VIA MEDICA

ORIGINAL ARTICLE

Oncology in Clinical Practice
2024, Vol. 20, No. 5, 319–326
DOI: 10.5603/ocp.96515

ISSN 2450-1654
eISSN 2450-6478

Between "opioidophobia" and the opioid crisis: a cross-sectional comparison of opinions on opioid analgesic treatment between palliative care patients with cancer and physicians in Poland

Maria Wysocka[1,2], Anna Kieszkowska-Grudny[3], Jakub Klimkiewicz[4,5], Jerzy Jarosz[6], Martyna Hordowicz[7], Andrzej Silczuk[8], Tomasz Pasierski[1], Anna Klimkiewicz[9,*]

[1]Department of Medical Ethics and Palliative Medicine, Medical University of Warsaw, Poland
[2]Hospice of St. Christopher, Warsaw, Poland
[3]Minds of Hope BezStres Institute, Warsaw, Poland
[4]Department of Anesthesiology and Intensive Care, Military Institute of Medicine — National Research Institute, Warsaw, Poland
[5]Legionowo Hospital, Military Institute of Medicine — National Research Institute, Legionowo, Poland
[6]Ewdomed, Konstancin-Jeziorna, Poland
[7]Nowowiejski Psychiatric Hospital, Warsaw, Poland
[8]Department of Environmental Psychiatry, Medical University of Warsaw, Poland
[9]Department of Psychiatry, Medical University of Warsaw, Poland

Abstract

Introduction. Inadequate pain control may contribute to a desire to die. Early use of opioid analgesics could improve pain treatment. On the other hand, opioids are associated with risk of addiction.

We aimed to compare the opinions on opioid analgesic use between palliative care patients and physicians.

Material and methods. Data on the opinions of hospice and palliative care patients (n = 104) and physicians of different specialties (n = 216) were collected using a survey with closed-ended questions scored on a 5-point Likert scale.

Results. The majority (87.5%) of cancer patients experienced pain during their illness (mean intensity: 7.01 ± 2.44). More than half (53.3%) of physicians had concerns that patients overuse opioid drugs. Negative connotations associated with the word "morphine" were expressed in both study groups. Survey responses of both patients and physicians were consistent with the phenomenon of "opioidophobia".

Conclusions. We found a high degree of consensus between cancer patients' and physicians' opinions on opioid analgesic use. However we also found some discrepancies in opinions and they were mostly related to medical knowledge, which may indicate poor patient education about opioid use and poor communication between patients and physicians. It is concerning to note these significant discrepancies concerning opioid use since patients considered opioids useful in ensuring pain relief and improving their quality of life. The majority (almost 90%) of patients surveyed struggled with pain over the course of their illness and treatment.

Keywords: analgesics, opioid, palliative care, hospices, opioid epidemic, pain

*Correspondence: Anna Klimkiewicz, MD PhD, Department of Psychiatry, Medical University of Warsaw, ul. Nowowiejska 27, 00–665 Warsaw, Poland, tel.: +48 22 825 12 36 (anna.klimkiewicz@wum.edu.pl)

Received: 14 July 2023; Accepted: 2 November 2023; Early publication: 24 November 2023

Introduction

Failure to adequately manage pain may result in reduced quality of life, deterioration of psychological functioning, increased depressive symptoms, and clinical demoralization [1]. In the years 2007–2016, the prevalence of pain in patients with advanced or terminal cancer disease increased from 64.0% to 66.4%, with similar increases noted both during anti-cancer treatment (55% to 59%) and in the post-treatment patients setting (33.0% to 39.3%) [2, 3]. A review of studies conducted from 2014 to 2020 found that the prevalence of pain during the 3-month period after anti-cancer treatment is 55% [4]. Poorly controlled pain is one of the reasons preventing patients from continuing rigorous treatment, leading to poor functioning and a desire to die [5]. This is consistent with the symptoms of a proposed "demoralization syndrome", including a sense of hopelessness, powerlessness, and loss of purpose and meaning in life. In turn, these symptoms can lead to a risk of poor long-term treatment adherence [6]. Analgesic therapy is defined as part of oncological treatment [7, 8] and supportive care has become part of the concept of patient-centered care, as proposed by the European Society for Medical Oncology [9]. Graczyk et al. [10] demonstrated the negative effect of medical consultations on the opinions and attitudes of patients concerning opioid use.

