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Adult Patient Cancer Statistics of Mardin Province

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ABSTRACT

Some types of cancer are more common in some regions. The data in Turkey are recorded with the cancer registry system but this data does not cover all cities. This study aimed to investigate the clinical and demographic characteristics of oncology patients admitted to Mardin State Hospital.

The records of patients, who admitted to Mardin State Hospital Medical Oncology Clinic between 2014-2018, were retrospectively reviewed. Patients over 18 years of age were included in the study. Gender, diagnosis and disease stages of the patients were recorded.

The median age of the 1208 patients (654 female and 554 male) was 57 (18-94) years. The median age was 52.25 in women and 60.92 in men. The 5 most common cancers in the whole group were; breast cancer, colorectal cancer, lung cancer, prostate cancer and gastric cancer, respectively. In men; the most common types of cancer were; lung, colorectal, prostate, head-neck and gastric cancer. On the other hand in women, the most common types of cancer were breast, colorectal, ovarian, gastric and uterus corpus cancer. The most common presentation stage was stage 4 (n = 416, 34.4%) in the whole group, stage 2 (n = 204, 31.2%) in women and stage 4 (n = 253, 45.7%) in men. Adenocarcinoma was the most common histologic type in both the male and the whole group (female and male) of patients. The most common histological types in women was breast carcinomas (invasive lobular and ductal carcinomas).

In this study, the incidence of colorectal cancer in all groups (men, women and total) was higher in Mardin province when compared with Turkey data.

Key Words: adult, cancer, distribution, frequency, Mardin

Introduction

Cancer is a leading health problem in terms of mortality and morbidity rates in almost every country in the world. Today, it is the second leading cause of death worldwide after cardiovascular diseases (1). There are differences in the frequency of malignant tumors in people living in different geographical areas. Many factors such as environmental conditions, the degree of industrialization of the country, socioeconomic level of the population, feeding habits and heredity may be effective in this difference (2). The cancer registry system in Turkey is rapidly developing and expanding its coverage but there is still no cancer registration and mapping system that covers 100% of patients. Data tables and cancer maps have been developed in the United States that can be arranged according to organ involvement, age, gender, race, region and time period at state and territory levels (3). Although it varies according to type, geographical region, patient age and gender; cancer is a disease with an incidence rate between 85 and 350 per hundred thousand in the society (4). It is predicted that the number of cancers will continue to increase progressively due to the increase in the elderly population rate and the increase in contact with environmental carcinogens due to developing technology (5, 6). Cancer Control Department was established in 1983 in Turkey. In these years, cancer disease was included among the reportable diseases. Although the passive cancer registry system was established by the Ministry of Health for the whole country in 1983, an active data collection system was introduced in 10 centers since 1992 due to the fact that the number of data with passive system was one-quarter of the expected (7). In this period, cancer frequency studies were also conducted. In these studies, the profile of cancer in Turkey, with the number of organ-specific cancers, was seen for the first time (8, 9). The scope of the population in the sample is 23% in Turkey until 2007. With the inclusion of the Gaziantep and Malatya provinces in 2010, the population coverage of the sample has reached 27%. In 2012, active cancer registry centers were established in Istanbul and Mersin, and the population coverage of the sample reached to 47%. Recently after collecting data in every province in Turkey; it is aimed to develop a cancer registry and database. All malignant tumors, in situ tumors, benign/borderline tumors of the central nervous system and medulla spinalis are trying to

