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Research Article

Exploring the Current Situation of Cancer Patients' Management from Physicians' Perspective: A Qualitative Study

Thukaa Abdul Ameer Alshaybaany[1], Basma Zuheir Al-Metwali[2]*
[1]*Department of Oncology, Kerbala Teaching Hospital for Children, Kerbala, Iraq;* [2] *Department of Clinical Pharmacy, College of Pharmacy, University of Baghdad, Baghdad, Iraq*
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Abstract

Background: Cancer is rising as a significant global public health concern. The global cancer burden is escalating, exerting considerable physical, emotional, and financial strain on people, families, communities, and healthcare systems. ***Objective***: To explore the challenges faced in cancer management from the perspectives of physicians. ***Methods***: A qualitative study was conducted between November 2024 and February 2025. Physicians were recruited from three different centers in Baghdad and Karbala using purposive and snowball sampling. The data collection was concluded upon reaching a saturation point. ***Results***: This study included twenty-six oncologists. There was about parity between the two genders, with a slight male predominance. Thematic analysis identified seven principal themes. The initial theme addressed limits within the healthcare system, encompassing five subthemes, while the subsequent theme focused on ways for managing treatment shortages, comprising one subtheme. The third theme encompassed communication skills in cancer care, which included three subthemes, while the fourth theme addressed obstacles related to patients' adherence, encompassing four subthemes. The fifth theme was supportive care management, encompassing two subthemes. The sixth theme was the Impact of Challenges on Cancer Care, which encompassed two subthemes. Lastly, the physicians' recommendations encompassed three subthemes. ***Conclusions***: Cancer care is a complicated and changing domain encumbered by various obstacles. Resolving these complex difficulties necessitates a collaborative, interdisciplinary strategy that emphasizes early detection, patient-centered care, and ongoing professional education. More facilities should be available to improve access to treatment.

Keywords: Cancer, Challenges, Current situation, Multicenter, Physicians.

استكشاف الوضع الحالي لعلاج مرضى السرطان من وجهة نظر الأطباء: دراسة نوعية

الخلاصة

الخلفية: السرطان آخذ في الارتفاع باعتباره مصدر قلق عالمي كبير للصحة العامة. يتصاعد عبء السرطان العالمي، مما يمارس ضغوطا جسدية وعاطفية ومالية كبيرة على الناس والأسر والمجتمعات وأنظمة الرعاية الصحية. **الهدف**: استكشاف التحديات التي تواجه إدارة السرطان من وجهة نظر الأطباء. **الطرائق**: أجريت دراسة نوعية بين نوفمبر 2024 وفبراير 2025. تم تجنيد الأطباء من ثلاثة مراكز مختلفة في بغداد وكربلاء باستخدام أخذ عينات هادفة وكرة ثلجية. تم الانتهاء من جمع البيانات عند الوصول إلى نقطة التشبع. **النتائج**: شملت هذه الدراسة ستة وعشرين طبيب أورام. كان هناك تكافؤ بين الجنسين، مع هيمنة ذكورية طفيفة. حدد التحليل المواضيعي سبعة مواضيع رئيسية. وتناول الموضوع الأولي الحدود داخل نظام الرعاية الصحية، ويشمل خمسة مواضيع فرعية، بينما ركز الموضوع اللاحق على طرق إدارة النقص في العلاج، ويتألف من موضوع فرعي واحد. وشمل المحور الثالث مهارات الاتصال في رعاية مرضى السرطان، والتي تضمنت ثلاثة محاور فرعية، بينما تناول المحور الرابع المعوقات المتعلقة بالتزام المرضى، ويشمل أربعة محاور فرعية. كان الموضوع الخامس هو إدارة الرعاية الداعمة ، والتي تشمل موضوعين فرعيين. كان الموضوع السادس هو تأثير التحديات على رعاية مرضى السرطان، والذي تضمن موضوعين فرعيين. أخيرا، تضمنت توصيات الأطباء ثلاثة مواضيع فرعية. **الاستنتاجات**: رعاية مرضى السرطان هي مجال معقد ومتغير ترهق بعقبات مختلفة، ويتطلب حل هذه الصعوبات المعقدة استراتيجية تعاونية متعددة التخصصات تؤكد على الكشف المبكر والرعاية التي تركز على المريض والتعليم المهني المستمر. يجب توفير المزيد من المرافق لتحسين الوصول إلى العلاج.