"The United States has been experiencing a drug overdose mortality epidemic marked by the introduction and spread of opioids across rural and urban communities over the past 20 years." [11]. The causes for the opioid crisis thus described are two-fold [12]. They are linked to addiction to prescribed opioids as well as to non-prescribed use. The most prevalent mechanisms are misuse of opioids prescribed as analgesics (e.g. oxykodon) and voluntary use of opioids for recreation (e.g. fentanyl). Specialists managing patients with long life expectancy are faced with the dilemma of whether to administer opioid analgesics early or undertreat pain [13, 14]. The use of opioid medications in Eastern and Southern European countries is significantly lower than in Western and Northern European countries [15]. In 2016, in the United States, new recommendations for the use of opioids in the treatment of chronic pain were issued to minimize their use in patients who do not undergo or have completed anticancer treatment [16]. The usage of opioid drugs in Poland remains low and many patients may not be receiving appropriate pain treatment despite it being legally guaranteed in Poland [17, 18]. Reports on the third wave of the opioid crisis are shaping public opinion in Poland, which is reflected in the latest guidelines and recommendations for the medical community [19, 20]. While stigmatization of opioids is common [21], there is a growing awareness of the role terminology plays when physicians refer to them while talking to patients. The recommendation is to abandon the use of such terms as "drug" and "narcotic" [22]. Patients' and physicians' perceptions can result in ineffective or inadequate treatment. This depends on, for example, whether patients report the pain they are experiencing, how adequately they describe it, whether they are willing to discuss their concerns or doubts about the dosage, and how they adhere to recommendations for long-term treatment, including skipping or adjusting dosages based on self-perceived changes in pain intensity [23]. The most common patients' opinions concerning opioid analgesics are related to fears of taking the treatment focus away from cancer and being perceived as a difficult patient as well as the belief that, as the disease progresses, pain will develop and get worse [24]. The "morphine myth" discussed in the medical literature reinforces concerns about deteriorating cognitive functioning, shortened life span, and poor therapeutic efficacy [25]. The extent to which patients share these opinions is largely dependent on the quality of communication and level of trust [26]. A systematic review published in 2017 concluded that patients and doctors often have negative attitudes concerning opioid use, a fear of addiction, intolerance, and side effects [27]. Important obstacles to opioid treatment include insufficient assessment of pain and its treatment, reluctance of patients to use opioid medications, and inadequate knowledge of medical personnel [28, 29]. Another review published in 2022 concluded that the main reason for under-treatment of cancer pain lies more in a lack of knowledge of, and confidence in, the benefits of opioid analgesics, rather than the view that patients can tolerate cancer-related pain [30]. The phenomenon of opioidophobia is defined here as an excessive fear of the risks associated with opioid agents, which prevents the appropriate use of opioid medications for medical indications. These fears can affect anyone involved in the distribution and prescribing of medicines as well as patients, their families, and members of the community [20]. A study conducted in 2015 across ten Asian countries found a discrepancy in pain assessment, whereby 88.3% of doctors reported that they had used a scale to determine pain levels, whereas 49.5% of patients reported that no scale was used in assessing their pain [30]. Other reviews also indicated potential differences in the attitudes toward opioid analgesics between doctors from different countries. Despite the prevailing reluctance to use high-dose opioids, many doctors for example in the United States are less concerned about patients becoming addicted and tend to prescribe opioids more frequently [32].

This study aimed to compare the opinions on opioid treatment between Polish oncology palliative patients and physicians.

Material and methods

This prospective study was conducted in accordance with the recommendations of the Declaration of Helsinki and after approval from the Bioethics Committee at the Medical University. The study was part of a larger research project to evaluate access to and use of opioid medicines in Poland. Therefore, in addition to the questions about opinions, the questionnaire for doctors also included questions on professional experience, drugs used, and knowledge and experience. The questionnaire for patients consisted of a section dedicated to opinions and experiences of cancer pain management. The study used the original questionnaires developed by the research team for this study. A survey (written questionnaire handed over by staff) included questions scored on a 5-point Likert scale and was conducted online among patients of the Oncology Hospice in Poland and specialist physicians between the 15th of March 2020 and the 30th of June 2020. Respondents were instructed to select the answer they most agreed with. We selected patients admitted to inpatient hospice, home hospice, and palliative care outpatient clinics of St. Christopher's Oncology Hospice Foundation (Fundacja Hospicjum Onkologiczne Św. Krzysztofa) located in Warsaw, Poland. We included 104 oncology patients (Tab. 1).

In addition to patients, we also included physicians involved in in- and out-patient primary care and hospice settings. Physicians were recruited from different regions of the country using a snowball sampling strategy, with the first participants inviting others to join the study, and these participants, in turn, inviting others, and so on.

The physician group consisted of 41 internal medicine specialists, 38 psychiatrists, 31 anesthesiologists, 28 general practitioners, 15 oncologists, 8 surgeons, 7 neurologists, 7 palliative medicine specialists, 5 neurosurgeons, 3 pediatricians, 2 geriatrics; 31 did not specify their specialization.

