

DEBATE #12

Stone Equipment is not suitable for UTUC treatment !

Yes, we do think that stone equipment is not suitable for UTUC treatment



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6th April 2018, Paris

Trans-Atlantic Leaders in
ENdourological Technologies

Various steps of UTUC endoscopic treatment: are there any limitations due to the use of stone equipment ?

Access to the
ureter/kidney

- *Guide wire*
- *UAS*



Inspection of the
collecting system

*Digital flexible
ureteroscopes*



Tumour biopsy

Basket



Endoscopic
treatment

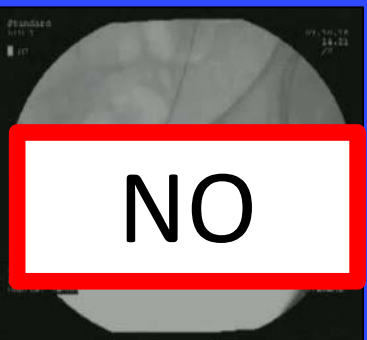
- *Ho:YAG laser*
- *Devices for adjuvant
instillation*



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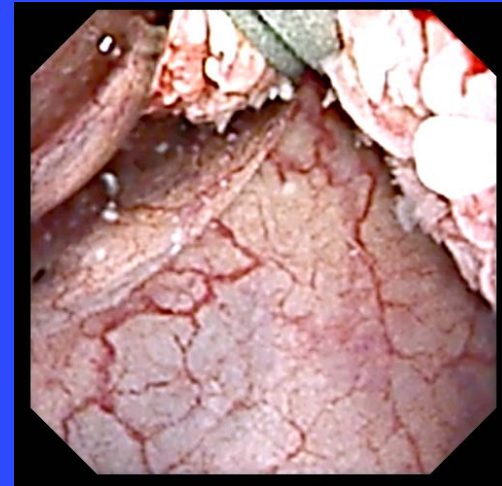
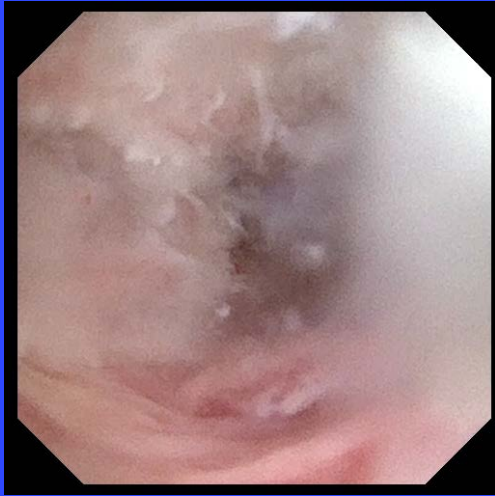
**Endoscopic
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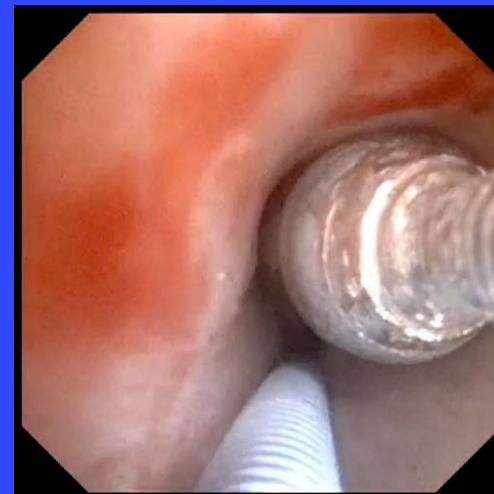


Ureteroscopic biopsy: what can we use?

Nitinol Basket designed for stone retrieval



Forceps for tissue sampling



Ureteroscopic biopsy – what is the best grasper?

Ureteroscopic Biopsy of Upper Tract Urothelial Carcinoma Using a Novel Ureteroscopic Biopsy Forceps

Shaun E L Wason ¹, John D Seigne, Alan R Schned, Vernon M Pais Jr

19 ureteroscopic procedures

the mean size in maximal diameter (mm +/- SD) of the biopsies:

- 3Fr forceps 1.2 +/- 0.4
- BIGopsy 3.4 +/- 2.0
- nitinol basket 4.9 +/- 4.0

Lesions with stalks → basket biopsy

Flat or sessile lesions → BIGopsy biopsy forceps provided larger, deeper and less distorted specimens than the 3Fr biopsy forceps

Ureteroscopic biopsy – what is the best grasper?

Can We Improve the Biopsy Quality of Upper Urinary Tract Urothelial Tumors? Single-Center Preliminary Results of a New Biopsy Forceps

Al-Qahtani S.M.^a · Legraverend D.^a · Gil-Diez de Medina S.^a · Sibony M.^b · Traxer O.^a

20 UTUC pts

percentage of valid biopsy:

85% Bigopsy

35% Piranha

Ureteroscopic biopsy – what is the best grasper?

