

2009-2011

Prostate Cancer Treatment Report



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Salina Regional Health Center

Comprehensive
Cancer Care
Close to Home

A publication reviewing Cancer Program Activities and Data

Prostate Cancer Treatment at SRHC (2009-2011)

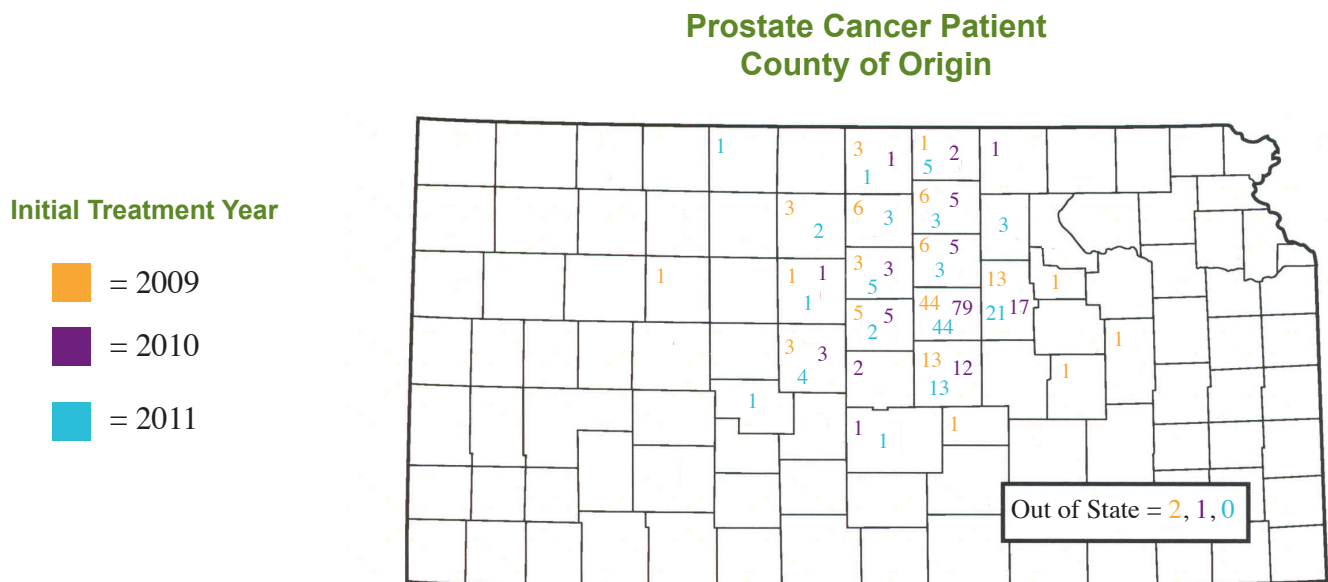
Background

The prostate is a walnut-sized gland that is part of the male reproductive system. It contributes to the production of seminal fluid and is located in front of the rectum and under the bladder. When the prostate becomes enlarged, it can squeeze the urethra, limiting the normal flow of urine.

Prostate cancer is one of the most common types of cancer in men and it develops in the tissues of the prostate. It occurs when new cells are formed abnormally or old and damaged cells fail to die as they should. These abnormal cells form a mass called a tumor. Prostate cancer is generally slow-growing. However, in some cases it may be aggressive and can invade nearby tissues or spread to other parts of the body. Prostate cancer can spread when cancer cells travel from the prostate through blood vessels, nerves, or lymph system to other tissues in the body.

Prostate cancer generally does not cause symptoms until it has spread. However, some men with prostate cancer experience frequent urination, increased urination at night, difficulty urinating, blood in the urine and painful urination. Men with advanced prostate cancer may suffer from bone pain.

Salina Regional Health Center treats many men from north central Kansas with prostate cancer each year. The graph below shows the distribution of prostate cancer patients at SRHC by their county of residence.