Participation was entirely voluntary, and the data were collected and stored anonymously. All subjects provided informed consent. Statistical analysis was performed using IBM SPSS Statistics 25 software. The Chi-squared (X^2) test was used to determine whether there were significant between-group differences for the outcome measures. The Shapiro–Wilk test was used to test for the normality of distribution of continuous numerical data, both for the total sample and in the two groups. If the data met the assumptions for normal distribution, correlations were calculated using parametric Pearson correlation coefficients. If the data were non-normal, the non-parametric Spearman rank correlation was used.

Table 1. Summary of the demographic characteristics of patients and physicians

	Patients (n = 104)	**Physicians** (n = 216)
Age, mean (SD)	70.3 (11.2)	39.1 (11.4)
Sex__male [%]	39.6	37.6
Master's degree [%]	38	100
Large town (>100k) [%]	71	93.4

SD — standard deviation

Results

Patients

Patient questionnaires explored opinions regarding their experiences of pain management and their views on opioid medications. Most cancer patients reported that they had experienced pain over the course of illness (87.5%), with mean pain severity of 7.01 ± 2.44 on the Visual Analog Scale. In total, 29.7% of patients were not offered analgesic treatment by their doctor during their illness; 44.9% said that they had sought out a prescriber of pain medication on their own. The proactive attitude of the doctors was reported by most patients (64%). However, when asked: "Did the doctor ask about pain complaints of their own initiative?", 36% of patients stated that they had not been asked. Twenty-one percent of patients claimed that their physician reacted to their concerns about ineffective pain treatment with disregard.

When asked whether the physician informed the patient about the effects of the drugs, possible side effects, and how to deal with them, 60.2% of the patients answered that they had not been informed. In addition, 13.2% of respondents were told that prematurely introduced analgesics may no longer be effective later, when they are more needed, whereas 10.2% admitted that their physician told them about the possibility of addiction or worsening of the course of the disease when using analgesics.

Only 9.1% of respondents believed that pain should be overcome without medication (answers to the questions that were identical in both surveyed groups can be found in Tab. 2). In this group, we found a weak positive correlation with the age of the subjects (r = 0.2953). A weak positive correlation was also found between the age of the respondents and the opinion that opioid analgesics can accelerate the patient's death [3.4% of respondents (r = 0.2547)] or accelerate the development of cancer [11.5% of respondents (r = 0.2034)]. The strongest positive correlation with age was found for the opinion that pain treatment with paracetamol-type drugs is sufficient for chronic pain [21.6% of respondents (r = 0.3334)]. The term "morphine" is widely misunderstood by most palliative care patients (74.5%). On the other hand, up to 83.7% of patients acknowledged that people do not understand the term opioids, and

Table 2. Positive answers for each question in both examined groups

Question	Positive answers [%]	
	Physicians	Patients
Pain management is too often exaggerated in the Polish media	12.1	26.8
Most patients can do without analgesics	20.7	14.3
Patients often exaggerate their pain	35.0	22.9
Polish people take analgesics too readily	46.3	50.5
Addiction to narcotic drugs is a big problem in Poland	30.8	24.7
The word "morphine" has a bad connotation for people	63.6	74.5
People don't understand the term opioids	51.9	83.7
Pain must be overcome without drugs	26.7	9.1
Patients are anxious about using narcotic analgesics (opioids)	59.2	64.3
Freeing the patient from pain is a moral obligation of the doctor	63.6	93.7
Opioid drugs are only for the treatment of severe acute pain	19.2	37.8
Treatment of various types of pain with opioids can only be short-term	16.0	23.2
Treatment of pain with opioids may accelerate cancer growth	19.7	11.5
Treating pain with opioids is a "necessary evil" or "lesser evil"	20.0	47.5
Pain treatment with paracetamol/ibuprofen is sufficient even for chronic pain	15.9	21.6
Use of narcotic analgesics quickly leads to addiction	26.7	35.4
Making medical cannabis legal helps to choose the optimal treatment	40.7	56.2
Narcotic pain medications may hasten the patient's death	30.8	13.4
Narcotic analgesics improve patients' quality of life	83.6	69.1
Opioid medication provides an opportunity to live a normal life and be active despite the disease	63.2	68.7

11.5% of patients agreed with the statement that opioid treatment of pain can accelerate the growth of cancer. Overall, 64.3% of the respondents agreed with the statement that "patients are afraid of using narcotic analgesics (opioids)"; 32.7% believed that "narcotic painkillers (opioids) are dangerous for people", and 25% thought that "they should only be used in the last phase of the illness". In total, 35.5% of patients believed that the use of opioid analgesics quickly leads to dependence, and 24.7% of patients considered drug dependence to be a big problem in Poland. Altogether, 69.1% of patients who have experienced palliative care stated that narcotic analgesics improved their quality of life and that these medications provide an opportunity to live a normal life and be active despite the illness (68.8%).

