

Publication Summary



Water vapor thermal therapy of lower urinary tract symptoms due to benign prostatic obstruction: Efficacy and safety analysis of a real-world cohort of 211 patients

Bausch K, Zahiti L, Schruttt M, Wetterauer C, Halbeisen FS, Ebbing J and Seifert HH.
World J. Urol. 2023; **41**: 1605–12. [doi: 10.1007/s00345-023-04395-y](https://doi.org/10.1007/s00345-023-04395-y).

BACKGROUND



- ▶ Transurethral resection of the prostate is the gold standard surgical treatment for lower urinary tract symptoms (LUTS) caused by benign prostatic obstruction (BPO).
- ▶ However, the demand for minimally invasive treatments is growing.
- ▶ Rezūm™ is a minimally invasive water vapour thermal therapy that has demonstrated a beneficial improvement in micturition symptoms and voiding function in a real-world patient cohort.
- ▶ Previous studies have reported on either homogeneous patient groups¹⁻⁶ or specific baseline characteristics.^{7,8}

This article reports short- to long-term efficacy and safety outcomes of Rezūm therapy in an unselected real-world cohort.

METHODS

A pragmatic, observational, longitudinal cohort, single-centre study that included consecutive patients treated with the Rezūm system, following the same previously published protocol,^{3,9} from January 2014 to August 2022.



211 patients
Median age:
68.0 years
(IQR 61.0–77.0)

IQR, interquartile range



Received **Rezūm** therapy
(January 2014–August 2022)



Assessed at:
Baseline, then 2 months,
6 months, 1 year, 2 years
and >2 years after surgery

Primary outcomes

Operative efficacy:

Maximum urine flow rate (Q_{max})
Postvoid residual volume

International Prostate Symptom Score (IPSS)
Quality-of-life (QoL) score

Safety:

Clavien–Dindo graded¹⁰
intraoperative and
30-day postoperative
complications

RESULTS

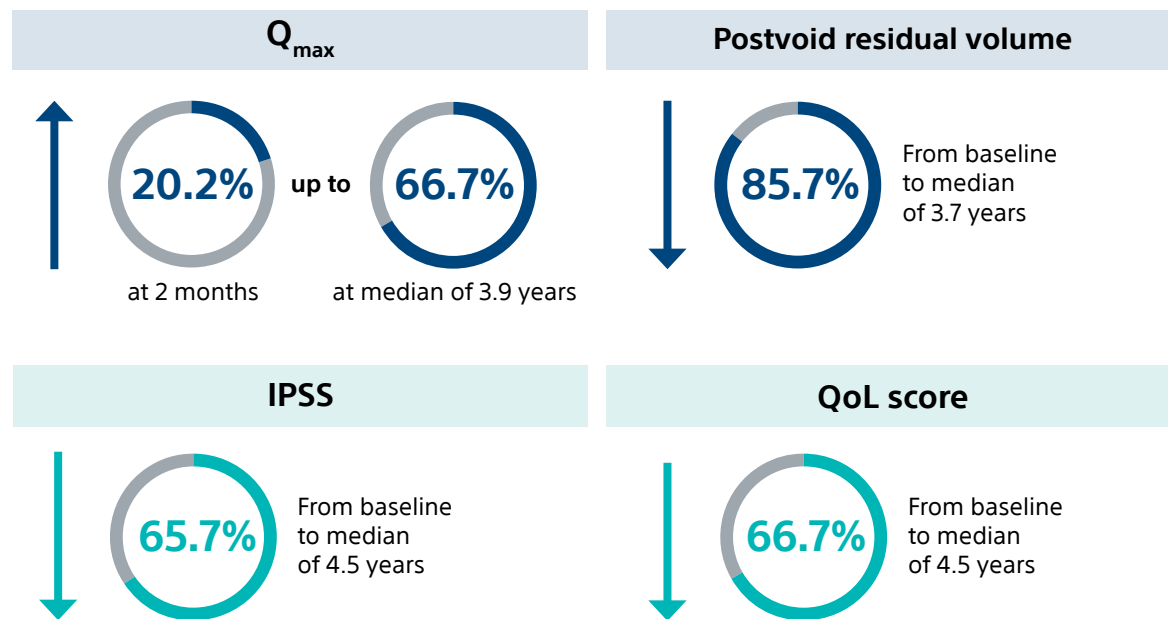
Preoperative patient characteristics

- An indwelling catheter and a prostate volume ≥ 80 mL were each present in 19.9% of patients; a median lobe was reported in 38.4% of patients.