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be recorded (10). Distribution of the 10 most common cancers in terms of gender (per 100 000 people) according to Turkey Cancer Statistics 2013 data: the most common cancers in men were; lung cancer 59.3, prostate cancer 36.4, colorectal cancer 24.4, bladder cancer 21.1, gastric cancer 15.9, renal cancer 7, laryngeal cancer 7, non-hodgkin lymphoma 6.9, pancreatic cancer 6.3 and brain/nervous system cancers 6.1, respectively. On the other hand in women the most common cancers were: breast cancer 45.9, thyroid cancer 21.3, colorectal 15.3, lung cancer 10, uterine corpus cancer 9.9, gastric cancer 7.1, ovarian cancer 7, non-hodgkin lymphoma 5.3, brain/nervous system cancers 4.7, endometrial/cervical cancer 4.6, respectively (11). Cancer incidence rates in 2013 (per 100 000 population) were 267.9 for males and 186.5 for females. The incidence in the whole group was 227.2 (11). This study aimed to investigate the clinical and demographic characteristics of patients admitted to the medical oncology outpatient clinic of Mardin State Hospital in Mardin province, which does not have a comprehensive oncology center.

Materials and Method

The records of patients who admitted to Mardin State Hospital Medical Oncology Clinic between 2014-2018 were retrospectively reviewed. Local Ethics committee approval was obtained. Patients over 18 years of age were included in the study. Solid tumors were included in the study. Hematologic malignancies were excluded from the study. Patients without a pathological diagnosis were excluded from the study. In addition to age, gender and disease diagnosis, admission diagnosis and stages of the patients were also recorded. Investigation of cancer distribution and frequency were performed over the whole group and analysis was also made with both male and female patients. Data analysis was performed using SPSS version 20.0 software. Results were given in percentages (%) and ''n'' numbers.

Results

A total of 1208 patients were included in the study. The median age was 57 (18-94) years. There were 654 (54.1%) female patients and 554 (45.9%) male patients. When the whole group was examined, the 5 most common malignancies were; breast cancer (n = 315, 26.1%), colorectal cancers (n = 160, 13.2%), lung cancer (n = 131, 10.8%), prostate cancer (n = 79, 6.5%) and gastric cancer (69, 5.7) %), respectively (Table 1). The 5 most common histological types were; adenocarcinoma (n = 459, 38%), breast carcinoma (sum of ductal and lobular carcinomas) (n = 295, 24.4%), Squamous cell carcinoma (SCC) (n = 135, 11.2%), neuroendocrine tumors and carcinomas (including small cell lung cancer) (n = 43, 3.6%) and sarcomas (n = 37, 3.1%), respectively. The number of patients and their ratios for application and diagnosis stages were as follows; Stage 0 (DCIS): 7, 0.6%, stage 1: 203, 16.8%; stage 2: 314, 26%; stage 3: 268, 22.2%; stage 4: 416, 34.4% (Table 2). The median age of the female patients was 52.25 (18-93). The 5 most common tumors in women were: Breast cancer (n = 308, 47.1%) colorectal cancer (n = 74, 11.3%), ovarian cancer (n = 31, 4.7%), gastric cancer (n = 29, 4.4%) and uterine corpus (endometrium) cancer (n = 26, 4%) (Table 1). The 5 most common histological types in women were: breast carcinomas (invasive lobular and ductal carcinomas) (n = 288, 44%), adenocarcinoma (n = 192, 29.4%), SCC (n = 40, 6.1%), sarcomas (n = 21, 3.2%) and thyroid cancers (papillary, follicular and hurtle cell type) (n = 17, 2.6%), respectively. When the stages of patients during admission to hospital and diagnosis were examined; the most common ones were stage 2 (n = 204, 31.2%) and stage 3 (n = 173, 26.5%) patients (Table 2). The median age of male patients was 60.92 (18-94). The 5 most common tumors in men were: Lung cancer (n = 109, 19.7%), colorectal cancers (n = 86, 15.5%), prostate cancer (n = 79, 14.3%), head and neck cancers (n = 44, 7.9%) and gastric cancer (n = 40, 7.2%) (Table 1). The 5 most common histological types in men were: adenocarcinoma (n = 267, 48.2%), SCC (n = 95, 17.1%), neuroendocrine tumors and carcinomas (n = 31, 5.6%), urothelial cancers (n = 27, 4.9%) and germ cell tumors (n = 20, 3.6%). When the stages of patients during admission to hospital and diagnosis were examined; stage 4 (n=253, 45.7 %) tumors were the most common ones (Table 2).

