Agri 2025;37(2):100–105
doi: 10.14744/agri.2024.00936

ORIGINAL ARTICLE

A barrier to adequate cancer-related pain treatment in Türkiye: Awareness of algology

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SUMMARY

Objectives: Cancer-related pain negatively affects the quality of life of most patients with cancer. As pain can impact sleep, function, and sociability, the adequate treatment of cancer pain is of great importance. The present study, therefore, aimed to evaluate the awareness of algology and its effects on pain management among patients with cancer in Türkiye.

Methods: This study was conducted at the Oncology Outpatient Clinic and Chemotherapy Unit of Başakşehir Çam and Sakura City Hospital between November 2023 and April 2024. Patients' awareness of algology, factors affecting awareness, and the influence of algology clinics on pain management were assessed using an 11-item questionnaire.

Results: The awareness of algology among cancer patients was 31%, although this percentage increased with greater pain intensity and longer disease duration. In this study, 78.6% of participants reported experiencing pain. Additionally, 91.1% of patients receiving treatment at an algology clinic acknowledged the pain management as adequate. After receiving brief information about algology, 82.5% (n=211) of the patients who were previously unaware of this discipline reported that they would consider visiting an algology clinic for pain treatment.

Conclusion: Adequate pain management is of great importance to cancer patients and their caregivers; however, in Turkey, patients lack sufficient information about algology, which may pose a barrier to effective pain treatment.

Keywords: Algology; cancer pain; pain clinics; pain management.

Introduction

Cancer is a leading cause of mortality worldwide and is a significant barrier to a longer life expectancy. According to the World Health Organization (WHO), in 2019, cancer was one of the top 2 leading causes of death in adults <70 years of age in 112 out of 183 countries, and in the top 4 in another 23 countries.[1]

Of the symptoms reported by cancer patients, pain is one of the most unpleasant, as it significantly affects personal comfort and is quite common. A previous study reported that 39% of patients experienced cancer pain after treatment, 55% during treatment, and 66% during metastatic disease or at the end of life.[2] Regardless of the stage, 51% of cancer patients experienced pain, of whom 40% described their pain as moderate-to-severe. In another study involving patients with advanced cancer, the incidence of moderate-to-severe pain was 80%.[3,4]

Cancer-related pain continues to be a major factor affecting patients' quality of life. There are several drawbacks, however, to pain management in patients with cancer. The greatest challenge for both physicians and patients is opiophobia.[5] Available evidence suggests that physicians need more guidance in assessing pain, prescribing opioids, and counselling patients on the safe use of opioids.[6]

Aslan et al.[7] evaluated the prevalence of pain in patients at a cancer treatment center in Türkiye and

Submitted: 30.04.2024 Received: 18.05.2024 Accepted: 15.06.2024 Available online: 10.04.2025

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found that 20.4% of the patients did not receive treatment for their pain, while half of those whose pain was treated still experienced pain.

Çalışkan et al.[8] found that 95% of cancer patients received analgesic treatment, although 61.9% still experienced pain. Moreover, it was shown that 55.8% of those with pain had a visual analog scale (VAS) score ≥5. After seeking pain management in algology clinics, this percentage decreased to 25%, with partial or complete pain relief observed in 88.6% of those treated, emphasizing the importance of algology in the management of cancer.

The present study, therefore, aimed to evaluate the awareness of algology in cancer patients in Türkiye and determine its effects on adequate cancer pain management.

Material and Methods

The protocol for the present study was approved by the institutional review board at Başakşehir Çam and Sakura City Hospital and was in accordance with the ethical guidelines of the 1975 Declaration of Helsinki, revised in 2000 (protocol no.: 22.11.2023.588).

From 29 November 2023 through 23 April 2024, patients at the Oncology Outpatient Clinic and Chemotherapy Unit at Başakşehir Çam and Sakura City Hospital were provided with an 11-item questionnaire. In the first question, patients were informed that the questionnaire was for a research study and asked if they were willing to participate. Patients who refused to participate were subsequently excluded from the present study.

Survey

A self-questionnaire survey consisting of 11 questions was prepared by three algology specialists and one medical oncology specialist in our hospital to assess the awareness of algology among cancer patients.

A pilot study was conducted to assess whether the patients could clearly understand the questions while preparing the questionnaire, and the questions were evaluated face-to-face with 15 patients. The questionnaire was then given to 11 other patients to answer on their own, and it was determined that all of them could easily complete the questionnaire. These patients were not included in the study.

