

Endoskopische Steintherapie

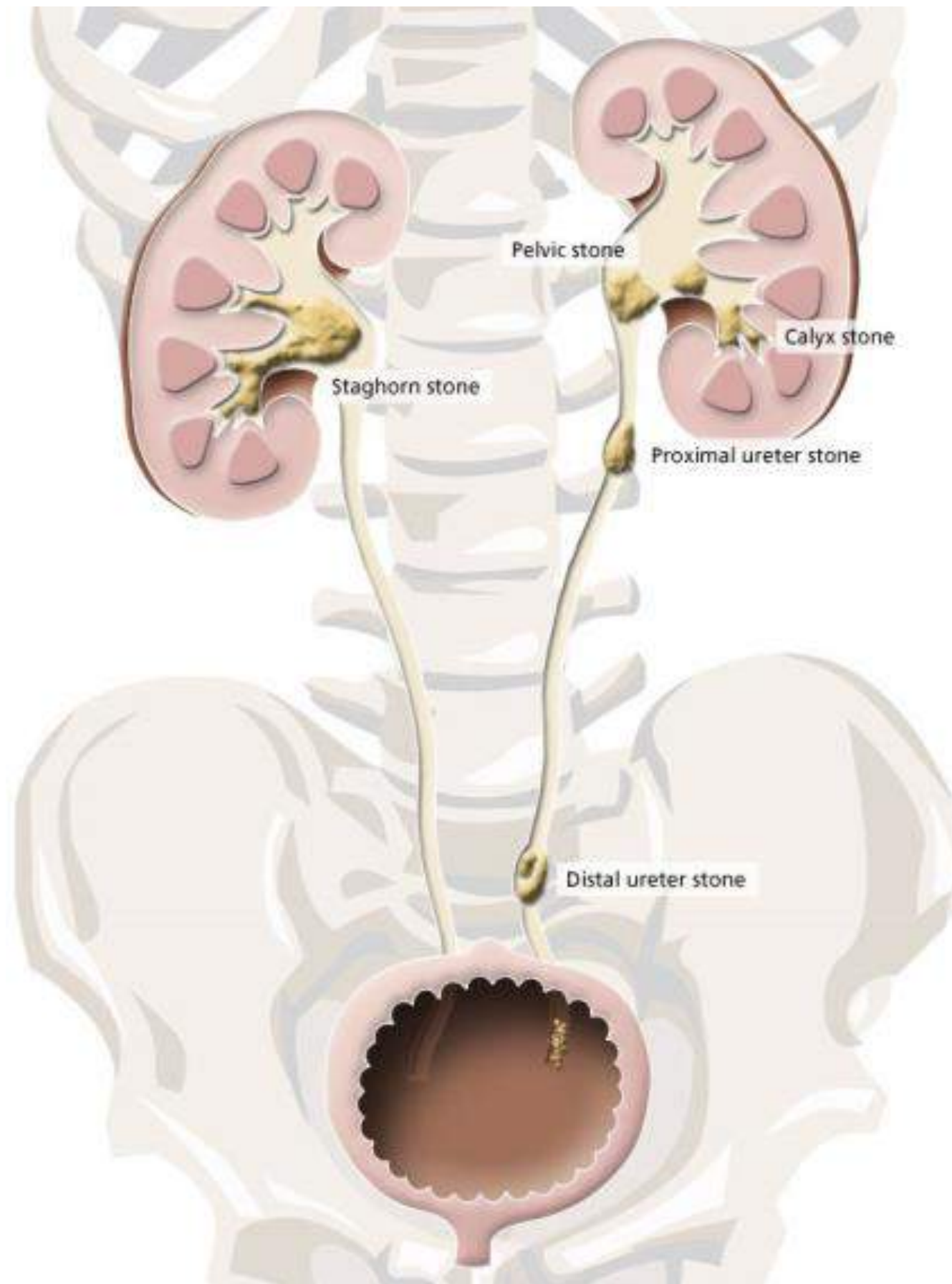
B. Förster



**Blick durchs Schlüsselloch –
Endoskopische Operationen in der Urologie**

Exkursion Samstag 13. April 2019

Anatomie

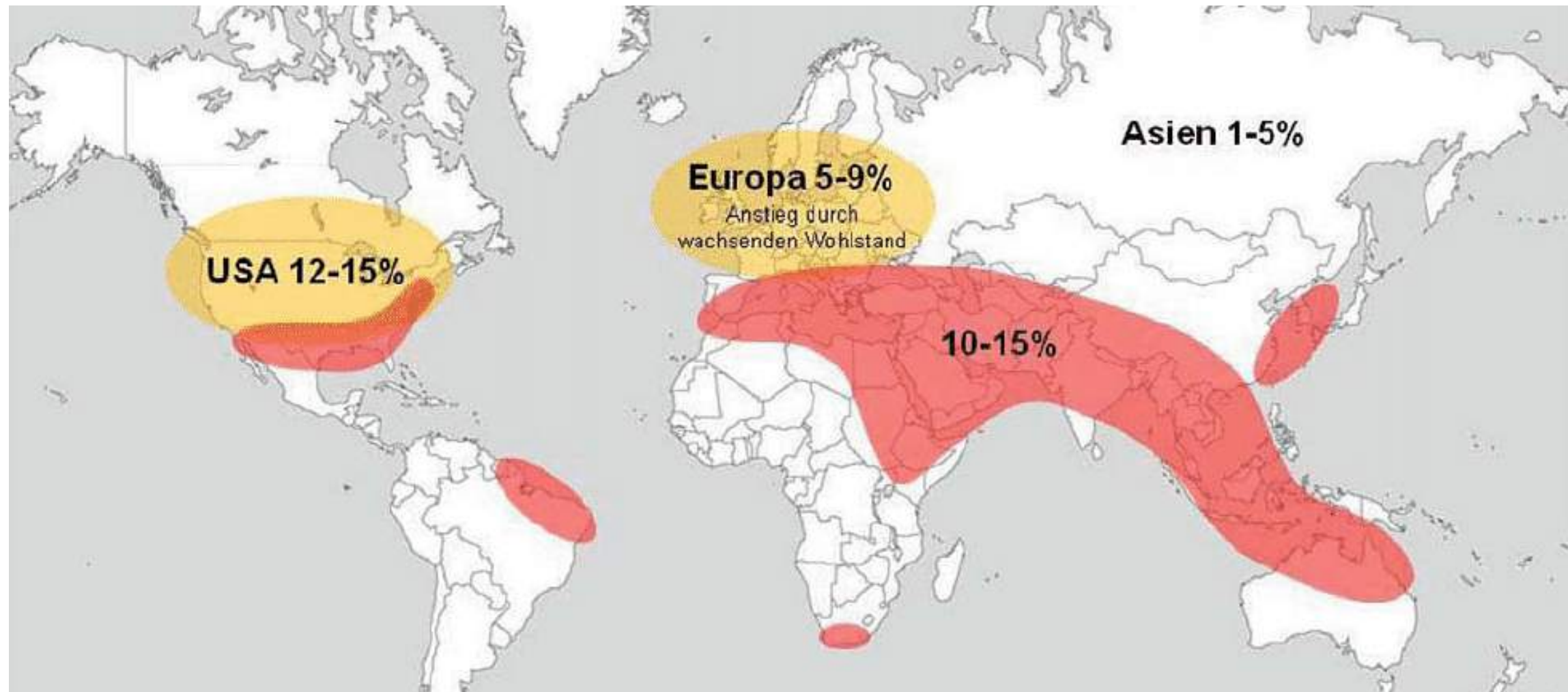


Epidemiologie

Ungefähr 5% der Bevölkerung leidet an Harnsteinen!
Neuerkrankungen pro Jahr: 1,47% der Bevölkerung



~1500 Personen/Jahr

