

ABCRATCTS



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Oncological patient care and treatment in the era of artificial intelligence (AI)

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The inadvertent consequence of the future widespread integration of technology in oncological healthcare support might be the emergence of a relational divide between healthcare professionals and patients and their relatives, as the latter will increasingly interact directly with artificial intelligence (AI). Medical staff should be a coherent element in this context, providing patients and their relatives with professional knowledge about these technologies and their proper use for therapeutic purposes. In this case, the medical staff would act as instructor and controller; by monitoring and overseeing the AI systems they use.

During the process of cancer care, the unquestionable potential of the human being lies in his ability to use intelligence, sensitivity, and expertise that surpass the capabilities of technology, thus providing a humanistic aspect of care. For this reason, contrary to popular dystopian assumptions, I contend that AI systems should be seen as a tool available to healthcare professionals and robots as a kind of non-human co-workers.

In the near future, as cancer care becomes increasingly dependent on technological advances, a key task for nursing staff will be to develop new skills in addition to what they already have. Thanks to this, it will be easier for them to build an empathetic bridge between the patient, their relatives and AI, providing holistic care in the treatment process.

It is necessary to define the rules that will allow the maximum use of artificial intelligence and avoid its negative effects. Currently, attempts are being made to develop guidelines around the world. Despite their differences, they are united by ethical principles considered to be the foundation: transparency, honesty, non-violence, responsibility and privacy.

Keywords: artificial intelligence, oncological patient, oncological nursing, robotics, education, future of the nursing profession.

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Between hope and helplessness. Who and what supports us when we accompany the sick?

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Receiving a diagnosis of cancer and starting oncological therapy is associated with a large emotional burden for the person being treated. Due to the dynamics of the disease, the psychologically most difficult situations include receiving information: about the diagnosis, about relapse (progression) of the disease, and about the exhaustion of the possibility of conducting oncological therapy. Cancer is a huge emotional burden also for the family of the sick person, it causes a number of changes in the family system (at least for the time of treatment). The relatives of the patient go through successive stages of emotional crisis, they are exposed to PTSD symptoms.

Medical staff, doctors providing unfavourable information, all those confronting patients' suffering, sometimes their death, are also exposed to the experience of emotional burden...

Efforts aimed at mitigating the difficulties faced by the patient's family and medical staff indirectly affect the care the sick person receives.

Providing psychological help to the patient's family is very important due to the fact that the patients themselves see the family as their main source of support. The attitude of relatives may make it easier for patients to make a decision about treatment and accept the possible effects of the therapy.

Psychological help provided to the patient's family depends on who is ill in the family, what diagnosis the sick person has received, what is the phase of treatment, what is the way of communication (expressing emotions) in the family, what kind of support the people closest to the patient can expect. The goals of psychologist's work are always set individually, but the most common ones include showing understanding and support to the loved ones, broadly understood psychoeducation (which may concern, for example, the patient's needs, how to talk about the disease with children, or whether information about the patients' health should be fully handed over to them...).

In the case of psychological assistance provided to medical staff, the most common forms of such work include: training in psycho-oncology (so as to learn about the needs and difficulties faced by patients and their relatives), communication workshops (e.g. on transferring unfavourable information), the Balint Group and classes on the prevention of burnout syndrome.

In addition to the forms of psychological assistance listed above, there can be other kinds of great support

for medical staff, e.g. the atmosphere at work, the presence of people who have similar sensitivity, developing your own work philosophy ("how will I know that I work well?", "how will I know that there is no routine at work?", "what is my attitude towards suffering and death"?"), as well as work-life balance.

Both the patient and their relatives, as well as people accompanying the patient, due to the type of work performed, are confronted with a kind of secret, with questions that will remain unanswered and with the necessity to choose: whether to give in to despair or make the most of the time they have.

I think that both relatives and medical staff can sometimes experience that the patients themselves become a kind of guides for them, that they can also be a "source of support" for them.

Due to the specificity of contact with a person who has experienced cancer and the desire to provide them with the best possible care, it is important to care for the psychological needs of people accompanying the patients.

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Problems in the Care of Oncology Patients in General Practitioners' Practices.

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Cancer is a major clinical problem. In 2020, there were 19.3 million new cases of malignant neoplasms and 10 million deaths worldwide. In Poland, 146.2 thousand people developed malignant neoplasms and 99.9 thousand patients died. An early diagnosis and initiation of treatment is a key factor in improving patient survival. At the same time, it is necessary for the doctor to cooperate with the patient at all stages of diagnosis and treatment in order to achieve satisfactory results.

