

<https://doi.org/10.52889/1684-9280-2023-3-69-12-18>

UDC 614.253.52 - 616.8-089

IRSTI 76.29.51

Original article

The Most Common Diagnoses in Orthopedic Oncology: Southeastern Anatolia Region in Turkiye

[Özlem Orhan](#)¹, [Burak Bozdoğan](#)², [Numan Atılğan](#)³, [Orkun Gül](#)⁴,
[Volkan Baki Çetin](#)⁵, [Mehmet Akif Altay](#)⁶

¹ Assistant professor of the Department of Orthopedics and Traumatology, Medical Faculty, Harran University, Sanlıurfa, Turkey.
E-mail: droorhan@gmail.com

² Research assistant of the Department of Orthopedics and Traumatology, Medical Faculty, Harran University, Sanlıurfa, Turkey.
E-mail: drburakbozdogan@gmail.com

³ Specialty of the Department of Hand Surgery, Deva Hospital, Gaziantep, Turkey. E-mail: doktor_dao@hotmail.com

⁴ Specialty of the Department of Orthopedics and Traumatology, Medical Park Trabzon Yıldızlı Hospital, Trabzon, Turkey.
E-mail: orkungul13@yahoo.com

⁵ Assistant professor of the Department of Orthopedics and Traumatology, Medical Faculty, Harran University, Sanlıurfa, Turkey.
E-mail: bvolkanc1@gmail.com

⁶ Professor of the Department of Orthopedics and Traumatology, Medical Faculty, Harran University, Sanlıurfa, Turkey.
E-mail: maltay63@yahoo.com

Abstract

The purpose of this study: Musculoskeletal tumors are very rare, and their distribution varies regionally. We aim to share the musculoskeletal system tumors and tumor-like lesions that orthopedic surgeons in the region commonly encounter in their daily practice.

Methods. In this retrospective study, 339 patients diagnosed with tumor and tumor-like lesions in the musculoskeletal system who consulted a single orthopedic surgeon between 2022 and 2023 in a tertiary hospital in the Southeast of the country were included. Age, gender, size, type of lesions, tumor diagnoses, and anatomical sites were examined.

Results. Bone localization (62.8%) is more common than soft tissue. Benign lesions are most commonly seen in both bone and soft tissue. Osteochondroma (21.7%) and chondrosarcoma (54%) are the most common benign and malignant bone tumors, while osteomyelitis (47.6%) is the most common tumor-like lesion. Hemangioma (27%) and peripheral nerve sheath tumor (62.5%) are the most common benign and malignant soft tissue tumors, while ganglion cyst (63.8%) is the most common tumor-like lesion. Benign bone tumors are larger in males than females ($p:0.008$). Lower extremity located of musculoskeletal tumors and tumor-like lesions is more common than upper extremity.

Conclusions. In the Southeastern Anatolia region, benign bone and soft tissue tumors (osteochondroma and hemangioma) are more likely. The most common malignant tumors are chondrosarcoma and peripheral nerve sheath tumors. Additionally, it should not be forgotten that musculoskeletal system tumors are often located in the lower extremities.

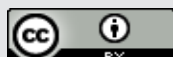
Keywords: Benign tumors, bone tumors, malign tumors, musculoskeletal tumors, soft tissue tumors, tumor-like lesions.

Corresponding author: Özlem Orhan, Assistant professor of the Department of Orthopedics and Traumatology, Medical Faculty, Harran University, Sanlıurfa, Turkey.
Postal code: 63300
Address: Turkey, Sanlıurfa, Osmanbey campus
Phone: +905057475401
Email: droorhan@gmail.com

J Trauma Ortho Kaz 2023; 3 (69): 12-18

Received: 28-07-2023

Accepted: 11-09-2023



This work is licensed under a Creative Commons Attribution 4.0 International License

Introduction

Musculoskeletal tumors are uncommon, accounting for 0.2-0.5% of all malignancies in all age groups [1]. Although tumor-like lesions are not neoplastic, they are significant because they are common, and their radiological, morphological, and histological appearances mimic actual tumors, including malignant lesions [2]. When evaluating these patients, history, physical examination, radiological imaging, and, when necessary, histological examinations will be necessary for diagnosis and treatment.

