

Prostate Cancer: An individualized approach at improving outcomes

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Nursing 102: Nursing Care of Adults

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March 21, 2024

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Prostate cancer is one of the leading cancer diagnoses in the world, affecting a huge population of men. While it has a high prevalence, with early detection and treatment it is manageable. American Cancer Society tells us that there are “about 313,780 new cases of prostate cancer in 2025” (American Cancer Society, 2025). This cancer occurs in a small male gland that produces seminal fluid that nourishes and transports sperm (Belkahla, 2022). Prostate cancer, having such a huge prevalence in the world population is crucial to bring awareness to so that with proper screenings, healthy lifestyle choices, and understanding of risk factors more men can prevent this disease and live a healthy life.

Body of the paper:

“Prostate cancer is the second leading cause of cancer death in the U.S. after lung cancer” (Hopkins Medicine, 2023). This disease occurs in a small male gland that holds and produces seminal fluid that transports sperm. Most of the time though, this type of cancer is localized to the prostate only and grows slowly allowing for high survival rates. Although this may be true most of the time, the outcome can depend on many variables including the stage of the cancer and who is affected.

The stage that a man has of prostate cancer can help determine what his treatment plan will be. Interventions are made upon the risk level that the person has. It is based on risk factors, Gleason score, and a PSA level. A Gleason score is a grading system for prostate cancer from tissue samples under a microscope. The score ranges from 6 (low-grade cancer) to 10 (High-grade cancer) (Cleveland Clinic, 2023). Low-risk prostate cancer is when there are intermediate-

risk factors, a Gleason score of 6 or below, and a PSA of less than 10 ng/mL. For this level, surveillance is recommended (Mew, 2025). Another stage is favorable intermediate-risk, and this is the presence of one risk factor, a Gleason score of 7 and a PSA level of 10-20 ng/mL. For these patients' active surveillance is recommended along with radiation, and brachytherapy (Mew et al., 2025). The last stage I will be discussing is the unfavorable intermediate risk, which is more than one intermediate risk factor, Gleason's score of 7, and more than 50% of tissue positive during biopsy. For this class, it is recommended for bone and soft tissue biopsy along with a similar approach of radiation and brachytherapy (Mew et al., 2025). No matter what stage or risk level that a person has, every status is important so that we as healthcare professionals can increase the prognosis and quality of life of those affected.

This topic is so significant to touch upon because of just how prevalent it is. NCI tells us that although few men die from prostate cancer, there were an estimated "268,490 new cases and 34,500 deaths in the US in 2022" (National Cancer Institute, 2023). This goes to show that while less men are dying from the disease, it is important to keep that number of deaths declining even more. There is still more work that needs to be done, not just for the physical wellbeing of the patients but their psychosocial aspect as well. Many will experience treatment related side effects, depression, or anxiety and this will affect their quality of life (Ilie & Rutledge, 2023). By not fixing these issues that patients are dealing with, it will cause a need for more education, and time to educate on resources, techniques, healthy lifestyle choices and palliative care to make those who have been affected have the best life possible. The most important task is bringing down the prevalence that prostate cancer holds in the US.

Risk reduction/Treatment of the problem

Preventing the risk of prostate cancer, there are important preventative measures that one