The role of the primary care physician in the oncology patient care process is significant. Some differences have been noted depending on the gender of the physician, namely, patients treated by men are more likely to experience treatment delays due to perceived difficult access to the physician and difficulties in physician-patient communication, while patients under the care of women are more likely to experience increased treatment delays related to the system, especially referrals and impaired coordination of the diagnostic process. A unified approach to the patient's needs is needed to achieve a satisfactory therapeutic outcome for the patient and to increase compliance. However, this requires a significant amount of time spent with the patient. Adequate knowledge of communication theories and methods is also necessary, especially when encountering difficulties in this area.

Polish patients are mostly dissatisfied with the amount of time needed for diagnosis, at the same time they report unsatisfactory communication with the physicians during the treatment process, from diagnosis to follow-up. Physicians and patients' families would mostly prefer not to inform the patient about the diagnosis and the course of the disease (as many as 70% of patients do not know the actual course of the disease), while patients themselves mostly express a desire to be informed. Informing the patient of the diagnosis during a phone call is also an increasingly common and disturbing practice.

There are many obstacles and barriers to physician-patient communication that needs to be overcome in order to provide appropriate care to cancer patients. To this end, standardized methods are being sought to ensure a satisfactory level of such care. Physician-patient communication is necessary for effective treatment, but communication between healthcare professionals should not be marginalised. This is why it is so important to pay constant attention to the needs of patients and to develop interpersonal skills among physicians.

Oncology patients' expectations of nursing staff in home care

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Nursing home care is an element of the health care system, allowing access to health care services at the patient's place of residence. It guarantees comprehensive care for the oncology patient by providing medical services. It is accessible, continuous, comprehensive and coordinated. Nursing care for oncology patients is aimed primarily at meeting functional needs and controlling disease symptoms. The nurse's contact with the patient, in addition to the implementation of specialized medical services, includes instrumental support and information about the possibility and type of emerging side effects and ways to alleviate them. Home visits also lead to the establishment and maintenance of emotional contact in direct relationships between the patient, his family/guardians and nursing staff. These relationships build an increase in trust, make the level of motivation for cooperation increase. By learning about the patient's expectations, we let them know that we want to care for them, this in turn makes the patient happy, and the support provided significantly reduces the consequences of the disease and is a valuable resource.

The aim of this study was to assess the expectations of patients receiving palliative care from nursing staff referring to the words of Vuori(1987) "care cannot be considered high quality until the patient is satisfied".

The study was conducted with the approval of the Bioethics Committee of the Medical University of Bialystok. Forty-seven patients receiving nursing home care through a home hospice participated in the study. The following were used: the author's questionnaire, the standardized Satisfaction with Life Scale (SWLS),in Juczynski's Polish version for other professionals who are not psychologists, and the standardized AIS Disease Acceptance Scale in Juczynski's Polish adaptation.

The study group was predominantly women 75%, the remaining 25% were men. With regard to age, a division was made into seven age groups: up to 20 years, 20-30 years, 31-40 years, 41-50 years, 51-60 years, 61-70 years, more than 70 years. Most respondents chose the nurse as the leader of care 72.0% of the surveyed respondents, while the rest chose the doctor. In the analysis of the evaluation of the expectations of the respondents surveyed, the education of the nurse was taken into account. Patients mostly (41.2%) had no opinion on the level of education of the nurse. The largest number of respondents indicated that the most desirable trait in nurses is diligence and accuracy in performing procedures (54.8%), followed by a humane attitude towards the patient (49.4%), possession of medical knowledge indicated (38.9%) of respondents, manual skills (35.2%). Respondents indicated the ability to communicate medical information (22.3%) as the least expected.Patients surveyed showed that they expect a conversation regarding health problems from home care nurses (69.6%), The percentage of respondents (26.4%) who cannot clearly answer this question is worrying. The vast majority of patients 93.2% expected education aimed at proper disease management. Only 2.0% did not expect the nurse to

educate them in the disease, and 4.7% had no opinion on the subject. The survey showed that the respondents expected from the home care nurse primarily professionalism - 39.2%, patience - 31.3%, trust - 30.4%, and less frequently indicated honesty or tolerance - 1.5%. Patients rated the qualities of nursing care in the six areas studied - professionalism, satisfaction, trust, ethical behavior, punctuality and self-reliance. In each of the areas studied, the average value is a positive value. High average values were obtained in all areas studied.

- 1. There is a huge demand for nursing home care in modern times.
- 2. The vast majority of respondents expect from the home care nurse professionalism, holistic care, respect for cultural rights and values, extensive medical knowledge in accordance with modern standards and also informational and emotional support.

Findings from the study may be helpful for nursing staff working in palliative care to better understand patients' expectations and tailor care to their needs. Further research with a larger sample of patients and using other assessment tools may provide more comprehensive results.