* ***Corresponding author***: Basma Z. Al-Metwali, Department of Clinical Pharmacy, College of Pharmacy, University of Baghdad, Baghdad, Iraq; Email: basma.naji@copharm.uobaghdad.edu.iq
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INTRODUCTION

Cancer is rising as a significant global public health concern [1]. It is expected that the worldwide cancer burden will be 28.4 million cases by 2040, representing a 47% increase from 2020 [2]. In 2022, the Iraqi Cancer Registry (ICR) documented 39,068 new cancer cases, with a total cancer mortality of 11,421 [3]. Additionally, the global cancer burden is escalating, exerting considerable physical, emotional, and financial strain on people, families, communities, and healthcare systems [4]. The worldwide drug shortage is a concern impacting countries across all income levels, including low, middle, and high-income nations. All categories of pharmaceuticals, including vital life-saving medications, cancer agents, antimicrobial treatments, analgesics, opioids, cardiovascular drugs, radiopharmaceuticals, and

parenteral goods, are susceptible to shortages [5]. Likewise, Iraq Pharmaceutical Country Profile 2020 corroborated the inadequacy of essential medicines in public healthcare institutions [6,7]. A qualitative study in Iraq revealed that most pharmacist participants reported a shortage of pharmaceuticals in public hospitals, particularly in life-saving treatments [8]. Alongside treatment-related obstacles, diagnostic tools also represent a considerable issue. A qualitative study in South Africa found that factors at the patient level that affect the time to diagnosis include financial constraints, patients' nonattendance, and delays in seeking care. Factors related to healthcare providers and systems encompassed training requirements, insufficient awareness of protocols, inadequate and unsatisfactory clinical evaluations, overarching socio-economic conditions, and resource constraints [9]. The diagnosis and treatment of cancer with an unclear primary origin, when the fundamental anatomical site of tumor formation is undetermined, poses challenges due to late presentation, diagnostic complexities, and restricted, non-selective therapeutic alternatives [10]. A previous study in Iraq found that most participating physicians identified shortages in treatment and investigation/laboratory materials and low patient adherence as significant obstacles to implementing guidelines [11]. A qualitative study was conducted in Erbil, Kurdistan Region of Iraq, to examine the obstacles to implementing and the effectiveness of the cervical cancer prevention initiative within the region's healthcare system. The study revealed three primary areas of concern: the lack of an official reminder system, the necessity for improved public information distribution activities, and the infrastructure of healthcare institutions [12]. The obstacles to cancer care in Iraq remain unidentified, and comprehending the burden is essential for enhancing patient outcomes and care provision. To the best of our knowledge, no previous research has been conducted in Iraq to explore the challenges faced by physicians during cancer treatment. Therefore, the current study aimed to explore the current situation in cancer management from the perspective of oncologists working in Iraq.

METHODS

Study design

A qualitative study was conducted from November 2024 to February 2025 at the Imam Al-Hussein Center for Cancer and Hematology and Imam Al-Hassan Al-Mujtaba Teaching Hospital in Karbala Governorate, along with Al-Jawad Oncology Center, Al-Kadhimain Medical City, Baghdad.

Sampling strategies

Purposive and snowball sampling were adopted. The data collection was concluded upon reaching a saturation point, indicating that new participants provided identical responses and further data acquisition would not result in significant insights.

Inclusion criteria

Consultant physicians involved in cancer management who are willing to participate in the study. Permanent doctors working at the centers that are involved in direct cancer management.

Exclusion Criteria

Intern doctors and physicians who are not directly involved in patient care, such as consultants who do not actively treat cancer patients. Physicians unwilling to participate in the study.

Study procedure

Physicians' viewpoints were gathered via face-to-face, semi-structured interviews with prospective study participants. Each interview lasted 15 to 30 minutes. The interviews were audio recorded and conducted in the consultation room, a private clinic, or in the workplace. All interviews were transcribed verbatim into English.

Thematic analysis

According to Braun and Clarke's six-step thematic analysis framework [13]. The data analysis employed a theme analysis methodology. Upon transcribing the interviews, the researcher engaged with the text and commenced coding pertinent phrases and concepts associated with the study questions. Associated codes were categorized into overarching topics. The themes were evaluated and enhanced to ensure they appropriately represent participants' experiences, and findings are presented with illustrative quotations to substantiate each theme.

Ethical considerations

The study protocol received approval from the Scientific and Ethics Committee of the University of Baghdad/College of Pharmacy and the Iraqi Ministry of Health. The privacy and confidentiality of all participants and patients' information were protected.

RESULTS

This study recruited twenty-six oncologists. Participants were recruited from three centers: 7 from Imam Al-Hussein Center, 7 from Imam Al-Hassan Al-Mujtaba Teaching Hospital, and 12 from Al-Jawad Oncology Center. There was about parity between the two sexes, with a slight male predominance: 16 males and 11 females. Most participants had a minimum of a decade of clinical experience (76.9%), and more than half (69.2%) possessed a board certificate in oncology, as shown in Table 1. Thematic analysis identified seven principal themes. As shown in Table 2. The first theme noted was the limitations in the healthcare system. All oncologists interviewed acknowledged the limitations of the healthcare system.

