# **Psycho-Oncology Support**

Laura Rebegea

Medical Clinical Department, Faculty of Medicine and Pharmacy, Dunărea de Jos University of Galati Strada Domnească 47, Galati, Romania

Phone: 0336 130 108

Radiotherapy Department, Sf. Ap. Andrei Emergency Clinical Hospital

Str. Brailei nr. 177 Galati Romania 800578

Phone: 0236 301111 laura\_rebegea@yahoo.com

Dorel Firescu

Surgical Clinical Department, Faculty of Medicine and Pharmacy,

Dunărea de Jos University of Galati Strada Domnească 47, Galati, Romania

Phone: 0336 130 108

Surgery Clinic II<sup>nd</sup>, Sf. Ap. Andrei Emergency Clinical Hospital

Str. Brailei nr. 177 Galati Romania 800578

Phone: 0236 301111

Ginel Baciu

Clinic Department, Faculty of Medicine and Pharmacy,

Dunărea de Jos University of Galati Strada Domnească 47, Galati, Romania

Phone: 0336 130 108

Emergency Clinical Paediatric Hospital, Galati, Romania

Anamaria Ciubara

Clinic Department, Faculty of Medicine and Pharmacy

Dunărea de Jos University of Galati

Strada Domnească 47, Galati, Romania

Phone: 0336 130 108

Psychiatry II<sup>nd</sup> Clinic, Elisabeta Doamna Psychiatry Hospital

Strada Traian 290, Galati, Romania

Phone: 0236 479 401 anamburlea@yahoo.com

#### Abstract

**Background:** Malignant diseases represent one of the most important worldwide morbidity and mortality causes. In Romania, the number of new cancer cases is 78800/year and the number of cancer deaths is 48300/year. In Galati County the number of oncology patients under observation is continuously increasing, ranging from 11426 cases in 2008 to 17083 cases in 2017.

Methods and materials: We are presenting psycho-oncology reactions manifested by an oncology patient during his evolution from pre-therapeutic evaluation, to diagnostic set-up, treatment and further evolution. Anxiety and depression prevalence among oncology patients vary in very large limits, function of malignant site, but also, within the pale of the same disease, the highest incidence of depression being in patients with breast, lung, colorectal, head and neck cancers. In the specialty literature the following influence factors for psychological and psychiatrically reactions are mentioned: age, neoplasia sites, emotional, psychological status, and depressive status prior to cancer diagnostic. Psychic reactions are various and variable from one patient to another, progressing from denial, revolt, anger, sadness, anxiety to depression and suicidal tendencies. Taking into consideration that depression

symptoms are overlapping with those given by neoplasia itself and with toxicities of the oncologic treatment, the evolution of depression is complicated.

**Conclusions:** The polymorphism of psycho-oncology reactions manifested on the entire route of malignant diseases requires psychological counseling in all disease stages. Efficient communication with the oncologic patient, psychological counseling of patient, of their family, of medical staff and group therapy can be achieved only with specialized personnel employed in oncology centers: psychologist, psychiatrist, social assistant, and priest.

**Keywords:** Psycho-Oncology Reactions; Patient; Depression.

#### 1. Introduction

Neoplastic diseases are one of most important worldwide morbidity and mortality causes. According to Globocan (2018), new global cancer data suggests that the global cancer burden has risen to 18.1 million cases and 9.6 million cancer deaths (Globocan, 2018, https://www.uicc.org/new-global-cancer-data-globocan-2018). The International Agency for Research on Cancer (IARC) estimates that 1 from 5 men and 1 from 6 women worldwide will develop cancer over the course of their lifetime, and that 1 from 8 men and 1 from 11 women will die from this disease. The factors that contributed to this increase are particularly a growing and ageing global population, an increase in exposure to cancer risk factors linked to social and economic development, and, on the other hand, increasing efficiency of cancer treatment modalities (Globocan, 2018, https://www.uicc.org/new-global-cancer-data-globocan-2018).

In Europe, the incidence and the death rate are higher than both in North and South America, being 21% and respectively 14.4% (Globocan, 2018, https://rohealthreview.ro/statistica-globocan-2018-romania-fara-date-exacte-privind-cancerul/).

In Romania the highest incidences are for lung cancer (13.6%), colorectal cancer (13.3%) and breast cancer (11.5%) (Globocan, 2018, http://saptamanamedicala.ro/articole/Noi-date-despre-cancer-in-Romania-de-la-Globocan/). Regarding Galati County, the number of patients still existing in oncological evidences in 2007 is 17083, 25% higher than in 2010 (with 12902 oncological cases in evidence). The number of new cases recorded in 2017 was 1003 and we observed great variations from one year to another, 1626 new patients with neoplastic disease being registered in 2013. In Sf. Ap. Andrei Emergency Clinical Hospital in Galati, there is a single psychiatric physician and a single psychologist for all oncologic patients, their family and medical staff.

The psychological impact of cancer is due to the incurable disease aspect, representing one of the principal causes of death but the emotional effect is devastating; one the other side, cancer treatment is aggressive, mutilating, debilitating, affecting the quality of patient's life (Fann et al., 2008; Wefel, Kesler, Noll & Schagen, 2014).

