

SCIENTIFIC EVIDENCE

related to single-use ureteroscopes



HEALTH ECONOMICS

With a total per-procedure cost ranging from \$1,212 to \$3,260 for procedures performed with reusable ureteroscopes, the **aScope™ 5 Uretero** is an **economically sustainable solution**.



The average repair rate of ureteroscopy procedures is 6.5%, equivalent to **15 ureteroscopy procedures before repair**, which corresponds to a **repair cost of \$441 per procedure for reusable ureteroscopes**.

[Rindorf et al., 2022](#)
[Bozzini et al., 2021](#)
[Large et al., 2019](#)

[Mager et al., 2018](#)
[Taguchi et al., 2018](#)

PROCEDURE CANCELLATION

Unavailability owing to breakdown or repair of flexible reusable ureteroscopes has been shown to account for 55% of all cancellations. Switching to single-use flexible ureteroscopes **reduces the rate of cancellation** due to flexible ureteroscopes.



[Al-Balushi et al., 2019](#)

CLINICAL OUTCOME

With **superior or similar stone-free rate and lower postoperative complications and infection rates** compared to reusable scopes, single-use flexible ureteroscopes are a great tool that offers high quality.



[Unno et al., 2023](#)
[Bozzini et al., 2021](#)

[Li et al., 2021](#)
[Yang et al., 2021](#)

OPERATIVE TIME

Single-use flexible ureteroscopes have a **shorter procedure duration** compared to reusable scopes.



[Göger et al., 2021](#)
[Salvado et al., 2019](#)
[Usawachintachit et al., 2017](#)

LENGTH OF HOSPITAL STAY

Procedures performed with single-use flexible ureteroscopes have a **shorter mean length of hospital stay**, compared with procedures performed with reusable flexible ureteroscopes.



[Huang et al., 2022](#)
[Bozzini et al., 2021](#)

March 2024, 1st edition

This document summarises published peer-reviewed studies on health economics, clinical performance, procedure cancellations, lengths of hospital stays and operative time related to the aScope 5 Uretero single-use ureteroscope.