Table 1: The characteristics of the participants

Pseudo code of physicians	Gender	Age (year)	Experience (Year)	Degree	Specialty
DR 1	Male	40	10	Master	Hematology
DR 2	Female	40	7	Board	Oncology
DR 3	Female	45	13	Master	Hematology
DR 4	Female	40	12	Board	Oncology
DR 5	Male	37	10	Board	Oncology
DR 6	Male	47	12	Board	Intern medicine
DR 7	Female	40	11	Board	Oncology
DR 8	Male	32	7	Board	Radiation Oncology
DR 9	Male	43	14	Board	Nuclear medicine
DR 10	Female	35	8	Board	Hematology
DR 11	Male	36	10	Board	Oncology
DR 12	Female	39	9	Bachelor	Medicine & Surgery
DR 13	Male	37	4	Board	Hematology
DR 14	Male	34	12	Diploma	Medical radiotherapy
DR 15	Male	48	10	Diploma	Medical radiotherapy
DR 16	Female	39	15	Board	Oncology
DR 17	Male	39	10	Board	Oncology
DR 18	Male	55	20	Diploma	Medical radiotherapy
DR 19	Female	38	10	Board	Oncology
DR 20	Male	38	12	Master	Oncology
DR 21	Male	39	12	Board	Oncology
DR 22	Male	45	15	Diploma	Medical radiotherapy
DR 23	Male	40	10	Board	Oncology
DR 24	Male	40	13	Board	Hematology
DR 25	Female	35	7	Board	Oncology
DR 26	Female	40	15	Board	Oncology

Table 2: Themes and subthemes from physicians' perspectives

Themes	Subthemes
Limitations in the healthcare system	Medical resources
	Ministry instructions
	Shortage of healthcare workers & training staff
	Registration system
	Appointments
Strategies implied to deal with treatment shortage	Alternative means of obtaining treatment
Communication in cancer care	Aim of the communication
	Tools of communication
	Patterns of Communication
Barriers to adherence	Socioeconomic status
	Social & cultural beliefs
	Healthcare system
	Medication-related factors
Supportive care management	Unmet needs in supportive care management
	Adverse effects
Impact of challenges on cancer care	Negative effect on the treatment journey.
	Minimal impact on treatment outcomes
Recommendations of the physicians	Providing medical resources
	Improve healthcare workers
	Improve logistics matters

A significant challenge mentioned was in medical resources, which included limitations in the diagnosis, treatment, access to specialized centers, and screening programs. Most participants (n=22) reported a shortage of treatment, and many participants (n=21) demonstrated a shortage of diagnostic tools and investigations. *"May be the availability of drugs, the availability of investigations, for example, PET scans or port-a-caths, or may be the absence of palliative care center management for the cancer patient." (Dr. 1).* More than half of the physicians (n=16) mentioned an inadequate number of healthcare workers and insufficient trained staff. *"We have a problem with human resources in general. The nursing staff does not have the higher education to deal with chemotherapy patients..." (Dr. 10).* The second theme identified was the strategies implied to deal with treatment shortage. Most of the participants (n=21) agreed that patients may be referred outside the center if they can purchase unavailable treatment. *"This is done by the patient himself or herself by buying the medication from outside this center…"* (*Dr. 15*). About seven participants also said they may send patients to another government center where this treatment is available. *"Sometimes we refer to the outside if the alternative treatment is not available and is available in another center. We can contact the governmental hospital that has this treatment and dispense it to the patient..."* (*Dr. 12*). While one participant emphasized that he did not send the patients outside the center, he modified the treatment plan. Two physicians noted that patients sometimes had to wait to receive treatment, whether it was to fix the device, schedule an appointment, or until treatment became available. *"We give a choice to the patient: either to wait till the equipment is available, or he can go to the right clinic without nominating any name."* (*Dr. 11*). A third theme that emerged was communication in cancer care. Many participants (n=21) mentioned that they inform patients about their