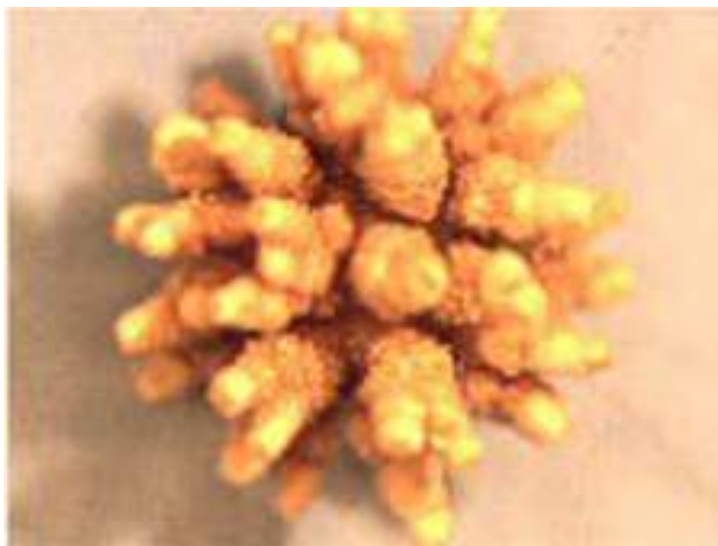


Nierenstein

- **Grösse**
 - Sandkorn bis Golfball
- **Form**
 - Glatt bis stachelig
- **Farbe**
 - gelb / braun / weiss



Schmerzen



Qual

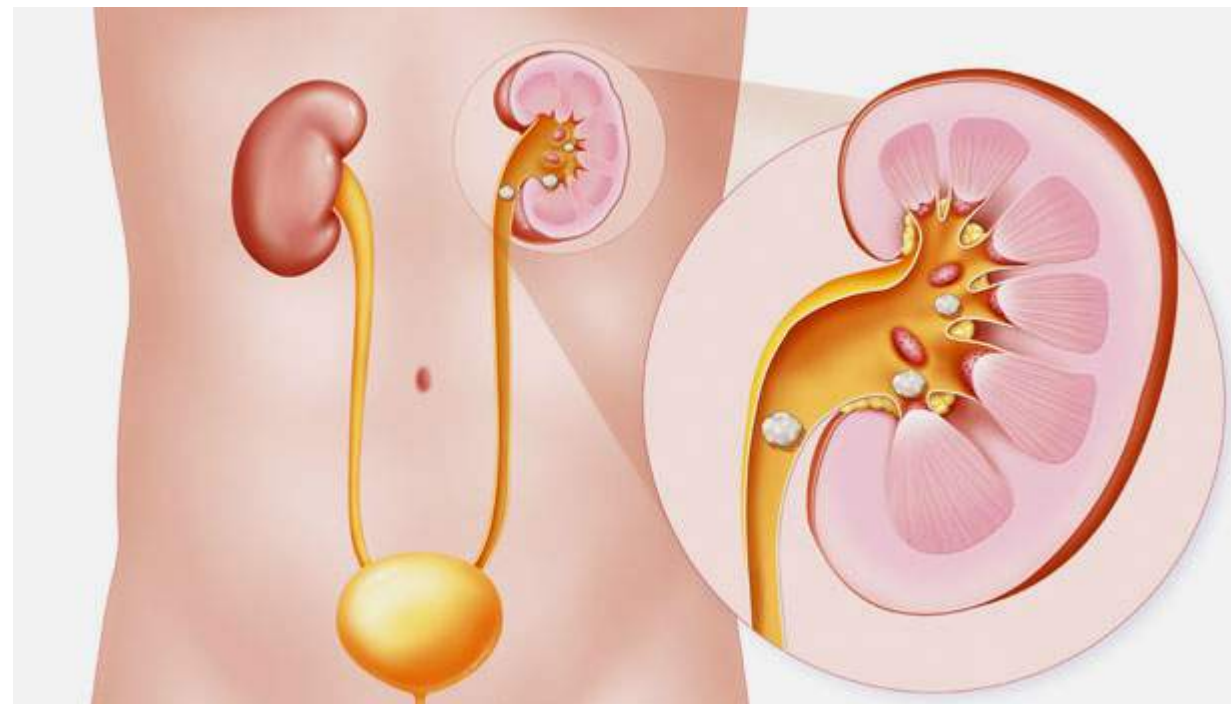


Elend



Ursachen

- Multifaktoriell
- Erhöhte Ausscheidung von steinbildenden Substanzen: Harnsäure, Calcium, Phosphat
- Verminderte Ausscheidung von Anti-Steinsubstanzen, wie Magnesium und Citrat