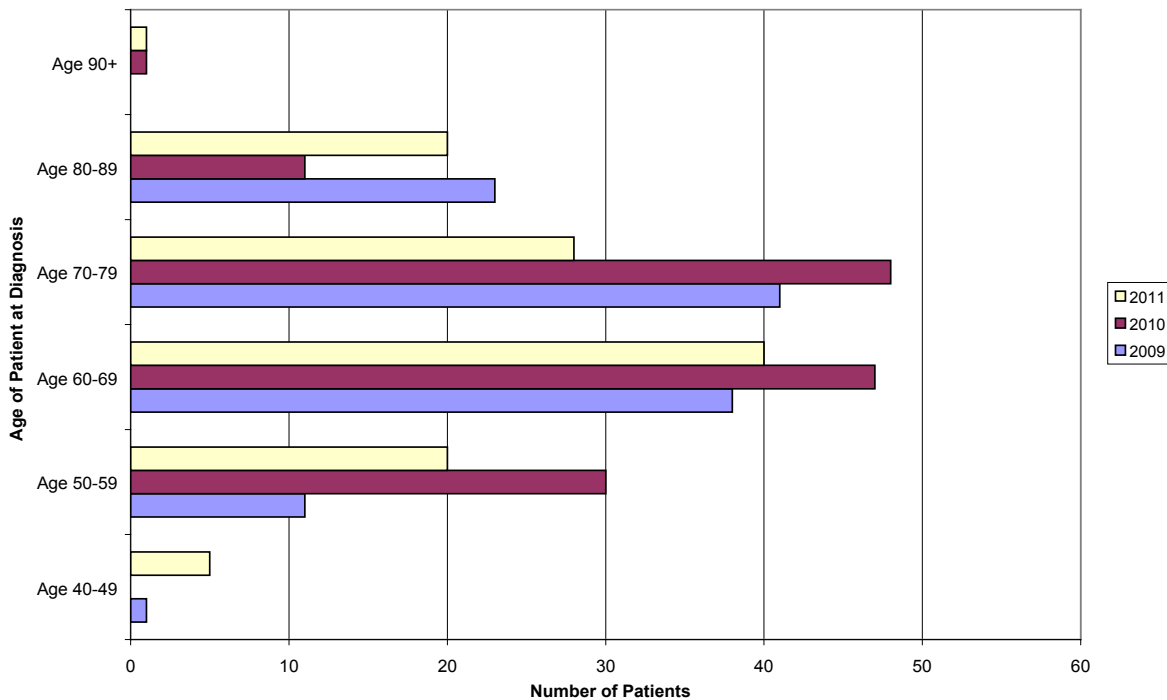


Prostate Cancer *continued*

Age

The risk of prostate cancer increases with age and it is most common in men over the age of 65. The graph below shows the ages of patients treated at SRHC.

Prostate Cancer Patients Treated at SRHC by Age



Prostate cancer patients treated at Salina Regional Health Center in 2009 ranged in age from 50 to 89 years old. This age range was narrower than was seen nationally in 2009. The table below shows SRHC prostate cancer patients by age and prostate cancer patients by age nationally.

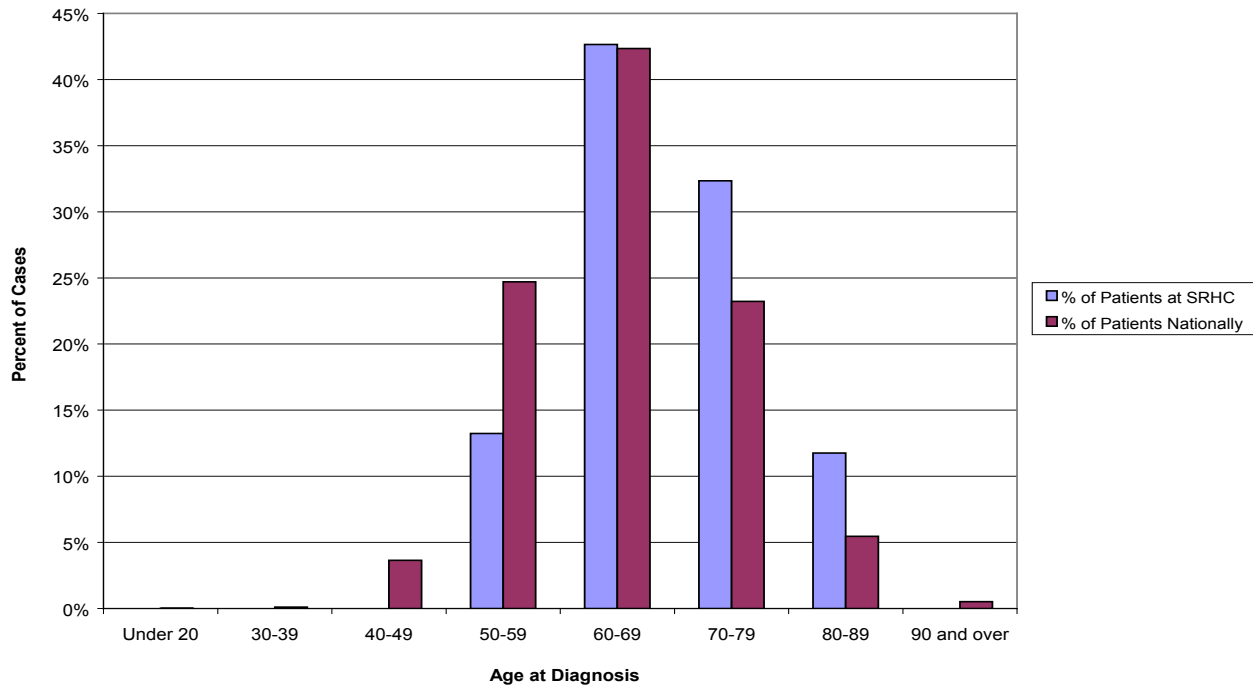
Prostate Cancer Cases by Age at Diagnosis