The questionnaire gathered the following information: demographic data; type of cancer; duration of diagnosis; severity of cancer-related pain; assessment of knowledge about algology and, if any, how they found out about it; whether they have previously applied to an algology clinic; and whether they have received adequate pain treatment. As part of the last question, patients were given detailed information about algology, after which they were asked if they would consider applying to an algology clinic in the light of this information. In the questionnaire, a verbal analog scale with the following 6 categorical options was used to assess pain intensity: 0, no pain; 1, mild pain; 2, moderate pain; 3, severe pain; 4, extremely severe pain; and 5, unbearable pain.

Statistical Analyzes

SPSS (version 28.0; IBM Corp., Armonk, NY, USA) was used for the analyses in the present study. The mean, standard deviation, frequency, and ratio values were used for descriptive statistical analysis. The distribution of variables was measured using the Kolmogorov-Smirnov test. Normally distributed data were expressed as mean±standard deviation, while heterogeneous data were expressed as median (minimum–maximum). Disease duration and awareness were analyzed using the Mann-Whitney U test, and the chi-square test was used to evaluate awareness and relationships.

Results

A total of 340 questionnaires were collected in the present study, 21 of which were excluded for having missing answers. Additionally, 11 patients completed the questionnaire twice, therefore only their first-attempt questionnaires were evaluated. After exclusions, 308 surveys were evaluated in the present study. The mean age of the participants was 59.34±14.5 years, and there were 139 female and 169 male patients. The mean time since diagnosis was 14.44±13.7 months (Table 1), and the most common cancers were breast (19.2%), lung (16.6%), and colorectal (12%) as seen in Table 2.

Table 1. Patient characteristics

	n	%	Mean±SD
Sex			
Female	169	54.9	
Male	139	45.1	
Age (years)			59.34±14.5
Duration of disease (months)			14.4±13.7

SD: Standard deviation.

Table 2. Patient diagnoses

Cancer type	n	%
Lung	51	16.6
Central nervous system	9	2.9
Endometrium	30	9.7
Liver	15	4.9
Colorectal	37	12
Bone (chondrosarcoma)	3	1
Skin (malignant melanoma)	4	1.3
Breast	59	19.2
Bladder	5	1.6
Gastric	15	4.9
Nasopharynx	18	5.8
Ovary	28	9.1
Pancreas	17	5.5
Unknown primary	3	1
Prostate	10	3.2
Vulva	4	1.3

While 31.5% (n=97) of the participants had previous knowledge about algology, the majority (68.5%; n=211) had none. The patients who were familiar with algology had learned about it from their oncology physicians (76.3%; n=74), referring physicians (5.2%; n=5), social environment (14.4%; n=14), and/or the Internet (4.1%; n=4). The "other" option was not selected by any patient in response to this question. Of the 97 participants who were previously familiar with the concept of algology, only 46.3% (n=45) had been admitted to and received treatment at an algology clinic, while 42.2% did not know how to be seen at one, and 11.3% preferred not to. Additionally, 91.1% (n=41) of the 45 patients undergoing pain treatment at an algology clinic reported that their pain treatment was sufficient (Fig. 1).

