



## ROBOTIC UROLOGY TRAINING IN TURKEY: CURRENT PRACTICE AND SUGGESTIONS FOR FUTURE

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Robotic surgery is increasingly being performed in the management of urologic diseases including mostly uro-oncologic and benign conditions. Uro-oncologic procedures include robotic prostate cancer, robotic bladder cancer, robotic kidney cancer and robotic adrenalectomy procedures. Benign conditions where robotic surgery is applied include robotic pyeloplasty and other robotic pediatric urology procedures, robotic sacrocolpopexy procedures and robotic renal transplantation. Robotic surgery could be less frequently applied in the surgical management BPH and urinary tract stone diseases.

Currently, more than 35 surgical robots are present in Turkey and the number of robots increases every year. In Ankara as the capital of Turkey that has an estimated population of more than 5 million people, currently there are 8 surgical robots. Of those, 5 are in the government university and/or government training & research hospitals and the remaining are in the private hospitals. Our hospital is the first in Ankara where robotic surgery was started in February 2009. To date, more than 1500 robotic urologic procedures have been performed in our department. Our center is also the first to be the ERUS certified robotic urology training center in Turkey.

### HOW DID WE START ROBOTIC UROLOGY?

Before explaining how we started robotic urology at our department, it is important to mention that our department is a very well known referral department particularly in the field of uro-oncology in Turkey

having lots of patients. Therefore, we used to have many patients that we perform open surgery for uro-oncologic diseases. Another point that may be important is that our hospital is a government hospital where no private work is carried out. Therefore, we have been a high-volume center for uro-oncologic surgical procedures and diseases.

In February 2009, we had our surgical robot in our hospital. We invited a very well known name in the field of robotic prostate cancer surgery, Dr. Randy Fagin from USA who stayed for a week and proctored robotic prostate cancer surgery. The cases that we chose were straightforward cases. Thereafter, we proceeded with performing robotic prostate cancer surgery cases. After the initial surgeon performed more than 50 robotic prostate cancer surgery cases, the second surgeon started to perform while the initial surgeon supervised. In this way, a chain of surgeons was trained. After having sufficient experience in robotic prostate cancer surgery, we decided to perform robotic bladder cancer surgery that required certain robotic pelvic surgery experience. We invited two very well known names, Prof. Peter Wiklund and Dr. Abolfazl Hosseini from Sweden in order to proctor robotic bladder cancer surgery with intracorporeal urinary diversion. Thereafter, we started to perform these complicated procedures. Regarding robotic partial nephrectomy, robotic pyeloplasty and robotic adrenalectomy procedures, we did not require any proctoring because we were already performing these procedures by laparoscopy.

[www.robotictimes.org](http://www.robotictimes.org)



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## HOW IS THE ROBOTIC UROLOGY TRAINING AT OUR DEPARTMENT?

To date we have three generation of surgeons who were trained as robotic urologists in our department. The most senior ones have performed more than 400 procedures and they are able to supervise and proctor the new generation surgeons. Currently, we are performing 4-5 robotic prostate cancer surgery procedures per week, 1 robotic bladder cancer surgery per week and 1-2 robotic kidney cancer surgery procedures per month. Particularly in terms of robotic prostate cancer surgery one can observe around 100 robotic prostate cancer surgery cases in 6 months time. The training starts with observing and then proceeds with bedside assistance. During this period, training with the simulator of the surgical robot is encouraged. Thereafter, a stepwise hands-on training is performed as a console surgeon under direct supervision. At the end, one is able to perform a whole robotic prostate cancer surgery case by himself/herself with confidence and safety. Some of the colleagues who visited our department for training have surgical robots at their own hospitals. Following completing their training at our center and after returning back to their own centers, they booked robotic prostate cancer cases and we went to their center to supervise their initial cases, in this way they performed their initial cases in their own center with confidence and safety. I think that this type of training is an efficient and safe way of learning robotic prostate cancer surgery.

## HOW IS THE ROBOTIC UROLOGY TRAINING IN THE DEVELOPED COUNTRIES?

Fellowship based training between 1-3 years is a well-known, recognized and probably the best way of training particularly offered in USA. However, it is not easy for everyone to enter a formal fellowship program in USA as one needs to pass many exams in order to start training. Similar fellowship programs are available in other leading countries. During the training period, the trainee is actively involved in every part of the program and at the end he/she performs sufficient number of robotic surgical cases and receives a certificate stating that he/she is a fellowship trained colleague.

## SUGGESTIONS FOR ROBOTIC UROLOGY TRAINING IN TURKEY

- \* Centralized training rather than individual training might be more efficient and safe. \*It might be more cost-effective and efficient if high-volume government hospital centers such as our center offers robotic surgery training.
- \* A logical plan should be made in order to decide how many colleagues will be trained in every year and how many visitors will be accepted who will be trained from other departments.
- \* It might be better if training is offered to those who will work at a hospital with a surgical robot and with sufficient number of patients for robotic surgery.
- \* Outcomes of the robotic surgical cases that were performed should be assessed regularly by an expert committee in order to evaluate the quality and safety.
- \* Particularly for the government hospitals including university and training & research hospitals, it might be logical if a plan is made in order to recruit new surgical robots that is expected to be more cost-effective and for more efficient usage.