Materials and Methods

The patients who applied to a university in the Southeastern region of the country between February 2022 and April 2023 due to a mass located in the extremity were evaluated retrospectively. All patients were clinically examined by a surgeon, and imaging was analyzed. A total of 388 patients who presented with complaints of pain, palpable swelling or were incidentally detected to have a mass were evaluated. This study included patients with at least three months of follow-up and whose physical examination findings and radiology images were not missing. All patients who underwent a biopsy or had a tissue diagnosis were recorded according to their histological findings. Patients with bursitis (n=5), hydatid cyst (n=3), abscess (n=4), and patients who were lost to follow-up or whose examinations were missing (n=37) were excluded from the study. As a result, 339 patients with confirmed musculoskeletal tumors and tumor-like diagnoses were included in the study.

In the study, demographic characteristics of the patients (age, gender), tumor diagnoses, tumor size, histological structure of the tumor (malignant, benign, intermediate/metastasis, tumor-like), anatomical region, and the affected side (right, left, multiple) were recorded.

The tumors were classified according to the 2020 World Health Organization classification of tumors of bone and soft tissue [3,4].

Results

Demographic data of patients presenting with bone and soft tissue tumors are given in Table 1. The mean age of all patients (N=339) was 25.48±17.65. There was a statistically significant difference when bone and soft

Musculoskeletal system tumors may have a regional distribution. In this study, led to at a university hospital in the Southeastern region of the country, the 2020 World Health Organization classification of soft tissue and bone tumors, a current classification, was taken into account [3,4].

We aimed to report tumors and tumor-like lesions that oncological orthopedists in this region commonly encounter in their daily practice.

This study was conducted in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration, together with its later amendments. The research was approved by the local ethical committee. All individual participants signed a general research consent form, approved by the institutional review board, allowing inclusion in retrospective reviews.

Statistics. The obtained data were recorded in the IBM SPSS 21.0 Statistics Package Program (SPSS, Chicago, IL, U.S.). In statistical analysis, categorical variables were given as numbers and percentages and continuous variables were presented with mean± standard deviation and median (min-max) for descriptive analyses. The conformity of continuous variables to normal distribution was evaluated using visual (histogram and probability graphs) and analytical methods (Kolmogorov-Smirnov/Shapiro-Wilk tests). Normality analysis revealed that all data sets were not normally distributed. Non-parametric methods were used for the measurement values that did not conform to the normal distribution. The Mann-Whitney U test was used to compare the measurement values of two independent groups. The statistical significance level was accepted as $p < 0.05$ with a 95% confidence interval in this study.

tissue tumors were compared in age ($p < 0.001$). The mean size was 36.61±32.79 mm at first admission. There was no statistically significant difference when comparing the size of bone and soft tissue tumors ($p > 0.05$).

Table 1 - Baseline demographics

	Bone n=213 (%62.8)		Soft tissue n=126 (%37.2)		Total (N=339)	
	Median	n (%)	Median	n (%)	Median	n (%)
	min-max		min-max		min-max	
Sex						
Female		93 (43.7)		70 (55.6)		163 (48.1)
Male		120 (56.3)		56 (44.4)		176 (51.9)
Age (year)	16		31		19	
	(0-70)		(1-86)		(0-86)	
Side						
Right		107 (50.2)		64 (50.8)		171 (50.4)
Left		96 (45.1)		60 (47.6)		156 (46)
Multi		10 (4.7)		2 (1.6)		12 (3.5)
Size (mm)	25		27		25	
	(4-190)		(4-230)		(4-230)	
Type of lesions						
Benign		166 (77.9)		63 (50.0)		229 (67.6)
Malignant		20 (9.4)		16 (12.7)		36 (10.6)
Tumor-like lesions		21 (9.9)		47 (37.3)		68 (20.1)
Others		6 (2.8)		none		6 (1.8)

Data on the diagnosis and frequency of patients who applied to the orthopedics and traumatology outpatient clinic due to tumors are given in Table 2.

Accordingly, the most common malignant tumor in the bone is chondrosarcoma (45%), the benign bone

tumor is osteochondroma (21.7%), and the tumor-like lesion is osteomyelitis (47.6%). In addition, two patients had metastases due to renal and prostate cancer, while four patients had intermediate-form giant cell tumors of the bone.

