

Start	End	Topic	Speakers
14:00	14:05	Introduction	Michel Wyndaele
14:05	14:15	Robotic surgery in urinary tract and pelvic floor reconstruction: step-by-step through increasingly complex procedures (including OR setup, patient positioning and trocar placement)	Eva Fong
14:15	14:25	Advantages and downsides / pitfalls of robot-assisted urinary tract and pelvic floor reconstruction	Jacqueline Zillioux
14:25	14:30	Questions	All
14:30	14:35	How to discover or develop your robotic potential	Michel Wyndaele
14:35	14:45	The first steps: Dedicated access to the robot, management support, creating a team and setting up the pathway	Giuseppe Campagna
14:45	14:55	The learning steps in becoming a robotic surgeon: from course/workshop to simulation, independent operation and credentialing (through mentors and proctors).	Benoit Peyronnet
14:55	15:15	Certification challenges and approach: Europe, Australia and New Zealand, USA	Benoit Peyronnet Eva Fong Jacqueline Zillioux Giuseppe Campagna
15:15	15:20	Key learning points from a global perspective in implementation and certification of a robotic surgery	Michel Wyndaele Benoit Peyronnet Eva Fong Jacqueline Zillioux Giuseppe Campagna
15:20	15:25	Questions	All
15:25	15:30	Future perspectives, take home messages and conclusions (including workshop evaluation)	Michel Wyndaele

Description

Background information

Urologists have been at the forefront of implementing and applying robotic systems for surgery, particularly for oncological indications (malignancies of prostate, bladder and kidney, and lymph node dissection), in which the robot-assisted approach has become the standard of care.

The adoption of minimal-invasive approaches for urinary tract and pelvic floor reconstruction is developing a lot slower. This is due to specific difficulties inherent to reconstructive surgery: low volume procedures (due to pharmacological and endoscopic treatment options), highly complex procedures (due to prior treatments such as surgery or radiation, or due to congenital anatomical variations) and alternative (and often more optimal) approaches (perineal / vaginal) for certain indications. The lack of high-volume index procedures and the lower priority of “benign” indications for operating room and robotic time poses challenges in learning and implementing a robotic programme to an existing urinary tract and pelvic floor reconstructive surgery service. The fact that certification of robotic surgery is through oncological procedures (RALP existing and robot-assisted radical cystectomy incoming) further complicates the implementation by “benign” reconstructive surgeons.

Nevertheless, the robotic approach can offer a lot of benefits for surgeons, trainees and patients in urinary tract and pelvic floor reconstruction specifically: improved access to narrow body cavities (such as the pelvis) or in obese patients, improved ergonomics for the surgeon during long procedures, 3D vision, near infrared imaging technology, shorter length of stay, less blood loss, smaller scars, ... More and more benign urinary tract and pelvic floor reconstructive procedures are being described and more frequently performed, in the upper urinary tract (pyeloplasty, ureteric stricture treatment, ureteric reimplantation), lower urinary tract (catheterisable channels, bladder augmentation, urinary diversions, bladder diverticulectomy, simple prostatectomy, bladder neck reconstruction, posterior urethroplasty), and pelvic floor (pelvic organ prolapse, male and female non-neurogenic and neurogenic stress urinary incontinence, genitourinary or rectourethral fistula and mesh erosion treatments). Furthermore, the reconstructive surgeon is challenged to aid in solving complications during or after prior minimal invasive urological or other abdominal surgery (e.g. vesico-urethral anastomosis stenosis, uretero-enteric anastomosis stenosis, bladder or ureter involvement during endometriosis surgery).

There is a large current and future potential for the application and development of robotic-assisted surgery in urinary tract and pelvic floor reconstructive surgery, but the pathway to learn and implement the robotic tool to the “benign” reconstructive expertise is unclear and difficult. In this workshop we aim to highlight the potential of robotic surgery in urinary tract and pelvic floor reconstruction, to indicate the pitfalls, and to provide tips, tricks and focus points to aid the implementation of robotic surgery into practice.

Key learning points

The workshop consists of two main parts, each with their specific key learning points and each with room for questions, peer-to-peer interaction and discussion.

The first part of the workshop provides an overview of the evidence and potential of robotic surgery in urinary tract and pelvic floor reconstruction, and the advantages, disadvantages and pitfalls of robot-assisted surgery in this setting.

Key learning points are:

- 1) Insight into the currently described and performed robotic upper and lower urinary tract, and pelvic floor reconstructive procedures. Video examples will illustrate the techniques and approaches used to optimize the learning experience.
- 2) Knowledge of the advantages, disadvantages and pitfalls of using the robot for urinary tract and pelvic floor reconstruction. Different aspects will be highlighted: the patient, the surgeon, the trainee, the OR team, but also the healthcare system (cost-benefit, sustainability). Specifically for reconstructive surgery the pitfalls can be the loss of open surgery expertise over the generations and the over-use of the robot in cases where an open approach (e.g. perineal or transvaginal) is more optimal. A key learning point is to identify what the robot can be used for, and as important, what it should not be used for. The robot is one of the tools of the reconstructive surgeon, a means to achieve the goal in the best possible way, rather than the goal itself.
- 3) Finally, a stepwise approach will be proposed, from novice / index cases to master / complex and less predictable procedures for robotic urinary tract and pelvic floor reconstruction

The second part of the workshop focuses on the challenges in acquiring robotic expertise and in implementation, credentialling / certification of the robotic approach to the urinary tract and pelvic floor reconstruction expertise. The aim is to aid the aspiring "benign" robotic-able reconstructive surgeon in this difficult trajectory, with tips and tricks, and insights from across the globe (Europe, Australia and New Zealand, and USA).