COMPARISON OF BIOPSY DEVICES IN UPPER TRACT UROTHELIAL CARCINOMA

Authors. Alberto Breda, Angelo Territo, Giuseppe Basile, Jose Subiela, Jose Maria Gaya, Joan Palou

Affiliation. Fundació Puigvert, Autonomous University of Barcelona, Spain

112 diagnostic and therapeutic URS in 85 patients

A total of 302 biopsies were taken

Overall RATE OF INADEQUATE SPECIMEN for diagnosis : 21.8%

- **3F forceps 25.1%**
- **BIGopsy 18.1%**
- **2.2 Nitinol Basket 0%**

Subgroup of 27 pts: comparison btw 3Fr forceps and BIGopsy in terms of INADEQUATE SPECIMEN on the same lesion:

3F forceps 26%

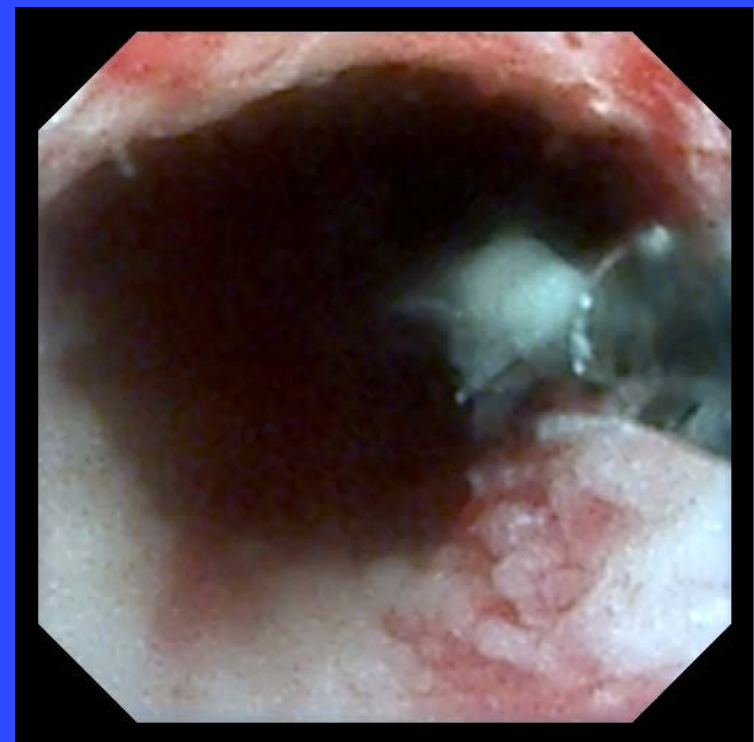
BIGopsy 0%

Ureteroscopic biopsy - limitations due to 1) tumour characteristics

Position



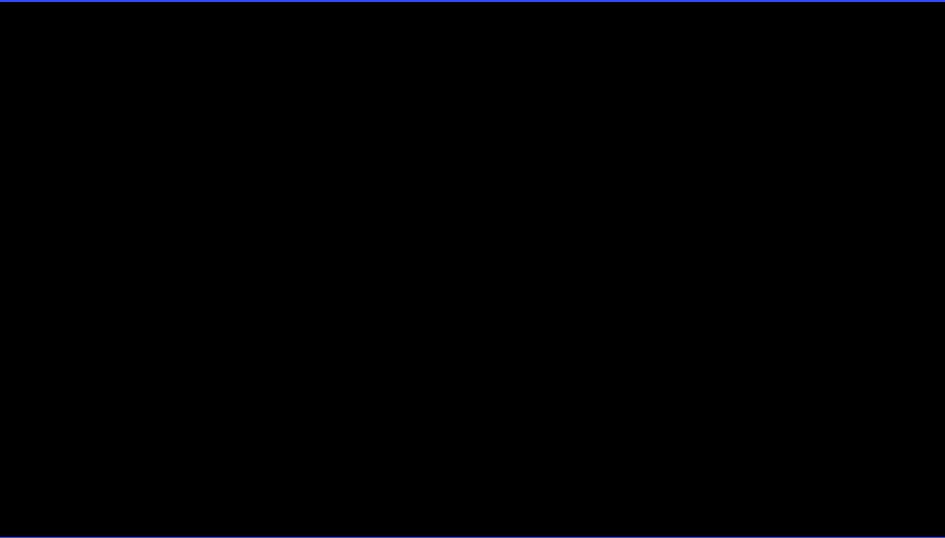
Size and shape



Ureteroscopic biopsy – limitation due to 2) the presence of forceps into the working channel