Stress refers to any event in which course internal or external requests are perceived as solicitant or exceeding the adaptive resources of one person. Stress causes are fear of death, changing of life plans, corporal image changes, loss of self-esteem, major changes in day-to-day life, financial and legal problems, waiting of results, lack of understanding of medical terms, treatment begging, treatment resistant attainment, unresolved anterior emotional trauma (Fann et al., 2008; Wefel, Kesler, Noll & Schagen, 2014).

The major cause of stress for cancer patient's appears at the moment of diagnosis, at the moment of treatment initiation, change of therapeutically sequences, at the relapsing moment or at the moment of metastatic disease diagnostic.

### 2. Methods and Materials

During the oncological treatment, psychological reactions depend on patient's personality, neoplastic sites, and secondary side-effects of cancer treatments (Saracino, Weinberger & Roth, 2017).

There is no standard behavior in the patient's confrontation with cancer. The psychological reaction at the moment of oncological diagnosis is described as one staging process with the following

fazes (Kubler-Ross scale): denial, revolt, anger, resignation, depressive anxiety syndrome (Wefel, Kesler, Noll & Schagen, 2014).

Depression evaluation at cancer patients is much more complicated than fatigability and pain evaluation. Depression has symptoms which are overlapping with neoplasia and its treatment. The frequent symptoms of depression in cancer patients which are included in the Diagnostic and Statistical Manual of Mental Disorders (DSM) are fatigue and loss of appetite (Smith, 2015).

Because of overlapping symptoms, other criteria were proposed. Endicott criteria replace some physic symptoms related with neoplastic disease with more psychological symptoms. However, according to DSM Criteria and Endicott Criteria, there is a strong correlation between diagnosis and major depressive disorder in cancer patients (Smith, 2015). Most of the time, in patients with cancer, depression remains undiagnosed, unrecognized, undertreated, with negative effects upon the quality of life and disease evolution (Smith, 2015; Lavdaniti, Barbas & Fratazana, 2012; Saracino, Weinberger & Roth, 2017).

The psychiatric syndrome manifested clinically frequently occurs in cancer patients after therapy initiation due to disease evolution and oncological treatments. The most frequent disorders are delirium, depression and anxiety. One patient can present one or more of these syndromes. The onset of disorder varies from one individual to another and is often related with disease stage or treatment performed (Smith, 2015).

Depression is associated more frequently with chemotherapy vs. radiotherapy and surgery, maybe due to alopecia, nausea, secondary insomnia, post-chemotherapy amenorrhea. Also, depression can be a direct consequence of anti-neoplastic therapies.

There are some neoplastic sites which frequently determine brain metastasis (M1BRA), such as: malignant melanoma, breast cancer, lung cancer and kidney cancer. The symptoms manifested in M1BRA and which can be mistaken for psychiatric symptoms are hallucinations, spatial-temporal disorientation, confusing states, memory disorders, amnesia, aphasia, diminishing of thinking skills synthesis. When psychiatric symptoms do not respond to the pharmacological treatment, there is M1BRA suspicion.

Another issue is the link between pain and depression. Inadequate treatment for pain can cause anxiety symptoms and depression. The link between pain and depression remains controversial. Sixty percent of depressive patients say that they experience pain at the diagnosis moment.

Depression can be a significant predictive factor of persisting pain. Patients with pain and depression are more likely to commit suicide, autolysis or treatment renouncing. It was reported that administration of antidepressants increases quality of life, permits a higher grade of psycho-social readjustment of cancer patient (Smith, 2015).

For the treatment of depression associated with neoplasia, multidisciplinary therapies are frequently used: cognitive-behavioral therapies, medication, sustaining psychotherapy, emotional support (Spoletini, 2008).

NCCN elaborated in 2002 specific and practical guides for each type of contribution in patient's care, giving recommendations for emotional behavior screening, selecting, initial evaluation, orientation and treatment for each participation type in patient's care through each member of the therapeutical team: psychologist, psychiatrist, social assistant, palliative care specialist, pastoral assistance (NCCN Guidelines, 2018).

The term "distress" was chosen due to the fact that it sounds less embarrassing, is more acceptable and less stigmatizing than "emotional", "psychosocial" or "psychiatric" and can be defined and measured by self-report (NCCN Guidelines, 2018).

Distress in cancer is defined as a multifactorial experience of a psychological, social, spiritual and/or physical nature that may interfere with the capacity to deal with neoplasia, with its symptoms, treatment and side effects. Distress spreads along a continuum, from normal fear and sadness, concern that can be identified among criteria of diagnostic of some psychiatric disease, depression and anxiety (NCCN Guidelines, Distress Management, 2018).

The prevalence of distress varies with the type of neoplasia, sites and stage of disease. There are some cancer sites associated with increased occurrence of depression: pancreatic, oropharynx, lung, breast, colon, gynecologic and lymphomas (NCCN Guidelines, Distress Management, 2018).

Screening is required, along cancer evolution, at diagnostic moment and also, after diagnosis, after treatment initiation or when therapeutical sequences are changed, after periodical post-treatment evaluation, at the moment of relapse, in the period of transition through palliative care. In each of these periods distress can appear (NCCN Guidelines, Distress Management, 2018).

