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Analysis of selected malignant tumours in Bielsko-Biala in the year 2015

Zachorowalność na wybrane nowotwory złośliwe w 2015 roku na terenie Bielska-Białej

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Abstract

Introduction: In 2015, 163,281 new cases of malignant tumours were registered in Poland, with 81,649 cases in men and 81,632 cases in women. In the province of Silesia, there were 19,180 new cases: 9,567 in men and 9,613 in women (absolute numbers). In the Beskid Oncology Centre – John Paul II Municipal Hospital, there were 430 cases of malignant tumours in men and 403 in women. **Aim of the study:** This study presents the incidence of selected malignant neoplasms among the residents of the city of Bielsko-Biala, who were hospitalised in the above mentioned hospital in 2015. **Material and methods:** Statistical data in the form of the annual report for 2015 were received from the Beskid Oncology Centre – John Paul II Municipal Hospital in Bielsko-Biala, Poland. The statistical analysis concerned breast cancer, testicular cancer and prostate cancer. **Results and discussion:** In the Beskid Oncology Centre – John Paul II Municipal Hospital in Bielsko-Biala, there were 7 cases of malignant testicular cancer and 80 cases of prostate gland carcinoma in 2015. In women, there were 90 malignant breast cancer cases, and it was the most frequent cancer in the discussed hospital. The vast majority of the reported cancers of various types occurred in the group of people, both men and women, over 60 years of age. **Conclusions:** Cancer is a serious health problem in both Poland and worldwide. In Poland, cancer is the second cause of death in general and the first cause of death among patients at the age below 65 years. The analysis of the data showed that, in the city of Bielsko-Biala, cancers of the breast and prostate gland belong to the group of the most common malignant tumours.

Keywords: epidemiology of cancer, neoplasm, prostate cancer

Streszczenie

Wstęp: W Polsce w 2015 roku zarejestrowano 163 281 nowych zachorowań na nowotwory złośliwe, przy czym u mężczyzn liczba ta wynosiła 81 649, a u kobiet 81 632. W województwie śląskim odnotowano 19 180 nowych zachorowań – 9567 u mężczyzn i 9613 u kobiet (liczby bezwzględne). W 2015 roku w Beskidzkim Centrum Onkologii – Szpitalu Miejskim im. Jana Pawła II wśród mężczyzn zarejestrowano ogółem 430 przypadków zachorowań na nowotwory złośliwe, a wśród kobiet 403. **Cel pracy:** W niniejszym artykule przedstawiono zachorowalność na wybrane nowotwory złośliwe u mieszkańców Bielska-Białej, którzy byli hospitalizowani we wskazanym szpitalu w 2015 roku. **Materiał i metody:** Otrzymano dane statystyczne pochodzące z Beskidzkiego Centrum Onkologii – Szpitala Miejskiego im. Jana Pawła II w Bielsku-Białej w postaci rocznego sprawozdania za 2015 rok. Dokonano analizy statystycznej nowotworu złośliwego sutka, jądra i gruczołu krokowego. **Wyniki i omówienie:** W 2015 roku w Beskidzkim Centrum Onkologii – Szpitalu Miejskim im. Jana Pawła II w Bielsku-Białej odnotowano wśród mężczyzn 7 zachorowań na nowotwór złośliwy jądra i 80 na gruczoł krokowy. U kobiet zarejestrowano 90 zachorowań na nowotwór złośliwy piersi i był to najczęstszy nowotwór odnotowany w omawianym szpitalu. Zdecydowana większość zarejestrowanych zachorowań na nowotwory różnego typu występuje w grupie osób po 60. roku życia, i to zarówno wśród mężczyzn, jak i wśród kobiet. **Wnioski:** Zarówno w Polsce, jak i na świecie nowotwory stanowią poważny problem zdrowotny. Jest to druga przyczyna zgonów ogółem i pierwsza u osób przed 65. rokiem życia w Polsce. Analiza danych wykazała, że na terenie Bielska-Białej nowotwory piersi i gruczołu krokowego należą do najczęstszych nowotworów złośliwych.

