W24: EUS Workshop #3: Endourological Masterclass for Stone disease (PCNL, FURS, ECIRS)

Workshop Chair: Yasser Farahat, United Arab Emirates
20 September 2025 09:00 - 10:30

Start	End	Topic	Speakers
09:00	09:10	Surgical Anatomy of the kidney in PCNL; Surgical perspectives	Amr Elsawy
09:10	09:20	PCNL puncture; Tips and Tricks	Essam Abdel Mohsen
09:20	09:30	Exit strategies after PCNL; Timing and strategies	Mohsen Elmekresh
09:30	09:50	FUTS; Technical guide from A to Z	Amr Elsawy
09:50	10:00	ECIRS: Indiciations and show how	Yasser Saeedi
10:00	10:30	Hands-on training	Yasser Farahat Amr Elsawy Essam Abdel Mohsen Mohsen Elmekresh Yasser Saeedi

Description

This comprehensive, 90 minute 'Endourological Masterclass for Stone disease (PCNL, FURS, ECIRS) 'masterclass is designed to enhance the foundational knowledge and practical skills of urologists in the management of urinary stone disease using contemporary minimally invasive techniques. With a focus on real-world application and skill development, the course integrates detailed anatomical understanding, procedural planning, and hands-on simulation training. It is particularly valuable for urologists at the early or intermediate stages of their endourological experience, as well as for those seeking structured exposure to PCNL, URS, and ECIRS approaches.

The workshop will begin with a detailed introduction to the fundamentals of renal access—a core competency in the effective management of complex renal stones. Faculty will guide participants through the selection and handling of access equipment, including puncture needles, guidewires, dilators, and sheaths. Emphasis will be placed on safety, precision, and the avoidance of complications. The session will include theoretical instruction alongside practical demonstrations, supported by 3D anatomical reconstructions and radiographic imaging to help attendees internalize the renal collecting system's spatial orientation.

Participants will develop a working 3D mental model of the renal anatomy, with a particular focus on how to identify and approach the correct calyx under fluoroscopic and ultrasound guidance. This understanding is critical for planning safe and effective access for PCNL and ECIRS procedures. The workshop will also introduce imaging techniques for confirming access, identifying anatomical variations, and troubleshooting during difficult cases.

The second segment will cover the step-by-step technical approaches to the three primary endourological procedures for stone disease:

PCNL (Percutaneous Nephrolithotomy): Indications, patient positioning, tract creation, and stone clearance techniques.

URS (Ureterorenoscopy): Ureteral navigation, stone basketing, use of flexible scopes, and laser fragmentation strategies.

ECIRS (Endoscopic Combined IntraRenal Surgery): Coordination of antegrade and retrograde approaches, instrumentation setup, and operative workflow.

Expert faculty will use real surgical videos, case studies, and open question and answer sessions to explain the nuances of decision-making in choosing between techniques based on stone size, location, and patient-specific factors.

The main highlight of the masterclass is the simulation-based training session, which allows participants to translate their newly acquired knowledge into hands-on practice. Using high-fidelity models and endourological training stations, attendees will practice scope navigation, renal access, stone fragmentation using laser or ultrasonic devices, and stone extraction techniques. Small group rotations will ensure every participant receives ample time and personalized instruction at each station. Faculty will provide real-time feedback on technique, ergonomics, and efficiency - a must attend!

The workshop's interactive format encourages continuous engagement with the faculty, allowing participants to ask questions, clarify challenges, and receive immediate, actionable feedback. This direct engagement fosters a collaborative learning environment and ensures participants leave with a confident understanding of the skills taught.

By the end of the masterclass, attendees will be equipped with both the theoretical framework and practical experience necessary to integrate PCNL, URS, and ECIRS safely and effectively into their clinical practice. The course will help improve

surgical outcomes, minimize complications, and promote the wider adoption of advanced endourological techniques for the treatment of stone disease.

Aims of Workshop

This masterclass builds core knowledge and practical skills in managing stone disease with minimally invasive endourological techniques. Participants will learn the basics of renal access, scope handling, and stone manipulation, while gaining a 3D understanding of renal anatomy for accurate calyceal access using fluoroscopy and ultrasound. The course covers key procedural steps for PCNL, URS, and ECIRS, and includes hands-on simulation training for scope control, stone fragmentation, and retrieval.

Educational Objectives

This workshop offers high educational value by combining theoretical knowledge with immersive hands-on training in endourological techniques for stone disease, ensuring relevance to clinical practice. Participants will benefit from expert-led sessions covering PCNL, URS, and ECIRS, followed by practical simulation modules that reinforce technical skills such as renal access, scope manipulation, and stone retrieval.

The format encourages direct engagement with the faculty through small-group instruction, live demonstrations, case discussions, and real-time feedback during simulation exercises. This interactive approach allows participants to clarify concepts, refine techniques, and build confidence.

By the end of the workshop, attendees will be equipped with practical skills and decision-making tools that can be immediately applied in the operating room, improving procedural outcomes and patient care.

Learning Objectives

1. Address the basics of renal access, scope, and stone manipulation
2. Get an all-encompassing orientation of the renal anatomy and develop a 3D understanding of how the calyx is approached using the initial puncture needle with the help of fluoroscopy and ultrasound.
3. Identify the how to do approach of different endourological procedures PCNL, URS and ECIRS. Practice scope manipulation, stone pulverization and pickup on simulators

Target Audience

Urology

Advanced/Basic

Intermediate

Suggested Learning before Workshop Attendance

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