In the last decades, due to increasing early stage diagnosis (explained by adequate screening and progress of diagnostic methods), occurrence of new therapeutic options, improvement of treatment options and increase of global survival for all patients at all ages, the following were observed: increasing side effect frequency, decreasing capacity for carrying out day-to-day activities, and symptoms such as fatigue, anxiety and depression (NCCN Guidelines, Distress Management, 2018).

Favoring non-psychological factors for distress appearing are effects induced by neoplasia itself and effects induced by secondary reactions to cancer treatment.

Distress can be a reaction of neoplastic disease diagnostic and different transitions through pathways of this illness, including survivor's pain (NCCN Guidelines, Distress Management, 2018); 20-52% of survivors have a high risk of distress and present the probability of using drugs for anxiety and depression two times higher comparative with patients without cancer history (NCCN Guidelines, Distress Management, 2018). Oncologic patients can have psychologic or psychiatric conditions which can interfere with the ability to deal with neoplastic diseases.

In Canada, psychosocial care have become a "standard of care" for cancer patients, emotional distress being considered the 6<sup>th</sup> vital sign which is monitored alongside with pulse, respiration, blood pressure, temperature and pain (NCCN Guidelines, Distress Management, 2018).

Social stress, psychological distress and psychosocial support influence cancer patients' adaptation and adherence to treatment. The aspects that can influence adherence to treatment, improve adaptation and disease evolution are clear and open communication, manifestation of emotions, collaboration and involvement in resolving problems (Smith, 2015; Spoletini, 2008; NCCN Guidelines, Distress Management, 2018). Thirty-forty per cent of patients with different types of cancer present more than one types of distress (Spoletini, 2008; NCCN Guidelines, Distress Management, 2018).

## 3. Depression in Breast Cancer Patients

Breast cancer is the most frequent neoplasia in women, in 2012, the annual estimated incidence being 94.2/100000 with a mortality rate of 23/100000; 33% of breast cancer patients present moderate and mild depression and 13% present severe depression with tendency of underestimated depressive symptoms (Fann, Thomas Rich, & Katon, 2008; Coyne, Thompson, Palmer, Kagee & Maunsell, 2000; Gilbody, House & Sheldon, 2001; Pignone, Gaynes, & Rushton, 2002).

Major depressive disorder (MDD) diagnosis in breast cancer patients is frequent, in most of the cases, unrecognized and undertreated, leading to diminished adherence to treatment and magnified psychic symptoms and all these together determine a major decline of life quality (Fann et al., 2008).

Because of the unique character of psychosocial and hormonal factors which influence the mood of breast cancer women, data regarding depression treatment and epidemiology from other neoplastic sites cannot be applied in breast cancer cases.

In the first year after diagnosis, breast cancer treatment presents a higher risk for depression development (Fann et al., 2008), especially in young patients (Fann et al., 2008), (Compas et. al., 1999), premenopausal, previous with chemotherapy, with depression history. Breast cancer patients who performed chemotherapy have a high risk of depressions due to the medication's side effects, negative cognitive effects (15-33% of cases), that can persist months or even years after treatment, affecting quality of life (Fann et al., 2008; Schagen, van Dam, & Muller, 1999; Leedham & Ganz, 1999). Also, chemotherapy has secondary effects upon fertility, sexuality, early menopause (associated with diminution of bone density and osteoporosis onset), cardiovascular illnesses development which leads to high level of distress (Fann et al., 2008).

Hormonal therapies with Tamoxifen affect the emotional state, with a negative impact upon cognition influencing the onset of depression, in some cases being necessary to interrupt the treatment in depressive patients. On the other hand, frequently, breast cancer patients are fearful of disease relapsing which is also an anxiety and depression cause (Fann et al., 2008; Saykin, Ahles & McDonald, 2003; Cathcart et. al., 1993; Thompson, Spanier Vogel, 1999; Breuer & Anderson, 2000).

One possible reason for depression prevalence in breast cancer patients is that menopause and the decrease of estrogens levels are related to depression (Fann et al., 2008). Hormonal therapies (ovarian suppression) diminish the estrogen levels in patients in pre and post-menopause (Fann et al., 2008).

Estrogen increases brain serotonin postsynaptic responsivity and cumulatively act as a serotonin agonist (Halbreich, Rojansky & Palter, 1995). The serotonergic system plays an important role in behaviors that are disturbed in affective disorders, including mood, sexual activity, sleep, cognitive function and appetite (Pearlstein, 1995).

Gaston-Johannson et. al. (Gaston-Johansson et. al., 1999) examined the influence of depression, pain and fatigue on the health status of 127 breast cancer patients. 91% reported fatigue, 47% pain and 54% depression. These symptoms were all significantly correlated with each other and with the general health status (Fann et al., 2008; Dodd, Miaskowski & Lee, 2004). Depression exacerbates sleep problems (Spiegel & Giese-Davis, 2003) and these are associated with fatigue (Bower, Ganz & Desmond, 2000).