Słowa kluczowe: epidemiologia nowotworów, choroba nowotworowa, nowotwór prostaty

INTRODUCTION

In 2015, 163,281 new cases of malignant tumours were registered in Poland, with 81,649 cases in men and 81,632 cases in women. In the province of Silesia, there were 19,180 new cases: 9,567 in men and 9,613 in women (absolute numbers). Approximately 155,000 new cases of malignant tumours and about 96,000 cancer-related deaths are registered in Poland each year. In the province of Silesia, 15,000 patients die of cancer annually. In the Beskid Oncology Centre – John Paul II Municipal Hospital, there were 430 cases of malignant tumours in men and 403 in women in 2015 (Figs. 1, 2). There were 171 deaths among men and 134 deaths among women (rough data of 13 September 2018) (Fig. 3).

Every day, about 300 people in Poland find out that they have cancer. Poland is a country with low cancer incidence

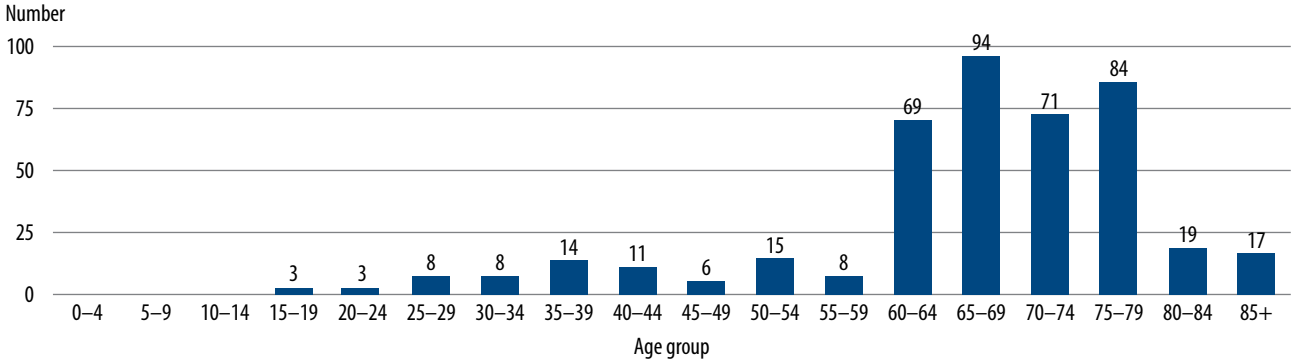

Fig. 1. Malignant cancers in men in 2015 (authors' own analysis based on data of 13 September 2018, obtained from the Beskid Oncology Centre)