Physicians

In the questionnaire for doctors, we used for this analysis the questions about their opinions on opioid medicine use, mainly from the section entitled "Opinions". This was the final part of the survey, which was preceded by sections on "professional experiences", "medication choices", "impediments and concerns", "perceived efficacy and recommendations", and "regulation and administration constraints". Overall, 34.3% of studied physicians received training in palliative medicine or pain therapy, and only 9.4% reported that they had never dealt with cancer patients who experienced chronic cancer pain. The remaining majority dealt with such patients (42% several times a year, 24.1% several times a month, 9.4% several times a week, 15.1% daily). Almost eight percent (7.9%) of physicians felt "strongly competent" to treat pain with opioids, and 37.9% felt "quite competent". The answer "neither yes nor no" was selected by 16.8% of respondents. Sixteen percent of physicians agreed with the statement that "most patients can do without analgesics", and 4.7% answered, "I fully agree". In addition, 35% of respondents noted that "patients often exaggerate their pain", and 46.3% claimed that patients take painkillers too readily. Overall, 26.7% of physicians expressed the opinion that pain should be overcome without drugs, and 15.9% said that pain treatment with paracetamol/ibuprofen is sufficient even for chronic pain, while 33.2% had no opinion on this matter. As a reasonable measure of pain that can replace descriptive self-assessment by the patient, 11.2% of physicians regarded assessment by a doctor or nurse as a viable alternative, while 19.6% had no opinion on the matter. The statement "treatment of pain with opioids may accelerate the development of cancer" was selected by 19.8% of physicians as consistent with their opinion. In addition, 26.7% agreed that "taking narcotic painkillers quickly leads to addiction", and 30.9% agreed that "narcotic painkillers can hasten the patient's death". More than half (59.1%) of physicians agreed that patients are afraid of using opioid analgesics; 72.9% believed that patients were afraid of becoming addicted, while 53.3% of physicians expressed fear that patients would use opioids for purposes other than treatment. Furthermore, 33.3% of respondents found chronic prescription of opioids to be burdensome for physicians. Increased administrative burdens were cited by 33.7% of physicians as

Table 3. Summary of the linear relationships between patient and physician responses to closed-ended questions

Subject of correlations	Test statistics-statistic	
Pain management is too often exaggerated in the Polish media	Pearson correlation	0.675
Most patients can do without analgesics	Pearson correlation	0.566
Patients often exaggerate about their pain	Pearson correlation	0.273
Polish people take analgesics too readily	Pearson correlation	0.767
Addiction to narcotic drugs is a big problem in Poland	Pearson correlation	0.912
The word "morphine" has a bad connotation for people	Spearman correlation	0.8
People don't understand the term opioids	Pearson correlation	0.771
Pain must be overcome without drugs	Pearson correlation	0.745
Patients are anxious about using narcotic analgesics (opioids)	Pearson correlation	0.75
Freeing the patient from pain is a moral obligation of the doctor	Spearman correlation	0.872
Opioid drugs are only for the treatment of severe acute pain	Pearson correlation	–0.268
Treatment of various types of pain with opioids can only be short-term	Pearson correlation	0.323
Treatment of pain with opioids may accelerate cancer growth	Pearson correlation	0.077
Treating pain with opioids is a "necessary evil" or "lesser evil"	Pearson correlation	–0.116
Pain treatment with paracetamol/ibuprofen is sufficient even for chronic pain	Pearson correlation	0.382
Use of narcotic analgesics quickly leads to addiction	Pearson correlation	0.906
Making medical cannabis legal helps to choose the optimal treatment	Pearson correlation	0.765
Narcotic pain medications may hasten the patient's death	Pearson correlation	0.961
Narcotic analgesics improve patients' quality of life	Pearson correlation	0.874
Opioid medication provides an opportunity to live a normal life and be active despite the disease	Pearson correlation	0.779

Numbers close to +1.0 mean positive correlation toward physicians, numbers close to –1.0 mean negative correlation toward physicians

a reason for not prescribing opioid analgesics; fear of an audit by the National Health Fund (the government organization that oversees healthcare) held back 30% of physicians, while problems with administrative oversight of drug distribution held back 25.7%. Also, 27.3% of physicians chose not to prescribe opioids to avoid problems with the patient's family, and 20.6% to avoid problems with the patient.

The relationship between patients' and physicians' responses

Since physician-patient responses were not coordinated and the number of respondents differed between the two groups it was not possible to examine point correlations. The response distributions of these two groups were compared, and the correlation of the distributions for the whole group and individual subgroups was checked (Tab. 3).