### **4. Depression in Colorectal Cancer Patients**

Colon cancer rates third as incidence in both men and women world-wide. Depression incidence in colorectal cancer varies in specialty literature, in large range, between 23.6% and 69.4%. These differences are due to many factors, such as different design of studies, patients with different characteristics included in the same lots, different evaluation methods (Lavdaniti, Barbas, Fratazana & Zyga, 2012). Depression affects approximately 15-25% of cancer patients, being the most frequently cancer related symptom and is a comorbid disabling syndrome. Independent predictors for depression are, in some studies, nutritional and gastrointestinal factors (Lavdaniti, Barbas, Fratazana & Zyga, 2012; Breen, Baravelli & Schofield, 2009). Patients with colon cancer report serious psychological and emotional morbidities (Lavdaniti, Barbas, Fratazana & Zyga, 2012; Fillipovic et. al. 2007; Ashbury et. al. 2003). Many studies have shown increased levels of depression in cancer patients using different methods of evaluation (Lavdaniti, Barbas, Fratazana & Zyga, 2012; Jadoon, Munir, Shahzad & Choudhy, 2010; Pirl, 2004; Mystakidou et. al., 2005). It is reported that depression in cancer patients may be caused by diagnosis of cancer, side effects and long duration of treatment, disruption and diminished quality of life (Lavdaniti, Barbas, Fratazana & Zyga, 2012; Jadoon et. al., 2010), (Mystakidou et. al., 2005).

Colorectal cancer patients manifesting anxiety and depression have a lower overall survival rate and, also, interaction between mental and psychic problems in elderly patients can exacerbate depression and anxiety. KRAS gene mutation influences the development of psychosocial distress and can be associated with low overall survival in colorectal cancer. Depression should be assessed and treated as early as possible in older metastatic colorectal cancer patients with the KRAS mutation (Zhou et. al., 2016).

In a study by Yi Zhou et. al., 62 metastatic colorectal cancer patients were analyzed (Zhou et. al., 2016). The KRAS mutation rate was 40.3% of cases, 76.0% of with KRAS mutations had probable depression (19 from 25 with depression), and only 24.3% of the patients with wild-type KRAS were probably depressed (p<0.05). The KRAS mutation was associated with higher HADS depression scores, independent of gender and performance status (p<0.05), but not with higher HADS anxiety or total scores (Zhou et. al., 2016).

### **5. Depression in Thyroid Cancer Patients**

Thyroid cancer accounts for about 1% of all malignancies and for 0.2% of cancer deaths. It is the most common malignancy of the endocrine system (Tagay et. al. 2005). Withdrawal of thyroid

hormone therapy with consecutive hypothyroidism has a well-known negative impact on patients' HRQL, leading to increased levels of fatigue, decreased appetite, problems with constipation and motor skills, and fluid retention (Tagay et. al. 2005). During treatment, patients manifested psychological symptoms and social changes, such as family decreased motivation to work or distress. Patients suffering from non-metastatic differentiated thyroid cancer (DTC) have been shown to have worse HRQL during peak thyroid withdrawal (Tagay et. al. 2005; Dow, Ferrell & Anello, 1997).

The study by (Tagay et. al. 2005) analyzed two lots of patients: a hypothyroid group who performed 4 weeks of levothyroxine treatment (DTC-H) involving 130 cases and DTC out-patients subsequent to radioiodine therapy under TSH-suppressive levothyroxine treatment (DTC-L), involving 100 patients. The health survey short-form 36 (SF-36) (Tagay et. al. 2005; Ware et. al., 1995) was used to assess generic HRQL. This investigation instrument analyses aspects of physical, psychological, social functioning, quality of life, anxiety, depression (Tagay et. al. 2005; Bullinger, Kirschberger & Ware, 1995).

The results indicated that quality of life significantly decreased in both lots, but more accentuated in DTC-H vs. DTC-L (p<0.001). In both subgroups, 44.6% and, respectively, 17.7% of cases manifested anxiety and depression (Tagay et. al. 2005).

## 6. Depression in Head and Neck Cancer Patients

Patients with head and neck cancer (HNC) have multiple, complex, and concurrent physical, functional, and psychosocial problems as a result of their disease and its treatment; the uncertainty of the diagnosis; also, the impact of the disease on facial disfigurement, ventilation, nutritional intake and communication have negative effects on vital functions and may lead to the high incidence of depressive symptoms in these patients (Guro et. al. 2015; Haisfield-Wolfe et. al., 2009).

In the specialty literature, several predictors of depressive symptoms in patients with HNC were identified, such as higher stage of disease (Guro et. al. 2015; Joseph et. al., 2013), tumor site (Guro et. al. 2015; Singer et. al., 2012) combined modality treatment (Guro et. al. 2015; Joseph et. al., 2013) aggressive RT regimens (Guro et. al. 2015), higher number of comorbidities (Guro et. al. 2015; Haisfield-Wolfe et. al., 2009), side effects (Guro et. al. 2015; Neilson et. al. 2015; Joseph et. al., 2013), being single or living alone, (Guro et. al. 2015; Chen et. al., 2009), education (Sehlen et. al., 2003; Duffy et. al., 2007), working, smoking, (Chen et. al., 2009), alcohol usage, (Duffy et. al., 2007) specific working conditions, decreased social support, lower physical functioning (Hammerlid et. al., 1999) and increased numbers of physical symptoms; also, depressive symptoms were associated with malnutrition, and changes in body image, as well as with increased anxiety (Rhoten et. al., 2014) and decrements in various dimensions of QOL (Guro et. al. 2015; Britton et. al., 2012).