Diagnostik

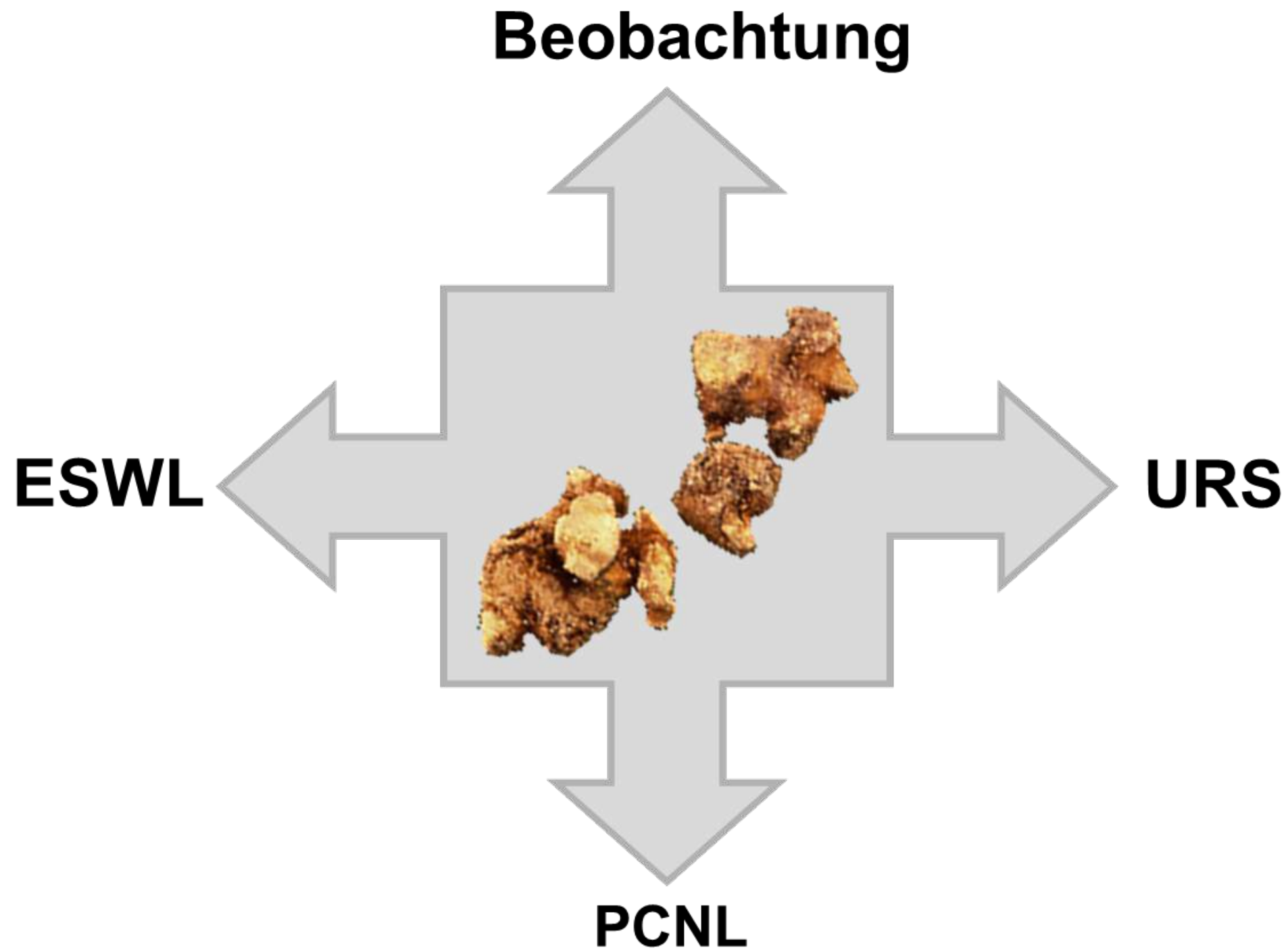
Computertomographie



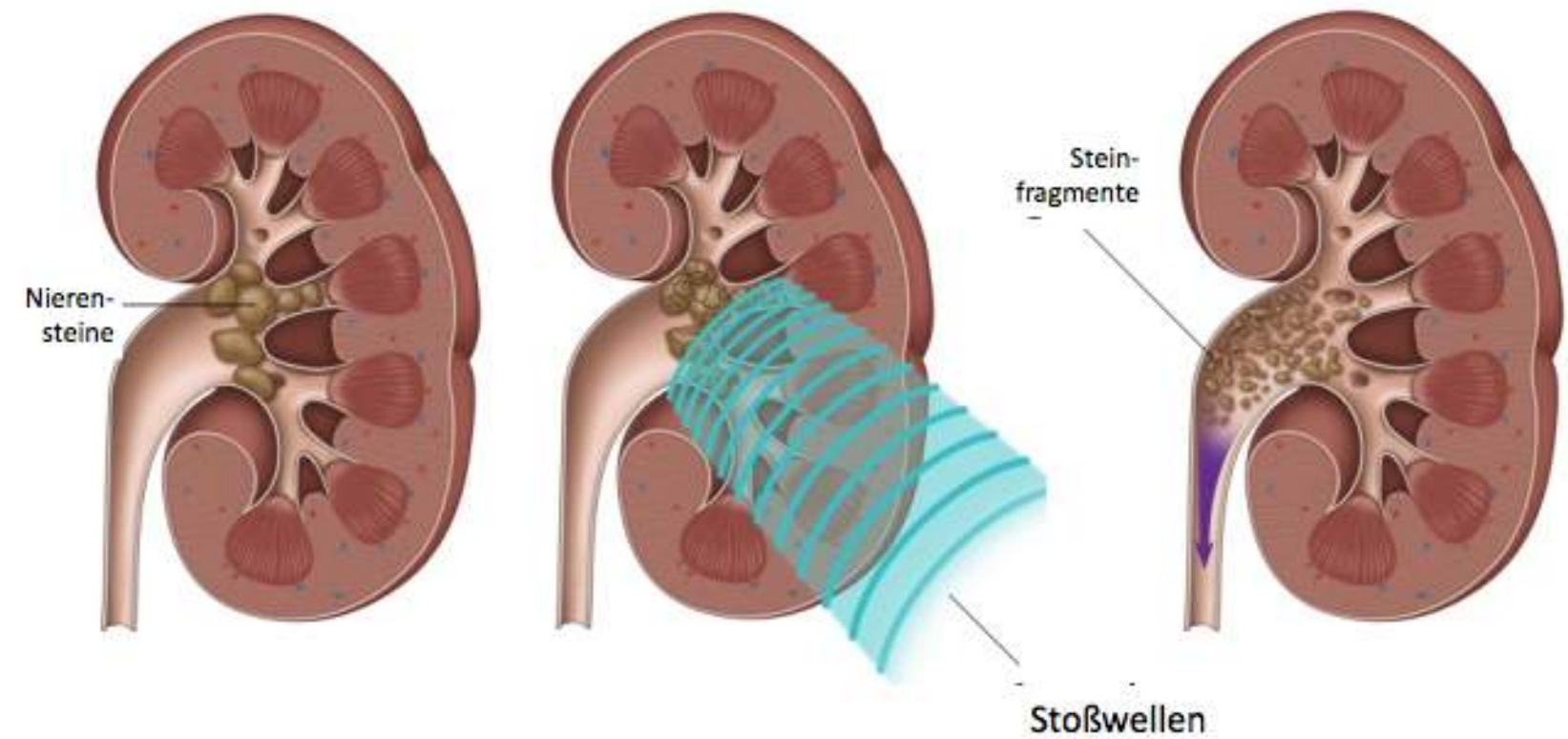
Ultraschall



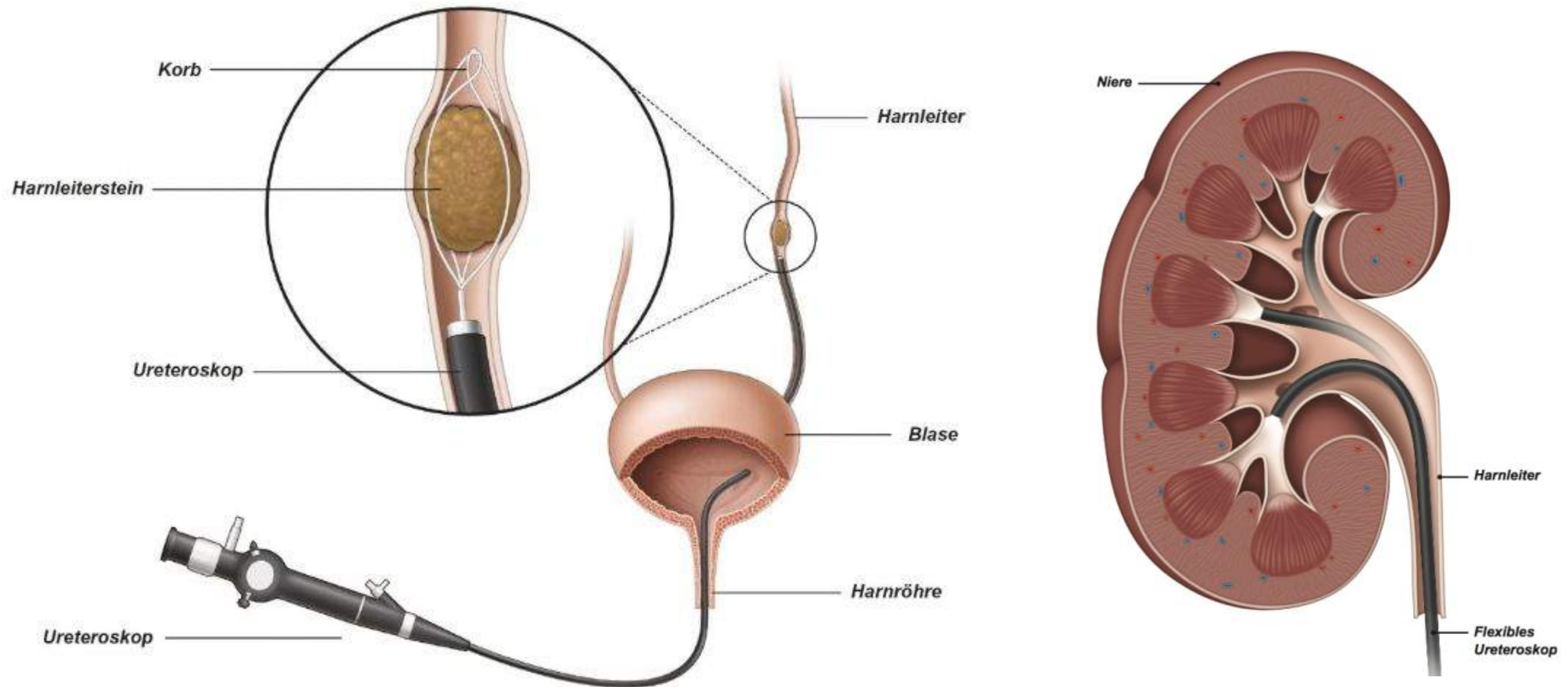
Therapieoptionen



Extrakorporelle Stosswellenlithotripsie (ESWL)

