

Miniaturised PCNL

“Because MiniPerc is slowly replacing
standard PCNL”

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TALENTS Symposium

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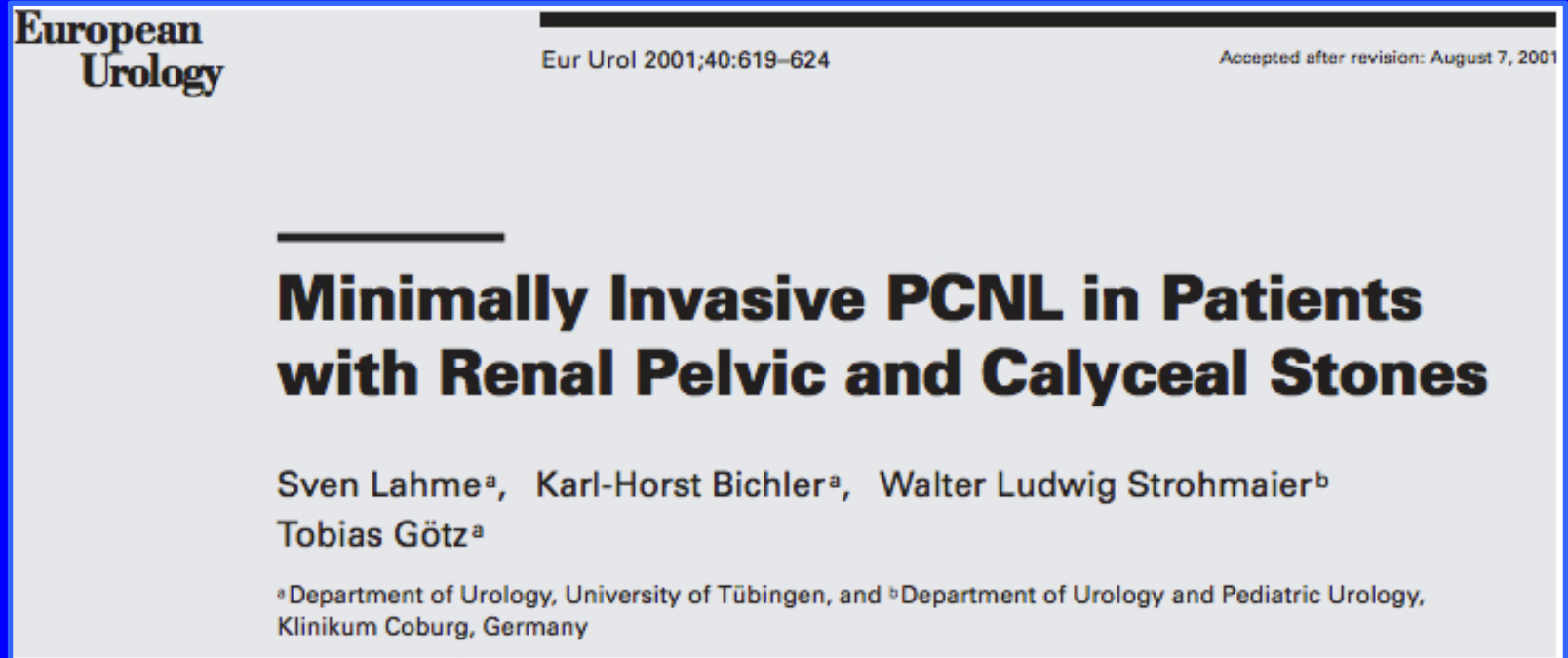


Trans-Atlantic Leaders in ENdourological TechnologES



Mini-PCNL (17y available)