Table 2 - Tumor diagnoses

	Malign		Benign		Tumor-like		Others (intermediate or metastasis)	
Bone	Adamantimo	%5, n=1	Aneurysmal bone cyst	%9.1, n=15	Exocytosis	%9.5, n=2	Giant cell tumor of bone	%66.6, n=4
	Ewing sarcom	%25, n=5	Simple bone cyst	%16.5, n=27	Enostosis	%19, n=4	Prostate cancer metastasis	%16.7, n=1
	Chondrosarcoma	%45, n=9	Enchondroma	%9.8, n=16	Intraosseous ganglion cyst	%19, n=4	Renal cancer metastasis	%16.7, n=1
	Osteosarcoma	%25, n=5	Fibrous dysplasia	%2.4, n=4	Osteomyelitis	%47.6, n=10		
			Intraosseous hemangioma	%1.8, n=3	Osteopoikilosis	%4.8, n=1		
			Chondroblastoma	%1.2, n=2				
			Intraosseous lipoma	%0.6, n=1				
			MHE	%6, n=10				
			NOF/fibrous cortical defect	%18.1, n=30				
			Osteoblastoma	%1.8, n=3				
			Osteoid osteoma	%8.4, n=14				
			Osteochondroma	%21.7, n=36				
		Subungual exocytosis	%3, n=5					
Soft tissue	Fibrosarcoma	%6.3, n=1	Dermoid cyst	%1.6, n=1	Baker's cyst	%12.8, n=6	NONE	
	Chondrosarcoma	%6.3, n=1	Fibroblastic tumor	%3.2, n=2	Epidermoid cyst	%2.1, n=1		
	Liposarcoma	%12.5, n=2	Fibroblastik tümör	%9.5, n=6	Ganglion cyst	%63.8, n=30		
	Mesenchymal sarcoma	%12.5, n=2	Glomus	%1.6, n=1	Myositis ossificans	%4.3, n=2		
	Peripheral nerve sheath tumor	%62.5, n=10	Hemangioma	%27, n=17	Nodular fasciitis	%6.4, n=3		
			Lymphangioma	%3.2, n=2	Pseudo cyst	%2.1, n=1		
			Lipoma	%25.4, n=16	Sinovial cyst	%8.5, n=4		
			Myxoma	%6.3, n=4				
			Peripheral nerve sheath tumor	%1.6, n=1				
		Tenosynovial giant cell tumor	%20.6, n=13					

Demographic data of bone tumors are given in Table 3. There was no statistically significant relationship between gender and age or size in the malignant bone tumors ($p>0.05$) (Table 3).

There was no statistically significant difference between gender and age in benign bone tumors ($p>0.05$) (Table 3). On the other hand, a statistically significant difference was found between gender and size in benign bone tumors ($p=0.008$) (Table 3).

In patients with tumor-like lesions in the bone, no relationship was found between gender, age, and size

($p>0.05$) (Table 3). Only one female patient with the other lesion was diagnosed as a giant cell tumor of the intermediate bone. No significant relationship was found between gender and both age and size ($p>0.05$) (Table 3).

Table 3 - Bone tumors of distribution ($p < 0.05$)

Diagnosis	Sex	Age (years) (median, range)	p	Size (mm) (median, range)	p
Malign	Female %35, n=7	14 (0-56)	0.579	45 (16-65)	0.132
	Male %65, n=13	19 (6-70)		65 (15-190)	
Benign	Female %45.8, n=76	15 (1-58)	0.144	20 (5-100)	0.008
	Male %54.2, n=90	15 (2-69)		30 (6-134)	
Tumor-like	Female %42.9, n=9	33 (15-61)	0.117	18 (4-80)	0.305
	Male %57.1, n=12	17.5 (9-59)		22 (7-155)	
Others (intermediate, metastasis)	Female %16.7, n=1	34	0.380	47	0.770
	Male %83.3, n=5	61 (25-68)		36 (5-72)	

Data on anatomical distribution in bone tumors are shown in Table 4. All bone tumors are most commonly located in the femur except for tumor-like lesions, while

tumor-like lesions are frequently located in the tibia (Table 4).