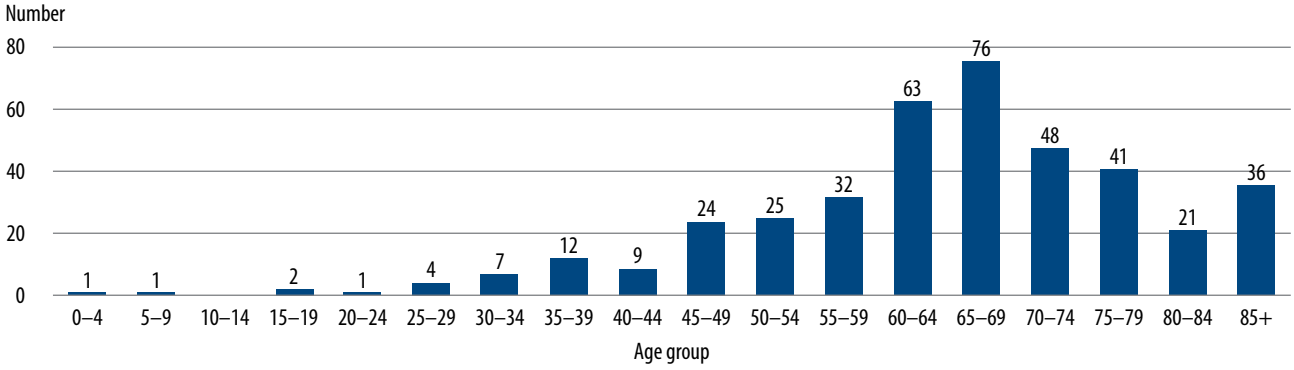

Fig. 2. Malignant cancers in women in 2015 (authors' own analysis based on data of 13 September 2018, obtained from the Beskid Oncology Centre)

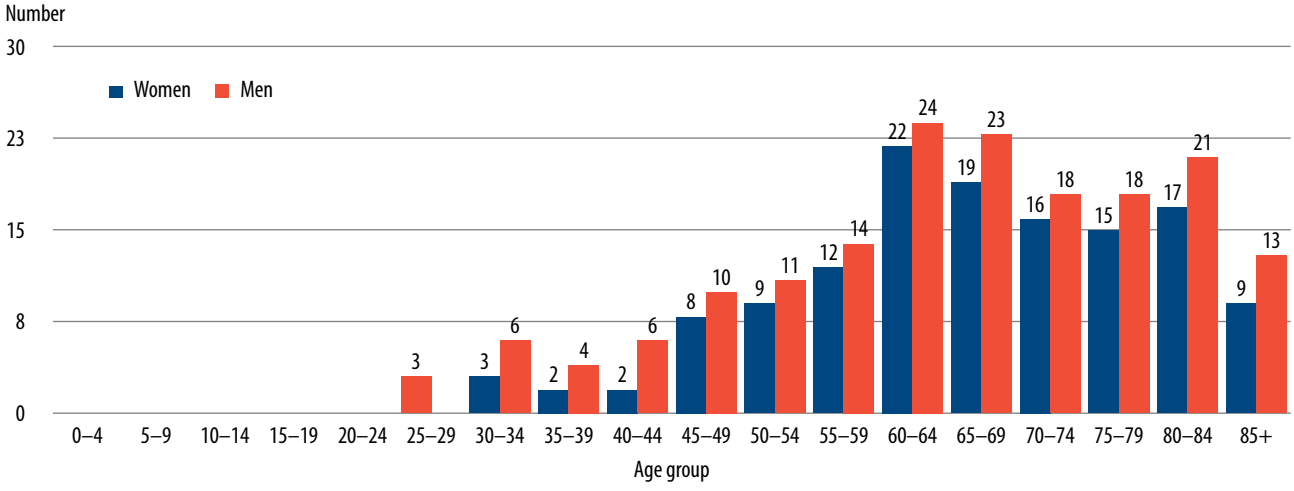

Fig. 3. Comparison of the number of deaths among men and women in 2015 (authors' own analysis based on data of 13 September 2018, obtained from the Beskid Oncology Centre)

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but high cancer-related mortality compared with other countries of the European Union[1].

AIM OF THE STUDY

This study presents the incidence of selected malignant neoplasms among the residents of the city of Bielsko-Biala, who were hospitalised in the Beskid Oncology Centre – John Paul II Municipal Hospital in 2015.

MATERIAL AND METHODS

Statistical data in the form of the annual report were received from the Beskid Oncology Centre – John Paul II Municipal Hospital in Bielsko-Biala, Poland. These data were gathered by employees of the said hospital and concerned the type of cancer and sex of the patients.
Information on given malignant tumour (by their site and patient's age) were categorised to groups according to the patient's sex, taking into account the following age groups: children, adolescents, young adults, mature adults and elderly.
The statistical analysis concerned breast cancer, testicular cancer and prostate cancer. Figures and tables were prepared on the basis of these data.