disease and the possible side effects that could appear in the first session. *"At the beginning, we explain to the patient that treatment and its side effects…"* (*Dr. 3*). Four physicians indicated they provide consultation at the hospital, in a clinic, or by giving their private numbers. *"I think you know there are many communication tools, like social media or by phone or by messaging or in my private clinic. So, I give the chemo or immunotherapy or radiotherapy by caution, and I give my patients my private number"* (*Dr. 22*). More than a third of the physicians (n=12) noticed that communication is successful in cancer care. *"The communication is successful most times; we are always with the patient, with her or his adherence to treatment; we exchange phone numbers; I call them, and they call me …*" (*Dr. 7*). On the other hand, many physicians (n=12) have noted several challenges in communicating with patients. *"Most times challenging. They become sad, depressed, crying, and shouting sometimes. So, they don't allow the doctor to challenge "Still, the idea about the disease is the killer disease..."* (*Dr. 15*). The fourth theme highlighted barriers to adherence in cancer care. Almost all participants (n=25) acknowledged the socioeconomic impact on cancer treatment. *"The socio-economic conditions affect the patients. The patients are socially comfortable, and their situations are good. The family members are connected and good. This gives me a lot of resources." (Dr. 10).* Most participants (n=24) identified financial limitations as a significant barrier to treatment adherence. *"Our main problem is the economy and the cost of the treatment… a poor area or poor patient cannot afford all investigation or all treatment"* (*Dr. 5*). On the other hand, more than half of the participants (n=14) indicated the effect of patient education on cancer treatment. Five of them noted that when patients are more educated, it can sometimes negatively affect the treatment plan. *"You know, educated patients can explain to him the risk of the disease… and the risk of the treatment, but the rural people and low-educated people, I can't"* (*Dr. 22*). All participants except one indicated that social and cultural beliefs affect patients' beliefs. *"One of my patients died due to the belief of the relative in the state of chemotherapy, and the patient's age was 36."* (*Dr. 11*). More than two-thirds of the participants (n=18) emphasized the importance of psychological support during the treatment journey. *"During these 15 years of my experience in this field, I saw that many patients deteriorate because of depression, and there is no psychological support for many of those patients"* (*Dr. 22*). More than one-third of the physicians (n=11) indicated that social media affects patients' beliefs about cancer management. *"Social media effect. Many cheaters on social media are selling herbal products. They produce a program of feeding. Many of the patients, when following them, develop cachexia, immune suppression, and anemia. This is one of the challenges." (Dr. 25).* More than half of the participants (n=14) indicated that one of the other challenges was the side effects of treatment. In contrast, two physicians mentioned that the side effects make the patients come back. *"Side effects of treatment affect patient adherence, for example, hair loss, tiredness, nausea, and vomiting."* (*Dr. 12*). The fifth theme was supportive care management. More than half of the participants (n=18) highlighted the importance of addressing side effects when managing supportive care**.** Two participants indicated that they reassure patients regarding their treatment and potential side effects during supportive care management. *"We give the patients many drugs to treat the side effects of vomiting and nausea, but still, there is a strong regimen here; we give more than one strong medicine, so it happens, the side effects appear, the hair falls, etc."* (*Dr. 16*). Some participants (n=9) noted that a significant challenge in supportive care was the side effects of treatment. *"Some chemotherapy protocols, we call them high emetogenic drugs. The usual, the typical antiemetic drug, cannot control the nausea and vomiting of the patient. And maybe a lot of them we should postpone; for example, a cycle for some days, until they get better"* (*Dr. 9*). Many participants (n=15) agreed that there is an unmet need for supportive care management, such as the lack of therapy, unavailability of specialized care, palliative care, and emergency care. Some participants (n=8) indicated that the lack of treatment posed issues in providing supportive care. Meanwhile, one participant noted that supportive care treatment is available at the center. *"Some of the resources are not available, some of the treatments to treat the side effects are not available, and some of them are costly, so all of these are challenges"* (*Dr. 17*). Some participants (n=5) indicated an unavailability of specialized centers in supportive care. *"We didn't have a special center of supportive care. We need a special center for every hospital."* (*Dr. 22*). Theme six identified the impact of challenges on cancer care. Most participants (n=18) reported that these difficulties negatively affect treatment outcomes. Some physicians (n=*6*) indicated that these challenges affect patient adherence. Meanwhile, some oncologists (n=7) mentioned that these limitations impact the healthcare infrastructure. *"Of course, all the topics I mentioned affect the treatment outcome, like poor availability of drugs and poor availability of investigation had negative effects on the treatment outcome"* (*Dr. 1*). Nevertheless, six oncologists emphasized that these obstacles have little effect on therapy results. *"It affects treatment outcome by about 30%"* (*Dr. 6*). The last theme was about the recommendations of the physicians. Given the challenges faced by the participants at oncology centers, most physicians (n=20) stressed the importance of offering a variety of medical resources. More than a third of the participants (n=10) recommended providing diagnostic tools. Additionally, seven physicians indicated that their recommendation involved making unavailable treatments accessible. Ten physicians acknowledged the importance of establishing a specialized center. *"Availability of the investigational equipment and treatment equipment, this is very important to receive a good treatment outcome"* (*Dr. 22*). Over half of the participants (n=15) underlined the importance of improving human resources. Some participants (n=9)