Age	Number of Patients at SRHC	Number of Patients Nationally
Under 20	0	7
30-39	0	129
40-49	0	4938
50-59	9	33498
60-69	29	57431
70-79	22	31480
80-89	8	7405
90 and over	0	707

Prostate Cancer *continued*

In 2009, the patients treated for prostate cancer at SRHC were slightly older than the national average. The graph below shows the percentage of prostate cancer patients in each age bracket for SRHC and nationally.

2009 Prostate Cancer Cases by Age at SRHC and Nationally



Stages

Prostate cancer is categorized into stages, which describe the extent of the disease in the patient. In addition to the location and size of the tumor, two other metrics called a Gleason score and a Prostate-specific antigen (PSA) test are used to help stage prostate cancer. A Gleason score is assigned by a pathologist based on the appearance and pattern of the tumor cells under a microscope. The PSA test measures for the aggressiveness of the cells microscopically. It is often elevated in patients with prostate cancer.

Stage I

Early-stage cancer that is located only in the prostate. It has a Gleason score of 6 or less and the PSA level is less than 10. The tumor may be too small to detect during a digital rectal exam (DRE).

Stage II

More advanced than Stage I and considered more aggressive, but the tumor still does not extend beyond the prostate. Stage II has a higher Gleason Score or a higher PSA. Stage II prostate cancer may be diagnosed as Stage IIA or IIB with IIB being more aggressive and organ confined with a higher grade.

Stage III

The tumor extends beyond the prostate in Stage III prostate cancer. It may have invaded the seminal vesicle or other nearby tissues. However, it has not yet spread to any structure outside the pelvis including lymph nodes or bones.