Mini-PCNL



first instrument specially designed for Mini-PCNL,
17 years ago





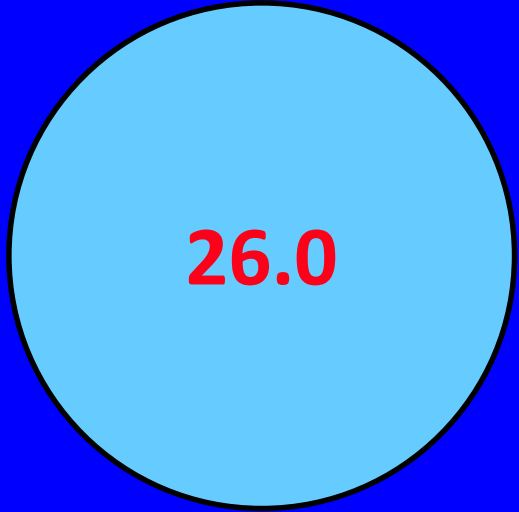
tract size and bleeding

tract size
Risk factor for blood loss after PNL!

Mini-PCNL

conventional PCNL

Mini-PCNL



100%

21.4%





Mini-PCNL



dilation

- “single step-dilation”
- no need for balloon or sequential dilators
- quick and simple
- easy under USS and/or fluoroscopy guidance
- no need to exceed 16F





Mini-PCNL



lithotripsy

- holmium laser lithotripsy recommended
- stone dusting required to benefit from vacuum cleaner effect
- high frequency decreases treatment time



70 W, 60 Hz



Mini-PCNL



stone removal

- vacuum cleaner effect
- stone removal automatically while stone dusting
- no forceps and baskets needed
- active suction has been shown to be feasible and effective (Super Mini PCNL, SMP)



transfusion rate

- shown to be reduced in key studies
- EAU guidelines Urolithiasis 2018 3.4.7
- “...Procedures performed with small instruments tended to be associated with significantly lower blood loss...”
- primary metric for surgical outcome data
- CROES data supports this¹
 - track size proportional to transfusion rate

