Good morning, everyone!

Today, Dr. Alon Weizer drops by to give us an update on some of the robotic surgery breakthroughs and progress being accomplished here in our department. I'd like to thank Dr. Weizer for taking the time to contribute during this busy season, and I know you'll all enjoy his update! So, without further ado, here's Dr. Alon Weizer.

-Eric Anderson

Dr. Alon Weizer
One of my greatest joys as a surgeon is in innovation and, in particular, being able to "replicate" what could potentially be a morbid open surgery and convert it into a minimally invasive surgery. In 2007, I remember Jim Montie passing me in the hall of the Department and casually mentioning that someone here needs to be performing robotic assisted partial nephrectomies. At that time, Stuart Wolf had trained me and others in the Department to do laparoscopic partial nephrectomies and we were mainly performing robotic prostatectomies. Together with the help of Jeff Montgomery, Khaled Hafez, and David Miller we embarked on the journey to learn how to do robotic partial nephrectomies and to do them well. There were a handful of articles, no textbooks and really no courses and a lot of how we do this operation and especially the retroperitoneal approach is home grown. We took a similar approach to robotic-assisted retroperitoneal lymph node dissection (RPLND) always keeping in mind patient safety, maintaining oncological principles and improving outcomes for patients.
Just like partial nephrectomy, I would not have guessed what we would be able to manage robotically when we first started. This past week, I performed two post-chemotherapy RPLNDs that created challenges both based on the patient’s body habitus and disease. I definitely put a few gray hairs on my head this past week peeling disease off of the vena cava.

Testis cancer is a rare disease with approximately 8,850 patients diagnosed in 2017. As you can see from the graph, the incidence of testis cancer is rising slowly but mortality has remained very low since the introduction of cisplatin based chemotherapy.

Most patients do not require an RPLND and this surgery is typically reserved for patients with either normal tumor markers and high risk disease without lymphadenopathy for stage I of IIa non-seminomatous germ cell tumors (NSGCT) or for residual mass after chemotherapy with normalized markers for NSGCT.

Our approach to this operation has evolved over time. When I first learned how to do a laparoscopic RPLND, we did this in the lateral position with our ports down the middle and tilted the table to get access to either side of the retroperitoneum. We initially used this same approach in 2012 when we did the first robotic RPLND here but I was at an AUA annual meeting and met one of the former lap/endo fellows from Duke who was currently on staff at the Naval Hospital in San Diego and he sent me a copy of his video. Instead of tackling one side at a time, they positioned the robot over the head and placed the patient in lithotomy and trendelenberg allowing the bowels to fall into the upper abdomen. He then mobilized the right colon and small bowel mesentery similar to the open surgery and developed peritoneal flaps which he tacked up to the anterior abdominal wall creating a “hammock” to keep the bowels out of the way (the third arm of the robot lifts up on the duodenum preventing the small bowel from slipping down the middle). Below is a picture of the port placement, the robot docked into position, and a view of the ports which are placed below the umbilicus in order to allow access to the common iliac lymph nodes.
If you’re interested in seeing and learning more, we published a multicenter article a few years back that includes a really nice video. The article is attached. To date, we have performed 40 robotic assisted retroperitoneal lymph nodes with a dramatic increase in the number per year over the last two years. I won’t bore you with the details but the ability to perform this surgery safely and achieve a similar oncologic outcome to the open approach in an appropriately selected patient is good. I do believe we are making progress with functional outcomes, particularly ejaculatory function, and many of these patients go home the next day and return to work in 2-3 weeks. I also believe that this robotic approach can be useful for other urologic conditions and Sapan Ambani and I performed a robotic-assisted bilateral ureterolysis using the same approach.
Thanks for letting me share a little about what I do and I want to thank all of my colleagues in the Department for a culture of collaboration that allows us to innovate in the interest of patient care.

Alon