Table 4 - Anatomical sites bone tumours

	Shoulder	Humerus	Radius/Ulna	Hand/wrist	Pelvis	Femur	Tibia/Fibula	Foot/ankle	Unspecified	Total (n)
Benign	2.4	19.3	2.4/-	6.6/-	3	29.5	20.5/4.2	6.6/-	5.4	166
Malign	10	15	5/10	none	none	55	5/-	none	none	20
Tumor-like	none	9.5	none	14.3/-	none	19	28.6/-	23.8/-	4.8	21
Others	none	none	16.7/-	16.7/-	none	none	33.3/-	16.7/-	16.7	6
Total	2.8	17.4	2.8/0.9	7/-	2.3	30	20.2/3.3	8/-	5.2	213

Demographic data of soft tissue tumors are given in Table 5. No metastases or intermediate lesions were observed in soft tissues. There was no statistically

significant difference between gender, age, and size in all histological types of soft tissue tumors ($p > 0.05$) (Table 5).

Table 5 - Soft tissue tumors of distribution ($p < 0.05$)

Diagnosis	Sex (n, %)	Age (years) (median, range)	p	Size (mm) (median, range)	p
Malign	Female 9, %56.3	35 (11-60)	0.832	40 (9-175)	0.525
	Male 7, %43.8	34 (12-55)		100 (17-150)	
Benign	Female 38, %60.3	37 (3-86)	0.623	25 (4-130)	0.325
	Male 25, %39.7	36 (1-63)		32 (6-230)	
Tumor-like	Female 23, %48.9	27 (2-60)	0.558	15 (7-54)	0.523
	Male 24, %51.1	26 (2-69)		10.5 (6-70)	

Data on anatomical distribution in soft tissue tumors are shown in Table 6. Benign soft tissue tumors were most frequently located in the thigh and foot, while malignant

soft tissue tumors were most frequently in the thigh and arm. Tumor-like lesions were most frequently located on the wrist and ankle.

Table 6 - Anatomical sites soft tissue tumours

	Arm	Forearm	Hand/wrist	Elbow	Hip	Thigh	Leg	Knee	Poplitea	Foot/ankle	Total	
Benign	9.5	7.9	6.3	11.1/3.2	none	3.2	17.5	4.8	9.5	none	17.5/9.5	63
Malign	none	25	6.3	6.3/-	none	none	37.5	18.8	none	5.9	-/6.3	6
Tumor-like	none	none	2.1	14.9/25.5	4.3	none	none	2.1	6.4	10.6	12.8/21.3	47
Total	4.8	7.1	4.8	11.9/11.1	1.6	1.6	13.5	5.6	7.1	4	13.5/13.5	126

Discussion

Musculoskeletal system tumors may differ in age, gender, diagnosis, and distribution depending on the region. At the time of the present study, we could not find any study showing the distribution of bone and soft tissue tumors in the Southeastern Anatolia region of our country. The main finding of this study shows that bone lesions are more common than soft tissue lesions in musculoskeletal system tumors. In addition, benign tumors (osteochondroma,

hemangioma) are more common in bone and soft tissue. The most common malignant tumors are chondrosarcoma in bone and peripheral nerve sheath tumors in soft tissue. In both groups, lesions are most frequently involved in the lower extremities. Male patients with diagnosed benign bone tumors have larger lesions than females.

Sevimli reported that with a series of 710 patients, tumor diagnosis was more common in females (275 males, 435 females) [5]. On the contrary, in the present study, similar to the literature, all musculoskeletal system tumors were more common in males [6,7]. However, in this study, the incidence of soft tissue tumors in the male gender was 44.4%, and in the female gender was 55.6%. Similar to our study, the literature reported that bone tumors were more common in males and soft tissue tumors in females [7-9]. On the contrary, Sevimli reported that bone tumors were more common in the female gender (58%) than in the male gender (42%) [5].

Musculoskeletal system tumors were most common in child and adolescence. Sevimli reported that the median age of musculoskeletal system tumors was 30.67 (range to 1-92) years. In the present study, the median age of a musculoskeletal system tumor is 19 years (range to 0-86) (5). Additionally, bone tumors are seen earlier than soft tissue tumors (median: 16 and 31, respectively).