RESULTS AND DISCUSSION

Testicular cancer accounts for 1–2% of all male malignant tumours and 4–10% of urinary tract tumours. There are three incidence peaks: in childhood, at the age 20–40 and at approximately 60 years of age. In patients aged 20–35, this is the most common male cancer. The mean age of patients is 25 years. In 1–3% of cases, the disease develops in both testicles. Approximately 90–95% of these cancers derive from germ cells or reproductive cells, while 5% derive from the stroma or Leydig cells[2]. In 2015, there were 1,100 new cases of testicular cancer in Poland,

Site of malignancy in men, 2015	Children (about 4–14 years of age)	Adolescents (about 15–19 years of age)	Young adults (about 20–34 years of age)	Mature adults (about 35–64 years of age)	Elderly (over 65 years of age)
Lips					2
Root of the tongue			1		1
Unspecified part of the tongue			1	2	1
Floor of the mouth				1	
Palate					1
Palatine tonsil				3	2
Liver and bile ducts					2
Large bowel				8	23
Oesophagus				5	7
Stomach				8	19
Rectosigmoid junction				2	1
Rectum				5	9
Anus and anal canal					4
Pancreas				2	8
Larynx				5	6
Bronchi and lungs			4	15	42
Heart, mediastinum and pleura			1		5
Melanomas				1	4
Other skin malignancies		1	4	19	42
Connective tissue and soft tissues					2
Penis					2
Prostate gland				21	66
Testicle		2	6	3	3
Kidney excluding the renal pelvis				3	3
Urinary bladder				6	9
Brain				2	11
Thyroid non-Hodgkin				1	2
Secondary neoplasms of the lymph nodes				6	6
Unknown location				3	1
Other			2	2	1
Total	**0**	**3**	**19**	**123**	**285**

Tab. 1. Malignant cancers in men according to site and age. Bielsko-Biala 2015

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and 96 cases in the province of Silesia (absolute numbers). In the same year, there were 129 deaths due to testicular cancer in Poland, and 13 deaths in the province of Silesia (absolute numbers)[3]. In the discussed hospital, there were 14 new cases (Tab. 1) and, compared to the year 2012, the number increased by 8. The most effective prevention of testicular cancer is self-examination.

Prostate cancer is a serious health problem that concerns the entire male population worldwide. It is the second most common cancer in men (after colorectal carcinoma)[4,5]. The incidence is gradually increasing, which makes it a serious medical and economic concern globally. The global data on the prevalence of prostate cancer from 2012 show that the disease concerns 1.1 million men, which accounts for 15% of cancers diagnosed in men, with almost 70% of cases (759,000) noted in countries characterised by higher levels of development. The prevalence of prostate cancer is the highest in Australia and New Zealand as well as in North America (111.6 and 97.2/100,000, respectively) and the lowest in Southeast and Central Asia (10.5 and 4.5/100,000). In 2012, 60% of the estimated newly diagnosed cases and 41% of deaths concerned Europe and North America. Prostate cancer-related mortality is the highest in countries with black population, mainly in the Caribbean and in Sub-Saharan Africa. In Europe, high mortality is observed in Nordic countries[6].

In 2015, there were 14,211 new cases of prostate cancer in Poland, and 1,622 cases in the province of Silesia (absolute numbers). In 2015, there were 4,876 deaths of prostate cancer in Poland, and 570 deaths in the province of Silesia (absolute numbers)[3].

In the discussed hospital, there were 87 new cases (Tab. 1) and, compared to the year 2012, the number increased by 59.

Smoking, overweight, alcohol abuse and wrong eating habits are the risk factors for prostate cancer.

