

Prostate cancer – statistical analysis data in a 3year period in the Eastern region of Republic of North Macedonia

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Abstract

Prostate cancer is a malignant tumor that originates from prostate cells. In general, the prostate tumor usually grows slowly and remains confined to the gland for many years. According to World Health Organization (WHO), prostate cancer is after lung cancer, the most common malignancy in men in the world and the third leading cause of death when it comes to malignancies (lung and colon cancer). For the purposes of this paper was used data from the Institute for Public Health of Republic of North Macedonia in the period of 2016 to 2018 and data from the Center for Public Health – Shtip at the level of the Eastern region in the period of 3 years. The results show that the most of the cases registered are 65-74 years old or 54%, and the lowest number are registered at the age of 45-54 or only 2%. 26% of the patients are aged 55-64, and over the age of 75 account for 18% of all registered cases in Shtip. In Probishtip, total number of registered cases in the period from 2016 to 2018 ie 3 years is 48 cases. The highest number of cases is in 2016, ie 20 patients, then in 2017 there are 18, and in 2018 were registered 10 patients.

Key words: cancer, prostate, statistic, Macedonia, urology

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I. Introduction

The prostate is an organ/gland located in the base or neck of the bladder in men. The urethra is a tube that carries urine from the bladder outwards through the outlet of the head of the penis. In general, the prostate tumor usually grows slowly and remains confined to the gland for many years. During this time, the tumor produces little or almost no symptoms and/or external signs like abnormalities detected by physical examination. However, not all prostate cancers behave the same. Some aggressive types of prostate cancer grow and spread faster than others and can cause significant shortening of life expectancy in men. The most common sites of prostate cancer metastases are bones, lungs, and liver. Prostate cancer is the second most commonly diagnosed malignant tumor in men in the world and the sixth highest that causes death.

Age is the most important individual risk factor for prostate cancer. The risk is 2 to 3 times higher in patients whose father or brother has been diagnosed with prostate cancer. The presence of androgens is essential for the development of cancer. Known risk factors include increased intake of nutrients, obesity and smoking. Studies also indicate that regular intake of soy, selenium and green tea can be an additional line of battle. Furthermore, vitamin D deficiency, according to some studies, may be associated with an increased probability for cancer of aggressive type.

In the early stages, prostate cancer often does not cause any symptoms for many years. Often, the first abnormality is elevated PSA in the blood or a solid lump in the prostate during the digital rectal examination. Rarely, in advanced disease, cancers can put pressure on the urethra. As a result, urine flow decreases and urination becomes more difficult. Patients may also have a burning sensation during urination or blood in the urine. However, these symptoms do not confirm the presence of prostate cancer. Initial symptoms resemble those of benign prostatic hyperplasia. They can be manifested by: increased urinary frequency, low urine flow, urinary retention, urinary tract infection, a feeling of incomplete emptying of the bladder, hematuria or hematospermia (rare symptoms of prostate cancer) and symptoms caused by metastases. Symptoms of metastatic disease include fatigue, weakness and weight loss. Prostate cancer usually metastasizes first to the lower back of the spine or pelvis, leading to back or pelvic pain. Prostate cancer can spread to the liver and lungs.

If the disease progresses later, hormone therapy is usually started. Determination of SAP is initially done every 3 months. The stage is determined every 6 months by an urologist. Treatment for local advanced cancer radical surgery (open or laparoscopic), castration (LHRH analogue therapy or orchiectomy), Bicalutamide (150 mg / day). Treatment for advanced (metastatic) cancer: metastatic carcinoma is treated with

endocrine agents (castration, antiandrogens, androgen blockade, bicalutamide, estrogens). Estrogen therapy (intramuscular polyestradiol phosphate) is an alternative to orchiectomy. [1-9]

II. Material And Methods

The method used for the purposes of this thesis is a retrospective analysis of the data obtained from:

- State Statistical Office of the Republic of N. Macedonia
- Institute of Public Health of the Republic of N. Macedonia
- Center for Public Health - Public Health Institution- Shtip, at the level of Eastern region.

The results are processed in detail, analyzed and statistically presented in the paper in tables and graphs.

III. Results And Discussion

Graph 1 shows statistics by age groups: In 2016 most of the patients are aged 65-74 or 12 patients, the lowest number of patients are aged 45-54 or 1 person. There are 7 patients registered in the age group 55-64 years and 4 patients over the age of 75 years. There are no cases registered in the age groups under 44 years.