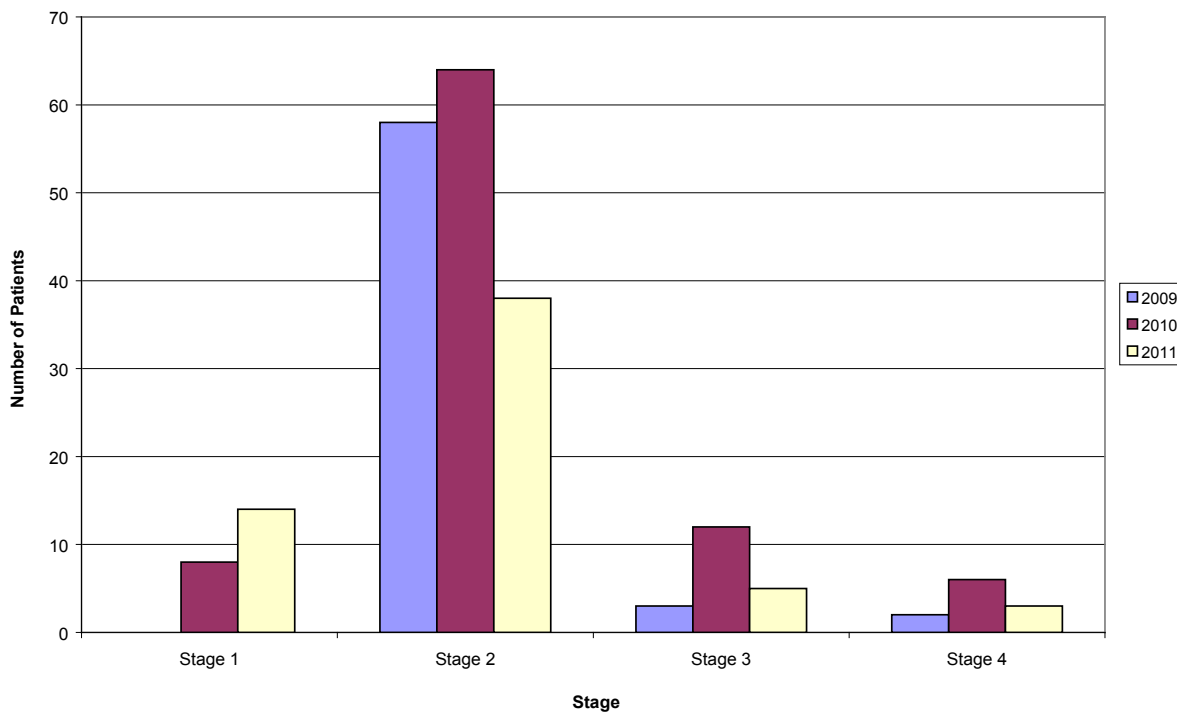
Prostate Cancer *continued*

Stage IV

This is the most advanced stage of prostate cancer. The tumor has spread and it could have invaded nearby organs like the bladder or rectum. It also may have spread to the lymph nodes and more distant parts of the body like the bones.

Salina Regional Health Center treats men with all stages of prostate cancer. The graph below shows the stages of prostate cancer seen at SRHC from 2009-2011.

Prostate Cancer Cases at SRHC by Stage



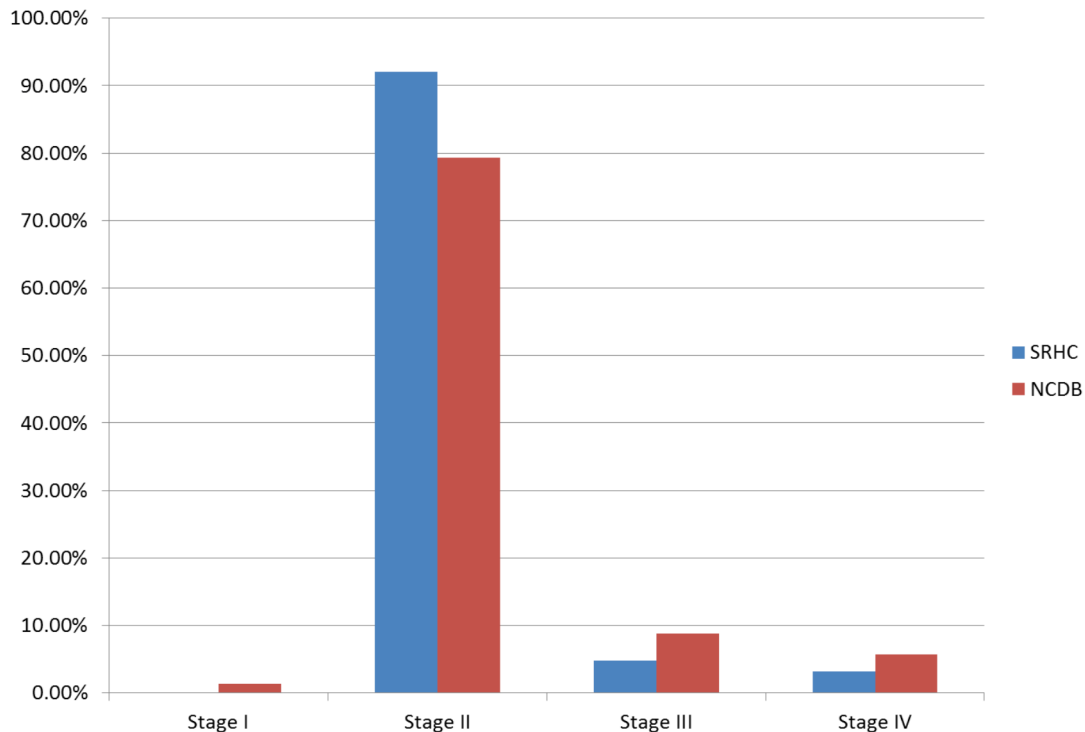
The patients treated for prostate cancer at SRHC were overwhelmingly diagnosed at Stage II of the disease. This trend is also seen nationally; 79% of patients diagnosed with prostate cancer in 2009 in the U.S. were Stage II. The chart below shows the number of patients diagnosed at each stage of disease in 2009 and the graph compares the percentage of patients at SRHC and nationally diagnosed at each stage.