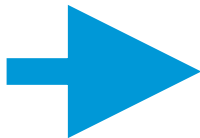
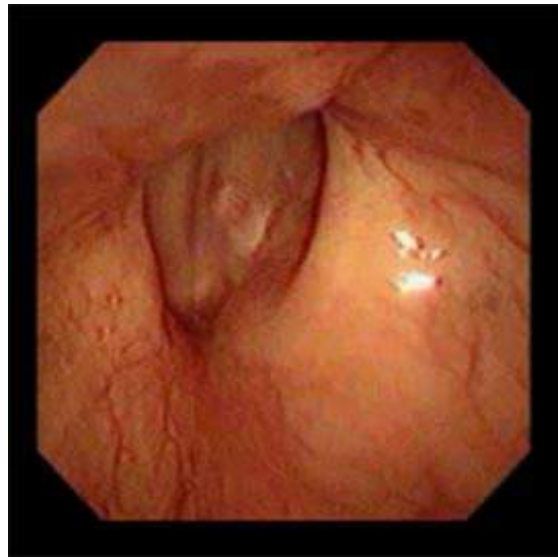
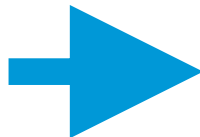
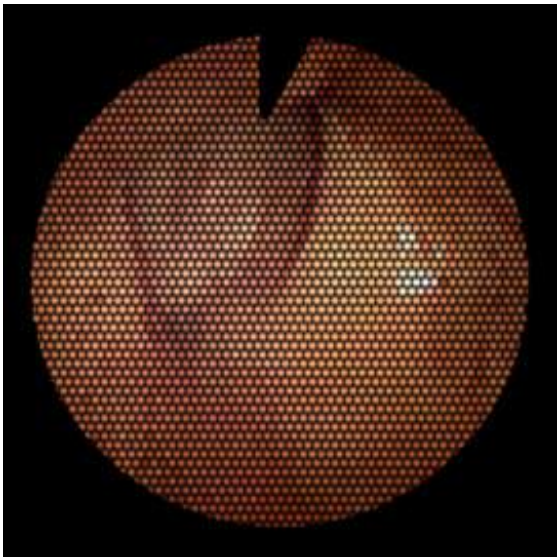
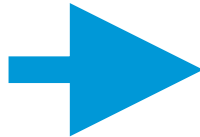
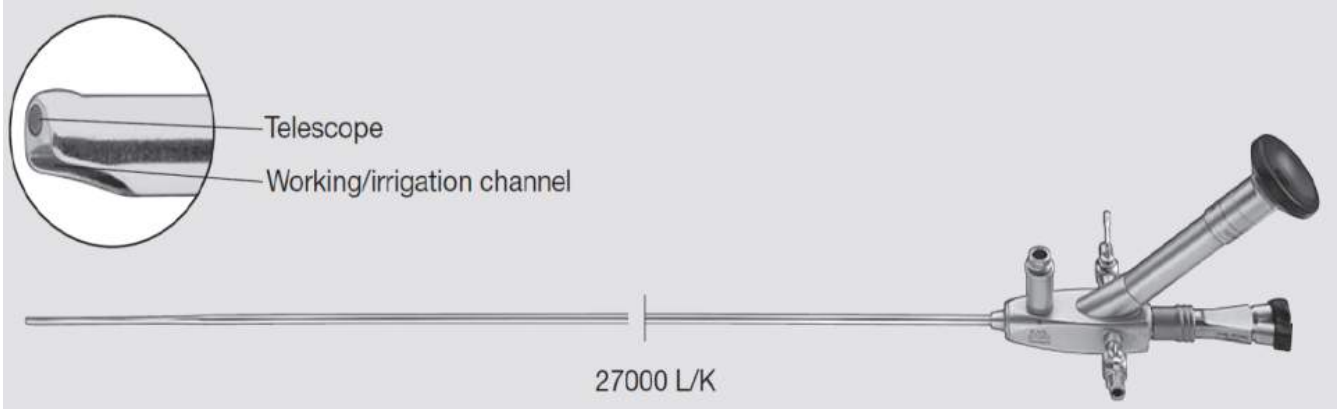


