Prostate cancer

The prostate is a male gland below the bladder and in front of the rectum. Prostate cancer is the most common cancer in men in America, according to the American Cancer Society. About 164,690 new cases of prostate cancer will be reported this year. This cancer is most common in men over 65.

Signs and symptoms

Some symptoms associated with prostate cancer include problems urinating, blood in urine or semen, erectile dysfunction and pain in areas that cancer might have spread. Early stage prostate cancer does not necessarily have any symptoms associated with it.

Tests

The prostate-specific antigen (PSA) and a digital rectal exam (DRE) are the most common tests used to identify prostate cancer. These tests detect a rise in the PSA level that can be associated with prostate cancer. Transrectal ultrasounds and biopsies are also used to test for and diagnose prostate cancer.

Staging

The PSA is also part of the staging used for prostate cancer. Another important factor in prostate cancer staging is the Gleason score. This is a grade, or score, of how abnormal the cancer cells are. Bone scans, CT scans and MRIs are also used in the process of staging to look for possible metastatic disease (spread of cancer outside the prostate).

The staging system for prostate cancer describes the extent of the tumor (T), the spread of cancer to lymph nodes (N) and the presence or absence of metastasis throughout the body (M). The staging system also relies on the PSA and Gleason scores. The stages range from stage 1 to stage 4B based on the aforementioned factors.

Risk assessment is also an important factor in prostate cancer workup and diagnosis as well as treatment. Risk models are used to determine a patient’s overall health, lab tests also look at the genes in the prostate cancer cells. In 2018, risk groups for prostate cancer were categorized by the National Comprehensive Cancer Network (NCCN) as very low, low, favorable intermediate, unfavorable intermediate, high, very high, regional and metastatic. The features that determine a risk group include the T stage, Gleason score, PSA, as well as the number or percent of prostate biopsy cores that are positive. These risk groups are used to help determine indicators for molecular and germline testing.

Treatment

Treatment is determined by the stage as well as the risk assessment gathered during staging. Treatment guidelines, such as those provided by the NCCN, are often used to determine the appropriate treatment regimens for patients. Unlike other cancers, prostate cancer is sometimes a slow growing disease and treatment can include a surveillance or watchful waiting period. Surgery, radiation, cryotherapy, hormone therapy and chemotherapy are other treatments used.

Survival rates

The five-year survival rate for prostate cancer is 98.2%, according to the National Cancer Institute Surveillance, Epidemiology and End Results Program, based on 2008-2014 data. Prostate cancer accounts for 4.8% of all cancer deaths. Statistics also show 78% of prostate cancer cases are localized or confined to the prostate; 100% of those localized cases have a five-year relative survival rate (SEER 18 2008-2014, All Races, Males by SEER Summary Stage 2000).
Novant Health Rowan Medical Center: Cases and outcomes

The National Cancer Database (NCDB) provides benchmarks and comparison data for over 1,500 Commission on Cancer-accredited facilities. The most current available data are for cases diagnosed in 2015. Following are demographic comparisons for Novant Health Rowan Medical Center and the NCDB for 2015 prostate cancer cases.

Figure 1 shows the age group 60-69 accounts for the most prostate cancer diagnoses at both Rowan Medical Center (38%) as well as NCDB (42%).

Whites account for over 70% of prostate cancer diagnoses in both Rowan Medical Center and the NCDB facilities. Figure 2 shows Rowan Medical Center has a higher incidence of prostate cancer cases among blacks (24%) compared to 14% in the NCDB.

Note: Percentage may not total 100% due to rounding.
Commission on Cancer Standard 4.6 study results

Adherence to national treatment guidelines is a standard required by the Commission on Cancer for accreditation. Each year a physician member of cancer committee at Rowan Medical Center reviews a specific cancer site to determine if guidelines are followed. Gregory Mitro, MD, reviewed 2017 prostate cancer cases that were treated at Rowan Medical Center, and his findings follow.

NCCN categorizes prostate cancer cases by risk group. Using version 2.2017, the following risk groups were assessed:
- Very low
- Low
- Intermediate
- High
- Very high
- Regional
- Metastatic

The initial treatments for 54 patients were reviewed; all received initial treatment within our cancer program at Rowan Medical Center. Of the nine very low risk patients reviewed, eight had active surveillance as their initial approach. One very low risk patient had androgen deprivation therapy (ADT) for volume reduction followed by brachytherapy. Three of the low risk patients had brachytherapy as their initial treatment and one was followed with active surveillance.

The 21 intermediate risk patients were appropriately managed with either active surveillance (n=2), ADT (n=12), external beam radiotherapy (EBRT) or brachytherapy (n=6), or prostatectomy (n=1). All 10 high risk patients received ADT plus or minus RT. The very high risk group was treated with ADT/RT (n=3). Finally, the metastatic group (n=7) was treated with ADT. Based on the review, all patients (100%) received appropriate treatment based on the 2017 NCCN guidelines.