TRANSURETHRAL PLASMA VAPORIZATION OF THE PROSTATE

Procedure Guide
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 ablation, 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 TURP
- 83% fewer readmissions compared to TURP
- Significantly shorter hospital stay compared to TURP
- Potential for day surgery due to a shorter catheterization period and hospital stay
- Use has been demonstrated in patients on anticoagulants
- 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).

Disclaimer

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

Olympus as manufacturer does not practice medicine, and therefore the information on the products and procedures contained in this document is of a general nature and does not represent and does not constitute medical advice or recommendations. This information does not purport to constitute any diagnostic or therapeutic statement with regard to any individual medical case. Each patient must be examined and advised individually, and this document does not replace the need for such examination and/or advice in whole or in part.

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

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.
PLASMA VAPORIZATION PROCEDURE STEPS – BARNES METHOD

01 | Cystoscopy with Inspection of Urethra

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

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

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.

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

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

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.

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:
A220xxA standard obturator
A220xxT obturator with deflecting tip

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