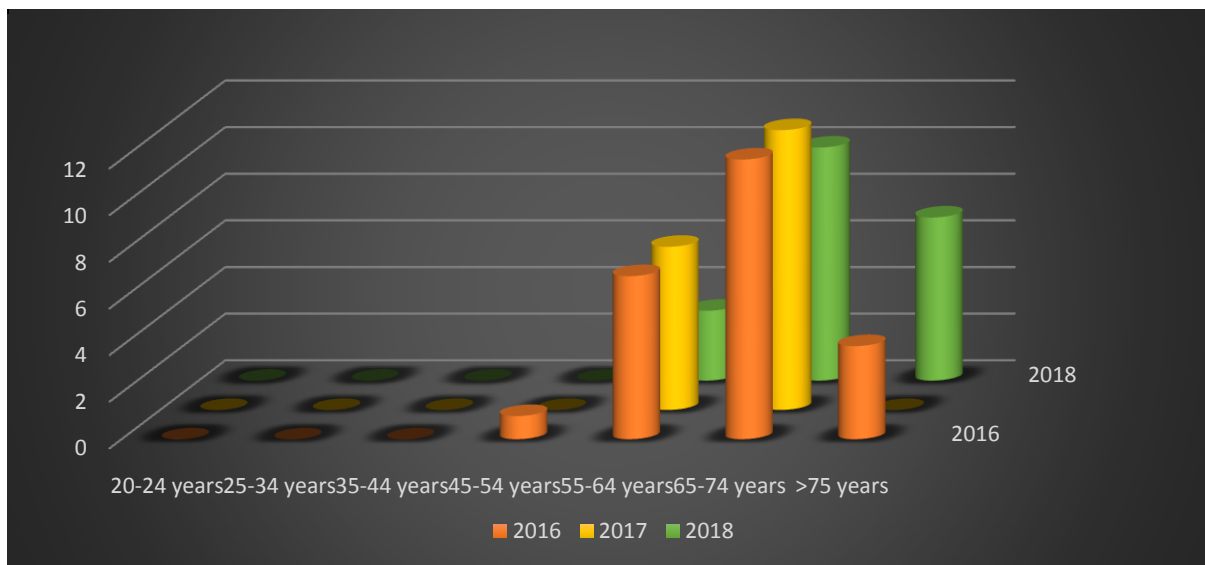


Chart1. Representation of people with prostate cancer in Shtip in period from 2017 to 2018 year

Chart 2 shows that for all 3 years most of the cases registered are 65-74 years old or 54%, and the lowest number are registered at the age of 45-54 or only 2%. 26% of the patients are aged 55-64, and over the age of 75 account for 18% of all registered cases in Shtip.

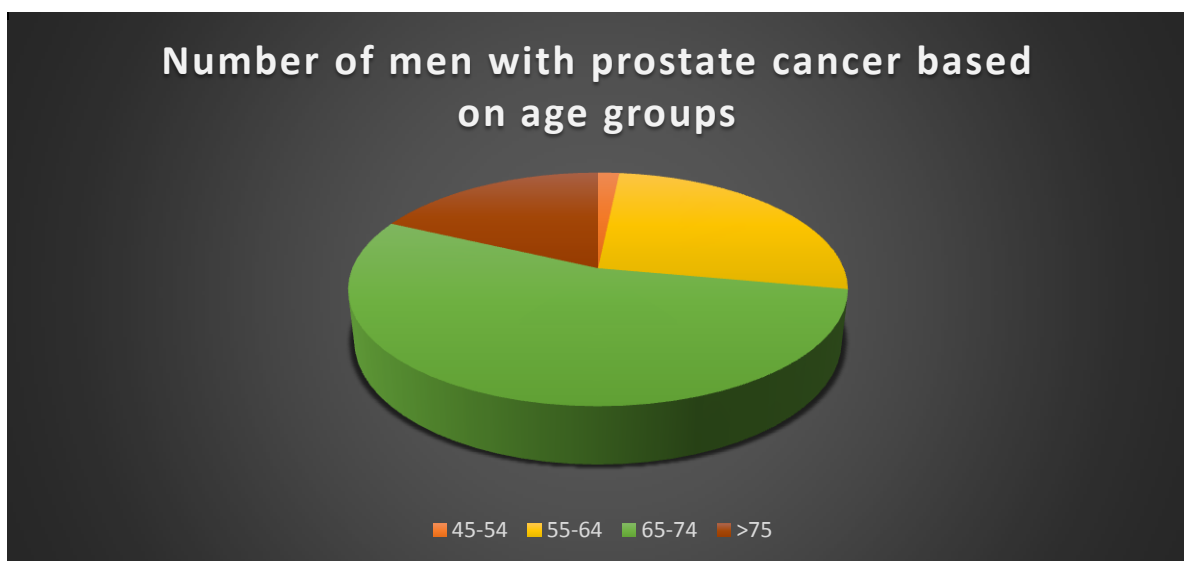


Chart 2. Percentage representation of people with prostate cancer in Shtip based on age groups from 2016 to 2018 year.

Table 1 shows the number of registered cases of prostate cancer in Probistip for the last 3 years. The total number of registered cases for all three years is 48 patients. According to the table, it can be seen that the highest number of cases is in 2016, ie 20 patients, in 2017 there are 18 patients, and 2018 has registered 10 patients.