recommended training staff, while two physicians mentioned needing a resident doctor with a specialty and subspecialty in cancer care. Furthermore, four physicians emphasized the importance of providing a multidisciplinary team at the center. *"…If we have the human resources, which is the most important thing, the nurse who stays with the patient, the resident doctor who stays with the patient, all of this will make a difference. All of this will improve cancer care"* (*Dr. 10*). *"Improve training of the worker and buy all investigation and imaging that cancer treatment need*s." (*Dr. 6*). At the same time, some physicians (n=9) brought attention to the need to enhance logistic materials, such as regulations, registration systems, and partnerships with the private sector. Two physicians said early detection and screening are the most crucial factors. Furthermore, a doctor said that things would be better if there were more research. *"Enhancing the cancer research, building a simple infrastructure. Just start to register everything, putting an ID number for the cancer patients all over Iraq."* (*Dr. 18*). Furthermore, four physicians indicated the importance of providing health insurance to cancer patients. *"I will strive to provide health insurance for all cancer patients."* (*Dr. 1*).

DISCUSSION

This qualitative research focused on physicians' perspectives on cancer management at three Iraqi governmental facilities. All physicians acknowledged that the healthcare system has its limitations. The participants of the current study indicated that there is a treatment shortage. This finding is consistent with a quantitative study that suggested that the lack of cancer drugs is a big issue across all healthcare facilities in Saudi Arabia [14]. Similarly, a prospective, observational study in a Moroccan hospital indicated that drug shortages significantly affect patient safety, clinical results, treatment quality, hospital administration, and other critical issues [15]. The participants in the current study demonstrated a shortage of diagnostic tools. In the same way, another study indicated that Iraq suffered from a 13-year shortage in cancer diagnoses. Throughout that period, numerous Iraqi cancer patients were compelled to seek modern diagnostic treatments outside. A primary difficulty is the insufficient availability of diagnostic imaging equipment, including mammography, endoscopy, and pediatric imaging. The deficiency of equipment has been apparent for some time, coinciding with a 50% increase in cancer incidence during the past decade [16]. It may be due to the high cost of medical resources for cancer care. The participants of the current study stated that there is a shortage of human resources. Similarly, Mallah conducted a study that found that the breast cancer early detection program suffers from inadequate human resources and infrastructure [17]. Many participants in the current study indicated that if primary cancer therapies are deficient, various alternative strategies may be implemented. The majority of participants highlighted that they either obtained drugs from external sources or employed second-line therapy by clinical standards, utilizing these techniques based on the severity of the patient's clinical condition and the exorbitant cost of normal therapies. These activities underscore the ethical and professional challenges encountered by healthcare providers who want to deliver optimal treatment amid systemic constraints. A study about the effect of oncology drug shortages in clinical practice indicated that drug shortages persistently obstruct cancer care delivery systems and pose significant hurdles worldwide. The utilization of alternative agents during prescription shortages may result in medication errors. Near-miss medication errors (i.e., errors that did not affect the patient) were reported by 4% of survey respondents. This encompassed dose-conversion discrepancies, along with erroneous electronic medical record configurations that confused preparation and administration. About 6% of respondents reported a medication error due to shortages [18]. Furthermore, many participants in the current study mentioned that they informed patients about their disease and possible side effects. This may be because patients possess the right to be informed of their diagnosis to facilitate informed decision-making regarding their health. Integrity and openness are essential tenets in the doctor-patient interaction. Moreover, many participants in the current study perceived the communication as successful, whereas others encountered challenges in communication with patients. Similarly, an exploratory qualitative study indicated that low patient literacy, limited cancer awareness, financial restraints, traditional religious cures, stigma, and fatalistic thinking lead to unwillingness to speak with doctors. Family caregivers often made treatment decisions and avoided telling patients with a bad prognosis, fearing it would upset them [19]. Another study indicated that oncologists encounter difficulties when communicating with patients with advanced breast cancer. These challenges include addressing patients' unrealistic beliefs about their disease status and selecting appropriate methods for discussing available treatment options and their associated side effects. Positive expectations and empathy may enhance customized information delivery, ultimately resulting in patient-centered treatment, which is fundamental to medicine [20]. Medication non-adherence constitutes a widespread and critical public health issue. [21]. Most participants in the current study identified financial limitations as a significant barrier to treatment adherence. Financial strain may be a barrier to receiving optimal cancer care. It might exacerbate anxiety or despair, which are recognized to diminish motivation and the ability to adhere to treatment regimens. This anticipation aligns with findings from another study that similarly emphasized the influence of financial difficulties exacerbating the distress and diminishing the quality of life associated with a cancer diagnosis and treatment [22]. On the other hand, many participants of the current study indicated that patients' education had an effect on cancer treatment. This finding is consistent with research conducted in Iraq that discovered that numerous barriers exist to the screening and early detection of breast cancer,

