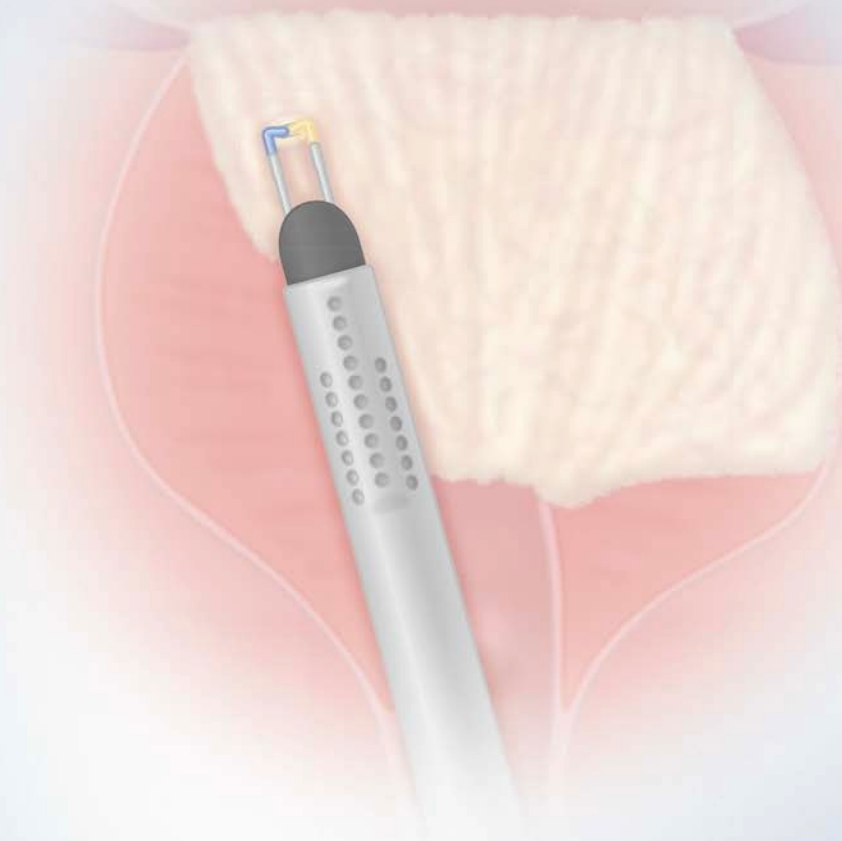


TRANSURETHRAL PLASMA VAPORIZATION OF THE PROSTATE

Procedure Guide



PLASMA VAPORIZATION THERAPY

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 new optimized oval shape in combination with the easy-to-learn “hovering technique” results in an effective, fast ablating, and virtually bloodless vaporization of the tissue. Through the optimized interaction between the PLASMA vaporization electrode and the high-frequency (HF) generator an instant PLASMA ignition and stable PLASMA vaporization is guaranteed for the smooth vaporization of prostatic tissue.

Benefits

- Continuous and safe hemostasis
- 27% fewer severe complications compared to TURP¹
- 83% fewer readmissions compared to TURP²
- Significantly shorter hospital stay compared to TURP³
- Potential for day surgery due to a shorter catheterization period and hospital stay
- Use has been demonstrated in patients on anticoagulants⁴
- A fraction of the material costs of photoselective vaporization (PVP)
- Clear and unobstructed view throughout the operation as neither tissue nor laser impulses impair vision

Recommended Vaporization Electrode

With its optimized shape the new **Plasma-OvalButton** allows around 20% faster vaporization compared to the existing PlasmaButton (round).^{5,6,7}



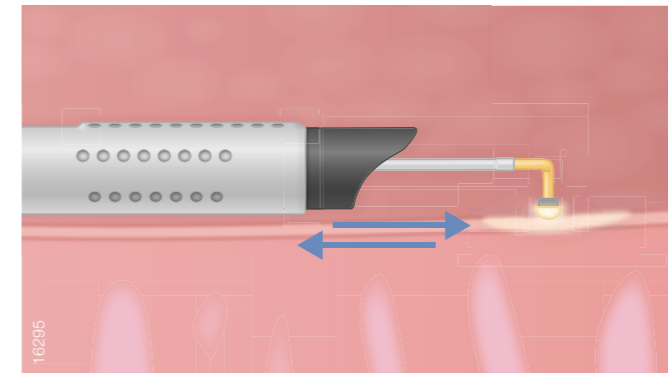
Disclaimer

This surgical technique is presented to demonstrate the Barnes method adapted by Prof. Raßler, MD of the Urology Department at St. Elisabeth Hospital in Leipzig (Germany).

