASMA electrodes and the high-frequency (HF) generator plus the constantly extended assortment of different PLASMA electrodes, the system sets new standards in terms of safety, cost and time efficiency, and individual treatment options for BPH and NMIBC.

# **Procedure-Optimized Electrodes**

PLASMA offers a variety of treatment options for each patient.



# Plasma-Needle Electrode for PLASMA Incision

Smooth bipolar incision of prostatic tissue.



# Plasma-OvalButton for PLASMA Vaporization

Continuous, safe hemostasis.



# PlasmaLoop for PLASMA Resection

Standard resection for small and medium-sized prostates.



# Plasma-LargeLoop Electrode for PLASMA Resection

Faster resection with instant, reliable ignition.



# Plasma-TUEBLoop for PLASMA Enucleation

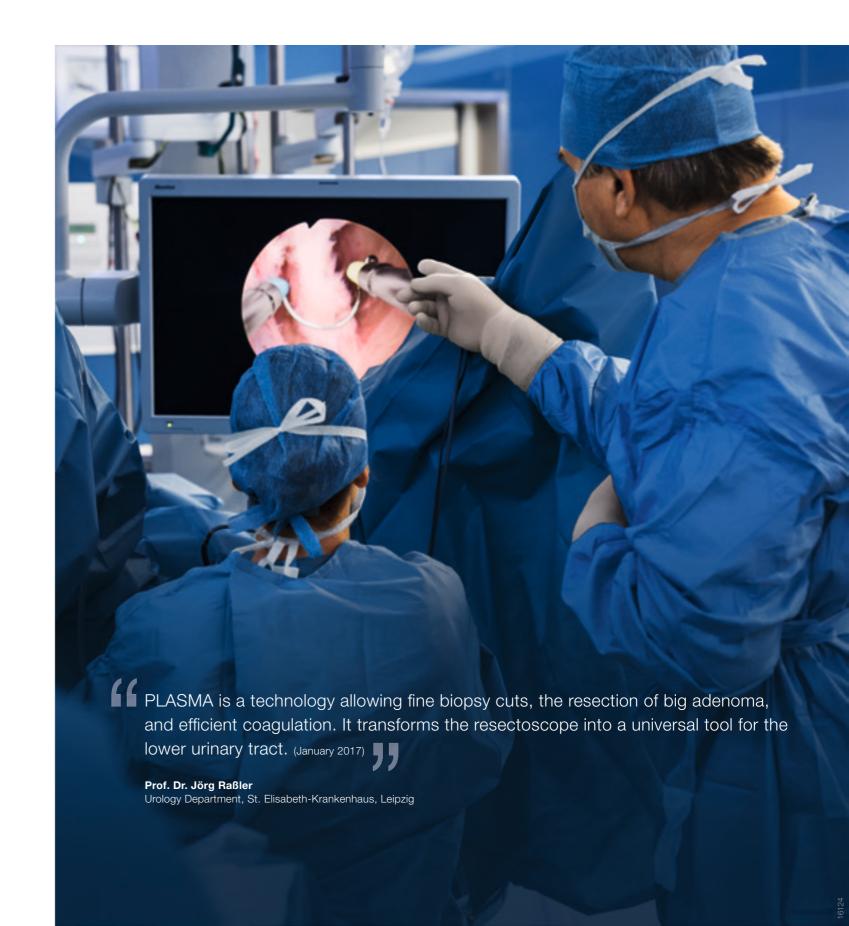
Fast, complete, potentially blood-free enucleation of medium and large prostates.