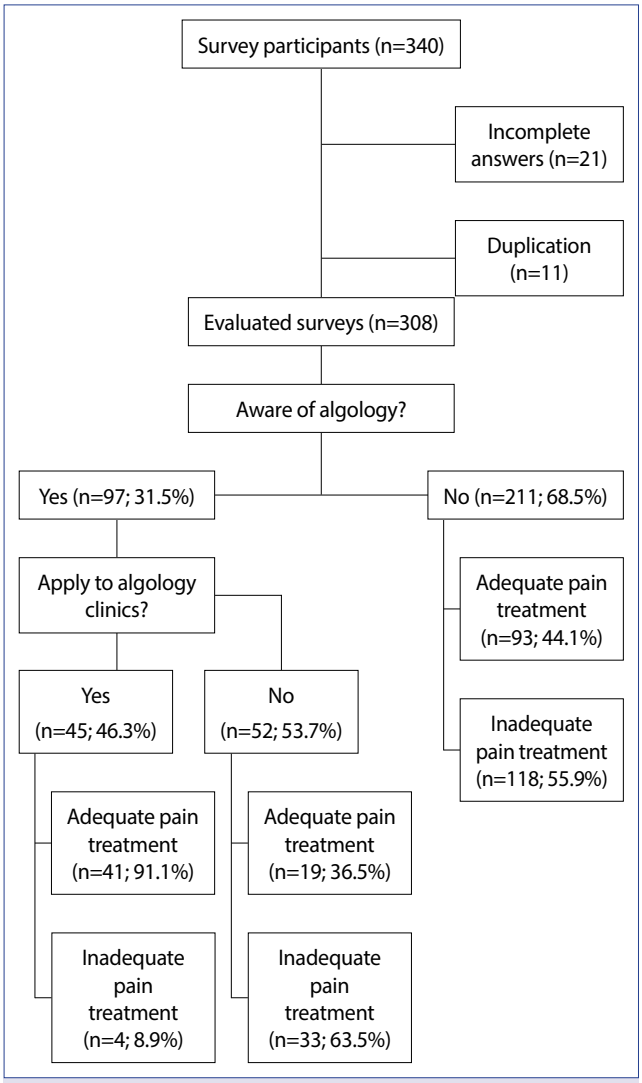

Figure 1. Flow chart of the study.

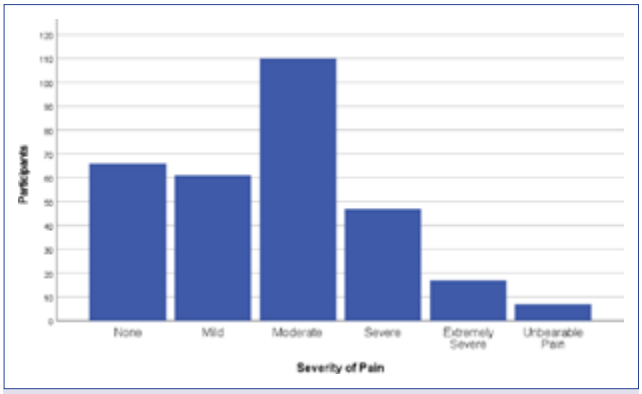

Figure 2. Distribution of pain intensity of the participants.

Among the 308 respondents included in the analysis, 21.4% (n=66) reported no pain, while 78.6% (n=242) reported that they had ongoing pain. Of those experiencing pain, 25.2% (n=61) reported mild pain, 45.5% (n=110) moderate pain, 19.4% (n=47) severe pain, 7% (n=17) extremely severe pain, and 2.9% (n=7) unbearable pain (Fig. 2).

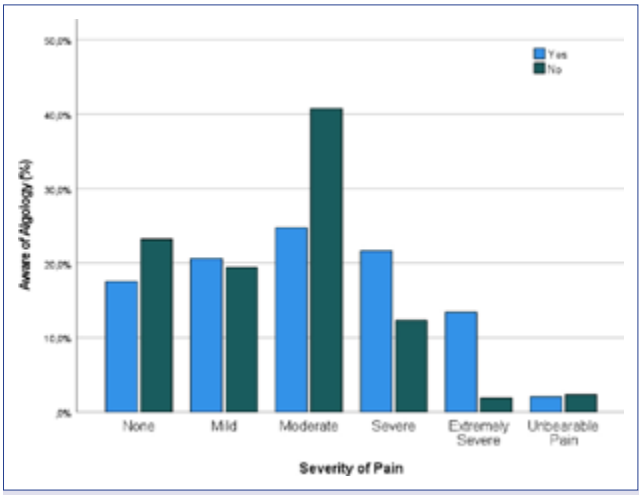

Figure 3. Relationship between pain intensity and aware of algology.

Results from the chi-square test demonstrated an association between awareness of algology and pain intensity ($p<0.001$) (Fig. 3), in particular, that awareness increased as pain increased.

The Mann–Whitney U test showed that there was a statistically significant difference in the duration of disease between the groups with and without previous knowledge about algology ($p<0.001$), and it was found that the awareness of algology was higher in those with a longer disease duration. On the last question, 82.5% of the 211 patients who did not have any prior knowledge of algology stated that they were interested in being seen after learning this information.

Discussion

Cancer pain negatively affects patients' functionality, sleep, and sociality, and therefore their overall well-being, leading to a significant decline in their quality of life. This decline, in turn, can lead to psychiatric comorbidities such as depression. The evaluation and management of pain, therefore, is critical for patients with cancer. As seen worldwide, patients in Türkiye experience numerous barriers to effective pain treatment, originating from a variety of sources including healthcare professionals, caregivers, patients, and healthcare systems. In a review of 22 studies conducted in 2017, the primary barriers to pain treatment were concerns regarding the use of opioids, lack of information about opioids, negative beliefs and attitudes, an unsupportive environment, and psychological distress.[9] One study evaluated patients' compliance among 113 patients with advanced cancer using painkillers to treat cancer pain, the results of which indicated that depression was the primary obstacle to pain management.[10] Moreover, poor medication compliance was associated with drug side effects and negative impressions of psychotropic medications.[10]