Prostate Cancer Cases by Stage at Diagnosis

Stage	Number of Patients at SRHC	Number of Patients Nationally
Stage I	0	1902
Stage II	58	107529
Stage III	3	11944
Stage IV	2	7725

Prostate Cancer *continued*

2009 Prostate Cancer Cases by Stage at SRHC & Nationally



Treatment Choices

There are several different treatment options available for prostate cancer. The appropriate treatment plan depends on the stage of the cancer, the patient's age, condition of the individual patient and the patient's choice.

Active Surveillance

In some cases of early-stage prostate cancer where the tumor seems to be slow-growing, the appropriate treatment may be active surveillance. With this option, the prostate cancer will be checked regularly by the doctor with tests like digital rectal exams and PSA tests to see if the tumor is changing.

Surgery

Another treatment option that may be appropriate for some men with prostate cancer is surgery. It is most common for men with cancer that has not spread outside the prostate. With this option, the entire prostate and several nearby lymph nodes are usually removed. The total removal of the prostate is called a radical prostatectomy. This procedure may be performed in several different ways. The prostate may be removed through a single incision in the abdomen or it may be removed laproscopically (several small incisions are made in the abdomen and a light and camera are inserted to assist the surgeon in removing the prostate) or it can also be done by a perineal incision. Sometimes, during a laparoscopic prostatectomy, the surgical instruments are attached to a robot, which is controlled by the surgeon.

Cryosurgery

During cryosurgery, needles are inserted into the prostate and a cold gas is placed into the needles. This results in the tissue surrounding the needles freezing. The tissue will be thawed and frozen in cycles during cryosurgery until the cancer cells and some surrounding tissue die.

Prostate Cancer *continued*

Radiation Therapy

Radiation therapy is a common treatment option for men with all stages of prostate cancer. It uses high-energy beams to kill cancer cells. With external beam radiation, the patient lies on a table while a machine directs beams at the prostate cancer. Treatments are usually conducted five days a week for several weeks. In some cases, brachytherapy may be appropriate. In this treatment, radioactive seeds that deliver a low dose of radiation over a long period of time are placed in the prostate tissue by a doctor using a needle and ultrasound.

Chemotherapy

Chemotherapy is a common treatment for men with advanced prostate cancer. This treatment involves intravenously administering drugs which kill rapidly dividing cells in the body. This includes cancer cells and some other types of cells like blood cells and the cells in the roots of hair (which is why chemotherapy may cause low blood counts and hair loss).

Hormone Therapy

The male hormone testosterone can cause prostate cancer to grow, so some men with prostate cancer may undergo hormone therapy to stop producing testosterone or prevent it from reaching the prostate cancer. Medications called luteinizing hormone-releasing hormone (LHRH) antagonist and agonists stop the testicles from receiving the chemical messages telling them to make testosterone. Medications called anti-androgens stop testosterone from reaching the prostate cancer cells. In some cases, the testicles may be surgically removed to reduce testosterone levels in a procedure called an orchiectomy.

High-Intensity Focused Ultrasound

A new surgical technique currently undergoing study is high-intensity focused ultrasound treatment. This treatment uses sound waves to heat up the prostate tumor and kill cancer cells. It is still experimental and is not available at SRHC.