In the study by Katherine Rieke et. al., 3466 HNC patients were analyzed; 18.5% of cases were diagnosed with depression during the study and these patients were more likely to die of cancer vs. those who received no depression diagnosis (Katherine et. al., 2017).

#### 7. Depression in Cervical Cancer Patients

Cervical cancer is the second most common cancer among women worldwide, with persistently high incidence and mortality in developing countries (Soo et. al., 2010; Parkin et. al., 2005; Vistad, Fossa & Dahl, 2006; Pearman, 2003). The increasing survival rates of women with cervical cancer increased the importance of health-related quality of life (HRQOL) of the survivors (Soo et. al., 2010; Saracino et. al., 2017). The multiple treatment modalities (surgery, radiation, and chemotherapy) of gynecological malignancies induce a significant morbidity. Women frequently manifest physical, psychological, and sexual changes after treatment including loss of ovarian function, hot flashes, vaginal dryness, bowel or bladder changes, and mood changes (Soo et. al., 2010; Morley, 2004). Soo et. al. performed a study on 828 patients with cervical cancer. Anxiety was significantly more prevalent in younger patients (<50 years) than in control arm (which included 500 patients), 40% vs 26.4%, respectively; p<0.001. In multivariate analyses, anxiety and

depression were associated with financial difficulty, poor body image, low existential well-being, sexual inactivity (Soo et. al., 2010).

## 8. Depression in Elderly Cancer Patients

The management of elderly cancer patients represents a challenge. Depression in elderly cancer patients varies in literature between 3 and 31%. Depression in geriatric patients is often under-recognized and under-treated due to the tendency for older adults to report depressive symptoms differently than younger adults (Saracino et. al., 2017; Gallo, Anthony & Muthen, 1994; Duc et. al., 2017; American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, 2013). For elderly cancer patients, it has a significant impact on quality of life, morbidity, and mortality (Guo et. al., 2006). Epidemiological studies reported that 60% of malignant diseases occur in patients ≥ 65 years, and is estimated that in 2020 approximately 70% of all cancers will be diagnosed in patients ≥ 65 years (Gallo, Anthony & Muthen, 1994; Guo et. al., 2006; Passik & Lowery 2011; Akechi et. al., 2003). Depressive symptoms, mild or severe, are associated with increase of deficiencies in neoplastic disease management. The principal causes of these difficulties come from depression diagnosis criteria overlapping with neoplasia symptoms and/or treatment side effects. The overlapping symptoms may include: sleep disturbances, decreased interest in sexual activity, and lack of energy (Gallo, Anthony & Muthen, 1994; Guo et. al., 2006; Mitchell, Lord, Symonds, 2012; Spoletini et. al. 2008; Polikandrioti, Evaggelou & Zerva, 2003).

It is difficult to set up the efficient treatment for depression in this patient category due to multiple medication (comorbid illnesses), difficulties in patient—physician relationship, lack of adherence to treatment, social stigma (Kathleen et. al., 2007).

Polikandrioti et. al. analyzed 159 cancer patients and the results of the study revealed that the depression level increases directly with age, with significant differences between age groups. The statistical analysis showed that patients >70 years old experienced higher levels of depression, compared with those who were <50 and 51-60 years old, p=0,025 and p=0,005, respectively (Polikandrioti, Evaggelou, Zerva & Zerdila, 2008). Possible reasons are that elderly patients with cancer have pre-existing comorbidities often associated with situations able to change their lives, such as functional impairment, poor network of social support, loss of spouse, loss of interest for activities, cognitive disorders (poor memory or concentration difficulties), and non-acceptance of actually state of depression (Heilman, Lee & Dury, 2002; Pasquini & Biondi, 2007).

The study performed by Duc S. et. al. analyzed 344 geriatric patients with chemotherapy and the independent factors of depression were depressive symptoms at baseline (odds ratio (OR) = 6.7, p < 0.001), malnutrition (OR = 5.1, p = 0.014), and risk of malnutrition (OR = 1.6, p = 0.014) (Duc et. al., 2017). Depression is a common symptom in cancer patients, which is difficult to be detected and consequently to be treated. It deteriorates over the course of cancer treatment, persists long after the end of therapy and influences negatively the quality of life (Kathleen et. al., 2007). Regarding educational status, patients of primary education experienced higher level of depression compared to those of secondary and higher/university education (Heilman, Lee & Dury, 2002). The socio-economic status of patients with cancer is frequently responsible for the incidence of depression. According to Heilman et. al. (2002) a correlation was found between financial stress and depressive symptoms in patients with cancer. Many researches stated that depression needs to be examined in combination with personality and the stage of disease (Heilman, Lee & Dury, 2002; Bailey et. al., 2005; Bardwell et. al., 2006) and other comorbidities like alcohol withdrawal (Ciubara et. al., 2015; Ciubara, et. al, 2018).

Cancer is a chronic disease, induces important changes to the functional capability, the body image and the social or family role involving emotional problems for the patient. Health professionals should be aware of the consequences of depression in all dimensions of patients' lives that undergo cancer treatment. Early diagnosis of depression and awareness of its impact have great importance for evaluation, medical treatment and the planning of personal care (Heilman, Lee & Dury, 2002). The depressive syndrome is associated more frequently with chemotherapy vs.

radiotherapy and surgery, maybe because of its side effects and their psychological impact on patients. The psycho-social support must become a "standard of care" for oncological patients, the same as it is in Canada.