Mini-PCNL

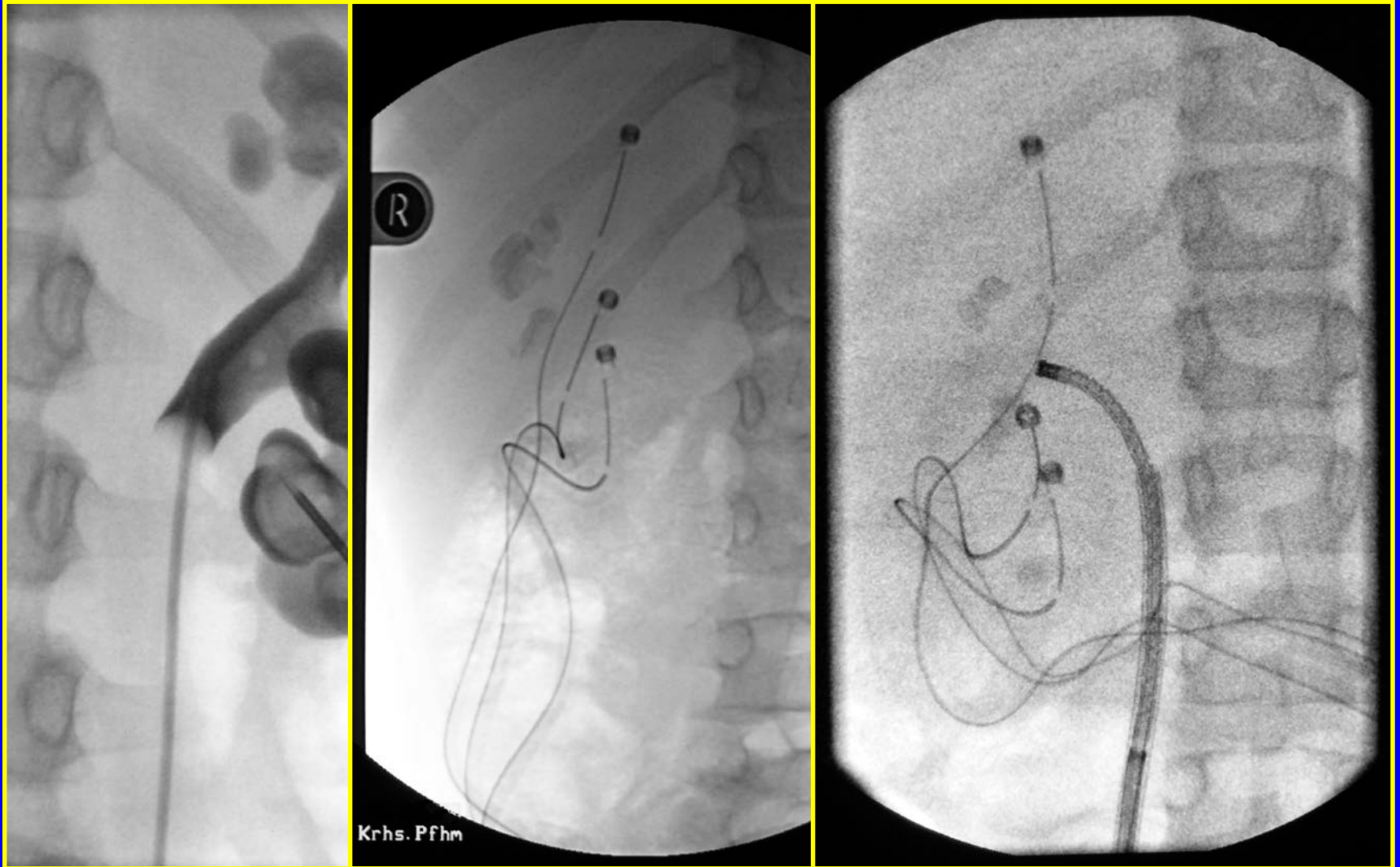


¹ World J Urol 2015 Feb; 33(2) :223-33

no limitations (multi-tract)

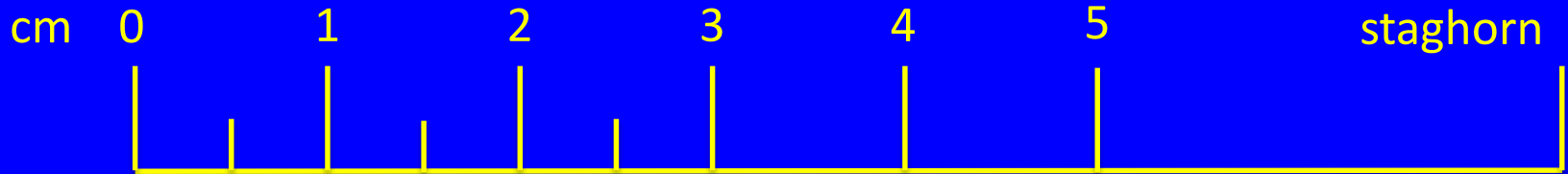


Mini-PCNL





no limitations (multi-tract)



Micro-
PCNL

Ultra-Mini-
PCNL

Mini-PCNL

Super-Mini-PCNL

conventional PCNL

Mini-PCNL





Mini-PCNL – conventional PCNL

Mini-PCNL



	Mini-PCNL	conventional PCNL
dilation	single-step	multiple-steps
diameter of sheath	15F	30F
lithotripsy	holmium laser	holmium laser ballistic lithotripsy ultrasound
stone removal	by irrigation	forceps basket
stonefree rate	+++	+++
nephrostomy	12F nephrostomy or tubeless	22F nephrostomy
transfusion rate	≈1%	10 - 15%



Mini-PCNL



conclusions

- miniaturised PCNL is used more and more
- miniaturisation means decreasing morbidity
- comparable stonefree rate
- no significant longer operative time
 - stone fragments are washed out by irrigation flow
 - no need for forceps or baskets
- success is depending on experience and knowledge of numerous surgical details

Mini-PCNL is replacing standard PCNL