

## Cancer as a chronic disease — a psychological perspective

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Cancer is a disease that affects many people. Therefore, issue of proper psychological adaptation to the disease is of utmost importance and allows one to look for a better understanding in similar fields. Cancer has many common features with chronic diseases, despite the fact that it is not established whether it can be classified as a chronic disease. The first goal of this article is to confirm that according to the WHO definition, cancer indeed can be classified as a chronic disease. The second aim is to present implications of this assumption. Knowledge about the functioning of patients with chronic disease may be a source of hypotheses for psychological adjustment in cancer. Considering cancer as a chronic disease allows application of psychological understanding of chronic diseases to the study of cancer.

Biuletyn PTO NOWOTWORY 2018; 3, 1: 29–33

**Key words:** cancer, chronic disease, psychological adjustment, psychological adaptation, WHO

### What is a chronic disease?

Suffering from a disease has an impact on both the personal and professional life of a patient. When the disease is acute, the patient has a chance to return to his or her previous life after treatment ends. A chronic disease cannot be completely cured, but the current level of development of medicine makes it possible to live with some diseases for many years. Chronic disease is connected with both a clinical condition and psychological adjustment. Adjustment to a chronic disease concerns changes in various areas of life, the passage of time to cope with changes and different ways people adapt [1]. A chronic disease has also an impact on the economic status of a patient, his or her family, and on the economic situation of the society [2]. Therefore, this topic is important not only from the clinical or psychological point of view, but it is more global. Among well-known chronic diseases, we can distinguish primarily chronic coronary heart diseases, chronic respiratory diseases and diabetes.

The Centers for Disease Control and Prevention [3] in its definition of chronic disease, includes the following crite-

ria: the long-lasting character, a lack of spontaneous cure, and no possibility of being completely cured. A broader definition is given by WHO [4]. It focuses on the permanent character of the disease, residual disability, non-reversible pathological alteration, special training of the patient for rehabilitation and the necessity of a long-period of supervision, observation, or care.

The purpose of the paper is to investigate whether it is possible to examine whether cancer meets the conditions for chronic disease defined by WHO and, if so, what are the psychological consequences.

### Cancer as a chronic disease?

#### *Is it permanent?*

Cancer is not classified as a disease that can be completely cured, but rather it can be at most in remission [5]. The situation when a tumor becomes smaller is called “partial remission.” However, complete remission does not mean that the cancer cells are absent, but that there is no apparent evidence of

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#### Artykuł w wersji pierwotnej:

Paleczna M. Cancer as a chronic disease — a psychological perspective. *NOWOTWORY J Oncol* 2018; 68: 28–32.

Należy cytować wersję pierwotną.

cancer. Therefore, since the reemergence of cancer is always possible, a cancer patient after having completed the treatment is required to participate in regular diagnostic procedures. The risk of recurrence depends on the cancer type [6–9].

### ***Does it result in a residual disability?***

Both cancer and the treatment process can cause disability and dysfunctions. Breast cancer may lead to some serious changes in the physical functioning of the arm, shoulder and hand areas [10]. One in five women suffers from lymphedema after having breast cancer [11], which decreases the quality of life and increases psychological distress [12]. It also restricts the range of motion [13].

Cancer can cause changes in areas related to eating and talking. Laryngectomy leads to a loss of voice [14], head and neck cancer provokes speaking and swallowing difficulties [15]. The voice plays an important role in social life; therefore the restoration of voice has a positive impact on patients' well-being [16]. One possible way of rehabilitation is use of an artificial larynx [17]. Patients are also encouraged to practice some particular types of sport: swimming, water aerobics, Nordic walking and cycling [18].

Irradiation may cause erectile dysfunction [19], however in testicular cancer patients psychological factors play an important role in satisfaction with sexual life [20].

### ***Is it caused by a non-reversible pathological alteration?***

Cancer cells come from normal body cells [21] and innate immune cells contribute to cancer development [22]. It is a non-reversible process. In metastasis, cancer cells travel through the blood or lymph system into the tissue of another organ, initiate and maintain their growth [23].

### ***Does it require special training of the patient for rehabilitation?***

Cancer affects the functioning of the individual in many areas of his or her life and rehabilitation is often an indispensable element of cancer treatment [24, 25]. For this reason, rehabilitation is required in many areas:

#### *Body rehabilitation*

The return to the pre-illness life is associated with motor function [26]. A common problem among cancer patients is fatigue [27]. Clinically significant levels of fatigue are observed in 30% patients up to six years after completion of the treatment [28]. Fatigue, in turn, may cause a reluctance to exercise. Full recovery is possible due to the relatively fast return to everyday life [29] and it requires proper motion capabilities.

Rehabilitation influences patients' quality of life [30], including the time of palliative care [31, 24]. It relieves both physical [32] and psychological pain [33].

#### *Sexual rehabilitation*

Sexual rehabilitation is needed to restore satisfying sexual function [34] and both women [35] and men [36] need it. Couples counseling is one available form of rehabilitation [37, 38]. Nonetheless, there are no specific recommendations for an optimal means of rehabilitation in this area [39].

