Advanced Detection of Bladder Cancer

A Win-Win

othing can quell 93-year-old Flo Marci's sense of adventure. She loves to travel and each year plans a road trip with her niece and nephew. "I love life," says Flo. "Every day is a new chapter." This year was to be no different. Flo was planning to fly out to Montana in August.



She would meet her niece and nephew at their home, and then drive crosscountry in their RV to visit her son in California. However, a health crisis threatened her travel plans. Flo was diagnosed with non-muscle invasive bladder cancer, a type of cancer that can return quickly and spread easily if not monitored properly. Bladder cancer is the sixth most commonly diagnosed cancer in the United States. The American Cancer Society estimates that 81,190 new cases of bladder cancer are diagnosed in the United States each year and up to 50% of patients will have their bladder cancer recur – that's the highest recurrence rate of any form of cancer.

Late last year, Flo discovered blood in her urine and was referred to Urologist Jeffrey Steinberg, MD, at Urology Specialists of Milford, LLC. An ultrasound and X-ray revealed she had a mass on the surface of her bladder. In December, Dr. Steinberg used a cystoscope, which is a thin, tube-like instrument that is equipped with a white light and video camera, to perform a traditional cystoscopy on Flo at Milford Regional. By inserting the cystoscope through the urethra and into the bladder, Dr. Steinberg was able to biopsy and remove the 6-centimeter cancerous mass.

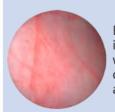
To ensure the cancer was not returning, Flo visited Dr. Steinberg's office every few months to have a cystoscopy to view her bladder. At the first follow-up appointment, Dr. Steinberg noticed a red area near the site of the original mass. He noted that the area was not a noticeable tumor – it could have been anything from an irritation or infection to cancer – but further monitoring was required. At Flo's next follow-up appointment in May, Dr. Steinberg conducted another cystoscopy and discovered that the red area had spread.

Flo's annual trip was fast approaching, and Dr. Steinberg couldn't risk waiting until she returned from her journey to find that the area he was monitoring was a rapid recurrence of her cancer. Having always been at the forefront of using the latest technologies to treat urologic conditions at Milford Regional,

he suggested Flo undergo blue light cystoscopy with Cysview. Milford Regional is one of the first hospitals in the region to have this advanced method of detecting bladder cancer.

The procedure is done in the operating room at Milford Regional. With the new blue light cystoscopy, Cysview – the imaging dye – is absorbed into the bladder through a catheter. While the patient is under general anesthesia, the urologist inserts the cystoscope to view the bladder. Once the initial viewing is completed with the white light, the urologist then switches on the blue light. The blue light causes a reaction between the dye and cancer cells that turns them bright, fluorescent pink. This immediate identification of cancer and its specific locations allows the surgeon to effectively target and remove the cancerous tissues present. "The blue light is helpful in lighting up those invisible but affected areas," explains Dr. Steinberg. "This helps us do a more complete job of detecting and removing superficial bladder tumors. By being able to detect bladder cancer early, it prevents it from rapidly recurring."

Previously, a cystoscopy using just the white light only showed what was obviously visible to the naked eye, potentially leaving some other areas of cancerous tissue undetected. Using the blue light, Dr. Steinberg was able to see that along with the area he was monitoring in Flo, there was another spot that was also cancerous. He was able to remove both at once. "If I hadn't used the blue light, those areas would not have been detected. We don't want to miss anything that might develop into a more significant health issue. That's the advantage of the blue light cystoscopy – being able to prevent a rapid recurrence," says Dr. Steinberg. He added that by finding these tumors which might otherwise be hidden, it saves the patient from making more frequent trips to the doctor and to the operating room.



Bladder image using white light cystoscopy alone.



Same image after using blue light cystoscopy with imaging dye. The dye is absorbed by cancer cells in the bladder making them glow bright pink under blue light.

Flo was the perfect patient for this procedure – being relatively healthy and having such an active lifestyle, the blue light cystoscopy allows her to make less frequent visits to the doctor and has little impact on her extensive travel plans. "For Flo, we wanted this condition to be considered more of a 'nuisance' rather than a threat to her life," he says. "As long as we are able to detect it early and address it, it won't be a threat to her health."

Most patients can go home the same day and return to their normal daily activities the next day, but the procedure required Flo to stay in the hospital overnight due to her particular circumstances. During her two-week recuperation, she was told not to do any heavy lifting.

In keeping with her sense of adventure, Flo was not at all worried about being Dr. Steinberg's first patient to have blue light cystoscopy as she was comfortable with him and in awe of the technology. "Dr. Steinberg is so good. He explains everything. I just love him," says Flo. "I felt so good about this. We figured out the little cysts were causing this and they had to come out. When Dr. Steinberg shows this technology to you and explains it to you, it is so easy to understand. I had faith in him."

"The technology in this piece of equipment is amazing," adds Flo. "It is a win-win. It's a win for Dr. Steinberg because he is able to see and remove what he needs to, and it is a win for the patient because they can understand everything that is happening. At the end of the day, the two most important people are happy – the doctor and the patient."

To schedule an appointment with Jeffrey Steinberg, MD, in his Milford office, call (508) 473-6333. ■

Breakthroughs in Urology Jeffrey Steinberg, MD

Urologist Jeffrey Steinberg, MD, has been on the leading edge of urologic breakthroughs that have advanced diagnostic capabilities and improved patient outcomes. In 2018, he introduced prostate fusion biopsy at Milford Regional, which painlessly and more accurately detects cancer that may have previously gone undetected or hidden.

The patient story presented here demonstrates Dr. Steinberg's continued efforts to provide the

very latest in urologic care with the introduction of blue light cystoscopy, another groundbreaking technology that significantly increases the detection of bladder cancer.

In both cases, Milford Regional is the first hospital in the area to offer these new, revolutionary technologies designed to improve the detection of urologic cancers.

How has prostate fusion biopsy improved the lives of your patients?

MRI/US Fusion Biopsy is performed as a painless 20-minute outpatient procedure using IV sedation, rather than the previous painful, less accurate ultrasound-guided method typically performed in the office. This allows me to find cancers that may have previously been missed using conventional biopsy methods.

What impact do you see blue light cystoscopy having on your patients?

Blue light cystoscopy will have a tremendous impact on reducing the number of procedures required for bladder cancer patients. Over time, small abnormalities in the bladder lining can turn into aggressive cancers if not removed in the early stages. Blue light cystoscopy helps the urologist from missing these early tumors and ultimately reduces recurrence rates.

What other leading-edge procedures and/or technologies do you offer your patients?

Previously, if a patient had an elevated PSA, he would usually be subjected to a painful prostate biopsy in the office. In my practice, I offer advanced prostate cancer detection tests such as the 4-K Score blood test and ExoDx Prostate (Intelliscore) urine test to help decide which patients are truly at high risk for aggressive prostate cancers. These non-invasive tests are then factored into determining which men should ultimately undergo an MRI and a possible prostate fusion biopsy.

Do you see any other breakthroughs on the horizon in diagnosing and treating urologic conditions?

One of the greatest areas of growth in urology is the use of genetic testing to determine the aggressiveness of urological cancers. Prostate cancer has a wide range of treatment options including active surveillance for non-aggressive tumors. I will frequently order genetic tests on the prostate tissue obtained at biopsy to provide further reassurance that active surveillance may be an appropriate option.

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