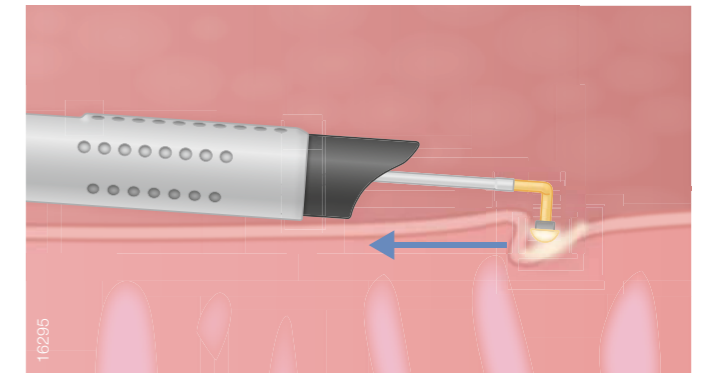
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Please refer to the instructions for use for important product information, including, but not limited to, contraindications, warnings, precautions, and adverse effects.

Versatile Usability – Vaporization Techniques



Hovering technique



Deep dive technique

Note: The hovering technique can be applied in both directions so that the procedure time can be minimized.

The Barnes Method

The Barnes method aims to completely clear one side of the prostate after the other. It is divided into three easily recognizable phases: proximal, middle, and apical resection/vaporization.

¹ 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.

² Geavlete B, et al. Bipolar plasma vaporization vs monopolar and bipolar TURP-A prospective, randomized, long-term comparison. *Urology* 78 (2011) 4: 930–935.

³ 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.

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 Olympus internal lab testing; data from Olympus Corporation

⁶ Compared to existing Olympus vaporization electrode

⁷ Compared to PlasmaButton

PLASMA VAPORIZATION PROCEDURE STEPS – BARNES METHOD

01 | Cystoscopy with Inspection of Urethra

Inspection of the urethra and bladder.

Inspect left and right ostium, bladder, verumontanum, and internal and external sphincter.

Note: Bladder tumors should be excluded.

02 | Marking of Resection Borders

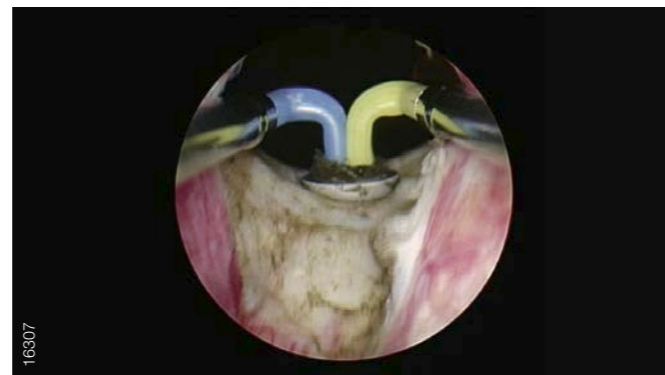
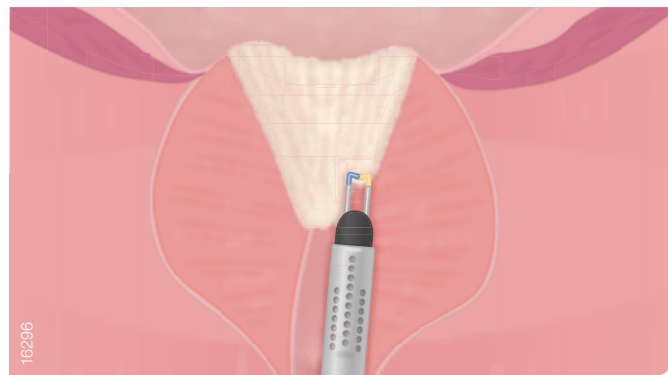
Marking proximally of the verumontanum in the case of EP procedure.

Use the coagulation mode of the button to superficially mark the resection borders approximately two loop diameters proximally of the verumontanum.

Note: If the area around the verumontanum is spared, postoperative retrograde ejaculation can be avoided. Whether this procedure also works with the vaporization technique remains unclear. There is a lack of research on this issue.

03 | Vaporization of the Medial Lobe, of Basal Portions of Lateral Lobes, and of the Floor of the Prostatic Cavity

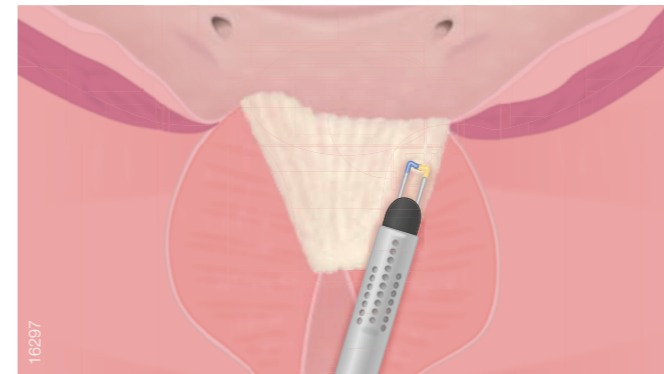
Vaporization of medial lobe and proximal part of the side lobes until the 5 o'clock and 7 o'clock position.