Ureterorenoskopie (URS)



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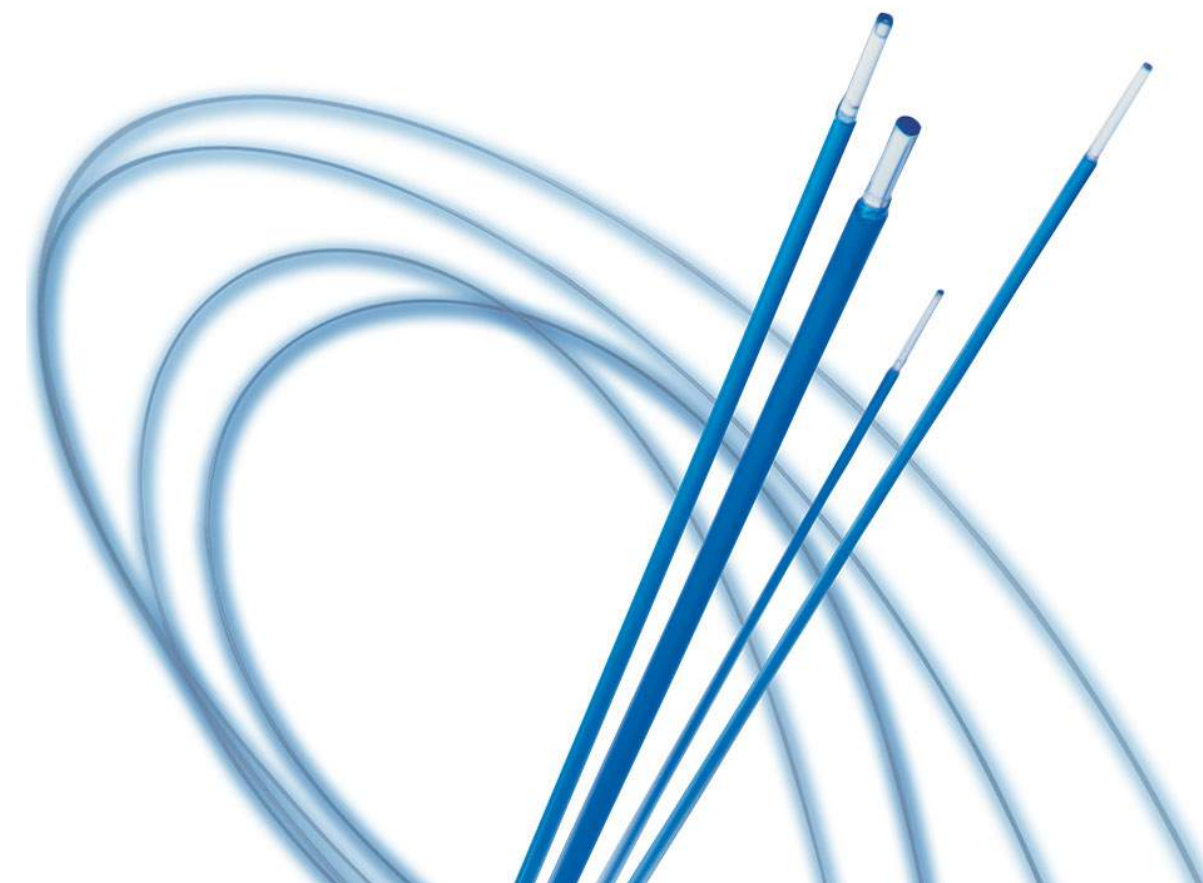
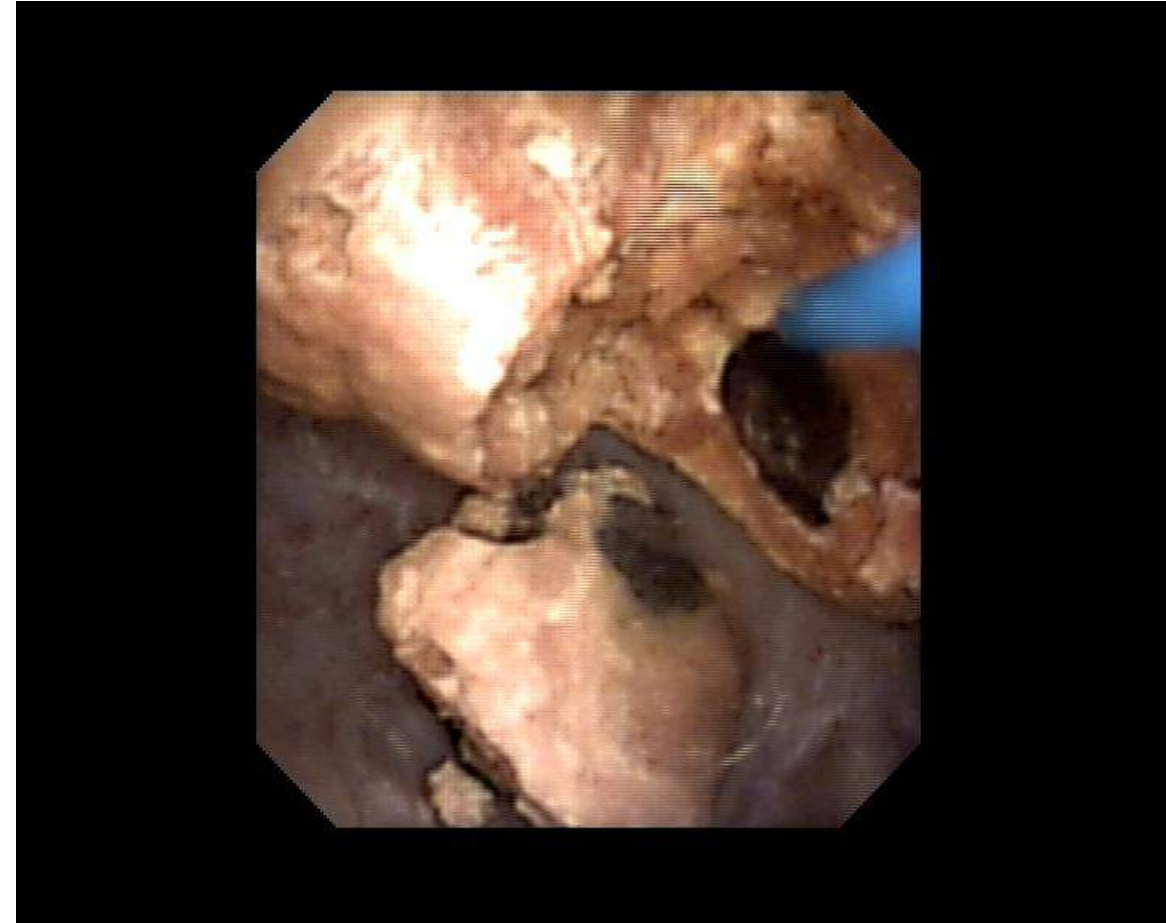
Technologischer Fortschritt