Breast cancer is the most common female malignancy and the major cause of death from cancer in Europe and

Site of malignancy in women, 2015	Children (about 4–14 years of age)	Adolescents (about 15–19 years of age)	Young adults (about 20–34 years of age)	Mature adults (about 35–64 years of age)	Elderly (over 65 years of age)
Lips					1
Unspecified part of the tongue				1	
Palate				1	1
Palatine tonsil					1
Oral part of pharynx				1	
Nasal part of pharynx					2
Stomach				2	7
Small intestine					1
Large bowel				2	10
Rectosigmoid junction				3	3
Rectum			1	13	6
Liver and bile ducts					2
Pancreas			1	3	5
Larynx				2	2
Bronchi and lungs			1	11	12
Melanomas			2	1	3
Other skin malignancies		1	1	27	71
Mammary gland			2	47	41
Cervix uteri				6	2
Uterine body				8	21
Ovary				12	9
Kidney excluding the renal pelvis	1			2	4
Renal pelvis				2	
Urinary bladder				3	4
Connective tissue and soft tissues				1	
Brain	1			2	4
Thyroid non-Hodgkin			2	11	6
Secondary neoplasms of the lymph nodes			1	2	1
Unknown location			1	1	1
Other		1		1	2
Total	**2**	**2**	**12**	**165**	**222**

Tab. 2. Malignant cancers in women according to site and age. Bielsko-Biala, 2015

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worldwide. At present, breast cancer accounts for 25% of cancer diagnoses in women worldwide[7]. The number of breast cancer cases is projected to exceed 20,000 annually in the next 10 years[8]. In 2012, there were 1,677,000 cases of this disease in the world and 522,000 related deaths. In the same year, the prevalence in the European Union was 1,467,000, with the incidence of 367,000, and there were 91,000 related deaths[7].

In Poland, 18,106 new cases were registered in 2015, with 2,140 cases in Silesia (absolute values). There were 6,493 and 892 related deaths, respectively (absolute numbers)[3]. Each year, there are approximately 11,000 new cases of malignant breast cancer in Poland, and this number is growing continuously. The number of cases and deaths is continuously growing each year[9].

Women over 60 years of age are at the greatest risk as this cancer represents the highest percentage in this group of patients. In 2015, 90 cases of breast cancer were diagnosed in the discussed hospital, including 2 cases in women younger than 34 years, 47 cases in women aged 35–64 years and 41 cases in women aged over 65 years (Tab. 2). In 2016, the number of new cases increased by 39 compared to the year 2012. In most of the discussed cases, the aetiology of this cancer was unknown. Research indicates that every fourth female malignancy is breast cancer[10].

In order to minimise the risk of the disease, it is indicated to perform breast self-examinations, undergo ultrasound scans or mammography.

The vast majority of the noted malignant cancers of various types occurs in the group of people over 60 years of age[5]. In the Beskid Oncology Centre – John Paul II Municipal Hospital in 2015, the number of cases in patients aged 60–64 years was 71 and increased to 91 in patients aged 65–69. As for women aged 60–64, there were 63 cases; a growing trend was also noted for women aged 65–69, where the number of cases was 76.

The mortality rate amongst patients hospitalised in the discussed centre in 2015 was higher in men than in women in every age group. The highest number of deaths in both men and women was noted in the age group 60–64, where it reached 24 and 22, respectively (Fig. 3). Malignant tumours will soon become the leading cause of death among men and women younger than 65 years. The incidence of malignant cancers is projected to increase by 2025 to 90,000 in men and 80,000 in women[11].

CONCLUSIONS

Poland is one of the countries with significantly inferior cancer treatment outcomes compared with Western Europe. The recommendations of the Code Against Cancer, which mostly pertain to prevention of given cancers, must be implemented. Spreading knowledge about carcinogenic factors and secondary prevention based on screening, mostly regarding the most common malignancies, are its significant objectives. Moreover, modern treatment methods, post-interventional patient care, the highest level of education of health care professionals as well as development and implementation of research are also important.

The analysis of the available data showed that, in the city of Bielsko-Biala, cancers of the breast and prostate gland were the most common malignant tumours in 2015. Moreover, an increasing trend was noted for their prevalence.

Conflict of interest

The author does not report any financial or personal affiliations to persons or organisations that could negatively affect the content of or claim to have rights to this publication.

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