The strongest positive correlations across the patient and physician groups were for opinions about the danger of opioid use in pain management. These included the beliefs that opioid narcotics may hasten the patient's death (r = 0.961); that addiction to opioid analgesics is a big problem in Poland (r = 0.912); and that the use of opioid analgesics quickly leads to addiction (r = 0.906). The weakest correlation was found for opinions concerning the suitability of opioid use, including the opinions that patients often exaggerate their pain (r = 0.272). There was a weak negative correlation for the statement that opioids are only for treating severe acute pain (r = –0.268). The study found the weakest negative correlation between opinions that opioid pain management is a "necessary evil" or a "lesser evil".

Discussion

We found that "opioidophobia" (i.e., the belief that opioids are harmful and dangerous in addition to their therapeutic value) was shared to a large extent by patients and physicians. There was significant similarity in responses to questions on this issue among physicians and patients. Furthermore, we also found that 87.5% of patients experienced pain over the course of their illness, with a mean pain intensity of 7.01 ± 2.44 on the Visual Analog Scale. These values are higher than those reported in a worldwide review of previous years 2005–2015 (4117 studies), where 55.0% of patients reported pain during anti-cancer treatment, and 66.4% reported pain during the advanced phases of the illness [33]. A systematic review of studies showed a strong effect of physician-patient and family interactions on the acceptance of an opioid-based treatment regimen [34]. In the treatment of cancer, recommendations for patient education by medical staff are well-defined; they are considered very effective, which can contribute to high treatment adherence. The medical community, rather than the public, is best suited to respond to the challenges of the opioid crisis, not only in terms of reducing its burden but also by providing, and in some countries restoring, adequate pain treatment for patients [35]. Future studies

of analgesic treatment consistent with opioid reduction recommendations and subsequent modifications will allow for full assessment of their impact on patient experiences in countries such as Poland, where the opioid epidemic has not developed [36]. It cannot be excluded that the caution and distrust of Polish physicians towards opioids as evident in this study may be reinforced by the multiplicity and variability of recommendations related to the opioid crisis. Furthermore, the physicians' concern expressed about patients using opioids for purposes other than medical treatment may indicate either a lack of doctors' confidence in the adequacy of their assessment of pain, the low efficacy of opioids for pain management, other opioids' potential for abuse and patients' rapid addiction. These findings are in agreement with prior reviews about incorrect pain assessment and documentation of pain levels, errors in treatment, and limited patient education as major barriers to adequate pain management [37, 38].

Another important cause of concern about non-medical opioid use expressed by most physicians in this study (53.3%) was the potential for abuse. Stigmatization of patients undergoing opioid-based treatment has its historical roots in the use of morphine and opium in Europe during the late 19th and early 20th centuries [39]. This view was also expressed by patients in our study when they described their interactions with pain management practitioners. Physicians' opinions concerning administrative difficulties and threats of regulatory supervision were comparable to concerns raised by the patient and their family when opioid analgesics are prescribed. We found that the threat of addiction was shared to a similar degree by both patients and physicians. This is in line with reviews conducted over the past 20 years indicating an increase in the prevalence of opioid abuse [40]. The negative connotations associated with the word "morphine" were expressed in both study groups. In the context of fear of addiction, this confirms the stigmatization of patients using opioid analgesics.

However, the greatest discrepancy between the two groups was found in the belief that pain treatment can accelerate cancer development, with nearly a fifth of doctors (19.8%) agreeing with this statement compared to only about a tenth of patients (11.5%), and nearly half (47.9%) of patients stating that they had no opinion on the matter. The least commonly shared opinions between the groups were those related to the legitimacy of opioid use in pain management. Questions related to the type of pain requiring opioid use may be due to lack of patient medical knowledge on this matter. The opinions related to the low reliability of patients' assessment of pain intensity may reflect physicians' lack of trust in their patients. It could be also related to patients' fear of being stigmatized as addicts aiming to use opioids for purposes other than analgesia. We found the greatest divergence of opinion between patients and physicians was evident in the statement that opioid pain treatment is a "necessary evil" or "lesser evil". In total, 42.3% of patients agreed with this statement, compared to only 10.7% of doctors.

One reason for the discrepancies found in our study may be attributable to patients not being aware of the difficulties of treating side effects related to opioid use. Another reason may be that patients in pain are willing to use opioids despite their opinions and fears. Similar findings were reported in US studies [40]. The treatment of bothersome cancer-related symptoms and treatment-related side effects to improve patient quality of life is the main goal of palliative medicine [41]. An approach that weighs the potential risks and benefits of opioid medications, not only in one-off interventions but in chronic treatment, may alleviate both opiodophobia and the opioid crisis [42].

In Poland, patients with cancer are usually provided with palliative care after completion of the causative treatment and only at the end of life. The aging of the population and longer life expectancy in cancer patients bring new challenges in this area.