Zeitachse



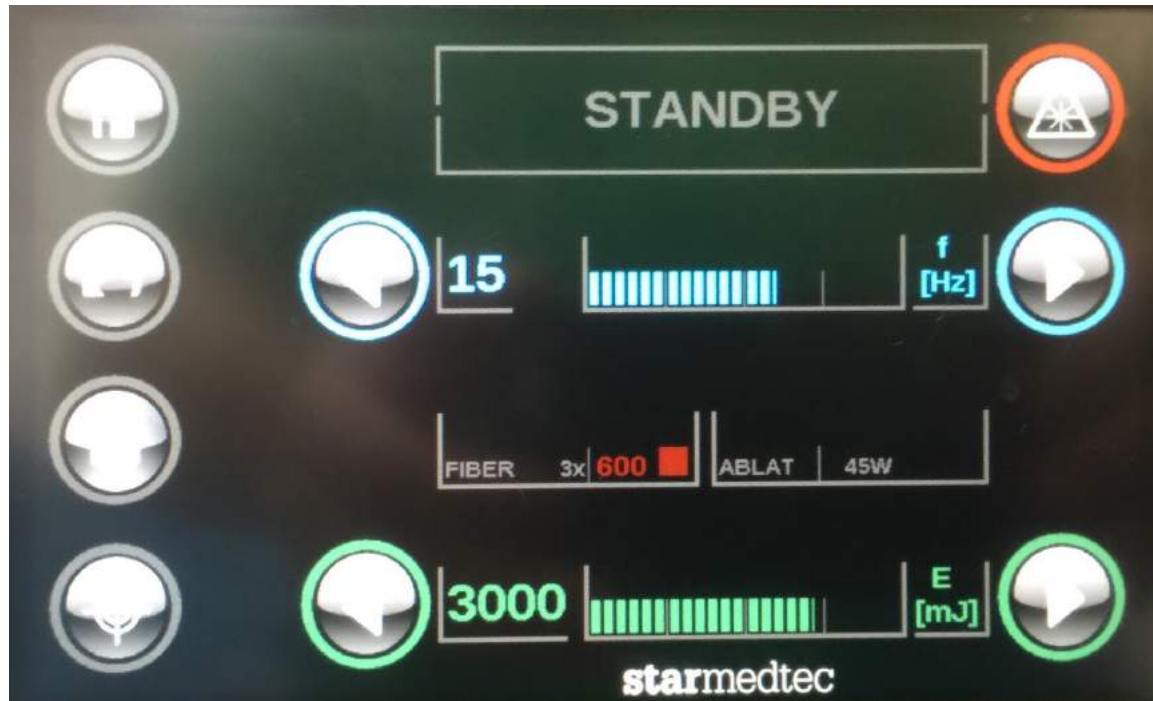
Holmium-Laser



3 Anwendungstypen:

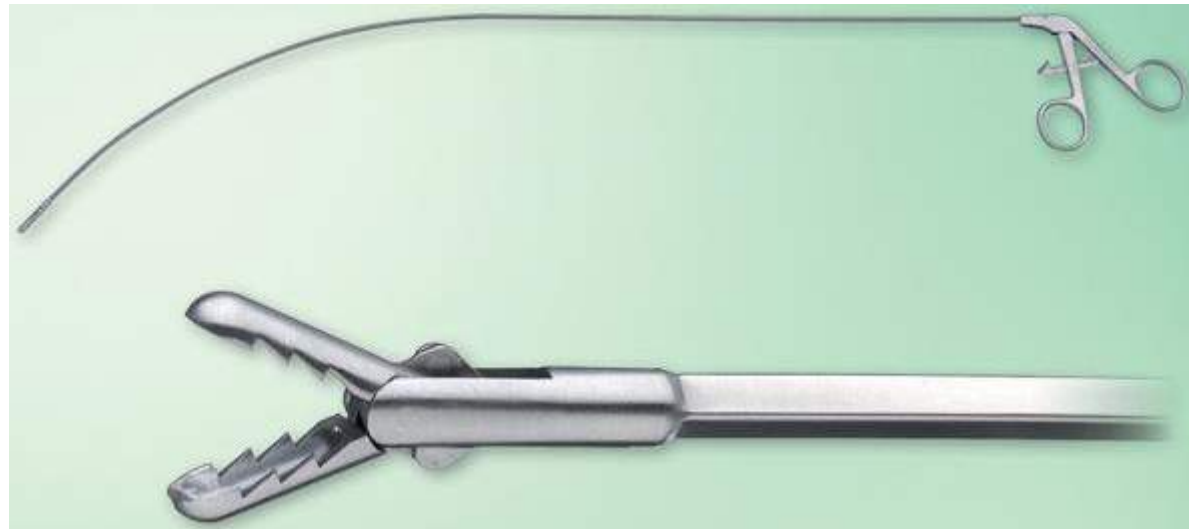
- Fragmentieren
- Dusting
- Popcorning