The psychologist must be an active member in multidisciplinary theme; its role is to support the patient's better understanding of the disease itself, the multimodality treatment, their side effects, changing treatment sequences, disease relapsing, palliative care. Also, the psychologist should provide psychological support for families, medical staff and care-givers.

### 9. Instead of Conclusions

The relationship between physician and patient has a supportive role when it is based on trust and reciprocity, when communication is open, sincere and full of honesty. Supportive psychotherapy must focus on solutions, and in these cases, supportive groups may be efficient by sharing individual experiences, such as patient groups with the same oncology diagnosis (breast cancer, colon, prostate, etc.), or patient groups with the same therapeutical sequence (chemotherapy, radiotherapy, surgery). Anxiety and depressive syndrome prevention may be achieved by psychological counseling for oncological patients, family, medical personnel, and group therapy.

There is a strong need to identify and treat depression in cancer patients in order to increase quality of life and reduce mortality. It is required to identify the most effective combinations of pharmacological and psychosocial treatments for depression in cancer patients.

Also, in our Oncology Department from Sf. Ap. Andrei Emergency Clinical Hospital in Galati, it is necessary to have two active psychologists to provide supportive psychotherapy for all oncologic patients, their family and the medical staff.

#### References

- Akechi, T., Nakano, T., Akizuki, N., Okamura, M., Sakuma, K., & Nakanishi, T. et al. (2003). Somatic Symptoms for Diagnosing Major Depression in Cancer Patients. Psychosomatics, 44(3), 244-248. doi: 10.1176/appi.psy.44.3.244
- American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders. 5th edition. American Psychiatric Publishing, Arlington, VA.
- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders: DSM-5. American Psychiatric Association; Arlington, VA, (2013).
- Ashbury, Fred & Madlensky, Lisa & Raich, Peter & Thompson, Mark & Whitney, Geoff & Hotz, Ken & Kralj, Boris & S Edell, William. (2003). Antidepressant prescribing in community cancer care. Supportive care in cancer: official journal of the Multinational Association of Supportive Care in Cancer. 11. 278-85. 10.1007/s00520-003-0446-8.
- Bailey, R., Geyen, D., Scott-Gurnell, K., Hipolito, M., Bailey, T., & Beal, J. (2005). Understanding and treating depression among cancer patients. International Journal Of Gynecological Cancer, 15(2), 203-208. doi: 10.1111/j.1525-1438.2005.15204.x
- Bardwell, W., Natarajan, L., Dimsdale, J., Rock, C., Mortimer, J., Hollenbach, K., & Pierce, J. (2006). Objective Cancer-Related Variables Are Not Associated With Depressive Symptoms in Women Treated for Early-Stage Breast Cancer. Journal Of Clinical Oncology, 24(16), 2420-2427. doi: 10.1200/jco.2005.02.0081
- Bjordal K, Kaasa S. (1995). Psychological distress in head and neck cancer patients 7-11 years after curative treatment. Br J Cancer. 71(3):592-597.
- Bower JE, Ganz PA, Desmond KA, Rowland JH, Meyerowitz BE, Belin TR. (2000) Fatigue in breast cancer survivors: occurrence, correlates, and impact on quality of life. J Clin Oncol;18:743–53.
- Breen SJ, Baravelli CM, Schofield PE, Jefford M, Yates PM, Aranda SK. (2009) Is symptom burden a predictor of anxiety and depression in patients with cancer about to commence chemotherapy? Med J Aust. 190 (7 Suppl):S99-104.