Immunotherapy

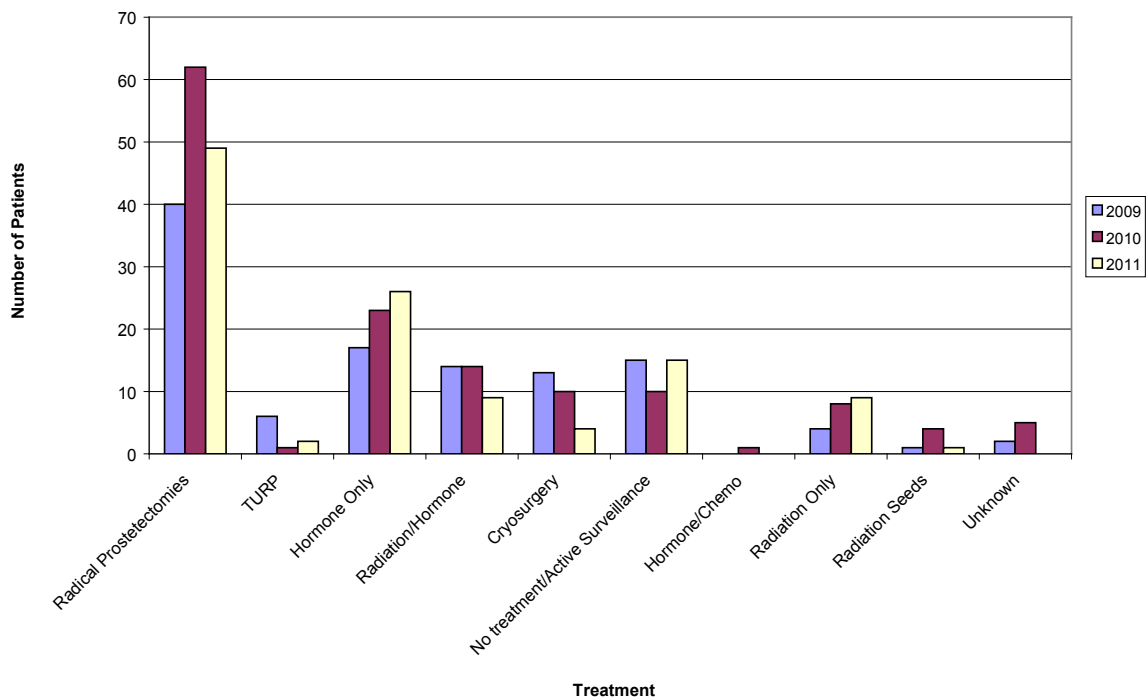
Gene therapy or immune therapy may be more successful in treating metastasized tumors of the prostate. Clinical trials are being conducted with agents that stimulate the body's immune system to fight prostate cancer.

Treatment at Salina Regional Health Center

Patients with prostate cancer who receive treatment at Salina Regional Health Center may undergo one or more types of treatment depending on their age, condition and the extent of their cancer. The graph on the following page shows the treatments received by patients with prostate cancer at SRHC from 2009 to 2011.