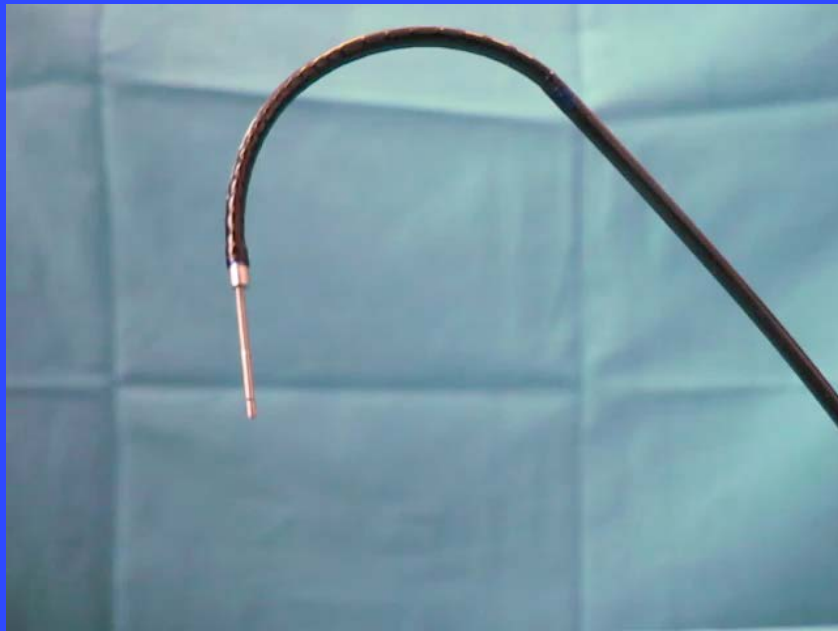
Loss of irrigation

Loss of deflection

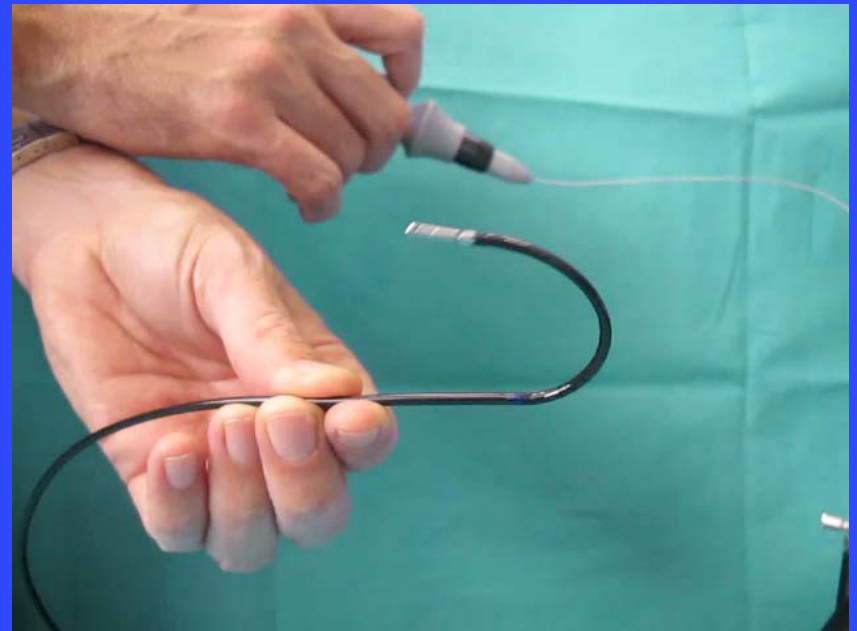


Ureteroscopic biopsy – limitation due to 3) ureteroscope tip deflection

Loss of forceps function



Loss of forceps function



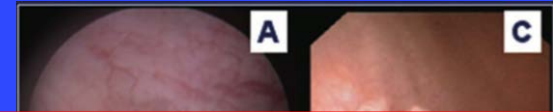
Ureteroscopic biopsy – rate of inadequate sampling for pathology

Authors (year)	N° of patients	Percentage of inadequate sampling
Villa et al. (2017)	92	48 %
Cutress et al.* (2012)	73	19 %
Thompson et al. (2008)	83	52 %
Krambeck et al. (2007)	90	47 %
Deligne et al.* (2002)	61	0 %
Keeley et al. (1997)	41	3 %
Martinez-Pineiro et al.* (1996)	54	5 %

**including patients treated with percutaneous nephroscopic resection of tumour*

UTUC - How can we improve the diagnostic process?

Image enhancement techniques and photodynamic diagnosis



not by using stone equipment!!!

Real time optical biopsies

- Cellvizio
- Optical coherence tomography