This study has several limitations, the most important of which is the difference in sample sizes of the studied groups. In particular, the group of physicians was twice as large as the patient group, which limited the possibility of drawing accurate conclusions concerning comparisons and correlations between the two groups. The retrospective nature of the study and reviews of pain management over the course of illness are also important limitations. This may have led to the over-representation of responses associated with strong negative experiences, and the weaker representation of responses associated with memories of pain that fade over time. Even though every effort was made to draw conclusions based on sound statistical analysis, the answers provided by respondents may not have been necessarily consistent with factual evidence.

Conclusions

In conclusion, we found a high degree of consensus on opioid analgesic use between cancer patients and physicians. The opinions of physicians showed considerable convergence. The greatest discrepancies in opinions were related to medical knowledge, which may indicate poor patient education about opioid use and poor communication between patients and physicians. It is concerning to note that there are significant discrepancies concerning opioid use since patients consider opioids as useful to ensure pain relief and improve quality of life. The majority (almost 90%) of patients surveyed struggled with pain over the course of their illness and treatment.

Article Information and Declarations

Data availability statement

Data owned by National Bureau for Drug Prevention.

Ethics statement

The study was conducted in accordance with the recommendations of the Declaration of Helsinki and after approval from the Bioethics Committee at the Medical University of Warsaw.

Author contributions

All authors read and approved the manuscript and made significant contributions to the conception, design, collection, analysis, or interpretation of the data.

Funding

This study was funded by the National Bureau for Drug Prevention No 123/BO/H13/2020.

Acknowledgements

None.

Conflict of interest

All authors declare no conflict of interest.

Supplementary material

None.