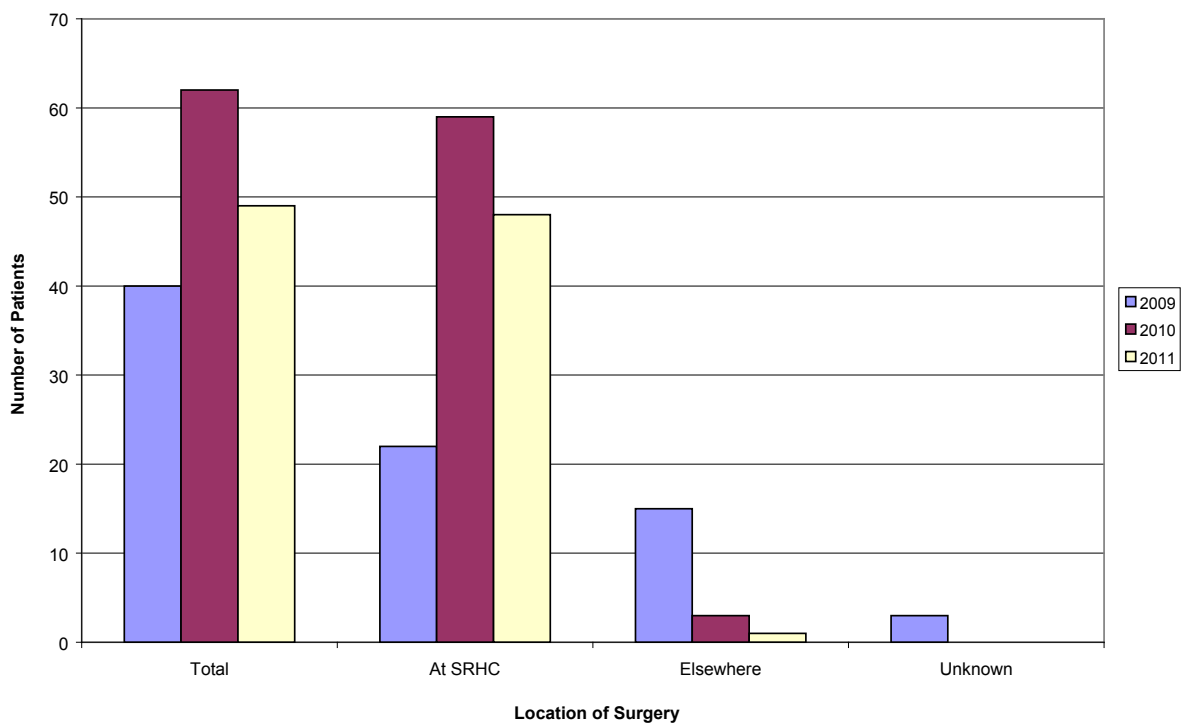
Prostate Cancer *continued*

Prostate Cancer by Treatment at SRHC



A significant number of patients diagnosed with prostate cancer at SRHC underwent radical prostatectomies. Most patients opted to have the procedure done at SRHC, but some had it done at different facilities.

Radical Prostatectomies



Prostate Cancer *continued*

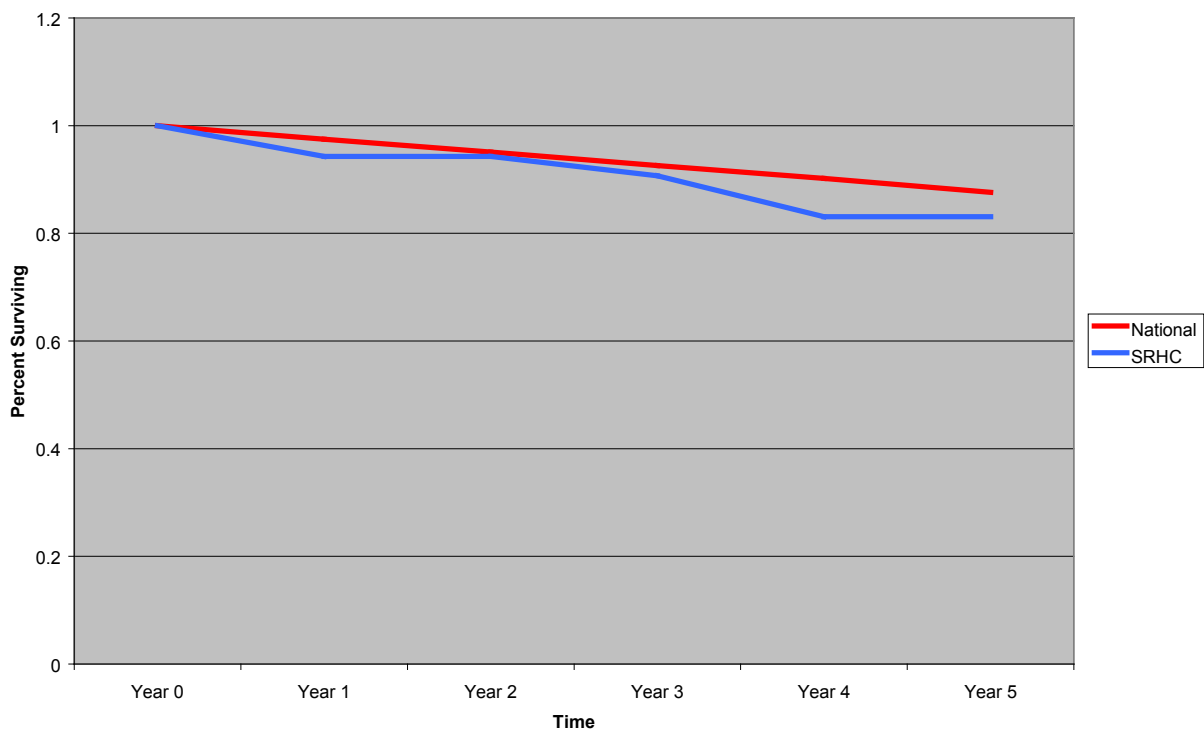
How does Salina Regional Health Center Compare?

In 2009, SRHC treated a total of 68 men diagnosed with prostate cancer. Nationally, 135,595 men were diagnosed with prostate cancer in 2009.

Survival

Patients who undergo treatment for prostate cancer at SRHC have comparable survival rates to those seen nationally. The graph below shows the five year survival rates of prostate cancer patients treated at SRHC and nationally.

