

# Cost study: reusable flexible ureteroscopes vs single-use in a healthcare facility

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## Background & importance

We would like to increase the activity of flexible ureteroscopy in our centre to take care of renal lithiasis, a procedure with a high risk of material breakage. With 6 adult ureteroscopes often undergoing disinfection or repair and 1 almost obsolete paediatric ureteroscope, our equipment is insufficient. Knowing that we have a disinfection centre for endoscopes, should we move to single use?

## Aim & objectives

To compensate for the unavailability of reusable ureteroscopes, should we switch completely to single use or use them in addition?

## Materials & methods

We compared the annual cost per 300 procedures of reusable and single-use ureteroscopes. The cost of reusable ureteroscopes includes the purchase price of the 7 devices amortized over a 3-year life span, the cost of disinfection, the maintenance contract and repairs. The cost of single-use ureteroscopes is the purchase price of 300 units.

## Results (table 1)

Costs (€/year)	Reusable	Single-use
Purchase price/amortization	27,813€	184,500€
Disinfection cost	18,953€	NA
Maintenance contract	66,000€	NA
Repair cost	20,594€	NA
Total	133,360€	184,500€

Table 1 : Yearly costs of reusable and single-use ureteroscopes' utilization

The results show that the annual cost of reusable ureteroscopes would be €133,360 excluding tax. The cost of single use would be €184,500 excluding tax. If we replaced our entire fleet with single-use ureteroscopes, the additional cost would be €51,140 per year, excluding taxes.

## Conclusion & relevance

In our case, reusable ureteroscopes are cheaper. In addition, the video quality of single-use ureteroscopes is lower.

We therefore decided to increase our stock to 8 devices and to reserve the occasional purchase of single-use ureteroscopes for emergencies when reusable ureteroscopes are unavailable and for procedures with a high risk of material breakage.

Thus the purchase was limited to 4 adult single-use ureteroscopes and 2 paediatric ureteroscopes in one year.