Key learning points are:

- 1) How to assess your robotic potential or lack thereof. This includes consideration of your own practice mix and likely volumes (to warrant the learning curve and identify your index procedure), your institutional support and your personal investment in learning the procedures and training your team.
- 2) How to access learning opportunities: courses, workshops (theoretical and practical cadaveric or animal models), simulation training, and observerships.
- 3) How to identify capable mentors (fellowships or short-term visits) and proctors (end of cycle and aid in certification by providing evidence of competency).
- 4) Insight in the credentialling and certification procedures, or lack thereof, from across the globe (Europe, Australia and New Zealand, and USA). What are the current possibilities and realities and what should we work towards and develop more?

At the end of the workshop a short overview will be presented of promising technologies in robotic surgery for urinary tract and pelvic floor reconstruction.

Take home messages

Robotic surgery has arrived in urinary tract and pelvic floor reconstruction and has a large potential for patient, surgeon, team and trainee, when used appropriately and by capable and trained experts. Implementing the robot is challenging but feasible, with multiple advantages within urinary tract and pelvic floor reconstruction.

Additional References

- A review on training models and credentialling of robotic-assisted urinary tract and pelvic floor reconstruction: Harley F, Fong E, Yao HH, Hashim H, O'Connell HE. What credentials are required for robotic-assisted surgery in reconstructive and functional urology? BJUI Compass. 2023 Apr 27;4(5):493-500. doi: 10.1002/bco2.238. PMID: 37636202; PMCID: PMC10447218
- A webinar on the future technological perspectives in robotic surgery: <https://uroweb.org/education-events/urowebinar-new-technologies-in-robotics>

Aims of Workshop

The workshop aims to guide the attendees through the present and future of robotic urinary tract and pelvic floor reconstruction, and through the challenges in implementing the robot into the non-oncological surgical toolbox.

Objectives:

To provide

- Knowledge of the robotic applications in urinary tract and pelvic floor reconstruction.
- Insight into the advantages, and downsides and pitfalls of the robot in urinary tract and pelvic floor reconstruction, for patient, surgeon, team and trainees.
- A practical step-by-step guide, including tips and tricks, to implement and certify a non-oncological robotic service.
- A taste of future perspectives in robotic urinary tract and pelvic floor reconstruction.

Educational Objectives

Robot-assisted surgery is widely used in uro-oncological surgery. A recent surge in applications in urinary tract and pelvic floor reconstruction has occurred. There are clear advantages: minimal invasive approach, improved access to narrow cavities (also in obese patients), enlarged 3D vision, endo-wrist technology, improved ergonomics (long procedures), fluorescence (reconstruction in irradiated environments), dual console (training)... The robot is becoming a worthwhile addition, but not a replacement, to the toolbox of the reconstructive surgeon. A means, but not a goal.

Implementing the robot to a urinary tract and pelvic floor reconstructive surgery service is challenging. There is no unified certification or training programme, nor are there common high-volume index procedures. Reconstructive surgery is heterogenous, low-volume and highly complex.

Nevertheless, the transferability of (oncological) robotic skills to reconstructive surgery is more difficult and less desirable than adding robotic skills to a reconstructive toolbox. We therefore strongly believe in the value of this workshop for urinary tract and pelvic floor reconstructive surgeons and will suggest a stepwise approach to acquiring robotic skills, from training models to execution of increasingly complex procedures.

The workshop will consist of structured mini-lectures from international faculty including videos and will encourage open discussion, both in terms of the current and future possibilities of the robot, as well as the challenges in credentialing, certification and implementation. We believe that a faculty from across the globe and from different healthcare systems can provide worthy and interactive peer-to-peer advice for all attendees aiming to set up a robotic reconstructive service.

Learning Objectives

1. The attendee has gained knowledge on the applications of the robot in urinary tract and pelvic floor reconstruction, and on a stepwise learning trajectory from novice to master through these procedures.
2. From lessons learned from around the globe (Europe, Australia & New Zealand, USA), the attendee has acquired insight into the strategies and important focus points to aid in implementing a robotic service into their urinary tract and pelvic floor reconstructive surgery practice.
3. The attendee knows the advantages and disadvantages of robotic urinary tract and pelvic floor reconstruction, for the surgeon, patient, team and trainees.

Target Audience

Urology, Urogynaecology and Female & Functional Urology

Advanced/Basic

Basic

Suggested Learning before Workshop Attendance

Overview of the applications and evidence of robotic-assisted surgery in functional reconstructive and neuro-urology:

1) Sun JY, Granieri MA, Zhao LC. Robotics and urologic reconstructive surgery. *Transl Androl Urol.* 2018 Aug;7(4):545-557. doi: 10.21037/tau.2018.03.06. PMID: 30211045; PMCID: PMC6127529.

2) Tsoi H, Elnasharty SF, Culha MG, De Cillis S, Guillot-Tantay C, Hervé F, Hüesch T, Raison N, Phé V, Osman NI. Current evidence of robotic-assisted surgery use in functional reconstructive and neuro-urology. *Ther Adv Urol.* 2023 Dec 1;15:17562872231213727. doi: 10.1177/17562872231213727. PMID: 38046941; PMCID: PMC10693211.