Table 1. Representation of people with prostate cancer in Probishtip in period from 2016 to 2018 year

Prostate cancer in Probishtip for the last 3 years	
2016	20
2017	18
2018	10
Total:	48

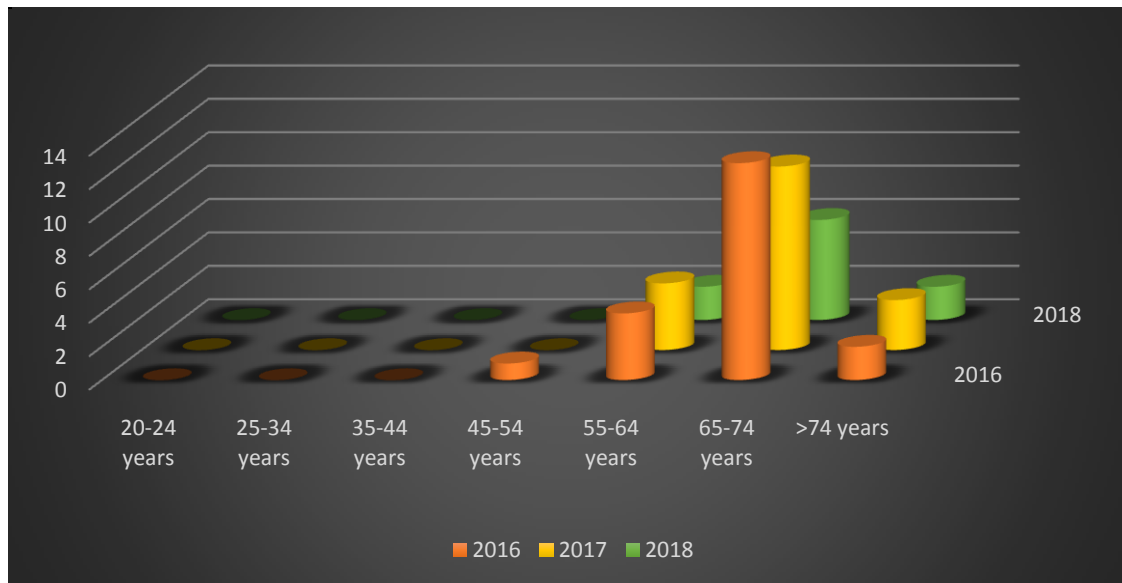


Chart 3. Representation of people with prostate cancer based on age groups in period from 2016 to 2018 in Probishtip.

Graph 3 shows statistics on patients with prostate cancer represented by age groups, according to this in 2016 the highest number of patients with prostate cancer are on age from 65 to 74 ie 13 cases and the lowest number are aged 45-54 or 1 case. 4 people are registered at the age of 55-64 years and 2 people above the age of 75 years. At the age of 44 years no cases were registered. In 2017, the largest number of cases were also registered at the age of 65-74 or 11 patients and the lowest at the age over 75 or 3 cases. There are 4 patients registered at the age of 55-64. In 2018, most cases are also registered at the age of 65-74 years ie 6 patients, and at the age of 55-64 and over 75 years are registered 2 patients.

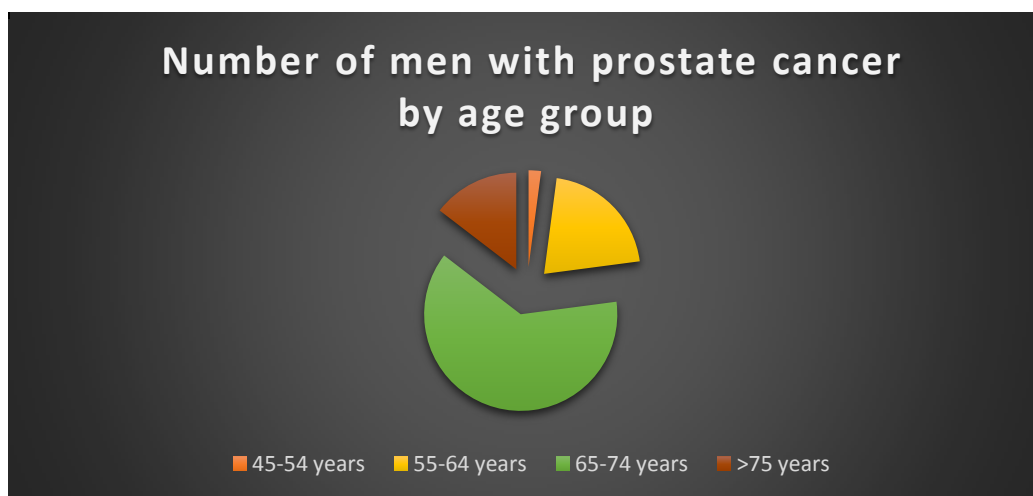


Chart 4. Percentage representation of people with prostate cancer in Probishtip

According to Chart 4 it can be noticed that in the period from 2016 to 2018 in Probishtip most cases were registered at the age of 65 to 74 years or 63%, and the lowest number at the age of 45-54 years or 2% of the total. 21% belongs on the age group 55-64, on the age group over 75 years belongs 15% of the total number of cases in the period from 2016 to 2018.

IV. Conclusion

Prostate cancer is the second most common malignant disease in men. If detected early (while still palpable) it has a high cure rate and it still ranks sixth in mortality. Prostate cancer mostly affects men over 65 to 74 years of age at the level of the Republic of N. Macedonia and at the level of the Eastern region. From the data obtained from the Public Health – Shtip it can be also concluded that compared to previous years, every upcoming year the numbers of prostate cancer patients are on the rise.

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