



Multidisciplinary Tumor Board

Tumor boards allow a number of doctors who are experts in different specialties to review and discuss the medical condition, treatment options, and individual needs of all new patients. Participants may include: medical, surgical, and radiation oncologists, pharmacists; radiologists; supportive care services such as social workers; nutritionists; or genetic counselors.

Patient cases presented at a tumor board may be reviewed for many reasons, including:

- Treatment recommendations
- Difficult management issues
- Discussion of National Comprehensive Cancer Network (NCCN) treatment guidelines
- Cases of cancer occurring in unusual sites or with unusual presentations
- Clinical trial opportunities
- Other disease(s) affecting patient management

At The University of Arizona Cancer Center at St. Joseph's, several disease-site tumor boards are held, including: breast, gastroenterology, genitourinary, gynecological, hepatobiliary, head and neck, and lung cancers.

CANCER CENTER TUMOR BOARD CASE VOLUME 2016

SITE	CASES**
Abdominal*	199
Breast	50
Head and Neck	30
Hepatobiliary/Pancreatic	45
Gynecologic	351
Thoracic	384

*Abdominal includes genitourinary and gastrointestinal cases
 **Number of cases is a combination of patients treated at the Cancer Center and St. Joseph's Hospital and Medical Center.



“TODAY WE GOT THE NEWS THAT THE LUNG TUMOR VISIBLY SHRANK AFTER TREATMENT! THANK YOU DOCTORS, NURSES, AND SCIENTISTS!!!”

Cancer Center Patient



Beating Cancer with a Collaborative Team of Surgeons and the Extraordinary Will to Live

After losing weight and undergoing traditional chemotherapy and radiation treatment, physicians at The University of Arizona Cancer Center at St. Joseph's told Roxanne Camp that her stage 3 cervical cancer required a rare and high-risk procedure, called pelvic exenteration. Roxanne's procedure would involve the removal of the organs in her pelvic cavity, including the colon, rectum, bladder, ovaries, uterus, cervix, and vagina. The procedure would leave her with a 33 percent chance of survival.

Even though this radical surgery would lead her to life with permanent urostomy and colostomy bags, external pouches that collect fecal matter and urine, Roxanne was determined to remain in life with her three beautiful daughters.

The complex procedure required a team of specialists working side by side—collaboration that is the hallmark of The University of Arizona Cancer Center at St. Joseph's. Colorectal surgeon Ronald Gagliano,

MD, FACS, FACRS, and urologist Ali Borhan, MD, worked alongside two gynecologic oncologists to perform Roxanne's 10-hour surgery which was followed by a two-week stay at St. Joseph's.

"Every patient and every cancer is unique," says Dr. Gagliano. "We take everything into consideration, from cultural background to family dynamics, to meet the patient where they are and to support the patient the best we can."

The support Camp received at the Cancer Center helped her overcome the many challenges she has experienced since her radical surgery. After her procedure, Roxanne was told she would not be able to work because of her ostomies, however, AT Still University heard of her advocacy in the community. She now works on a part-time basis teaching fledgling physicians about the daily life of an ostomy patient. Roxanne believes that anyone with an ostomy can overcome their difficulties and live a full life.

Living with Permanent Ostomy

Pelvic exenteration, the radical procedure used to remove Roxanne Camp's cancer, left her with permanent urostomy and colostomy bags, external pouches that collect fecal matter and urine due to the removal of organs that the body normally uses to eliminate waste.

Many people with ostomy bags tell no one as though it were a dark secret. Roxanne will have none of that.

"A lot of people will call me and I will visit them at the hospital if they've recently had an ostomy," says Roxanne. "I try to encourage people not to be embarrassed. The more you talk about it, the more you can accept it. If you don't talk about it, you'll just be really lonely."

With her gentle smile and her clear voice, Roxanne now works with the United Ostomy Associations of America (UOAA), an association of affiliated, non-profit, support groups dedicated to improving quality of life for people who have ostomies.