References

1. Robinson S, Kissane D, Brooker J, et al. A Systematic Review of the Demoralization Syndrome in Individuals With Progressive Disease and Cancer: A Decade of Research. J Pain Symptom Manage. 2015; 49(3): 595–610, doi: 10.1016/j.jpainsymman.2014.07.008, indexed in Pubmed: 25131888.
2. Everdingen Mvv, Hochstenbach L, Joosten E, et al. Update on Prevalence of Pain in Patients With Cancer: Systematic Review and Meta-Analysis. J Pain Symptom Manage. 2016; 51(6): 1070–1090.e9, doi: 10.1016/j.jpainsymman.2015.12.340, indexed in Pubmed: 27112310.
3. Everdingen Mvv, Rijke JMde, Kessels AG, et al. Prevalence of pain in patients with cancer: a systematic review of the past 40 years. Ann Oncol. 2007; 18(9): 1437–1449, doi: 10.1093/annonc/mdm056, indexed in Pubmed: 17355955.
4. Evenepoel M, Haenen V, Baerdemaecker TDe, et al. Pain Prevalence During Cancer Treatment: A Systematic Review and Meta-Analysis. J Pain Symptom Manage. 2022; 63(3): e317–e335, doi: 10.1016/j.jpainsymman.2021.09.011, indexed in Pubmed: 34563628.
5. Bail J, Traeger L, Pirl W, et al. Psychological Symptoms in Advanced Cancer. Semin Oncol Nurs. 2018; 34(3): 241–251, doi: 10.1016/j.soncn.2018.06.005, indexed in Pubmed: 30100372.
6. Makhlouf S, Pini S, Ahmed S, et al. Managing Pain in People with Cancer—a Systematic Review of the Attitudes and Knowledge of Professionals, Patients, Caregivers and Public. J Cancer Educ. 2019; 35(2): 214–240, doi: 10.1007/s13187-019-01548-9, indexed in Pubmed: 31119708.
7. Paice J, Bohlke K, Barton D, et al. Use of Opioids for Adults With Pain From Cancer or Cancer Treatment: ASCO Guideline. J Clin Oncol. 2023; 41(4): 914–930, doi: 10.1200/jco.22.02198, indexed in Pubmed: 36469839.
8. Chapman E, Edwards Z, Boland J, et al. Practice review: Evidence-based and effective management of pain in patients with advanced cancer. Palliat Med. 2020; 34(4): 444–453, doi: 10.1177/0269216319896955, indexed in Pubmed: 31980005.
9. Jordan K, Aapro M, Kaasa S, et al. European Society for Medical Oncology (ESMO) position paper on supportive and palliative care. Ann Oncol. 2018; 29(1): 36–43, doi: 10.1093/annonc/mdx757, indexed in Pubmed: 29253069.
10. Graczyk M, Borkowska A, Krajnik M. Why patients are afraid of opioid analgesics - study on opioid perception in patients treated for chronic pain. Pol Arch Intern Med. 2018; 128(2): 89–97, doi: 10.20452/pamw.4167, indexed in Pubmed: 29240048.
11. https://www.ers.usda.gov/webdocs/publications/100833/err-287.pdf.
12. Higgins C, Smith BH, Matthews K. Incidence of iatrogenic opioid dependence or abuse in patients with pain who were exposed to opioid analgesic therapy: a systematic review and meta-analysis. Br J Anaesth. 2018; 120(6): 1335–1344, doi: 10.1016/j.bja.2018.03.009, indexed in Pubmed: 29793599.
13. Gaertner J, Boehlke C, II CS, et al. Early palliative care and the opioid crisis: ten pragmatic steps towards a more rational use of opioids. Ann Palliat Med. 2019; 8(4): 490–497, doi: 10.21037/apm.2019.08.01, indexed in Pubmed: 31431028.
14. Wright E, El-Jawahri A, Temel J, et al. Patient Patterns and Perspectives on Using Opioid Regimens for Chronic Cancer Pain. J Pain Symptom Manage. 2019; 57(6): 1062–1070, doi: 10.1016/j.jpainsymman.2019.02.023, indexed in Pubmed: 30831237.
15. Bosetti C, Santucci C, Radrezza S, et al. Trends in the consumption of opioids for the treatment of severe pain in Europe, 1990–2016. Eur J Pain. 2018; 23(4): 697–707, doi: 10.1002/ejp.1337, indexed in Pubmed: 30407692.
16. Agarwal A, Roberts A, Dusetzina S, et al. Changes in Opioid Prescribing Patterns Among Generalists and Oncologists for Medicare Part D Beneficiaries From 2013 to 2017. JAMA Oncol. 2020; 6(8): 1271–1274, doi: 10.1001/jamaoncol.2020.2211, indexed in Pubmed: 32469405.
17. Arias-Casais, N (Natalia), et al. (1970) EAPC Atlas of palliative care in Europe 2019, DADUN. https://dadun.unav.edu/handle/10171/56787 (8.07.2023).
18. Zimmermann A, et al. Patient's right to pain treatment. Palliat Med Pract. 2018; 12(1): 21–29.
19. Krajnik M, Currow D, Sobański P. Appropriate pharmacotherapy at the end of life: prescribing safely and only what is needed as part of whole-person care. Pol Arch Intern Med. 2019; 129(10): 654–656, doi: 10.20452/pamw.15037, indexed in Pubmed: 31670723.
20. Wordliczek J, Kotlińska-Lemieszek A, Leppert W, et al. Pharmacotherapy of pain in cancer patients – recommendations of the Polish Association for the Study of Pain, Polish Society of Palliative Medicine, Polish Society of Oncology, Polish Society of Family Medicine, and Polish Society of Anaesthesiology and Intensive Therapy. BÓL. 2018; 18(3): 11–53, doi: 10.5604/01.3001.0010.8160.
21. Bulls H, Chu E, Goodin B, et al. Framework for opioid stigma in cancer pain. Pain. 2021; 163(2): e182–e189, doi: 10.1097/j.pain.0000000000002343, indexed in Pubmed: 34010940.
22. Leppert W, Pyszkowska J, Stachowiak A, et al. Access to the treatment with opioid analgesics in Poland – on the basis of a Conference "ATOME: Polish National Symposium on Access to Opioid Medication". Medycyna Paliatywna/Palliative Medicine. 2015; 7(1): 84–89.
23. Wright E, El-Jawahri A, Temel J, et al. Patient Patterns and Perspectives on Using Opioid Regimens for Chronic Cancer Pain. J Pain Symptom Manage. 2019; 57(6): 1062–1070, doi: 10.1016/j.jpainsymman.2019.02.023, indexed in Pubmed: 30831237.
24. Jacobsen R, Møldrup C, Christrup L, et al. Patient-related barriers to cancer pain management: a systematic exploratory review. Scand J Caring Sci. 2009; 23(1): 190–208, doi: 10.1111/j.1471-6712.2008.00601.x, indexed in Pubmed: 18785917.
25. Nijs J, Roose E, Lahousse A, et al. Pain and Opioid Use in Cancer Survivors: A Practical Guide to Account for Perceived Injustice. Pain Physician. 2021; 24(5): 309–317, doi: 10.36076/ppj.2021.24.309, indexed in Pubmed: 34323432.
26. Ho JF, Yaakup H, Low GS, et al. Morphine use for cancer pain: A strong analgesic used only at the end of life? A qualitative study on attitudes and perceptions of morphine in patients with advanced cancer and their caregivers. Palliat Med. 2020; 34(5):