#### *Cognitive rehabilitation*

Cancer causes some cognitive changes in patients [40–42]. Cognitive rehabilitation improves memory functioning [43], visuospatial functioning [44], processing speed [45] or verbal fluency [46] and helps with short-term cognitive complaints [47]. It is especially important for patients with brain tumor [48].

#### *Psychosocial rehabilitation*

Including psychosocial intervention in a rehabilitation program increases the quality of a patient's life [49] and family support improves their ability to cope with stress [50]. Korstjens et al. [51] indicate five main areas requiring consideration in psychosocial rehabilitation: continuous support and information about rehabilitation, psychological support, support of the family, improved health and medical services and help with financial burdens.

### ***Is it expected that a long period of supervision, observation, or care will be required?***

Due to the possibility of recurrence, patients remain under a regular observation. For example, they need to follow a special diet [52] or stop smoking [53]. The risk of recurrence decreases five years after a surgery [54], nevertheless there is always the possibility of cancer recurrence. Thus, patients experience a fear of recurrence [55, 56] in various types of cancer: breast cancer [57, 58], ovarian cancer [59], prostate cancer [60, 61], head and neck cancer [62, 63], thyroid cancer [64], hematological cancer [65], gastric cancer [66] colorectal cancer [67], oral cancer [68]. The fear of recurrence changes [69] and it affects the quality of life [62]. There are some methods to help patients who experience this fear, e.g. cognitive-behavioral therapy [70, 71].

### ***Cancer as a chronic disease***

Taking into consideration WHO criteria for chronic disease, cancer can be classified as a chronic disease.

Each chronic disease is characterized by specific risk factors, course of illness, and symptoms. It is an oversimplification to consider all the diseases as dependent on the same psychological characteristics. However, we can formulate hypotheses about the psychological functioning of patients suffering from cancer on the basis of knowledge of chronic diseases. Therefore, several conclusions from research on chronically ill patients will be presented.

1. There is no cure for a chronic disease, which makes self-management programs highly recommended. The medical condition of participants in the programs improves, they also acquire healthy habits and their self-efficacy rises [72]. Membership in the program also reduces the number of visits to the emergency department [73, 74] and is more effective than the information strategy [75]. The self-management program is inexpensive, and as such it is more easily available [76]. There are also internet-based programs [77]. Being a manager of one's own disease is a crucial factor in enhancing everyday coping, so self-regulation is an important element in disease management [78]. The psychological adjustment to a chronic disease is possible thanks to maintaining an active, proper understanding of the situation, expressing emotions, and focusing on potential positive aspects of life [79]. There is an important role of working on adaptive cognitive emotion regulation strategies [80].
2. For the treatment to be effective, the patient has to be aware of the consequences of the disease. In the relationship between the patient and his or her physician, the patient is treated as a partner [81], which means that he or she takes responsibility for his or her actions – the patient is obliged to engage in various practices intended to improve his physical condition [82], for instance changes in his or her diet, undertaking some physical activity, overcoming smoking or drinking habits.
3. Although an optimistic attitude plays an important role in the adjustment to a chronic disease, it depends on the controllability of the disease [83]. An optimistic attitude affects better mood and is a protection against negative perception of the illness [84]. What is important, an optimistic attitude does not lead to bias in perception of the illness, but increases insensitivity of activities aiming at improving one's own health [85] and influences on healthier behavior [86]. Meanwhile, a less optimistic attitude is related to a lower physical and mental health [78].
4. A chronic disease changes a person's self-perception. Taking suffering from a chronic disease as a core element of oneself decreases self-esteem [87], while believing in the ability to cope increases self-esteem [88]. Younger children [89] and adolescents [90] have lower self-esteem in comparison to their healthy peers, which in turn may have negative consequences in adulthood [91, 92].
5. Loneliness affects many patients suffering from chronic disease, regardless of the exact type of the disease [93]. This applies to both younger [94] and older people [95]. Loneliness affects not only patients, but also their spouses [96]. Thus, it becomes a wider problem in the relationship between the patient and the family.
6. Quality of life is a concept that indicates someone's perception of his or her position in his life [97]. The

perception of illness, attribution and internal locus of control may influence the quality of patients' life [98]. Although the disease decreases it [99–100], it may be increased by a greater focus on patients' everyday activities aimed at improving their health [101].

## Limitation

Tritter and Calnan [102] point out that cancer is a particular kind of a disease: diagnosis of cancer may mean a range of different diseases and it involves many medical fields for treatment. The authors indicate that the differences are too significant, and cancer should not be defined as a chronic condition.

In this paper cancer is considered as a chronic disease without dividing it into specific types of the disease. Thus, features of a chronic disease (and characteristics of psychological adjustment) can refer not to all, but to certain types of the disease.

**Conflict of interest:** none declared

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Received: 23 Mar 2018

Accepted: 30 Apr 2018

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