including individual-specific obstacles and those associated with socioeconomic conditions, as well as impediments connected to health organization services [23]. Regarding the results of this study, all of the study participants, except one, indicated that social and cultural beliefs affect patients' beliefs. A systematic review about cervical cancer screening mentioned that women were not screened due to religious or customary constraints and bans [24]. In contrast, a cross-sectional study regarding patients with gastric cancer indicated that beliefs regarding medication do not affect adherence to oral anticancer treatments [25]. Many participants of the current study indicated that social media affects patients' beliefs about cancer management. A report on misinformation and harmful content about cancer on social media showed that approximately 32.5% of the content contained inaccuracies, while 30.5% included detrimental information. Significantly, 76.9% of publications featuring misinformation also included detrimental information explicitly concerning cancer treatment [26]. The participants of the current study stated that one factor adversely affecting patients' adherence to cancer treatment is the experience of treatment-related side effects. The toxicity and side effects of chemotherapy adversely impact the quality of life of breast cancer patients [27]. A cross-sectional study about adherence of breast cancer patients in adjuvant hormonal therapy showed that a significant percentage of poor adherence was attributable to the adverse effects [28]. According to the results of this study, most participants emphasized the importance of psychological support during the treatment journey. These findings align with a study conducted in Iraq on the psychosocial needs of women with breast cancer, revealing that 63% of patients have psychological needs [29]. Many participants in the current study agreed that there is an unmet need for supportive care management. A systematic study indicated that the primary unmet supportive care needs were social support, daily activity, sexual/intimacy, fear of cancer recurrence/spreading, and information support. Information requirements and psychological/emotional needs were the most prevalent [30]. Many participants of the current study highlighted the importance of addressing side effects when managing supportive care. The cytotoxic agents employed in cancer therapy possess the potential to induce adverse drug reactions (ADRs). Consequently, supportive therapy is crucial in mitigating the adverse effects of cancer medications in patients [31]. Optimal supportive care can facilitate precise diagnosis and management, thereby enhancing outcomes [32]. Regarding the findings of this study, the majority of participants asserted that these limitations adversely impact treatment outcomes. As demonstrated by numerous studies, the drug shortage impacts all stakeholders from economic, clinical, and humanistic perspectives [33]. This finding corresponds with a systematic review and meta-analysis study, indicating that delays in cancer treatment constitute a significant issue within global health systems. A four-week delay in cancer treatment correlates with elevated mortality rates across surgical, systemic, and radiotherapy modalities for seven types of cancer [34]. However, another study reflected that socioeconomic disparity hinders individuals with advanced cancer from obtaining healthcare, resulting in suboptimal cancer outcomes [35]. The results underscore essential physician suggestions to address obstacles in cancer care. They highlighted the necessity for addressing the limitations within the healthcare system to improve patient care and treatment outcomes. Furthermore, some physicians emphasized the importance of providing a multidisciplinary team at the center. These results correspond with Plumate et al., which highlighted the necessity for interdisciplinary collaboration among radiologists, pathologists, and other relevant specialties to enhance cancer diagnostics [36].

Study limitations

The study encompassed three distinct healthcare centers across two provinces to augment the generalizability of the findings. Nonetheless, it is crucial to recognize that further problems may be present in other centers or provinces not addressed in this study, which could potentially restrict the comprehensive generalizability of the findings. Moreover, due to the sensitive nature of the obstacles encountered at the cancer center, clinicians may selectively describe specific issues while omitting others.

Conclusion

Cancer care is a complicated and changing domain, encumbered by various obstacles. Resolving these complex difficulties necessitates a collaborative, interdisciplinary strategy that emphasizes early detection, patient-centered care, and ongoing professional education, and more facilities should be available to improve treatment outcomes. By recognizing and proactively addressing these challenges, healthcare systems can advance towards providing more efficient, empathetic, and holistic cancer care. Future policies and research must prioritize sustainable solutions customized to the unique requirements of varied populations, guaranteeing that no patient is overlooked in the battle against cancer.

Conflict of interests

The authors declared no conflict of interest.

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Data sharing statement

Supplementary data can be shared with the corresponding author upon reasonable request.