619–629, doi: 10.1177/0269216320904905, indexed in Pubmed: 32103707.
27. Gunnarsdottir S, Sigurdardottir V, Kloke M, et al. A multicenter study of attitudinal barriers to cancer pain management. Support Care Cancer. 2017; 25(11): 3595–3602, doi: 10.1007/s00520-017-3791-8, indexed in Pubmed: 28653107.
28. Snijders R, Brom L, Theunissen M, et al. Update on Prevalence of Pain in Patients with Cancer 2022: A Systematic Literature Review and Meta-Analysis. Cancers (Basel). 2023; 15(3): 591, doi: 10.3390/cancers15030591, indexed in Pubmed: 36765547.
29. Makhlouf S, Pini S, Ahmed S, et al. Managing Pain in People with Cancer—a Systematic Review of the Attitudes and Knowledge of Professionals, Patients, Caregivers and Public. J Cancer Educ. 2019; 35(2): 214–240, doi: 10.1007/s13187-019-01548-9, indexed in Pubmed: 31119708.
30. Dzierzanowski T, Kozlowski M. Opioid prescribing attitudes of palliative care physicians versus other specialists: a questionnaire-based survey. Postgrad Med J. 2022; 98(1156): 119–123, doi: 10.1136/postgradmedj-2020-139152, indexed in Pubmed: 33414178.
31. Kim YC, Ahn JS, Calimag MM, et al. ACHEON Working Group. Current practices in cancer pain management in Asia: a survey of patients and physicians across 10 countries. Cancer Med. 2015; 4(8): 1196–1204, doi: 10.1002/cam4.471, indexed in Pubmed: 25914253.
32. Rash JA, Buckley N, Busse JW, et al. Healthcare provider knowledge, attitudes, beliefs, and practices surrounding the prescription of opioids for chronic non-cancer pain in North America: protocol for a mixed-method systematic review. Syst Rev. 2018; 7(1): 189, doi: 10.1186/s13643-018-0858-7, indexed in Pubmed: 30424800.
33. van den Beuken-van Everdingen MHJ, Hochstenbach LMJ, Joosten EAJ, et al. Update on Prevalence of Pain in Patients With Cancer: Systematic Review and Meta-Analysis. J Pain Symptom Manage. 2016; 51(6): 1070–1090.e9, doi: 10.1016/j.jpainsymman.2015.12.340, indexed in Pubmed: 27112310.
34. Reedy F, Pearson M, Greenley S, et al. Professionals', patients' and families' views on the use of opioids for chronic breathlessness: A systematic review using the framework method and pillar process. Palliat Med. 2021; 35(8): 1421–1433, doi: 10.1177/02692163211032114, indexed in Pubmed: 34304624.
35. Opioids and Cancer Pain: Patient Needs and Access Challenges. J Oncol Pract. 2019; 15(5): 225, doi: 10.1200/JOP.19.00050, indexed in Pubmed: 31013180.
36. Webinar Thursday, November 17, 2022 - new 2022 CDC clinical practice guideline for prescribing opioids for pain (2022) Centers for Disease Control and Prevention. https://emergency.cdc.gov/coca/calls/2022/callinfo_111722.asp (08.07.2023).
37. Lee YJ, Rosenberg C. Improving Perioperative Pain Education for Patients Prescribed Opioids: An Integrative Review. Pain Manag Nurs. 2023; 24(5): 479–485, doi: 10.1016/j.pmn.2023.04.009, indexed in Pubmed: 37164779.
38. Edwards H, Bennett M. Access to Opioids for Patients with Advanced Disease. Curr Pharm Des. 2019; 25(30): 3203–3208, doi: 10.2174/1381612825666190716095337, indexed in Pubmed: 31333089.
39. Gaertner J, Boehlke C, Simone CB, et al. Early palliative care and the opioid crisis: ten pragmatic steps towards a more rational use of opioids. Ann Palliat Med. 2019; 8(4): 490–497, doi: 10.21037/apm.2019.08.01, indexed in Pubmed: 31431028.
40. Kwekkeboom K, Serlin RC, Ward SE, et al. Revisiting patient-related barriers to cancer pain management in the context of the US opioid crisis. Pain. 2021; 162(6): 1840–1847, doi: 10.1097/j.pain.0000000000002173, indexed in Pubmed: 33337597.
41. Fredheim OM, Skurtveit S, Sjøgren P, et al. Prescriptions of analgesics during chronic cancer disease trajectories: A complete national cohort study. Pharmacoepidemiol Drug Saf. 2021; 30(11): 1504–1513, doi: 10.1002/pds.5329, indexed in Pubmed: 34251721.
42. Knaul FM, Farmer PE, Krakauer EL, et al. Lancet Commission on Palliative Care and Pain Relief Study Group. Alleviating the access abyss in palliative care and pain relief-an imperative of universal health coverage: the Lancet Commission report. Lancet. 2018; 391(10128): 1391–1454, doi: 10.1016/S0140-6736(17)32513-8, indexed in Pubmed: 29032993.