Hospital volunteering in the process of supporting oncological patients

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The role of hospital volunteering in the process of supporting oncological patients in crises that patients and their families face from the beginning of the diagnosis through the entire duration of treatment.

Volunteers of the "Dobrze Że Jesteś " Foundation have been working at the Hematology Department of the L. Rydygier Hospital in Krakow for nearly 12 years. Contact with a kind, disinterested person, ready to help - gives patients a lot. Work on improving the mental state of a cancer patient takes place on many levels, be it through individual conversations with the patient, laugh therapy, art therapy, concerts and meetings with people of culture and art organized in the hospital. The main task of a volunteer on duty is to accompany and the presence for the patients. They help cancer patients in the hospital reality, sometimes they are the only visitors, because some of the patients do not have family or the family does not visit them. Volunteers largely fulfill Christ's call, which resounds in the Gospel of Saint Matthew. "I was sick and you visited me" (Mt 25:36). Each meeting with a patient changes us as people, our compassion expands on the one hand, volunteers are part of the hospital reality, but nevertheless they bring hope, love and an open heart to hospital rooms - and what is most important in loneliness during illness - the presence of a kind person.

Volunteers meet with great openness from both patients and medical staff, they are considered - according to prof. Aleksander Skotnicki from the Department of Hematology of the University Hospital in Krakow during one of the volunteer trainings: "as equal partners in the patient's therapeutic process".

The ranks of volunteers are mainly made up of psychology students who broaden their therapeutic skills during conversations with patients. There are also people who have faced cancer themselves and have a desire to be a living testimony that it is worth fighting for your own health. In addition, all people of good and open heart who want to serve the patients with their presence during sickness. All volunteers are prepared and substantively trained to visit patients in the Departments.

There is still much to be done in Polish psycho-oncology and in systemic support for both oncological patients and families. The aid system does not meet all the needs of the surveyed groups and there are still gaps in it. It is encouraging that, in order to expand awareness of oncological diseases, various Oncological Foundations are being established, bringing together volunteers and people of good will who want to serve cancer patients and their families. Grant projects are being created to provide opportunities to meet emotional, spiritual and informational needs. There are support groups available for patients and families, in various forms, both online and stationary. There are also few psycho-oncologists in the departments, their time is very limited and, in fact, the needs of patients are not met in an adequate number.

As part of the opportunities offered by the Dobrze Że Jesteś Foundation when it comes to emotional and spiritual support, we are expanding the work of hospital volunteers in the next Oncology Departments in hospitals throughout Poland, so that no needy person lacks the presence of a supporting person at a time of crisis.

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On the border of sickness and health. Between salvation and loss. Communication and support during oncological care and therapy.

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Every day we stand on the border between health and illness. Our belonging to the world of the healthy seems indisputable, and the ground under our feet is firm and sure. Employment in the Health Care sector, in Oncology Centers, gives us the feeling that we are the ones who provide professional help and support, but we do not need it ourselves. Working in interdisciplinary teams is often associated with a sense of ennoblement, professional fulfillment as caregivers and therapists. And if something were to happen, we feel that we and our loved ones are closer to diagnosis and treatment, we are safer and strongly protected. However, contrary to imagined life, from time to time the real life has it that it says uninvited: Show your cards! Then our sense of overconfidence is put to the test, frequently the painful one. We feel that the solid ground under our feet is becoming shaky, and the very uncertainty of the results of our own tests, the need to go to a different clinic, and finding ourselves in the role of a petitioner in the waiting room of another facility destroys the entire myth and sense of security. We begin to understand what anxiety, fear or even panic mean. What the sense of helplessness, inaccessibility, exclusion mean. That's on one hand. On the other hand, we experience and see how important it is who the therapist and caregiver is, or more simply what kind of person, is on the other side. What knowledge, competences, predispositions and interpersonal skills this person has. We become twofold aware of the meaning of human gesture and word, and the importance of non-verbal communication.

In journals and medical literature, as well as numerous written (memoirs, diaries) and spoken testimonies (interviews), we find knowledge about the experiences of patients. Including those who went from patients (childhood illness) to doctors, or from doctors or nurses to patients. Every day in hospitals we learn many individual stories of patients and their loved ones at every stage of oncological therapy.

We already know that we will never know when we will find ourselves temporarily or permanently on the other side (associated with hard experiences and the hardships of double-edged therapy). Our everyday and professional life is full of various observations and experiences that can deconstruct us, weaken us, tire us out and burn us out, but also toughen us up and strengthen us. Be able to show care and organize holistic help and ... be able to find and accept support yourself. It is worth preparing for tests, including those of the highest calibre. Including borderline ones related to hurting, dying and death. Just like that, in a human way - so as not to leave / fail others and yourself in experiencing inevitable losses. As not to lose humanity in the moments of the most important tests.

