OLYMPUS

Your Vision, Our Future

PLASMA

PLASMA VAPORIZATION

New Plasma-OvalButton – Efficient, Versatile, and Safe

15143

PLASMA-OVALBUTTON

Plasma Vaporization – the Next Generation

Plasma vaporization provides a safe, easy-to-use solution for TUR tissue-management procedural needs with only a fraction of the costs of laser treatments. The Olympus Plasma system provides an optimized interaction between the Plasma vaporization electrodes and the high-frequency (HF) generator so that instant plasma ignition and stable plasma vaporization are guaranteed for the smooth vaporization of prostatic tissue.

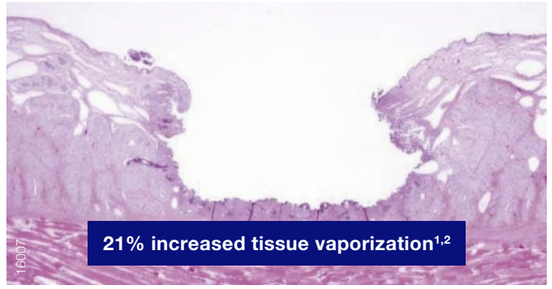
Plasma-OvalButton – the Revolution in Plasma Vaporization

With the latest Olympus innovation, the **Plasma-OvalButton**, the procedure of Plasma vaporization is brought to a new level in efficiency, versatility, and safety. Its oval shape, combined with an easy-to-learn vaporization technique, results in well-coagulated, smooth tissue.

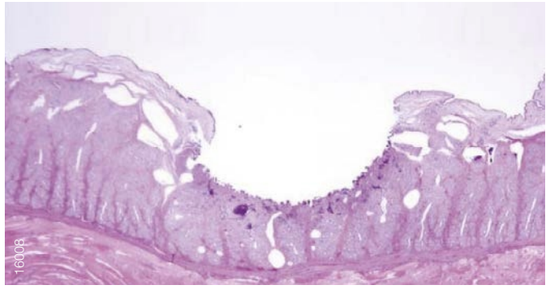
Efficiency

· Designed for enhanced TUR procedural efficiency with 25% increased width and 31% increased cross-sectional area[1,2,13]
· Enhanced stability with new ceramic disk[13]
· 21% increased tissue vaporization[1,2,13]

Plasma-OvalButton



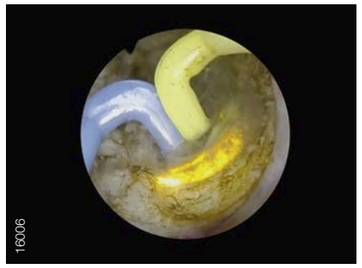
PlasmaButton



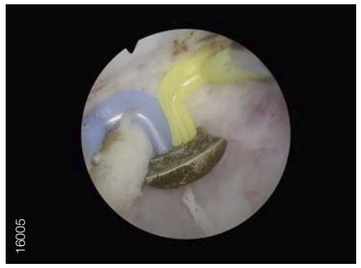
Versatile Usability

Incision

Vaporization



Enucleation



PLASMA VAPORIZATION THERAPY

Clinical Advantages of the Plasma Vaporization Technique

Safety

· Reduced risk of TUR syndrome compared to M-TURP[3]
· 64% less obturator nerve stimulation compared to M-TURB[8]
· 27% fewer severe complications compared to TURP[6]
· 82% lower blood transfusion rate compared to M-TURP[10]
· 83% fewer readmissions compared to TURP[10]

Time-Efficient

· Significantly shorter hospital stay compared to TURP[5]
· Shorter catheterization time compared to TURP[6]
· Potential for day surgery due to a shorter catheterization period and hospital stay

Risk Patients

· Use has been demonstrated in patients on anticoagulants[4]

Cost-Efficient

· A fraction of the material cost of photoselective vaporization (PVP)
· Costs 21% lower compared to M-TURP[7,12]

Easy Handling

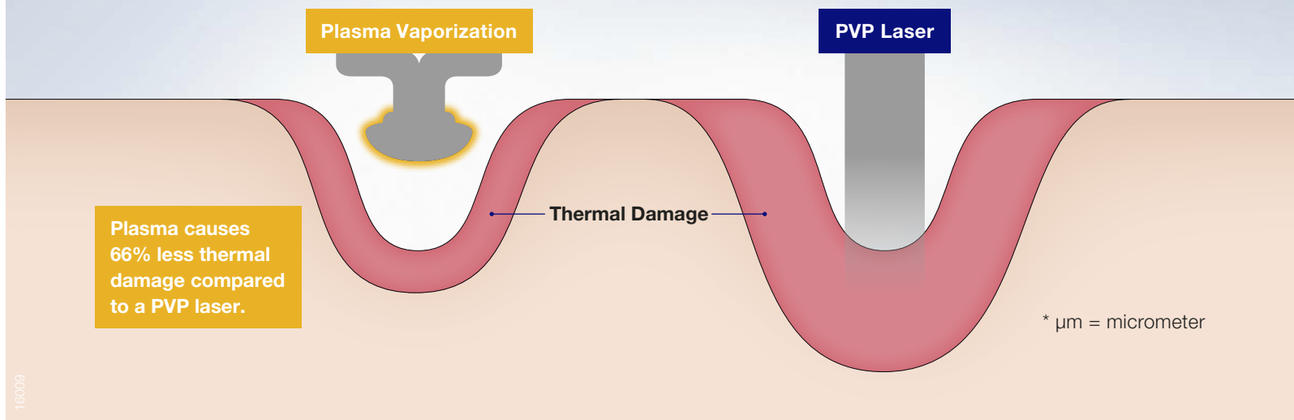
· Short learning curve – just as simple as standard resection[11]
· Continuous plasma activation and instant ignition
· Clear and unobstructed view throughout the operation as neither tissue nor laser impulses impair vision