Holmium-Laser in der Anwendung

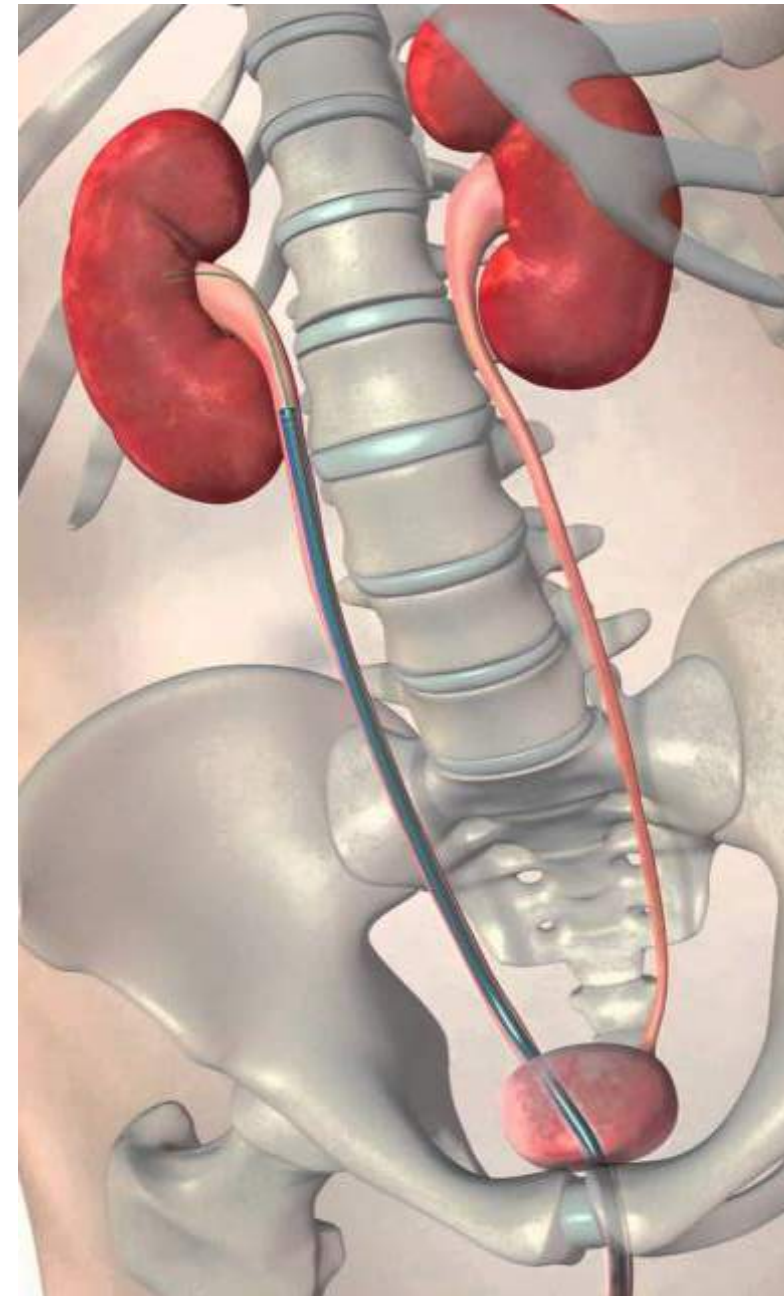


Hilfsmittel zur Steinbergung

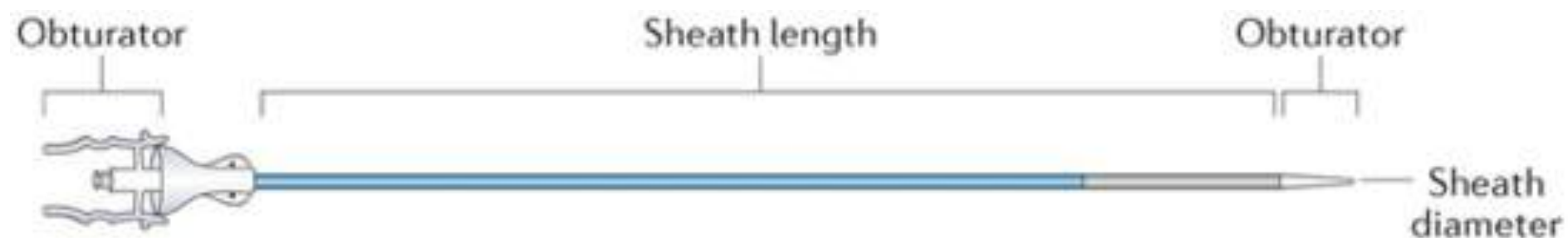
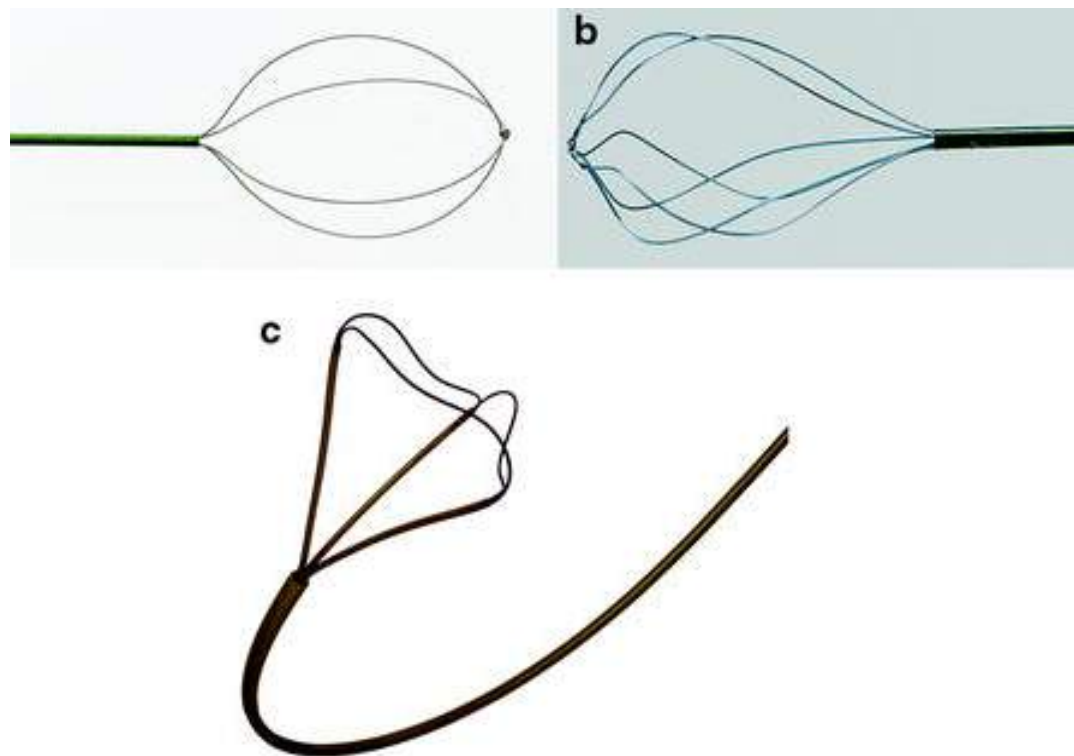
Fasszangen