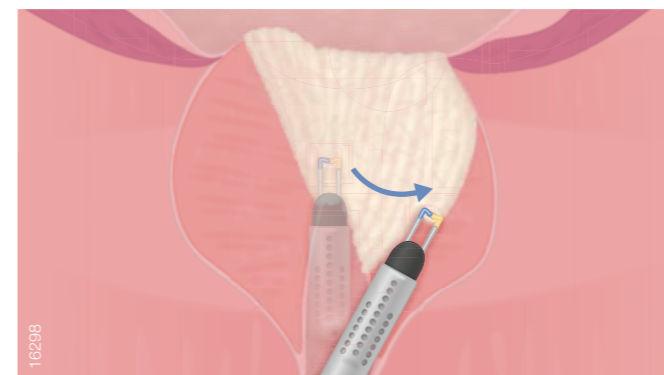
Vaporization is done in layers instead of deep grooves.

Note: If bleeders occur do a spot coagulation without moving the button forwards and backwards (as known in monopolar surgery). To improve coagulation, use the edge of the button. If it is necessary to cut, use the edge of the button with vaporization mode.

04 | Further Ablation of the Endovesical Part of the Medial and of the Left Lateral Lobe



05 | Complete Vaporization of the Endourethral Part of the Left Lobe Except for an Apical Remnant

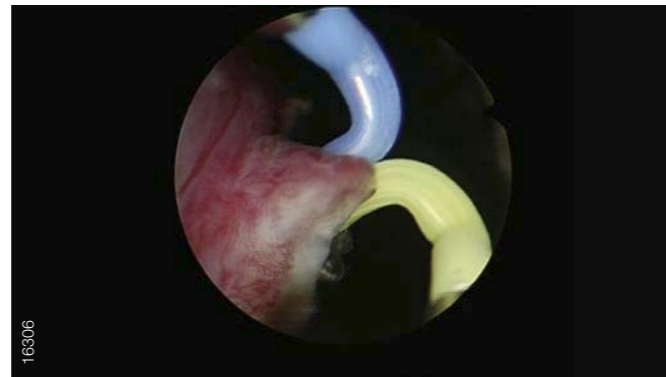
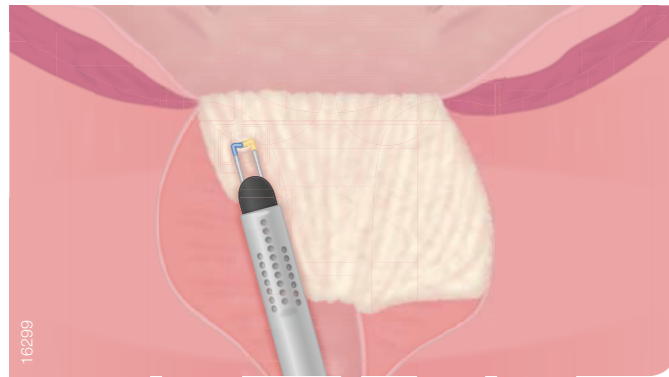


The vaporization direction goes from dorsal to ventral and the other way round until the left lobe is completely vaporized. Remove the tissue in layers in a vertical direction by starting on the floor of the cavity.

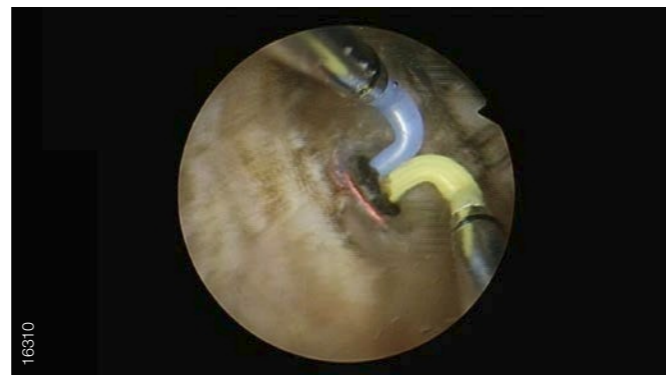
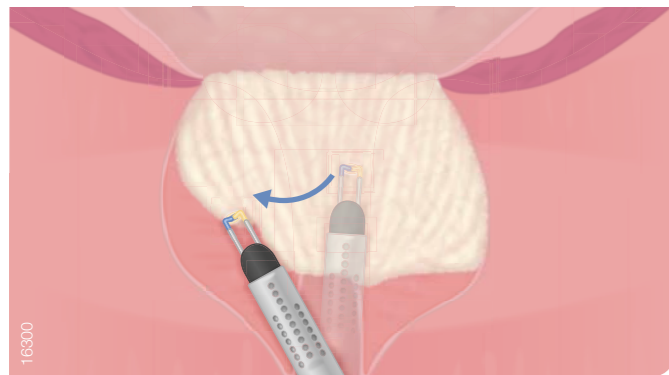
Note: In most cases vessels are in the 11 and 1 o'clock position. Be aware of bleeders and do spot coagulation where needed.