# ESG-400 - Powering PLASMA Procedures

The ESG-400 HF generator provides bipolar energy to the PLASMA electrodes. It is equipped with various features that ensure the highest degree of safety for users and patients, including

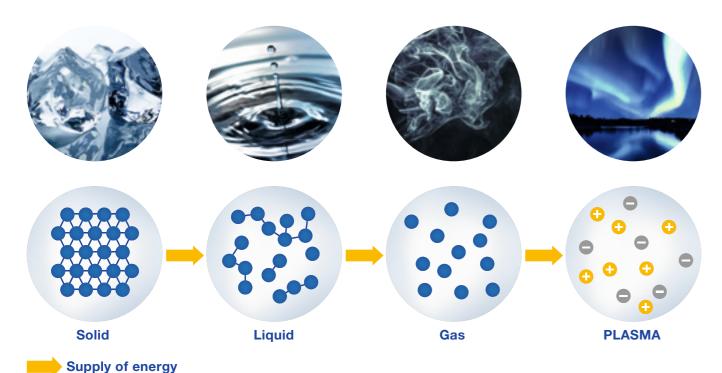
- · automated saline detection,
- $\cdot$  instant PLASMA ignition and continuous activation,
- · a user-friendly touchscreen, and
- $\cdot$  significantly lower energy output after first ignition.



#### What is PLASMA?

PLASMA is one of the four fundamental states of matter and is created by applying energy to a gas. Molecules are ionized and this turns the gas into a PLASMA.

Due to its conductivity, PLASMA allows energy to cross at lower levels. This quality allows for lower operating temperatures and, therefore, less thermal spread. The targeted tissue is vaporized by a locally confined denaturation process, while the surrounding tissue heating effects are minor.



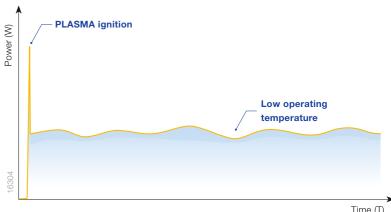
# Natural Occurrences of PLASMA PLASMA is common to our world and appears in different variations in nature. It is especially prevalent in atmospheric and outer space phenomena such as the sun and initiates polar lights as well.

#### **How to Treat with PLASMA**

While most energy-based surgical products such as lasers and monopolar electrosurgical devices use heatdriven processes to remove or cut tissue, PLASMA technology generates a constant PLASMA field to remove tissue at a low operating temperature.

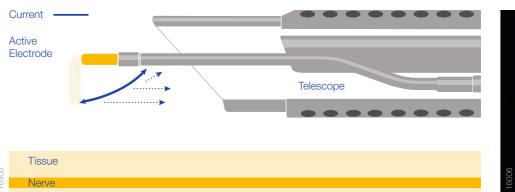
#### This results in:

- minimal thermal damage to surrounding soft tissue,
- · a low penetration depth for the energy used, and
- · significantly reduced bleeding.



# **PLASMA – Technical Principle**

Olympus PLASMA technology differs from monopolar technology in that the tissue effect takes place between two electrodes that are part of the same device. The system uses saline irrigation fluid that has a lower electrical impedance than the surrounding tissue. For this reason, the current flows from the electrode through the saline and then back to the electrode fork and resectoscope, always taking the path of least resistance. The large return surface area ensures very low current density, which increases the safety levels of the PLASMA system. This is fundamentally different from monopolar resection. In the latter, nonconducting irrigation fluid is used, which forces the electrical current to travel through tissue in the patient's body before returning to the neutral electrode.



# 16006

#### Note

The PLASMA produced by this device appears as a yellow cloud at the tip of the active electrode due to the sodium dissolved in the saline.

# PLASMA - THE EFFICIENT CHOICE



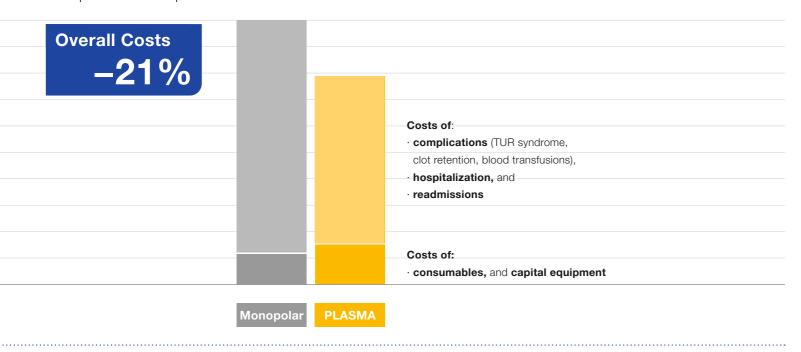
# **Reduced Hospital Stay and Readmissions for Reduced Costs**