Bergovec et al. reported that with 3482 patients with musculoskeletal system tumors, the frequency of benign tumors was 79.3% (6). Öztürk et al. reported the frequency of benign lesions in musculoskeletal system tumors as 52% (7). Sevimli reported that benign tumors (575/710) were more than malignant tumors (81/710) [5]. In our study, similar to the literature, benign tumors (67.6%) were the most common musculoskeletal system tumors. On the contrary, Yüçetürk et al., in their 5658-case series, reported that sarcomas (39.7%) were the most common, and tumor-like lesions (17.8%) were the second most common [10]. This difference may be because it was the region's reference hospital, and benign tumors and tumor-like lesions were treated in neighboring hospitals.

Mohammed et al. reported the most common malignant bone tumor as osteosarcoma (34%) [11]. In a large series, the most common malignant tumors were reported as osteosarcoma (29.7%), chondrosarcoma (14%), and Ewing sarcoma (13.5%) (6). In another study, the most common malignant bone tumors were osteosarcoma (44.7%), Ewing sarcoma (16.5%), and chondrosarcoma (14.3%) [7]. Sevim reported that the most common malignant bone tumor was chondrosarcoma (29%), multiple myeloma (25.4%), osteosarcoma (14.5%), and Ewing sarcoma (10.9%) (5). In this study, the most common malignant bone tumor is chondrosarcoma (45%), followed by osteosarcoma (25%) and Ewing sarcoma (25%). Yüçetürk et al. reported that the frequency of malignant bone tumors was 50.2%, while the frequency of malignant soft tissue tumors was 49.8% [10].

Similar to our study, soft tissue sarcomas in the extremities are more common than bone sarcomas [12]. Sevimli reported that the most common malignant soft tissue sarcoma was liposarcoma (23.7%), malignant mesenchymal tumor (19.2%), and pleomorphic undifferentiated sarcoma (19.2%) [5]. Öztürk et al. reported that the most common malignant soft tissue tumor was liposarcoma (16.9%); however, our study's most common malignant soft tissue tumor was malignant peripheral nerve sheath tumor (62.5%) [7]. In the same study, the frequency of malignant peripheral nerve sheath tumors was 6.7% [7].

Similar to the literature, osteochondroma was our study's most common benign bone tumor [5-7,11]. Öztük et al. reported that, with 1178 bone tumors, the second most common was enchondroma (15%), and the third was a simple bone cyst (14%) [7]. Sevimli reported that the second most common tumor was non-ossifying fibroma

(16%), and the third was an aneurysmal bone cyst (15%) [7]. In the present study, non-ossifying fibroma (18.1%) was the second, and simple bone cyst (16.5%) was the third.

Öztürk et al. reported that the most common benign soft tissue tumors were lipoma (22.3%), hemangioma (16.2%), and soft tissue giant cell tumor (11.2%) [7]. Sevimli reported that the most common benign soft tissue tumors were lipoma (14%), tendon sheath tumor (11.3%), and hemangioma (9.6%), respectively [7]. In 2011, Yüçetürk et al. reported the most common benign soft tissue tumor as 37.5% vascular lesions and 21.5% lipoma [10]. In this study, the most common benign soft tissue tumors were hemangioma (27%), lipoma (25.4%), and soft tissue giant cell tumor (20.6%).

In the study of Öztürk et al., the frequency of non-tumoral lesions was reported as 21.3% [7]. Similarly, in our study, the frequency of tumor-like lesions was 20.1%. Dabak et al. reported that infection was the most common cause of non-tumoral lesions [8]. In the present study, osteomyelitis is the most common tumor-like lesion in bone. The most common tumor-like lesion in soft tissue is the ganglion cyst.

In musculoskeletal system metastatic tumors, the most common primary tumor was unknown (27.7%), the second most common was breast (18.3%), and the third most common was lung (17.7%) [7]. In our study, metastatic tumors, one patient had prostate cancer, and one patient had renal cancer. No metastases or intermediate tumors were found in the soft tissue.

We found that male patients with benign bone tumors applied larger masses than females ($p:0.008$). Benign bone tumors usually present a painless and palpable mass. Males had more muscle mass, which may cause the palpable mass to be noticed later. As a result, we think that male patients present with larger masses. However, more studies are needed on this subject.