REFERENCES

1. Deo SVS, Sharma J, Kumar S. GLOBOCAN 2020 report on global cancer burden: Challenges and opportunities for

surgical oncologists. *Ann Surg Oncol*. 2022;29:6497–6500. doi: 10.1245/s10434-022-12151-6.
2. Bray F, Laversanne M, Sung H, Ferlay J, Siegel RL, Soerjomataram I, et al. Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin*. 2024;74(3):229-263. doi: 10.3322/caac.21834.
3. Salih HH, Abd SY, Al-Kaseer E, Al-Diwan J. Cancer registry of Iraq annual report 2022. *J Contemp Med Sci*. 2024;10(6):475–477.
4. Darby C, Valentine N, Murray CJ, De Silva A. World Health Organization (WHO): strategy on measuring responsiveness. World Health Organisation. 2003:1-21.
5. Shukar S, Zahoor F, Hayat K, Saeed A, Gillani AH, Omer S, et al. Drug shortage: causes, impact, and mitigation strategies. *Front Pharmacol*. 2021;12:693426. doi: 10.3389/fphar.2021.693426.
6. Al-Jumaili AA, Younus MM, Kannan Y, Nooruldeen Z, Al-Nuseirat A. Pharmaceutical regulations in Iraq: from medicine approval to post-marketing. *East Mediterr Health J*. 2021;27(10):1007–1015. doi: 10.26719/emhj.21.025.
7. Al-Jumaili AA. Iraq Pharmaceutical Country Profile 2020. Baghdad: Ministry of Health, Republic of Iraq; 2020
8. Nassrullah Z, Al-Jumaili AA. Professional challenges facing pharmacists working at public hospitals in an Iraqi province: A qualitative study. *Iraqi J Pharm Sci*. 2023;32(Suppl.):204-213. doi: 10.31351/vol32issSuppl.pp204-213.
9. Day S, Arendse KD, Scott SE, Moyo M, Mzeche S, Guzha BT, et al. Challenges and facilitators in pathways to cancer diagnosis in Southern Africa: A qualitative study. *medRxiv*. 2025:2025-01. doi: 10.1101/2025.01.14.25320521.
10. Shaker OM, Lami F, Alwan NA. Cancer of unknown primary origin: Incidence trend and pathological features, Iraq, 2005-2019. *Iraqi Postgrad Med J*. 2023;22(4):448-454.
11. Anwer IY, Yawuz MJ, Al-Jumaili AA. In-depth assessment of Iraqi physicians' adherence to treatment guidelines for different diseases: a qualitative study. *F1000Research*. 2024;12(350):350. doi: 10.12688/f1000research.128233.2.
12. Rasul VH, Moghdam ZB, Karim MA, Cheraghi MA. Challenges in delivery and performance of a cervical cancer prevention program in the Kurdistan Region of the Iraq health system. *Int J Gynecol Obstetr*. 2019;144(1):80-84. doi: 10.1002/ijgo.12684.
13. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitat Res Psychol*. 2006;3:77-101. doi: 10.1191/1478088706qp063oa.
14. AlAzmi AA, Jastaniah W, Alhamdan HS, AlYamani AO, AlKhudhyr WI, Abdullah SM, et al. Addressing cancer treatment shortages in Saudi Arabia: results of a national survey and expert panel recommendations. *JCO Glob Oncol*. 2020;6:476-485. doi: 10.1200/JGO.19.00230.
15. Cherif Chefchaouni A, Moutaouakkil Y, Adouani B, Tadlaoui Y, Lamsaouri J, Bousliman Y. Impact of anti-cancer drugs shortages in oncology and hematology departments in a Moroccan hospital. *J Oncol Pharm Pract*. 2022;28(4):822-826. doi: 10.1177/10781552211008212.
16. Hussain AM, Lafta RK. (2021). Cancer trends in Iraq 2000-2016. *Oman Med J*. 2021;36(1):e219. doi: 10.5001/omj.2021.18.
17. Maallah M, Needle JJ, Alwan N. Barriers impeding early detection of breast cancer in Iraq: a critical analysis. *Azerbaijan Med J*. 2022;62(07):2845-2863.
18. McBride A, Hudson-DiSalle S, Pilz J, Hamm M, Boring B, Buie LW, et al. National survey on the effect of oncology drug shortages in clinical practice: a hematology oncology pharmacy association survey. *JCO Oncol Pract*. 2022;18(8):e1289-e1296. doi: 10.1200/OP.21.00883.
19. Kebede BG, Abraha A, Andersson R, Munthe C, Linderholm M, Linderholm B, et al. Communicative challenges among physicians, patients, and family caregivers in cancer care: An exploratory qualitative study in Ethiopia. *PloS One*. 2020;15(3):e0230309. doi: 10.1371/journal.pone.0230309.