Peri- and post-operative efficacy outcomes

- Operation time: median 10 min (IQR 7–16); 28.9% of patients underwent the procedure with general anaesthesia, 55.9% received analgesedation, 3.3% received spinal anaesthesia and 11.8% received local anaesthesia.
- Re-operation rate: 5.7% at a median time of 407 days.
- Number of water steam injections: median 5 (IQR 3–7).
- Length of hospital stay: median 2 days (IQR 2–3).
- Catheter removal: possible after a median of 5 days (IQR 5–7) for 195 (92.4%) patients.
 - 27/42 patients with an indwelling catheter preoperatively became catheter-free after a median of 16 days.
 - 168/169 patients with no indwelling catheter preoperatively had their catheter removed after a median of 5 days.
- Successful catheter removal rates in patients with:
 - Prostate volume ≥ 80 ml: 80.9%
 - Median lobe: 83.9%
 - Preoperative catheter: 65.8%

Functional outcomes following Rezūm therapy showed improvements in uroflowmetry



Safety outcomes

- Complications of Clavien–Dindo grades I or II were recorded for 11.8% (25/211) of patients following the procedure.

CONCLUSION

- Rezūm is a minimally invasive treatment option in a real-world cohort of patients with LUTS secondary to BPO.
- Micturition symptoms and voiding function improve stably over time.
- Preoperative catheterisation and the presence of a median lobe increase the risk of unsuccessful catheter removal.

LIMITATIONS

- The pragmatic observational design adds selection bias that may underestimate both positive and negative outcomes.
- There is variability in the follow-up duration; some patients have incomplete data, and outcomes may be influenced by the patients with the worst outcomes needing more frequent consultations.

REFERENCES

1. McVary KT, Gange SN, Gittelman MC *et al.* Minimally invasive prostate convective water vapor energy ablation: A multicenter, randomized, controlled study for the treatment of lower urinary tract symptoms secondary to benign prostatic hyperplasia. *J Urol.* 2016; **195**: 1529–38.
2. McVary KT, Rogers T, Roehrborn CG. Rezūm water vapor thermal therapy for lower urinary tract symptoms associated with benign prostatic hyperplasia: 4-year results from randomized controlled study. *Urology.* 2019; **126**: 171–9.
3. McVary KT, Gittelman MC, Goldberg KA *et al.* Final 5-year outcomes of the multicenter randomized sham-controlled trial of a water vapor thermal therapy for treatment of moderate to severe lower urinary tract symptoms secondary to benign prostatic hyperplasia. *J Urol.* 2021; **206**: 715–24.
4. Siena G, Cindolo L, Ferrari G *et al.* Water vapor therapy (Rezūm) for lower urinary tract symptoms related to benign prostatic hyperplasia: Early results from the first Italian multicentric study. *World J Urol.* 2021; **39**: 3875–80.
5. Alegorides C, Fourmarier M, Eghazarian C *et al.* Treatment of benign prostate hyperplasia using the Rezūm® water vapor therapy system: Results at one year. *Prog Urol.* 2020; **30**: 624–31.
6. Johnston MJ, Noureldin M, Abdelmotagly Y *et al.* Rezūm water vapour therapy: Promising early outcomes from the first UK series. *BJU Int.* 2020; **126**: 557–8.
7. Bole R, Gopalakrishna A, Kuang R *et al.* Comparative postoperative outcomes of Rezūm prostate ablation in patients with large versus small glands. *J Endourol.* 2020; **34**: 778–81.
8. McVary KT, Holland B and Beahrs JR. Water vapor thermal therapy to alleviate catheter-dependent urinary retention secondary to benign prostatic hyperplasia. *Prostate Cancer Prostatic Dis.* 2020; **23**: 303–8.
9. Dixon CM, Rijo Cedano E, Mynderse LA *et al.* Transurethral convective water vapor as a treatment for lower urinary tract symptomatology due to benign prostatic hyperplasia using the Rezūm® system: Evaluation of acute ablative capabilities in the human prostate. *Res Rep Urol.* 2015; **7**: 13–8.
10. Dindo D, Demartines N and Clavien PA. Classification of surgical complications: A new proposal with evaluation in a cohort of 6336 patients and results of a survey. *Ann Surg.* 2004; **240**: 205–13.

Results from case studies are not necessarily predictive of results in other cases. Results in other cases may vary. Please be aware that this summary has been created by Boston Scientific, and modifications were made from the original publication. All cited trademarks are the property of their respective owners. CAUTION: The law restricts these devices to sale by or on the order of a physician. Indications, contraindications, warnings and instructions for use can be found in the product labelling supplied with each device. Information for use only in countries with applicable health authority registrations. Material not intended for use in France.

Publication's license: <https://creativecommons.org/licenses/by/4.0/>

Please check availability with your local sales representative or customer service.



Rezūm™ System Brief Summary

Scan the QR code, visit

[bostonscientific.com/rezum-risks](https://www.bostonscientific.com/rezum-risks)

URO-1658905-AB

CE 0344

**Boston
Scientific**
Advancing science for life™

www.bostonscientific.eu

© 2026 Boston Scientific Corporation or its affiliates. All rights reserved.