# **Improvement of Clinical Outcomes Reduces Overall Costs**

The PLASMA (TURis) system is associated with significant improvements in perioperative safety, hospital stay duration, and readmissions compared to monopolar technology. The improvements in clinical outcomes provided by PLASMA (TURis) may also lower complication costs compared to monopolar procedures due to the reduced risk of TUR syndrome, reduced levels of clot retention, and the reduced need for blood transfusions. The improvements may also reduce overall hospitalization costs and readmission costs significantly.<sup>15</sup>

# Potential Cost Saving with PLASMA Compared with Monopolar<sup>15</sup>

Example: 100 annual patients



The graphic shows that the higher cost of consumables and capital equipment associated with PLASMA is offset by savings on complication costs, hospitalization costs, and readmission costs based on improved clinical outcomes.

An economic analysis published in a NICE guideline and followed by another publication shows the potential saving of up to 21% by switching from monopolar to PLASMA technology.<sup>15</sup>

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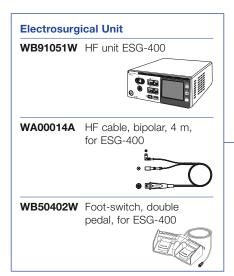
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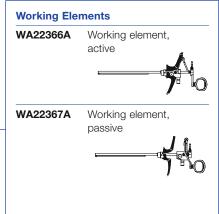
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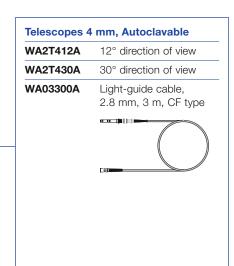
# YOUR CHOICE FOR BPH

# **Ordering Information**

	WA22351C PlasmaRoller, 12° and 3	30°
Con The Control of th	WA22355C PlasmaNeedle - Angled	l, 12° and 3
- <b>9</b>	WA22540S PlasmaNeedle - Right-A	Angled, 12°
	WA22521C PlasmaBand, medium, 1	12°
	WA22523C PlasmaBand, medium, 3	30°
	WA22566S Plasma-OvalButton	
	WA22541S Plasma-OvalButton-Long	g
	WA22558C Plasma-TUEBLoop, 129	° and 30°
		WA22355C PlasmaNeedle - Angled WA22540S PlasmaNeedle - Right-A WA22521C PlasmaBand, medium, 1 WA22523C PlasmaBand, medium, 3 WA22566S Plasma-OvalButton WA22541S Plasma-OvalButton-Lone







	Inner sheath	
A22040*	For 26 Fr. outer sheath	511 - 181
A22041	For 27 Fr. outer sheath	•••
	Outer sheath	
A22026A	26 Fr., 2 stopcocks, rotatable	<u>.</u> <u>0</u>
A22021A	27 Fr., 2 stopcocks, rotatable	
Continuo	us-flow Resectoscope	
	Inner sheath	
A22040*	For 26 Fr. outer sheath	VI
A22041*	For 27 Fr. outer sheath	
	Outer sheath	
A22027A	26 Fr., 2 vertical stopcocks, fixed	Til.
A22023A	27 Fr., 2 vertical stopcocks, fixed	
A22025A	27 Fr., 2 horizontal	

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Intermittent Irriga	ation
sheath, intermitter 24 Fr.	nt 🖫
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 $Note: A \ detailed \ list \ of \ electrodes, \ resect oscopes \ and \ accessories \ can \ be \ found \ in \ the \ Olympus \ Urology \ catalogue.$ 

of the manufacturer.