20. van Vliet LM, Meijers MC, van Dulmen S, van der Wall E, Plum N, Stouthard J, et al. Addressing challenges in information-provision: a qualitative study among oncologists and women with advanced breast cancer. *BMC Palliat Care*. 2021;20:1-2. doi: 10.1186/s12904-021-00836-w.
21. Abbas MS, Jamal , Sabri MM, Abdulrahman Z, Hussain SA. Medication-use behavior of elderly patients in Baghdad city: A cross-sectional study. *Al-Rafidain J Med Sci.* 2021;1:72–77. doi: 10.54133/ajms.v1i.30.
22. Mehlis K, Witte J, Surmann B, Kudlich M, Apostolidis L, Walther J, Jäger D, et al. The patient-level effect of the cost of cancer care–financial burden in German cancer patients. *BMC Cancer*. 2020;20:1-8. doi: 10.1186/s12885-020-07028-4.
23. Al-Diwan JK, Obaid AM, Sultan AH. Barriers of breast cancer screening and early detection among Iraqi women in Dhi-Qar city. *Univ Thi-Qar J Med*. 2023;25(1):126-139. doi: 10.32792/jmed.v25i1.389.
24. Petersen Z, Jaca A, Ginindza T, Maseko G, Takatshana S, Ndlovu P, et al. Barriers to uptake of cervical cancer screening services in low-and-middle-income countries: a systematic review. *BMC Momen's Health*. 2022;22(1):486. doi: 10.1186/s12905-022-02043-y.
25. Chen Y, Nam Ng MS, Wei X, Zhang L, Choi KC, Ma Y, et al. Medication perceptions mediate the association between illness perceptions and adherence to oral anticancer agents among patients with gastrointestinal tract cancer: A cross-sectional study. *Eur J Oncol Nurs*. 2025;76:102720. doi: 10.1016/j.ejon.2024.102720.
26. Johnson SB, Parsons M, Dorff T, Moran MS, Ward JH, Cohen SA, et al. Cancer misinformation and harmful information on Facebook and other social media: A brief report. *J Nat Cancer Institute*. 2021;114(7):1036-1039. doi: 10.1093/jnci/djab141.
27. Alkashaf KH, Mohammed SI. Impact of clinical pharmacist-led interventions on short term quality of life among breast cancer women taking chemotherapy. *Iraqi J Pharm Sci*. 2024;33(4):165-172. doi: 10.31351/vol33iss4pp166-173.
28. Saad AH, Salih H. Adherence and beliefs to adjuvant hormonal therapy in patients with breast cancer: A cross-sectional study. Iraqi J Pharm Sci. 2021;30(Suppl.):31-39. doi: 10.31351/vol30issSuppl.pp31-39.
29. Khalifa MF. Assessing the psychosocial needs of women with breast cancer in Baghdad city. *Int J Health Sciences*. 2022;6(S10):199-205. doi: 10.53730/ijhs.v6nS10.13378.
30. Fan R, Wang L, Bu X, Wang W, Zhu J. Unmet supportive care needs of breast cancer survivors: a systematic scoping review. *BMC Cancer*. 2023;23(1):587. doi: 10.1186/s12885-023-11087-8.
31. Kumar J, Gudhoor M, Ganachari MS. Parallel assessment of chemotherapy adherence and supportive therapy adherence on occurrence and minimization of adverse drug reactions among cancer patients: A clinical-based observational study. *J Pharm Technol*. 2020;36(2):72-77. doi: 10.1177/8755122520901739.
32. Berman R, Davies A, Cooksley T, Gralla R, Carter L, Darlington E, et al. Supportive care: an indispensable component of modern oncology. *Clin Oncol*. 2020;32(11):781-788. doi: 10.1016/j.clon.2020.07.020.
33. Shukar S, Zahoor F, Hayat K, Saeed A, Gillani AH, Omer S, et al. Drug shortage: causes, impact, and mitigation strategies. Front Pharmacol. 2021;12:693426. doi: 10.3389/fphar.2021.693426.
34. Hanna TP, King WD, Thibodeau S, Jalink M, Paulin GA, Harvey-Jones E, et al. Mortality due to cancer treatment delay: systematic review and meta-analysis. *BMJ*. 2020;371:m4087. doi: 10.1136/bmj.m4087.
35. Salas AS, LeGuerrier B, Horvath L, Bassah N, Adewale B, Bardales O, et al. The impact of socioeconomic inequality on access to health care for patients with advanced cancer: A qualitative study. *Asia-Pacific J Oncol Nurs*. 2024;11(7):100520. doi: 10.1016/j.apjon.2024.100520.
36. Pulumati A, Dwarakanath BS, Verma A, Papineni RV. Technological advancements in cancer diagnostics: Improvements and limitations. *Cancer Rep*. 2023;6(2):e1764. doi: 10.1002/cnr2.1764.