**Supplementary material:**

**SURVEY OF SURGICAL URINARY STONE TREATMENT IN SWITZERLAND**

**1. BASIC DATA**

**name (optional): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**1.1 Working place**

☐ Cantonal Hospital / University Hospital ☐ other Public Hospital ☐ Private Hospital

**1.2 Position**

☐ Head/Senior Consultant ☐ Consultant ☐ Resident ☐ Private practice

**1.3. Age / Sex**

☐ age: \_\_\_\_\_\_

☐ female ☐ male

**2. EQUIPMENT**

**2.1 Which of the following devices / stone therapies do you offer at your institution?**

☐ SWL Device:\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ☐ First generation

☐ 2nd generation

☐ 3rd or 4th generation

☐ Semirigid URS (available sizes: \_\_\_ , \_\_\_ , \_\_\_ , \_\_\_ Charr. )

☐ Flexible URS ☐ Fiber optic device

☐ Digital device

☐ Single use device

☐ PNL ☐ PNL (24 - 30 Charr.)

☐ Mini - PNL (14 - 20 Charr.)

☐ Ultra - mini - PNL (11-13 Charr.)

☐ Micro - PNL (4.85 Charr.)

☐ other procedures ☐ open surgery  
 ☐ laparoscopic

☐ robotic (DaVinci)

**3. PREOPERATIVE SETTING AND INTRAOPERATIVE PROCEEDING**

**3.1. Which antibiotic prophylaxis is used at your institution before treatment of urinary calculi in uncomplicated situations (no urinary tract infection, no infectious stones)?**

Antibiotic: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Used before the following procedure(s):

☐ SWL with stenting ☐ SWL without stenting ☐ URS ☐ PCNL

If you use different strategies for different procedures, please describe:  
  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3.2. Do you use CT-acquired data to plan your interventional stone treatment?**

SWL: - Skin - to - stone ☐ never  
 distance ☐ sometimes   
 ☐ always

- Hounsfield - ☐ never

Units ☐ sometimes   
 ☐ always

URS: - Hounsfield - ☐ never  
 Units ☐ sometimes   
 ☐ always

- stone volume ☐ never  
 ☐ sometimes   
 ☐ always

**3.3. Under which type of anaesthesia do you perform SWL?**

☐ none ☐ Sedoanalgesia (e.g. Haldol, Propofol) ☐ general anaesthesia

☐ different types / according to patient’s preference

**3.4. How do you locate urinary calculi during SWL treatment?**

☐ ultrasound ☐ fluoroscopy ☐ combination

**3.5. Do you perform primary URS without pre-stenting?**

☐ never  
☐ sometimes - What are your relevant factors?

☐ stone size ☐ stone location (☐ below / ☐ above crossing over the iliac artery bifurcation)   
 ☐ stone composition ☐ signs of infections ☐ patient’s wish   
 ☐ elective/emergency procedure ☐ resources (time, available personal)   
☐ always

**3.6. How do you remove stones located in the upper ureter?**

☐ Semirigid URS  
☐ Flexible URS

☐ Individually, decision based on:

☐ stone size ☐ stone composition ☐ accompanying nephrolithiasis

☐ preferences of the operating surgeon

**3.7. How do you position patients undergoing PNL (multiple answers possible)?**

☐ prone ☐ supine ☐ lateral

**4. PROCEDURES**

In the following, please indicate your preferred surgical treatment options for different stone scenarios. Several answers rated equal can be given. In this case, please indicate the individual decision criteria in the same line (see selection and example).

Decision criteria (multiple answers possible)

a) Patient’s preference e) Narrowing of the calyx i) Preference of the operating surgeon  
b) BMI f) Skin-to-stone distance

c) Stone composition g) Steep angle (lower calyx to pelvis)

d) Infectious stone h) Availability of instruments

**Example**

**Upper and middle Calyx**

**1. SWL or PNL (a, b, g) 3. -**

> 10mm

**2. URS 4. -**

Several answers with the same weighting can be given, in which case we ask you for an indication of the individual decision criteria on the same line. Choice of decision criteria (multiple answers possible):

a) Patient’s preference e) Narrowing of the calyx i) Preference of the operating surgeon  
b) BMI f) Skin-to-stone distance

c) Stone composition g) Steep angle (lower calyx to pelvis)

d) Infectious stone h) Availability of instruments

**4.1 Ureteral calculi** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1. 3.**

>10mm

<10mm

**2. 4.**

Proximal

**1. 3.**

**2. 4.**

**1. 3.**

>10mm

<10mm

**2. 4.**

Distal

**1. 3.**

**2. 4.**

Several answers with the same weighting can be given, in which case we ask you for an indication of the individual decision criteria on the same line. Choice of decision criteria (multiple answers possible):

a) Patient’s wish e) Narrowing of the calyx i) Preference of the operating surgeon  
b) BMI f) Skin-to-stone distance

c) Stone composition g) Steep angle (lower calyx to pelvis)

d) Infectious stone h) Availability of instruments

**4.2 Renal calculi**

**Upper and middle calyx** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1. 3.**

< 10mm

**2. 4.**

**1. 3.**

**2. 4.**

10 - 20 mm

**1. 3.**

> 20 mm

**2. 4.**

Several answers with the same weighting can be given, in which case we ask you for an indication of the individual decision criteria on the same line. Choice of decision criteria (multiple answers possible):

a) Patient’s wish e) Narrowing of the calyx i) Preference of the operating surgeon  
b) BMI f) Skin-to-stone distance

c) Stone composition g) Steep angle (lower calyx to pelvis)

d) Infectious stone h) Availability of instruments

**Lower calyx** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1. 3.**

< 10mm

**2. 4.**

**1. 3.**

**2. 4.**

10 - 20 mm

**1. 3.**

> 20 mm

**2. 4.**

**Remarks: ................................................................................................................................................................**

**Thank you for your participation!**