can take. The first of those being diet. A good diet is not only crucial for prevention of prostate cancer but for many diseases. It is found that a diet rich in, high intake of red meats, eggs, dairy products, and refined carbs like bagels, and French fries, all provide a higher risk of developing prostate cancer (Babakhanlou & Gowin, 2025). On the other hand, a diet rich in fish, plant-based proteins, and phytonutrients found in things like fruit, and vegetables are found to attribute antioxidant and anti-cancer effects (Babakhanlou & Gowin, 2025). Vitamins as well like Vitamin A & E can decrease the risk for malignancy (Babakhanlou & Gowin, 2025). Diet is important for overall health. The second risk reduction tactic that everyone should be aware of is if they are at a predisposed risk. There are certain demographics of people who are more prone to getting prostate cancer compared to others. The first big one being family history. Prostate cancer is one of the most heritable cancer types. Research tells us that family history of prostate cancer is an established risk of that person developing it themselves, along with an increased risk of mortality (Jenkins et al., 2021). If someone is predisposed by their genetics, it is very important to promote early screening to monitor the prostate. The biggest predisposed risk that most people are aware of for prostate cancer is of course being of the male gender and the ages of 45-60. Also, ethnicity being another one. African American males compared with white individuals have around a 70% higher incidence and double the mortality rate (Wadhwa et al., 2024). Knowing these risk factors is crucial so that people can make those doctor visits, get scanned, and be aware of what the risks are for their health and wellbeing.

Knowing the risks are just the first step, screening is a crucial part of prevention as well. Screening allows for an opportunity to identify this cancer at a curable stage. One of the most popular screenings is PSA, which is a prostate specific antigen that shows up on a non-invasive blood test. This option is the most comfortable for most patients and we are told that 50% of

morality is down due to PSA screenings. If a PSA test is elevated further testing can be done as it is not diagnostic, this includes an MRI (Carlsson & Vickers, 2023). An MRI can show focal lesions and the primary prostatic lesion. It can be used for detecting, staging, and planning (Fernandes et al., 2023). Most of the time an MRI can diagnose prostate cancer alone but for certain cases like people with an elevated risk for prostate cancer we are told that clinicians should proceed with a systematic biopsy (Wei et al., 2024). This is because while an MRI is almost definitive, it could still miss something and 1 in 10 who will have a negative MRI may have cancer on a biopsy (Wei et al., 2024). When screening it is important to find the best option for each individual as it is different for each.

If these screenings are positive for prostate cancer, treatment is needed. One of the treatment options includes radiation therapy. This includes brachytherapy along with external beam radiation therapy. While this has been used for years, new research has shown that Radionuclide therapy which is a type of radiation is even better as it can deliver to specific tumors and metastatic lesions (Zhong et al., 2024). Another major therapy for the treatment of prostate cancer is hormone therapy. The prostate depends on androgens for growth and development, and hormonal therapy blocks androgens and or the androgen receptors to block the advancement of prostate cancer metastasis (Desai et al., 2021). While both Radionuclide therapy and hormone therapy are on the rise for prostate cancer, another option is a prostatectomy. We are told that a prostatectomy is a good option because it may reduce tumor metastasis, delay the need for other treatments and their side effects, and even improve symptoms (Fang et al., 2024). The type of treatment option that a patient with prostate cancer will receive really depends on that individual, and their stage of prostate cancer. Treating prostate cancer is an individualized approach.

By making aware of the risk reductions, screenings, and treatments, it allows for an improvement in early detection, targeting and personalizing treatments, and improving survival along with quality of life for those targeted by this disease. Since prostate cancer has such a high prevalence it is important to continue to educate and make aware of everything there is to know about it.

Teaching

When educating people about prostate cancer, two things I want them to take away is knowing what prostate cancer is and the risks, along with understanding preventative measures they can take. I will do this by incorporating videos into my presentation, asking open ended questions to get them engaged and thinking, and asking a short Q & A at the end with a prize to really evaluate what the listeners took away and see if my objective was met. Along with these teaching strategies I will provide take home information and incorporate graphs and charts to allow for all types of learners to take something away from it since everyone learns differently.

Conclusion

Prostate cancer is one of the leading cancer diagnoses among men in the world. There are many risk factors to be aware of, screenings, and treatments associated with the disease but it all ultimately is personalized for each patient. This information is prevalent in evidence-based learning because it allows not only patients but healthcare workers to be aware of how to treat those diagnosed and how to prevent the disease and progression. The importance of writing this was to help educate patients on how to prevent this terrible diagnosis and bring an understanding of who, what, and why they may be at risk.

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