Ureterschleuse



Dormia-Körbchen



Perkutane Nephrolitholapaxie (PCNL)

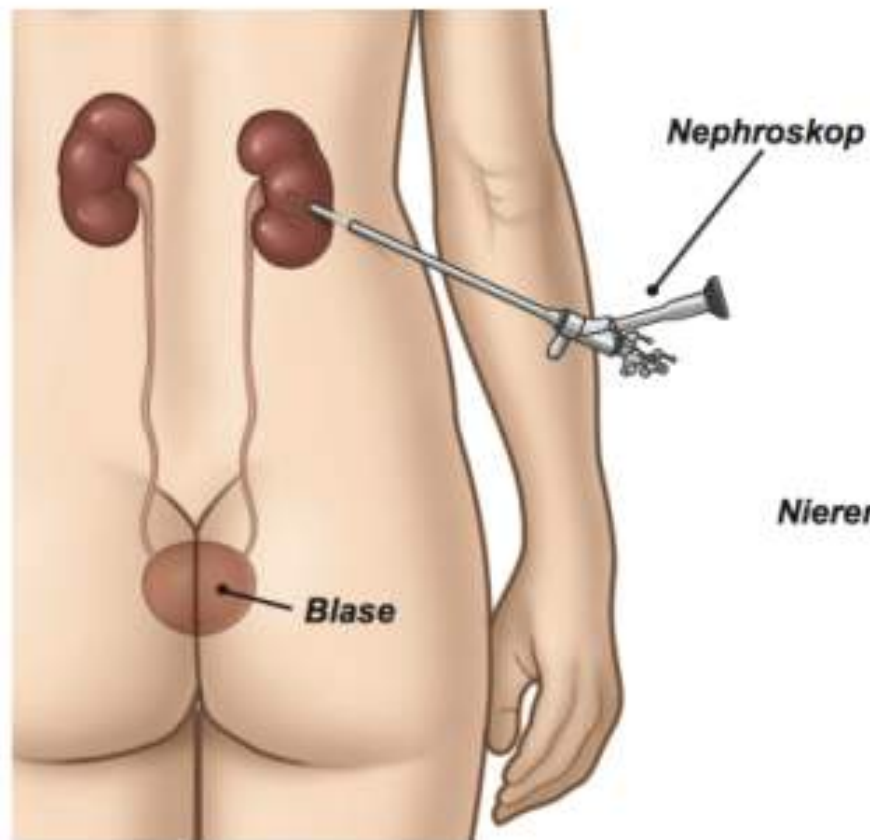


Abb. 8a: Ein Nephroskop wird verwendet, um Steine direkt aus der Niere zu entfernen.

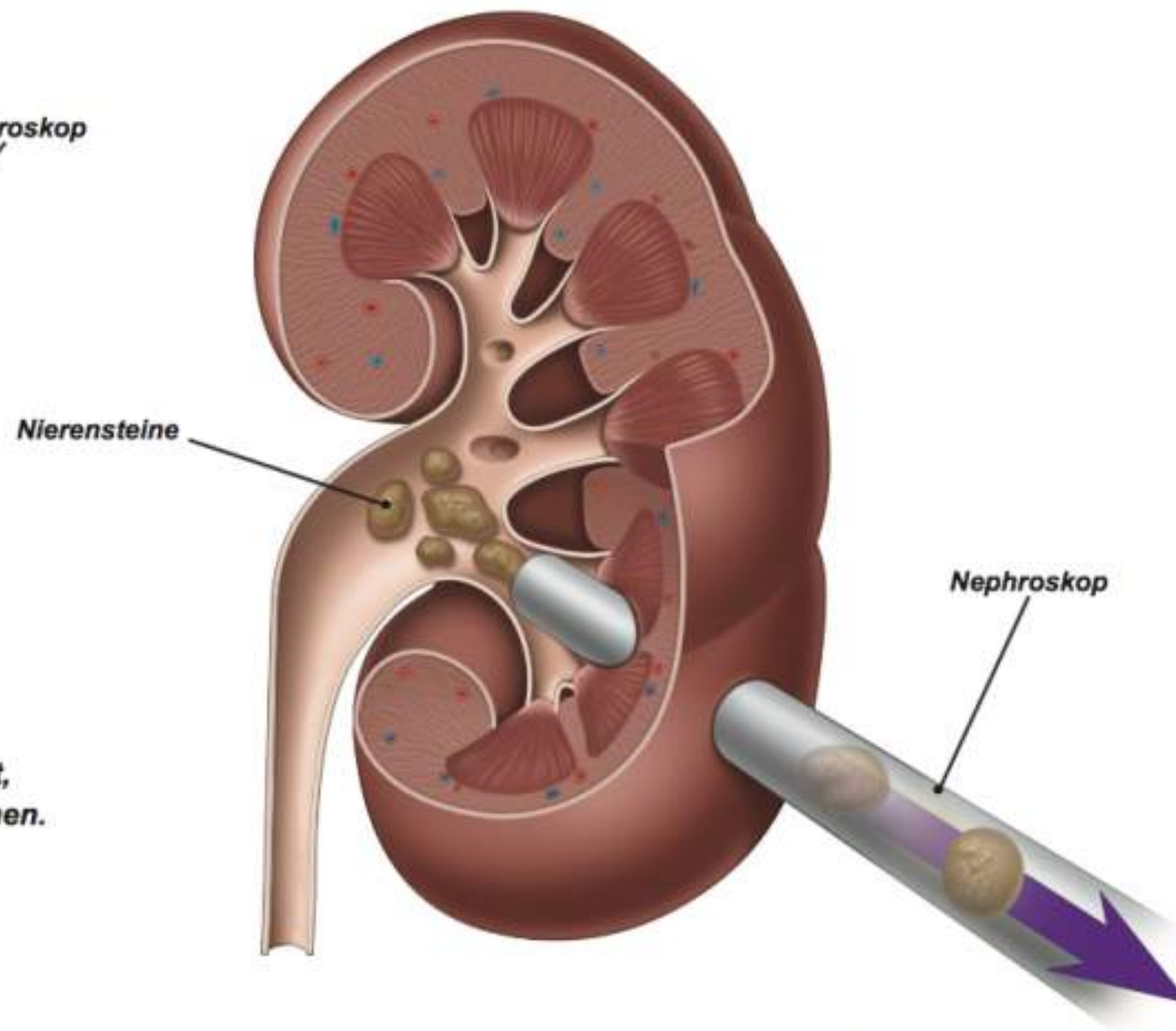


Abb. 8b: Steinfragmente werden in einem einzigen Eingriff mit einem Nephroskop entfernt.

Vielen Dank !



Exkursion Samstag 13. April 20199