**THE MOST INNOVATIVE
SINGLE-USE ENDOSCOPE
COMPANY***

*Frost & Sullivan, 2021

REFERENCES

1. Al-Balushi, K., Martin, N., Loubon, H., Baboudjian, M., Michel, F., Sichez, P. C., Martin, T., Di-Crocco, E., Gaillet, S., Delaporte, V., Akiki, A., Faure, A., Karsenty, G., Lechevallier, E., & Boissier, R. (2019). Comparative medico-economic study of reusable vs. single-use flexible ureteroscopes. *International Urology and Nephrology*, 51(10), 1735-1741. <https://doi.org/10.1007/s11255-019-02230-1>
2. Bozzini, G., Filippi, B., Alriyat, S., Calori, A., Besana, U., Mueller, A., Pushkar, D., Romero-Otero, J., Pastore, A., Sighinolfi, M. C., Micali, S., Buizza, C., & Rocco, B. (2021). Disposable versus reusable ureteroscopes: A prospective multicenter randomized comparison. *Research and Reports in Urology*, 13, 63-71. <https://doi.org/10.2147/RRU.S277049>
3. Göger, Y. E., Özkent, M. S., Kılınc, M. T., Taşkapu, H. H., Göger, E., Aydın, A., Sönmez, M. G., & Karalezli, G. (2021). Efficiency of retrograde intrarenal surgery in lower pole stones: disposable flexible ureterorenoscope or reusable flexible ureterorenoscope? *World Journal of Urology*, 39(9), 3643-3650. <https://doi.org/10.1007/s00345-021-03656-y>
4. Huang, F., Zhang, X., Cui, Y., Zhu, Z., Li, Y., Chen, J., Zeng, F., Li, Y., Chen, Z., & Chen, H. (2022). Single-Use vs. Reusable Digital Flexible Ureteroscope to Treat Upper Urinary Calculi: A Propensity-Score Matching Analysis. *Frontiers in Surgery*, 8. <https://doi.org/10.3389/fsurg.2021.778157>
5. Large, T., Rivera, M., Nottingham, C., Agarwal, D., Mellon, M., & Krambeck, A. (2021). Initial Experience with Novel Single-Use Disposable Ureteroscopy: A Prospective, Single Arm 90-Day Trial of the Axis Ureteroscope. *Urology Practice*, 8(2), 196-202. <https://doi.org/10.1097/upj.0000000000000194>
6. Li, Y., Chen, J., Zhu, Z., Zeng, H., Zeng, F., Chen, Z., Yang, Z., Cui, Y., Chen, H., & Li, Y. (2021). Comparison of single-use and reusable flexible ureteroscope for renal stone management: a pooled analysis of 772 patients. In *Translational Andrology and Urology* (Vol. 10, Issue 1, pp. 483-493). AME Publishing Company. <https://doi.org/10.21037/TAU-20-1009>
7. Mager, R., Kurosch, M., Höfner, T., Frees, S., Haferkamp, A., & Neisius, A. (2018). Clinical outcomes and costs of reusable and single-use flexible ureterorenoscopes: a prospective cohort study. *Urolithiasis*, 46(6), 587-593. <https://doi.org/10.1007/s00240-018-1042-1>
8. Rindorf, D. K., Taily, T., Kamphuis, G. M., Larsen, S., Somani, B. K., Traxer, O., & Koo, K. (2022). Repair Rate and Associated Costs of Reusable Flexible Ureteroscopes: A Systematic Review and Meta-analysis. In *European Urology Open Science* (Vol. 37, pp. 64-72). Elsevier B.V. <https://www.sciencedirect.com/science/article/pii/S2666168322000064?via%3Dihub>
9. Salvadó, J. A., Cabello, J. M., Moreno, S., Cabello, R., Olivares, R., & Velasco, A. (2019). Endoscopic treatment of lower pole stones: Is a disposable ureteroscope preferable? Results of a prospective case-control study. *Central European Journal of Urology*, 72(3), 280-284. <https://doi.org/10.5173/cej.2019.1962>
10. Taguchi, K., Usawachintachit, M., Tzou, D. T., Sherer, B. A., Metzler, I., Isaacson, D., Stoller, M. L., & Chi, T. (2018). Micro-Costing Analysis Demonstrates Comparable Costs for LithoVue Compared to Reusable Flexible Fiberoptic Ureteroscopes. *Journal of Endourology*, 32(4), 267-273. <https://doi.org/10.1089/end.2017.0523>
11. Unno, R., Hosier, G., Hamouche, F., Bayne, D. B., Stoller, M. L., & Chi, T. (2023). Single-Use Ureteroscopes Are Associated with Decreased Risk of Urinary Tract Infection After Ureteroscopy for Urolithiasis Compared to Reusable Ureteroscopes. *Journal of Endourology*, 37(2), 133-138. <https://doi.org/10.1089/END.2022.0480>
12. Usawachintachit, M., Isaacson, D. S., Taguchi, K., Tzou, D. T., Hsi, R. S., Sherer, B. A., Stoller, M. L., & Chi, T. (2017). A Prospective Case-Control Study Comparing LithoVue, a Single-Use, Flexible Disposable Ureteroscope, with Flexible, Reusable Fiber-Optic Ureteroscopes. *Journal of Endourology*, 31(5), 468-475. <https://doi.org/10.1089/end.2017.0027>
13. Yang, E., Jing, S., Niu, Y., Qi, S., Yadav, P. K., Yang, L., Bao, J., Tian, J., Wang, J., Li, N., Ou, T., & Wang, Z. (2021). Single-Use Digital Flexible Ureteroscopes as a Safe and Effective Choice for the Treatment of Lower Pole Renal Stones: Secondary Analysis of a Randomized-Controlled Trial. <https://Home.Liebertpub.Com/End>, 35(12), 1773-1778. <https://doi.org/10.1089/END.2021.0170>

Ambu