Dabak et al. found that bone tumors were most commonly localized in the femur (10.7%), hip and surrounding area (7.8%), and tibia/fibula (7.8%). In comparison, soft tissue tumors were most commonly localized in the hand/wrist (26.6%) and the thigh (26.1%) [8]. Bergovec et al. reported that the most common location was the long bones in the lower extremity (femur 26.7%, tibia 20.3%), followed by the knee (20%) and the hand (14.4%) [6]. Öztürk et al. found that bone tumors were most frequently located in the femur and tibia. In comparison, soft tissue tumors were located in the thigh (26%) and hand (13.5%) [7]. In this study, musculoskeletal tumors, such as benign or malign, were most frequently located in the lower extremities, especially the femur. In addition, bone tumors are located in second place in the tibia (20.2%) and in third place as multiple lesions (5.2%). Also, soft tissue tumors were second most frequently located on the hand (11.9%) and third most frequently on the wrist (11.1%).

We noted several limitations in our study. First, this study is a retrospective archive study and single-center design. Another limitation is that the follow-up period for the patients needs to be longer. Moreover, as asymptomatic and incidentally diagnosed benign tumors and tumor-like lesions usually do not require histological confirmation, histopathological diagnoses of these patients are not available. However, the power of our study is that it used the 2020 World Health Organization bone tumor and soft tissue tumor classification. In addition, to the best of our knowledge, it is the first study with the largest data in this region.

Conclusions

According to the results of this study, although it has similar results to the literature, it also contains different results. While benign tumors (osteochondroma, hemangioma) are more common in musculoskeletal system tumors in bone and soft tissue, the most common malignant tumors are chondrosarcoma in bone and peripheral nerve sheath tumors in soft tissue. Metastasis is extremely rare in soft tissue lesions. Male patients with benign bone lesions had larger masses than females. In conclusion, knowing the region-specific age, gender, localization, and incidence of tumors will help diagnose.

Conflict of interest. The authors declare no conflict of interest.

Acknowledgments: Not applicable

Authors' contributions: Conceptualization - Ö.O.; Data Curation - Ö.O., B.B.; Formal Analysis - Ö.O.; Investigation - N.A., B.V.Ç.; Methodology - Ö.O., N.A.; Project Administration - Ö.O., M.A.A.; Resources - Ö.O., B.B.; Supervision - O.G.; Validation - O.G., N.A.; Visualization - B.B.; Writing – Original Draft - Ö.O.; Writing – Review & Editing - M.A.A., B.V.Ç.

REFERENCES

1. Mohammed A., Sani M.A., Hezekiah I.A., Enoch A.A. Primary bone tumors and tumor-like lesions in children in Zaria, Nigeria. *Afr J Paediatr Surg.* 2010; 7(1): 16-18. [[Crossref](#)]
2. Karakoç Y., Ulucaköy C. Management and retrospective analysis of tumors and tumor-like lesions localized in the talus. *Jt Dis Relat Surg.* 2021; 32(1): 218-223. [[Crossref](#)]
3. Choi J.H., Ro J.Y. The 2020 WHO Classification of Tumors of Bone: An Updated Review. *Adv Anat Pathol.* 2021; 28(3): 119-138. [[Crossref](#)]
4. Choi J.H., Ro J.Y. The 2020 WHO Classification of Tumors of Soft Tissue: Selected Changes and New Entities. *Adv Anat Pathol.* 2021; 28(1): 44-58. [[Crossref](#)]
5. Sevimli R. Distribution and evaluation of primary bone and soft tissue tumors admitted from Malatya province and surrounding provinces. *Medicine Science.* 2017; 6(3): 546-50. [[Crossref](#)]
6. Bergovec M., Kubat O., Smerdelj M., Seiwerth S. et al. Epidemiology of musculoskeletal tumors in a national referral orthopedic department. A study of 3482 cases. *Cancer Epidemiol.* 2015; 39(3): 298-302. [[Crossref](#)]
7. Öztürk R., Arıkan Ş.M., Bulut E.K. et al. Distribution and evaluation of bone and soft tissue tumors operated in a tertiary care center. *Acta Orthop Traumatol Turc.* 2019; 53(3): 189-194. [[Crossref](#)]
8. Dabak N., Cıraklı A., Gülman B., Selçuk M.B. et al. Distribution and evaluation of bone and soft tissue tumors in the middle Black Sea Region. *Acta Orthop Traumatol Turc.* 2014; 48(1): 17-24. [[Crossref](#)]
9. Öztürk R., Arıkan Ş.M., Bulut E.K., Keleş A.F. et al. Distribution of bone tumors according to age, sex and tumor site. *Acta Orthop Traumatol Turc.* 2019; 53(3): 189-194. [[Crossref](#)]
10. Yüce Türk G., Sabah D., Keçeci B., Kara A.D. et al. Prevalence of bone and soft tissue tumors. *Acta Orthop Traumatol Turc.* 2011; 45(3): 135-143. [[Crossref](#)]
11. Mohammed A., Isa H.A. Pattern of primary tumours and tumour-like lesions of bone in Zaria, northern Nigeria: a review of 127 cases. *West Afr J Med.* 2007; 26(1): 37-41. [[Crossref](#)]
12. Gibbs J., Henderson-Jackson E., Bui M.M. Bone and Soft Tissue Pathology: Diagnostic and Prognostic Implications. *Surg Clin North Am.* 2016; 96(5): 915-962. [[Crossref](#)]