- Breuer B, Anderson R. (2000). The relationship of tamoxifen with dementia, depression, and dependence in activities of daily living in elderly nursing home residents. Women Health;31:71–85.
- Britton B, Clover K, Bateman L, et. al. (2012). Baseline depression predicts malnutrition in head and neck cancer patients undergoing radiotherapy. Support Care Cancer. 20(2):335-342.
- Bullinger M, Kirschberger I & Ware JE. (1995). The German SF-36 Health Survey. Zeitschrift Gesundheitswissenschaft: 10: 21–36.
- Cathcart CK, Jones SE, Pumroy CS, Peters GN, Knox SM, Cheek JH. (1993). Clinical recognition and management of depression in node negative breast cancer patients treated with tamoxifen. Breast Cancer Res Treat;27:277–81.
- Chen AM, Jennelle RL, Grady V, et. al. (2009). Prospective study of psychosocial distress among patients undergoing radiotherapy for head and neck cancer. Int J Radiat Oncol Biol Phys. 73(1):187-193.
- Chen SC, Lai YH, Liao CT, Lin CC, Chang JT. (2010). Changes of symptoms and depression in oral cavity cancer patients receiving radiation therapy. Oral Oncol. 46 (7):509-513.
- Ciubara A., Burlea Ş. L., Săcuiu I., Radu D. A., Untu I., & Chiriță, R. (2015). Alcohol Addiction—A Psychosocial Perspective. Procedia-Social and Behavioral Sciences; 187, 536-540
- Ciubara, A.B., Nechita, A., Tudor, R.C., Matei, M., Tutunaru, D., Sirbu, P.D. (2018). Social and Medical Ethics: Implications for Romanian Protocols Regarding the Therapy of Alcohol Withdrawal Syndrome in Trauma Patients. Revista de Cercetare si Interventie Sociala, 60, 174-179.
- Compas BE, Stoll MF, Thomsen AH, Oppedisano G, Epping-Jordan JE, Krag DN. Adjustment to breast cancer: age-related differences in coping and emotional distress. Breast Cancer Res Treat 1999; 54:195–203.
- Coyne, J. C., Thompson, R., Palmer, S. C., Kagee, A., & Maunsell, E. (2000). Should we screen for depression? Caveats and potential pitfalls. Applied & Preventive Psychology, 9(2), 101-121.
- Dodd MJ, Miaskowski C, Lee KA. (2004) Occurrence of symptom clusters. J Natl Cancer Inst Monogr; 76–78.
- Dow K, Ferrell B & Anello C. (1997). Balancing demands of cancer surveillance among survivors of thyroid cancer. Cancer Practice: 5; 289–294.
- Dow KH, Ferrell BR & Anello C. (1977). Quality-of-life changes in patients with thyroid cancer after withdrawal of thyroid hormone therapy. Thyroid 7:613–619.
- Duc S, Rainfray M, Soubeyran P, Fonck M, Blanc JF, Ceccaldi J, Cany L, Brouste V, Mathoulin-Pélissier S. (2017). Predictive factors of depressive symptoms of elderly patients with cancer receiving first-line chemotherapy. Psychooncology 26(1):15-21.
- Duffy SA, Ronis DL, Valenstein M, et. al. (2007). Depressive symptoms, smoking, drinking, and quality of life among head and neck cancer patients. Psychosomatics. 48(2):142-148.
- Fann, J., Thomas-Rich, A., Katon, W., Cowley, D., Pepping, M., McGregor, B., & Gralow, J. (2008). Major depression after breast cancer: a review of epidemiology and treatment. General Hospital Psychiatry, 30(2), 112-126. doi: 10.1016/j.genhosppsych.2007.10.008
- Fillipovic BR, Fillipovic BF, Kerkez M, Millnic N, Randelovic T. (2007). Depression and anxiety levels in therapy –nive patients with inflammatory bowel disease and cancer of the colon. World J Gastroenterol. 13(3): 438-443.
- Gallo JJ, Anthony JC, Muthen BO. (1994). Age differences in the symptoms of depression: a latent trait analysis. J Gerontol 49:251–264.
- Gaston-Johansson F, Fall-Dickson JM, Bakos AB, Kennedy MJ. (1999) Fatigue, pain, and depression in pre-autotransplant breast cancer patients. Cancer Pract 7:240–7.
- Gilbody SM, House AO, Sheldon TA (2001). Routinely administered questionnaires for depression and anxiety: systematic review. BMJ;322:406–9.
- Guo Y, Musselman DL, Manatunga AK, et. al. (2006). The diagnosis of major depression in patients with cancer: a comparative approach. Psychosomatics 47(5):376–384.

- Guro Lindviksmoen Astrup, Tone Rustøen, Christine Miaskowski, Steven M. Paul, Kristin Bjordal, (2015). A longitudinal study of depressive symptoms in patients with head and neck cancer undergoing radiotherapy. Cancer Nursing. 38 (6):436–446
- Haisfield-Wolfe ME, McGuire DB, Soeken K, Geiger-Brown J, De Forge BR., (2009) Prevalence and correlates of depression among patients with head and neck cancer: a systematic review of implications for research. Oncol Nurs Forum.;36(3):107-125.
- Haisfield-Wolfe ME, McGuire DB, Soeken K, Geiger-Brown J, De Forge B, Suntharalingam M. (2012). Prevalence and correlates of symptoms and uncertainty in illness among head and neck cancer patients receiving definitive radiation with or without chemotherapy. Support Care Cancer. 20 (8):1885-1893.
- Halbreich U, Rojansky N, Palter S, Tworek H, Hissin P, Wang K. (1995). Estrogen augments serotonergic activity in postmenopausal women. Biol Psychiatry 37:434–41.
- Hamish R. Smith (2015). Depression in cancer patients: Pathogenesis, implications and treatment. Oncol Lett. 9(4): 1509–1514.
- Hammerlid E, Ahlner-Elmqvist M, Bjordal K, et. al. (1999). A prospective multicentre study in Sweden and Norway of mental distress and psychiatric morbidity in head and neck cancer patients. Br J Cancer. 80(5-6):766-774.
- Heilman MV., Lee KA., Dury FS. (2002). Strengths and vulnerabilities of women of Mexican descent in relation to depressive symptoms. Nursing Res. 51:175–182.
- Ilaria Spoletini, Walter Gianni, Lazzaro Repetto, Pietro Bria, Carlo Caltagirone, Paola Boss`u, Gianfranco Spalletta (2008). Depression and cancer: An unexplored and unresolved emergent issue in elderly patients. Critical Reviews in Oncology/Hematology 65: 143–155
- Jadoon NA, Munir W, Shahzad MA, Choudhy ZS. (2010). Assessment of depression and anxiety in adult cancer outpatients: a cross-sectional study. BMC Cancer. 10:594.
- Jesse R. Fann, Anne M. Thomas-Rich, Wayne J. Katon, Deborah Cowley, Mary Pepping, Bonnie A.McGregor, Julie Gralow (2008). Major depression after breast cancer: a review of epidemiology and treatment. General Hospital Psychiatry 30:112–126
- Joseph LA, Routledge JA, Burns MP, et. al. (2013). Value of the Hospital Anxiety and Depression Scale in the follow up of head and neck cancer patients. J Laryngol Otol.127(3):285-294.
- Katherine Rieke, Kendra K. Schmid, Julia Houfek, Eugene Boilesen, Shinobu Watanabe-Galloway (2017). Depression and survival in head and neck cancer patients. Oral Oncology, 65: 76-82.
- Kathleen E., Quon B., Quinn D., Dwight-Johnson M., Wells A., Lee P-J., et. al. 2007. Improving treatment of depression among low-income patients with cancer: the design of the ADAPt-C Study. Gen Hosp Psychiatry. 29(3):223-231.
- Kelly C, Paleri V, Downs C, Shah R. (2007). Deterioration in quality of life and depressive symptoms during radiation therapy for head and neck cancer. Otolaryngol Head Neck Surg. 136(1):108-111.
- Kohda R, Otsubo T, Kuwakado Y, et. al. (2005). Prospective studies on mental status and quality of life in patients with head and neck cancer treated by radiation. Psychooncology. 14(4):331-336.
- Leedham B, Ganz PA (1999). Psychosocial concerns and quality of life in breast cancer survivors. Cancer Invest.17:342–8.
- Maria Lavdaniti, George Barbas, Aikaterini Fratazana, Sofia Zyga (2012). Evaluation of depression in colon cancer patients. Health Science Journal Volume 6, Issue 4, pg.681-692.
- Mitchell AJ, Lord K, Symonds P. (2012). Which symptoms are indicative of DSMIV depression in cancer settings? An analysis of the diagnostic significance of somatic and non-somatic symptoms. J Affect Disord. 138(1–2):137–148.
- Morley JE. (2004). The top 10 hot topics in aging. J Gerontol Biol Sci Med Sci. 59(1):24–33. (PubMed: 14718483)