Prehabilitation, i.e. time well spent for the patient...

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Prehabilitation is a very important field of medicine, mainly perioperative. Its premise is comprehensive action in order to obtain the best possible health status of the patient, which will allow for achieving good results of the procedure and quick recovery. In some cases, comprehensive prehabilitation can reduce the risk of complications postoperative even twice.

The aim of the clinic is to provide the patient with as much support as possible before the broadly understood therapy awaiting him. Thanks to this, he has a chance to build a maximum reserve for the time of fighting for health, because oncological treatment is associated with a heavy burden on the body. Prehabilitation should not postpone planned treatment, but on the contrary - not only facilitate their implementation, but in some situations accelerate them

Development: In the Specialist Hospital in Brzozów, Podkarpackie Oncology Center. Fr. Bronisława Markiewicza, the first Cancer Prehabilitation Clinic in Poland was opened, the aim of which is to bring the patient to the optimal state of health, which will allow for good tolerance of treatment, minimize complications and support in a quick recovery. In oncology, we focused on comprehensiveness.

Prehabilitation includes 4 pillars: nutritional preparation, implementation of physical activity, giving up addictions and psychological support for the patient. The prehabilitation team includes, among others: clinical dietitian, psychologist, physiotherapist, doctor, nursing team and anesthesiologist. At present, there is no uniform/final canon regarding the duration of prehabilitation, based on the results of reliably conducted research. The times of preoperative preparation recommended by the authors are therefore based on certain theoretical assumptions, own experience and technical and organizational possibilities of the time of patient preparation, including comprehensive oncological therapy). Quoting from the Polish consensus regarding comprehensive perioperative care, the most common standard is a period of 4-6 (sometimes 8) weeks.

A shorter period, i.e. from 2 to 4 weeks, is less effective, while a longer period than 3 months may result in poor patient compliance. Thus, the ideal time frame for a prehabilitation program should be estimated on the basis of the best correlation between the effectiveness of the program and the preparation regime. Therefore, the optimal period of prehabilitation should be at least 4 weeks, extending to 6 or even 8 weeks, if the underlying disease allows it.

Conclusions: The benefits of prehabilitation are therefore indisputable. Their main beneficiary is, first of all, the patient and his relatives, but also significant savings resulting from the reduction of treatment complications, e.g.

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shortening the time of hospitalization, reducing the consumption of drugs, medical equipment, etc. Therefore, prehabilitation is the direction that should be developed, spread and promoted.

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The use of physiotherapy in alleviating pain in oncological patients

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Pain is one of the basic symptoms accompanying oncological patients. Pain perception is a multifaceted concept, and the attempt to determine its intensity is highly subjective and closely related to the patient's situation in the face of a terminal illness. One of the factors of multidirectional treatment of oncological patients is physiotherapy, which main task is to improve the quality of life of cancer patients. The aim of the study was to determine how the perception of pain and the quality of life of oncological patients under the influence of oncological physiotherapy will change.

The research was carried out in the Beskid Oncology Center – Municipal Hospital in Bielsko-Biała at the Oncology Ward. The study involved 32 patients diagnosed with cancer who agreed to participate in the study. Patients underwent a two-week therapy, where exercises were conducted according to a standard physiotherapy program carried out in the hospital. Before and after treatment, patients answered 15 questions included in the EORTC QLQ C-15 PAL questionnaire (The European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Core-15 Palliative) regarding physical fitness, emotional state, quality of life assessment and questions about the severity of somatic symptoms (pain, nausea and vomiting, sleep disorders, lack of appetite, shortness of breath, weakness, constipation). Visual Analogue Pain Scale (VAS) and Laitinen Pain Scale were used to assess the intensity of pain, which were carried out before and after the physiotherapy program.

Analysis of the quality of life assessment based on the EORTC QLQ C-15 PAL questionnaire showed an improvement in the quality of life of patients in the study group. There was also a reduction in the intensity of pain experienced by patients based on the assessment of pain intensity (Laitinen scale and VAS).

The conducted physiotherapy program in the oncology ward reduced pain and contributed to the improvement of the quality of life of oncological patients, as evidenced by the improvement of the results of the EORTC QLQ C-15 PAL questionnaire and the Laitinen and VAS scales. It is necessary to conduct further research on reducing the intensity of pain among oncological patients. The right way of diagnosis and the selection of appropriate physiotherapeutic procedures can significantly affect and improve the quality of life of patients diagnosed with cancer.