Ортопедиялық онкологиялық диагноздардың ең жиі кездесетін түрлері: Түркия Анатолиясының оңтүстік-шығыс аймақтары

[Özlem Orhan](#)¹, [Burak Bozdoğan](#)², [Numan Atilgan](#)³, [Orkun Gül](#)⁴,
[Volkan Baki Çetin](#)⁵, [Mehmet Akif Altay](#)⁶

¹ Медициналық факультеттің Ортопедия және травматология кафедрасының ассистент профессоры, Харран университеті, Шанлыурфа, Түркия. E-mail: droorhan@gmail.com

² Медициналық факультеттің Ортопедия және травматология кафедрасының ғылыми қызметкері, Харран университеті, Шанлыурфа, Түркия. E-mail: drburakbozdogan@gmail.com

³ Саусақ хирургиясы бөлімшесінің маманы, Дева ауруханасы, Газиянмен, Түркия. E-mail: doktor_dao@hotmail.com

⁴ Ортопедия және травматология бөлімшесінің маманы, Медикал Парк Трабзон Йылдызлы ауруханасы, Трабзон, Түркия. E-mail: orkungul13@yahoo.com

⁵ Медициналық факультеттің Ортопедия және травматология кафедрасының ассистент профессоры, Харран университеті, Шанлыурфа, Түркия. E-mail: bvolkanc1@gmail.com,

⁶ Медициналық факультеттің Ортопедия және травматология кафедрасының профессоры, Харран университеті, Шанлыурфа, Түркия. E-mail: maltay63@yahoo.com

Түйіндеме

Тірек-қимыл аппаратының ісіктері өте сирек кездеседі және олардың таралуы аймақтарға байланысты.

Зерттеудің мақсаты: Біз аймақтағы ортопед-хирургтер күнделікті тәжірибеде жиі кездесетін тірек-қимыл аппаратының ісіктері мен ісік тәрізді зақымдануларын атап өтуді мақсат етіп отырмыз.

Әдістері. Бұл ретроспективті зерттеуге 2022 және 2023 жылдар аралығында елдің оңтүстік-шығысындағы үшінші сатыдағы ауруханада жалғыз ортопедиялық хирургпен кеңескен тірек-қимыл аппаратының ісік және ісік тәрізді зақымдануы диагнозы бар 339 науқас қамтылды. Жасы, жынысы, мөлшері, зақымдану түрі, ісік диагностикасы және анатомиялық орналасуы бағаланды.

Нәтижелері. Сүйек локализациясы (62,8%) жұмсақ тіндердің локализациясына қарағанда жиі кездеседі. Қатерлі емес ісіктер көбінесе сүйектерде де, жұмсақ тіндерде де байқалады. Сүйектің ең жиі кездесетін қатерлі емес және қатерлі ісіктері остеохондрома (21,7%) және хондросаркома (54%), ісік тәрізді зақымданулар остеомиелит (47,6%) болып табылады. Жұмсақ тіндердің жиі кездесетін қатерлі емес және қатерлі ісіктері – гемангиома (27%) және шеткергі жүйке қабықшасының ісігі (62,5%), ісік тәрізді зақымдануы – ганглиондық киста (63,8%). Сүйектің қатерлі емес ісіктері ер адамдарда әйелдерге қарағанда үлкенірек болды (р: 0,008). Тірек-қимыл аппаратының ісіктері мен ісік тәріздес зақымданулары жоғарғы жаққа қарағанда төменгі аяқтарда жиі кездесті.