Discussion

Cancer distribution and frequency may vary depending on many factors such as gender, age, geographical regions, environmental factors, feeding type and habit and structural factors (12, 13). Although lung, breast and stomach cancer are the most common cancers in the world, the distribution of cancer types may vary from country to country and even in cities, depending

Table 1. Disease Distribution by Cancer Type and Groups

Diagnosis	Female (654)		Male (554)		Total (1208)	
	n	%(n/654)	n	%(n/554)	n	%
Breast Cancer	308	47.1	7	1.3	315	26.1
Colorectal Cancers	74	11.3	86	15.5	160	13.2
Lung Cancers	22	3.4	109	19.7	131	10.8
Prostate Cancers	NA	NA	79	14.3	79	6.5
Gastric Cancer	29	4.4	40	7.2	69	5.7
Head and Neck Cancers	23	3.5	44	7.9	67	5.5
Bone and Soft Tissue Cancers	21	3.2	24	4.3	45	3.7
Skin Cancers	16	2.4	20	3.6	36	3
Pancreatic Cancers	13	2	21	3.8	34	2.8
Central Nervous System Tumors	17	2.6	16	2.9	33	2.7
Bladder Cancers	5	0.8	27	4.9	32	2.6
Ovarian Cancers	31	4.7	NA	NA	100	2.6
Thyroid Cancers	17	2.6	11	2	28	2.3
Kidney Cancers	10	1.5	18	3.2	28	2.3
Uterine Cancers	26	4	NA	NA	26	2.2
Biliary Tract Cancers	13	1.9	9	1.6	22	1.8
Testicular Cancers	NA	NA	20	3.6	20	1.7
Occult Primary Cancers	10	1.5	4	0.7	14	1.2
Cervical Cancers	9	1.4	NA	NA	9	0.7
Hepatocellular Cancers	4	0.6	4	0.7	8	0.7
Esophageal Cancers	1	0.2	5	0.9	6	0.5
Malignant Pleural Mesothelioma	1	0.2	3	0.5	4	0.3
Appendix Cancers	3	0.5	1	0.2	4	0.3
Small Intestinal Cancers	1	0.2	2	0.4	3	0.2
Timoma/Timic Carcinomas	0	0	3	0.5	3	0.2
Adrenocortical Cancers	0	0	1	0.2	1	0.1

on their level of development (14). For example of these urban differences in Turkey; gastric and esophageal cancers were reported to be in the first place in and around Lake Van (13). In a study, that was conducted in Okmeydanı Training and Research Hospital, which included 52.214 cancer patients from different cities of Turkey, the following results were reported (15): the 5 most common cancers in men were lung, colorectal, gastric, laryngeal cancer and non-Hodgkin's lymphoma. On the other hand, the 5 most common cancers in women were breast, colorectal, thyroid, ovarian and uterine corpus cancers. This data could not be extrapolated to Turkey in general but it can give an idea for Marmara and the Western Black Sea Region. In the Mardin study, lung and colorectal cancers were also in the first two places.

According to Globocan 2012 Data Published by International Cancer Agency (IARC) (16); distribution of the top five most common cancer types in men is reported to be as following: lung, prostate, colorectal, gastric and liver cancer in the world; prostate, lung, colorectal, bladder and renal cancer in the European Union (EU) (28 countries); prostate, lung, colorectal, bladder and renal cancer in the USA and lung, prostate, colorectal, bladder and gastric cancers in Turkey. According to the same data; top five most common cancer types in women is reported to be as following: breast, colorectal, uterine cervix, lung and uterine corpus tumors in the world; breast, colorectal, lung, uterine corpus and cervix tumors in the EU; breast, lung, colorectal, thyroid and uterine cancers in USA and breast, thyroid, colorectal, lung and uterine corpus tumors in Turkey (16). This ranking for Mardin is as follows: breast, colorectal, lung, prostate and gastric cancer for the whole group; lung, colorectal, prostate, head and neck cancers and gastric cancer for men