"This is a life-changing experience, but it's only what you make of it and that's why I'm trying to help people with ostomies," says Roxanne.

“I had the best team supporting me. They were honest; they didn’t hold anything back. But, at the same time, they treated me like a person – not just another patient. They saved my life.”



Treating Prostate Cancer: A Closer Look at High-Dose-Rate (HDR) Brachytherapy

Current standard of care treatment options for prostate cancer can include surgery (radical prostatectomy), external radiation, and brachytherapy (internal radiation). Brachytherapy, which can be used to treat many different types of cancer, is divided into low-dose-rate (LDR) and high-dose-rate (HDR) brachytherapy. LDR brachytherapy typically consists of permanent, radioactive seeds that are implanted into the tumor and deliver a “low dose” of radiation over days to months. HDR brachytherapy involves the temporary insertion of small tubes or catheters into the tumor and the subsequent delivery of a “high dose” radiation over minutes.

With HDR prostate brachytherapy, small plastic tubes or catheters are inserted with ultrasound guidance into the prostate. A planning CT scan is then performed after which a radiation treatment plan is developed based on the positioning of the catheters with a goal of increasing the dose to the prostate cancer while minimizing dose to the surrounding healthy tissues. These catheters are then connected to a robotic device that allows radiation to be delivered directly into the target area. The actual treatment takes approximately 20 minutes; afterward, the catheters are removed leaving the patient

with nothing inside and no radioactivity. After a brief recovery period, the patient can be safely discharged the same day.

PRECISION MEDICINE

The presumed benefit with HDR brachytherapy over LDR brachytherapy lies in the radiation oncologist knowing exactly how much dose is going to the prostate, the bladder, the rectum, and the urethra before it is delivered. This knowledge in turn allows for catheter repositioning and treatment plan changes prior to actually delivering radiation in order to ensure optimal treatment.

The rationale behind using brachytherapy is predominantly based on a few principles. Randomized studies have shown that prostate cancer responds to radiation dose – the higher the dose, the greater the opportunity to control the cancer. In addition, by radiating from “inside out,” the dose to surrounding tissues can be minimized in comparison to external or “outside in” radiation which involves external beams of radiation penetrating normal tissue before reaching their target. Also, radiobiologic studies of prostate cancer suggest that it may respond better to larger, less frequent doses of radiation in comparison to smaller, more frequent doses of radiation.



*FlexitronR Brachytherapy
Afterloading Platform*

According to the National Cancer Institute, precision medicine is defined as a form of medicine that uses information about a person’s genes, proteins, and environment to prevent, diagnose, and treat disease. In Cancer, precision medicine uses specific information about a person’s tumor to help diagnose, plan treatment, find out how well treatment is working, or make a prognosis.

HDR brachytherapy is an excellent treatment option as monotherapy (without external beam radiation) for early stage prostate cancers. HDR brachytherapy monotherapy typically involves performing two procedures spaced one to two weeks apart. This type of therapy leads to prostate cancer cure rates above 95 percent at 10 years.



By radiating from “inside out” using HDR, the dose to surrounding tissues can be minimized in comparison to external or “outside in” radiation that involves external beams of radiation penetrating normal tissue before reaching their target.

For more advanced cases of prostate cancer, HDR brachytherapy is used in combination with external beam radiation. In this scenario, one HDR procedure is performed before or after five weeks of daily external radiation. This is in contrast to the conventionally utilized nine-week daily radiation course. The addition of brachytherapy to external beam radiation significantly improves prostate cancer control rates in later stage prostate cancer when compared to external radiation alone. The short-term toxicities of this treatment are well-tolerated and long-term side effects occur in less than 5 percent of patients. Additionally, the precision of HDR brachytherapy allows it to be used in the treatment of recurrent prostate cancers that have come back after initial treatment with surgery or radiation.

HDR brachytherapy represents a safe and sophisticated treatment for prostate cancer with a long track record of success. The University of Arizona Cancer Center at St. Joseph’s is proud to offer this treatment option to its patients.