Another study, which investigated barriers to accessing opioid analgesics for the management of cancer pain from the healthcare worker's perspective, found that the primary barriers were related to regulatory, systemic, educational, patient-related, and societal factors. The primary barriers relate to the lack of understanding about cancer pain management. Such barriers, therefore, can be overcome through increased awareness and education.[11]

In 2023, a study that evaluated patient-related barriers in Turkish patients reported that the primary patient-related barriers were addiction and fear of becoming dependent on drugs.[12]

Cancer pain, which can be managed using conservative, medical, and interventional methods, is one of the most problematic chronic pain conditions addressed in algology clinics, a separate branch of pain management in Türkiye. Algologists typically manage cancer pain according to the WHO stepwise treatment, while interventional treatment strategies are utilized when required but before the patient's general condition worsens.[13,14]

Of the cancer patients who underwent pain treatment in Türkiye, >50% experienced moderate-to-severe pain.[7] Opioids, one of the primary treatment options for cancer pain, are generally not adequately prescribed, or if initially prescribed appropriately, the dosages are not reviewed and increased as required.[9,11] Patients', as well as the treating physicians', concerns about side effects are quite significant.[9,10] These barriers, therefore, prove the importance of accepting algology as a primary discipline in the management of cancer pain. Algologists may contribute to overcoming these barriers to the treatment process by prescribing opioids appropriately, while alleviating patient concerns, as well as those of their families and relatives, by providing adequate information surrounding the treatment regimens

involving opioids. In certain cases, epidural/spinal catheters or port/pump procedures may be utilized in patients in order to reduce opioid dosages, such as when patients are unable to tolerate the side effects of opioids. Algologists are also authorized to perform interventional pain management through neurolytic and radiofrequency ablation procedures, when necessary.[4,13]

Çalışkan et al.[8] previously demonstrated the important role of algology clinics in the management of cancer pain. The results of the present study support these findings and showed that 91.1% of patients who were treated at algology clinics reported adequate pain treatment. Of note, the results of the present study demonstrated that awareness of algology increased with the severity of pain and cancer duration. We found, however, that only 31% of our patients had knowledge about algology and, of those patients, only 46.3% had previously applied to an algology clinic, while 42.2% did not know how to apply. Better education on this subject may increase the follow-up rate of cancer patients in algology clinics.

One of the reasons for the lack of awareness of algology among cancer patients may be that the physicians who refer patients do not have sufficient knowledge about algology clinics and the treatments they provide. There is no particular study, however, currently investigating this subject in Türkiye.

Additionally, in the last question of the questionnaire, participants were given detailed information about algology and asked whether they would apply to an algology clinic in light of this information. Approximately 82.5% of the 211 patients who were not previously aware of algology responded that they would like to apply in the future.

The present study has some limitations. Firstly, only the pain scores of the patients were evaluated, the required number of patients was not calculated, and the medical treatments used by the patients were not classified. It was also conducted as a single-centre study without the inclusion of radiation oncology, haematology, or oncological surgery clinics. In the future, therefore, multicentre studies providing more detailed data including all cancer patients should be performed.

Conclusion

There are numerous barriers to the management of cancer pain, which can be related to patients, physicians, caregivers, and healthcare systems. The results of the present study indicate that awareness of algology among cancer patients in Türkiye is currently low. Furthermore, awareness is increased in patients with higher pain intensity and longer durations of cancer. The lack of sufficient knowledge about algology clinics and the associated lack of awareness of the treatments that are provided at these clinics may be an additional barrier to adequate pain treatment. We believe that increasing awareness of algology in cancer patients may contribute to more effective results in the management of cancer pain.

Ethics Committee Approval: The Başakşehir Çam and Sakura City Hospital Ethics Committee granted approval for this study (date: 27.11.2023, number: 22.11.2023.588).

Authorship Contributions: Concept – TTS; Design – TTS, BE, DGKB; Supervision – TTS; Resource – HİO, BE; Materials – TTS, BE; Data collection and/or processing – TTS, BE, HİO; Analysis and/or interpretation – TTS, DGKB; Literature review – TTS; Writing – TTS; Critical review – TTS, BE, DGKB.

Conflict-of-interest issues regarding the authorship or article: None declared.

Use of AI for Writing Assistance: No artificial intelligence was used.

Financial Disclosure: The authors declared that this study has received no financial support.

Peer-rewiew: Externally peer-reviewed.

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