PLASMA VAPORIZATION PROCEDURE STEPS – BARNES METHOD

06 | Ablation of the Endovesical Part of the Right Lateral Lobe



07 | Complete Vaporization of the Endourethral Part of the Right Lobe Except for an Apical Remnant



The vaporization direction goes from dorsal to ventral and the other way round until the right lobe is completely vaporized. Remove the tissue in layers in a vertical direction by starting on the floor of the cavity.

08 | Final Vaporization of the Apical Part

To avoid postoperative voiding disturbances, the BPH should be removed completely. At the apex remaining material can be vaporized or resected conventionally.



Note: In contrast to the classical Barnes resection, all BPH material should be removed, also distal of the verumontanum.

09 | Ensure Secure Hemostasis

Note: Ensure warm saline is used (37°C).

Be aware of bleeding and do spot coagulation where needed. Place the loop with slight pressure on the bleeding, activate coagulation mode and hold until bleeding has stopped.

The Nesbit Technique

Transurethral vaporization of the prostate can also be performed with the Nesbit technique. The method of Nesbit is aimed at a primary interruption of the arterial blood supply to the prostate adenoma. By encircling the adenoma tissue with a trench cut close to the capsule, all arteries supplying hyperplastic tissue are interrupted. The avascular prostatic tissue can then be excised rapidly with minimal blood loss.

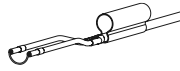
ORDERING INFORMATION

Plasma Vaporization Electrodes

WA22566S Plasma-OvalButton

WA22541S Plasma-OvalButton-Long

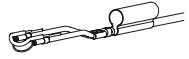
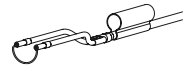
WA22557C PlasmaButton



WA22302D Loop, 12°, medium

WA22306D Loop, 30°, medium

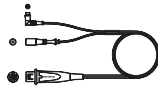
WA22558C Angled loop, 12° and 30° for TUEB (transurethral enucleation)



For a detailed list of electrodes, see our Urology catalogue

Electrosurgical unit

WA00014A HF cable, bipolar, 4 m, for ESG-400



WB91051W HF unit ESG-400



WB50402W Foot-Switch, double pedal, for ESG-400

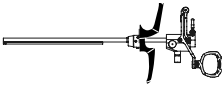


Working elements

WA22366A Working element, active



WA22367A Working element, passive

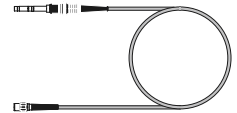


Telescopes 4 mm, autoclavable

WA2T412A 12° direction of view

WA2T430A 30° direction of view

WA03300A Light-guide cable, 3 mm, plug type



Rotatable continuous-flow resectoscope

Inner sheath

A22040* For 26 Fr. outer sheath

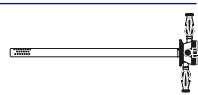
A22041 For 27 Fr. outer sheath



Outer sheath

A22026A 26 Fr., 2 stopcocks, rotatable

A22021A 27 Fr., 2 stopcocks, rotatable



Continuous-flow resectoscope

Inner sheath

A22040* For 26 Fr. outer sheath

A22041* For 27 Fr. outer sheath

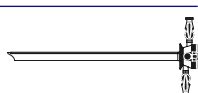


Outer sheath

A22027A 26 Fr., 2 vertical stopcocks, fixed

A22023A 27 Fr., 2 vertical stopcocks, fixed

A22025A 27 Fr., 2 horizontal stopcocks, fixed



Standard resectoscope

A22041* Resection sheath, without irrigation port



Irrigation port

A22051A 1 stopcock, rotatable

A22052A 1 luer-lock connector, rotatable

A22053A 2 horizontal stopcocks, rotatable

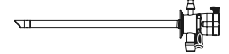
A22054A 1 vertical stopcock, fixed

A22055A 1 vertical luer-lock connector, fixed



Resectoscope with intermittent irrigation

A22014* Resection sheath, intermittent irrigation, 24 Fr.



*Add A or T to the article number for the desired obturator:
A220xA standard obturator
A220xT obturator with deflecting tip

Specifications, design, and accessories are subject to change without any notice or obligation on the part of the manufacturer.

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