Plasma – Controlled and Stable Energy with Minimal Thermal Damage

While most energy-based surgical products, such as lasers and monopolar electrosurgical devices, use heat-driven processes to remove or cut tissue, the Plasma vaporization technology creates a controlled, stable plasma field to remove tissue at a **low relative temperature**, resulting in **minimal thermal damage** to surrounding soft tissues and a **low penetration depth of energy.**

Heat-Damage Zone of Plasma Vaporization vs. PVP Laser 180 W (192 vs. 562 µm*)[9]

Deeper heat-damage zones may lead to post-operative complications like increased dysuria rates.



PLASMA VAPORIZATION

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, thus turning the gas into plasma. Due to its conductivity, the plasma allows the energy to cross at lower energy levels. This effect leads to low operating temperatures and, therefore, less thermal spread. Tissue is vaporized in a locally confined denaturation process, while surrounding tissue heating effects are minor. It appears yellow due to the sodium that is dissolved in the saline – not due to heat or burning features.

Study Abstracts of Plasma Vaporization

"The final postoperative aspect revealed a large prostatic fossa and a particularly smooth surface and sharp margins of the vaporization area, without irregularities or obstruction."[8]

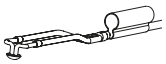
"We determined reduced capsular perforation and intraoperative bleeding rates for this technique."[8]

"Plasma vaporization occurs by direct gentle contact with the tissue surface and performs concomitant hemostasis."[5]

Ordering Information

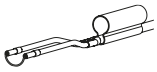
Plasma Vaporization Electrodes

Order Nr.	Description
WA22566S	Plasma-OvalButton
WA22541S	Plasma-OvalButton-Long
WA22557C	PlasmaButton

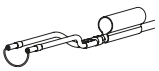


Further Plasma Electrodes

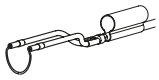
Order Nr.	Description
WA22301D	PlasmaLoop, 12°, small
WA22305D	PlasmaLoop, 30°, small



WA22302D	PlasmaLoop, 12°, medium
WA22306D	PlasmaLoop, 30°, medium



WA22503D	PlasmaLoop, 12°, large
WA22507D	PlasmaLoop, 30°, large



WA22332D	PlasmaLoop - Angled, 12°, 30°, and 45°
WA22351C	PlasmaRoller, 12° and 30°
WA22355C	PlasmaNeedle - Angled, 12°, 30°, and 45°
WA22540S	PlasmaNeedle - Right-Angled, 12° and 30°
WA22558C	Plasma-TUEBLoop for transurethral enucleation

For a detailed list of electrodes, see our Urology catalog

[1] Olympus internal lab testing; data on file
[2] Compared to existing Olympus vaporization electrode
[3] Approved by FDA
[4] Delongchamps NB, et al. Surgical management of BPH in patients on oral anticoagulation: transurethral bipolar plasma vaporization in saline versus transurethral monopolar resection of the prostate. Canadian Journal of Urology 18 (2011): 6007–6012.
[5] Geavlete B, et al. Transurethral resection (TUR) in saline plasma vaporization of the prostate vs standard TUR of the prostate: "the better choice" in benign prostatic hyperplasia? BJUI 106 (2010): 1695–1699.
[6] Wroclawski ML, et al. "Button type" bipolar plasma vaporisation of the prostate compared with standard transurethral resection: a systematic review and meta-analysis of short-term outcome studies. BJU Int. 177 (2016): 662–668.
[7] The TURis system for transurethral resection of the prostate, in: NICE medical technology guidance 23 (2015). Economic analysis done on TURis resection electrodes.
[8] Geavlete B, et al. Innovative Technique in Nonmuscle Invasive Bladder Cancer – Bipolar Plasma Vaporization. Urology 77 (2011): 849–854.
[9] Kan CF, et al. Heat Damage Zones Created by Different Energy Sources Used in the Treatment of Benign Prostatic Hyperplasia in a Pig Liver Model. J Endourology 29 (2015) 6:714–717.
[10] Geavlete B, et al. Bipolar plasma vaporization vs monopolar and bipolar TURP-A prospective, randomized, long-term comparison. Urology 78 (2011) 4: 930–935.
[11] Gupta NP, et al. Management of large prostatic adenoma: Lasers versus bipolar transurethral resection of prostate. Indian Journal of Urology 29 (2013) 3: 225–235.
[12] Treharne C, et al. Economic value of the TURis system for treatment of benign prostatic hyperplasia in England and Wales: systematic review, meta-analysis and cost-consequence model. EU Focus (2016)
[13] Compared to the PlasmaButton

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