Қорытынды. Сүйектің және жұмсақ тіндердің қатерлі емес ісіктері (остеохондрома және гемангиома) Оңтүстік-Шығыс Анадолы аймағында жиі кездеседі. Ең жиі кездесетін қатерлі ісіктер - хондросаркома және перифериялық жүйке қабықшасының ісіктері. Сонымен қатар, тірек-қимыл аппаратының ісіктері көбінесе аяқта локализацияланғанын ұмытпау керек.

Түйін сөздер: қатерлі емес ісіктер, сүйек ісіктері, қатерлі ісіктер, тірек-қимыл аппаратының ісіктері, жұмсақ тіндердің ісіктері, ісік тәрізді зақымданулар.

Наиболее распространенные диагнозы в ортопедической онкологии: регион Юго-Восточной Анатолии, Турция

[Özlem Orhan](#)¹, [Burak Bozdoğan](#)², [Numan Atılgan](#)³, [Orkun Gül](#)⁴,
[Volkan Baki Çetin](#)⁵, [Mehmet Akif Altay](#)⁶

¹ Ассоциированный профессор кафедры ортопедии и травматологии медицинского факультета, Университет Харран, Шанлыурфа, Турция. E-mail: droorhan@gmail.com

² Научный сотрудник кафедры ортопедии и травматологии медицинского факультета, Университет Харран, Шанлыурфа, Турция. E-mail: drburakbozdogan@gmail.com

³ Специалист отделения хирургии кисти, больница Дева, Газиянтен, Турция, E-mail: doktor_dao@hotmail.com

⁴ Специалист отделения ортопедии и травматологии, больница Медикал Парк Трабзон Йылдызлы, Трабзон, Турция. E-mail: orkungul13@yahoo.com

⁵ Ассоциированный профессор кафедры ортопедии и травматологии медицинского факультета, Университет Харран, Шанлыурфа, Турция. E-mail: bvolkanc1@gmail.com,

⁶ Профессор кафедры ортопедии и травматологии медицинского факультета, Университет Харран, Шанлыурфа, Турция. E-mail: maltay63@yahoo.com

Резюме

Опухоли опорно-двигательного аппарата встречаются очень редко, и их распространение варьируется в зависимости от региона.

Цель исследования: мы стремимся рассказать об опухолях и опухолеподобных поражениях опорно-двигательного аппарата, с которыми хирурги-ортопеды региона часто сталкиваются в своей повседневной практике.

Методы. В ретроспективное исследование были включены 339 пациентов с диагнозом опухоли и опухолеподобных поражений опорно-двигательного аппарата, которые консультировались у одного хирурга-ортопеда в период с 2022 по 2023 год в больнице третичного уровня на юго-востоке страны. Оценивались возраст, пол, размер, тип поражений, диагноз опухоли и анатомическое расположение.

Результаты. Костная локализация (62,8%) встречается чаще, чем мягкотканная. Доброкачественные поражения чаще всего наблюдаются как в костях, так и в мягких тканях. Наиболее распространенными доброкачественными и злокачественными опухолями костей являются остеохондрома (21,7%) и хондросаркома (54%), а наиболее частым опухолеподобным поражением является остеомиелит (47,6%). Наиболее распространенными доброкачественными и злокачественными опухолями мягких тканей являются гемангиома (27%) и опухоль оболочек периферических нервов (62,5%), а наиболее частым опухолеподобным образованием является ганглиозная киста (63,8%). Доброкачественные опухоли костей крупнее у мужчин, чем у женщин (р:0,008). На нижних конечностях чаще встречаются опухоли и опухолеподобные поражения опорно-двигательного аппарата, чем на верхних конечностях.

Выводы. В регионе Юго-Восточной Анатолии более вероятны доброкачественные опухоли костей и мягких тканей (остеохондрома и гемангиома). Наиболее распространенными злокачественными опухолями являются хондросаркома и опухоли оболочек периферических нервов. Дополнительно не следует забывать, что опухоли опорно-двигательного аппарата чаще всего локализируются в нижних конечностях.

Ключевые слова: доброкачественные опухоли, опухоли костей, злокачественные опухоли, опухоли опорно-двигательного аппарата, опухоли мягких тканей, опухолеподобные поражения.