Table 2. Distribution of the Cancer Stages According to Groups

Cancer Stage	Female		Male		All Group	
	n	%	n	%	n	%
Stage 0	6	0.9	1	0.2	7	0.6
Stage 1	108	16.5	95	17.1	203	16.8
Stage 2	204	31.2	110	19.9	314	26
Stage 3	173	26.5	95	17.1	268	22.2
Stage 4	163	24.9	253	45.7	416	34.4
Total	654	100	554	100	1208	100

and breast, colorectal, ovarian, gastric and uterine corpus (endometrium) for women.

It has been reported that the first 5 cancer types in Turkey are similar with cancers in the world and other developed countries (11). Lung cancer in men and breast cancer in women are the most common types of cancer. Lung cancer has also been reported to rise from the fifth rank to fourth in women (11). Similarly, it was found that lung cancer is the most common type of cancer in men and breast cancer in women in the Mardin study. In the cancer statistics of Mardin province, lung cancer ranks 7th with a ratio of 3.4% (Table 1). According to the Turkey Cancer Statistics data of colorectal cancer; it has been reported to be the third most common cancer type in both men and women (11). In this study, it ranks 2nd in both genders. According to Turkey Cancer Statistics data (11); Thyroid cancer is the second most common cancer in women. In this study, it was ranked 8th with a ratio of 2.6%. This is due to the fact that Mardin State Hospital does not have a full-oncology center, so some of the patients will need to receive radioactive iodine treatment and apply to comprehensive out-of-town centers. As a result of the investigation of 4795 patients diagnosed as cancer between 1991-2000 in the Pathology Department of Dicle University Faculty of Medicine: Skin, lymph node and lung cancers were in the top three in men, while skin, breast and lymph node cancers were in the first three in women (17). In another study, 1191 cancer cases that were notified to Şanlıurfa Provincial Health Directorate Cancer Registry Center between 1995-2002 were examined. Bladder, lung, larynx, gastric cancer and lymphoma were the first five cancers in men, while breast, gastric cancer, thyroid, ovary and connective tissue cancers were found most common in women (18). A total number of 152 patients were examined in a study that was conducted in and around Şırnak. In that study; the 5 most common cancers were skin, colorectal, gastric, thyroid and esophageal cancer in men; skin, thyroid, breast, colorectal and esophageal cancer in women (19). According to these three studies, although the cities of Diyarbakır, Şanlıurfa and Şırnak are adjacent to Mardin city border, the results were different from Mardin. This is good evidence that cancer types can vary even in very close cities. In a study covering Van province and its vicinity; it was reported that gastric, esophagus and lung cancers were the three most common cancers in men and esophagus, breast and gastric cancers were the most common cancers in women (13). This study is a good example for the difference between cities. In a study covering only 2008 in Hatay province, data of 465 patients were examined and it was reported that skin, breast and bladder cancers were the most common cancers. When evaluated according to gender; the first three places were breast, skin and colorectal cancers in women and skin, bladder cancer and prostate cancer in men (20).

Conclusion: In this study, the incidence of colorectal cancer in Mardin was found to be more than that of Turkey data of all groups. The etiology should be investigated. In general, although there are differences in the ranking of the top 10 cancers; cancer data of Mardin province, Turkey and the World are similar in terms of types of cancer. Environmental factors and feeding habits are as important as genetic factors in cancer development. Therefore, cancer statistics of each province can't be identical. There is no comprehensive oncology center in Mardin State Hospital. Therefore, most of the patients apply to comprehensive centers in other cities in which they are diagnosed and completed their treatment. It is thought that very few of these patients applied to Mardin State Hospital. As a result, even if all applications have been registered, these statistics may not reflect actual data. Presenting of cancer maps in all provinces of Turkey in the future, with the development of the cancer registry system, will further clarify data. Nevertheless, this study is important for Mardin

as it is the most comprehensive and the only study conducted so far.

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