Five Year Survival Rates of Prostate Cancer Patients

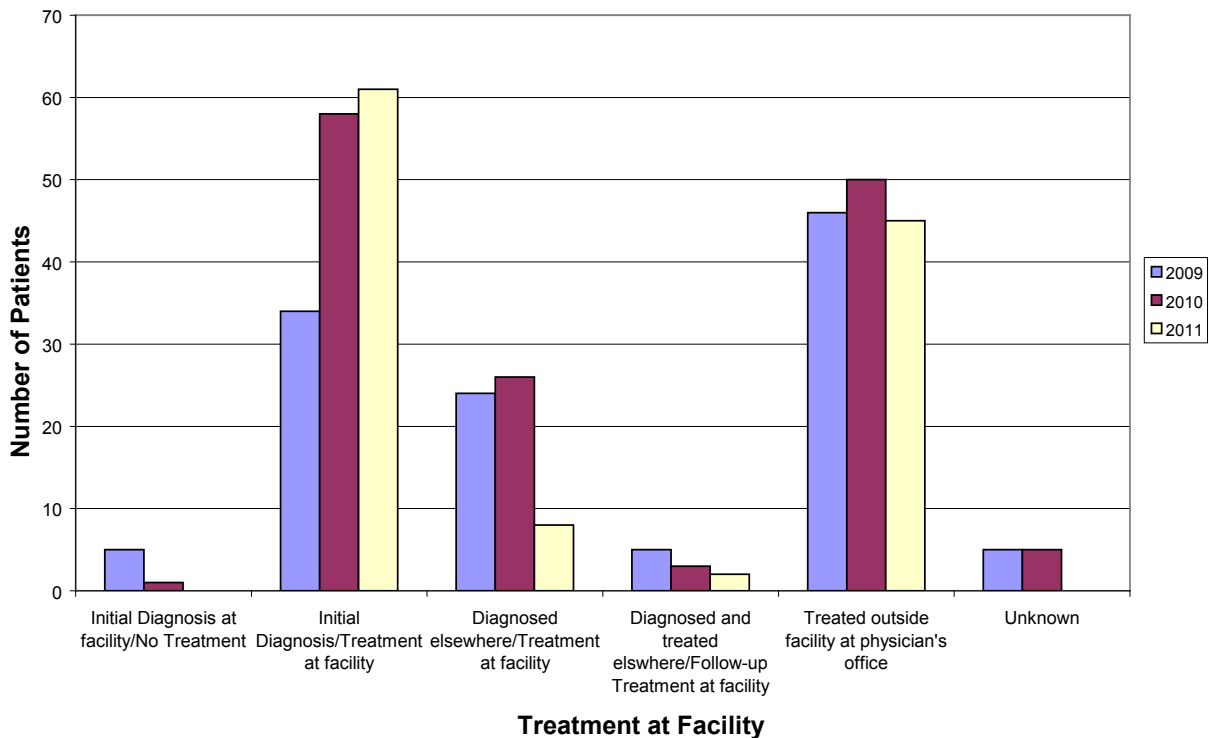


Classes of Cases

Some prostate cancer patients are diagnosed and receive their entire treatment at SRHC. Others are diagnosed elsewhere and then choose to come to SRHC for treatment. Some are diagnosed at SRHC and then seek out treatment at other facilities. The following graph separates the prostate cancer cases seen at SRHC into classes based on where they were diagnosed and treated.

Prostate Cancer *continued*

Class of Prostate Cancer Cases



Summary

Prostate cancer is the most common cancer reported by the SRHC Cancer Registry. Most patients are in the age range of 60-65 and are diagnosed as Stage II. SRHC has purchased a Da Vinci Robot machine to do robot-assisted prostatectomies. This has increased the choices for men enabling more to undergo treatment at SRHC.

The age of men being diagnosed has changed in 2011 from being mostly aged 70 to 89 to being mostly aged 50 to 69. All treatment options for men with prostate cancer are available at SRHC. The five year survival of prostate cancer patients at SRHC remains comparable with the national five year survival rate of prostate cancer patients.

Sources

1. National Cancer Institute. United States Department of Health and Human Services. What You Need to Know About Prostate Cancer. (2012). Print.
2. National Cancer Institute at the National Institutes of Health. Prostate Cancer. Web. <http://www.cancer.gov/cancertopics/types/prostate>
3. Mayo Clinic. Prostate Cancer. Web. <http://www.mayoclinic.com/health/prostate-cancer/DS00043/DSECTION=symptoms>

A special thanks to Salina Urologist Ryan Payne, M.D., for reviewing the information in this report.