- Mystakidou K, Tsilika E, Parpa E, Katsouda E, Galanos A, Vlahos L. (2005) Assessment of anxiety and depression in advanced cancer patients and their relationship with quality of life. Qual Life Res, 14:1825-33.
- National Cancer Institute. Depression available at http://www.cancer.gov access in 8 August 2011). NCCN Guidelines Versions (2018). Distress Management.
- Neilson K, Pollard A, Boonzaier A, et. al. (2013). A longitudinal study of distress (depression and anxiety) up to 18 months after radiotherapy for head and neck cancer. Psychooncology. 22(8):1843-1848.
- New Global Cancer Data: GLOBOCAN 2018 | UICC. (2018). Retrieved from https://www.uicc.org/new-global-cancer-data-globocan-2018
- Noi date despre cancer în România de la GLOBOCAN. (2019). Retrieved from http://www.saptamanamedicala.ro/articole/Noi-date-despre-cancer-in-Romania-de-la-GLOBOCAN
- Okamura M, Yamawaki S, Akechi T, et. al. (2005). Psychiatric disorders following first breast cancer recurrence: prevalence, associated factors and relationship to quality of life. Jpn J Clin Oncol 35: 302-309.
- Parkin DM, Bray F, Ferlay J, et. al. (2005). Global cancer statistics, 2002. CA Cancer J Clin. 55:74Y108.
- Pasquini M., Biondi M. (2007). Depression in cancer patients: a critical review.ClinPractEpidemolMent Health. 3: 2.
- Passik, SD., Lowery, (2011). A. Recognition of depression and methods of depression screening in people with cancer. In: Kissane, MM., Sartorius, N., editors. Depression and Cancer. Wiley and Sons; Oxford.
- Pearlstein TB. (1995). Hormones and depression: what are the facts about premenstrual syndrome, menopause, and hormone replacement therapy? Am J ObstetGynecol 173:646–53.
- Pearman T. (2003). Quality of life and psychosocial adjustment in gynecologic cancer survivors. Health Qual Life Outcomes.1:33.
- Pignone MP, Gaynes BN, Rushton JL, Burchell CM, Orleans CT, Mulrow CD, et. al. (2002). Screening for depression in adults: a summary of the evidence for the U.S. Preventive Services Task Force. Ann Intern Med;136:765–76.
- Pirl WF. (2004). Evidence report on the occurrence, assessment, and treatment of depression in cancer patients. J Natl Cancer Inst Monogr. 32:32-9.
- Polikandrioti M., Evaggelou E., Zerva S., Zerdila M., Koukoularis D., Kyritsi E. (2008), Evaluation of depression in patients undergoing chemotherapy. Health Science Journal. 2 (3):162-172.
- Rebecca M. Saracino, Mark I. Weinberger, Andrew J. Roth, Arti Hurria, Christian J. Nelson (2017). Assessing depression in a geriatric cancer population Psychooncology. 26 (10): 1484–1490.
- Rebecca M. Saracino, Mark I. Weinberger, Andrew J. Roth, Arti Hurria, Christian J. Nelson, (2017). Assessing depression in a geriatric cancer population Psychooncology 26(10): 1484–1490.
- Rhoten BA, Deng J, Dietrich MS, Murphy B, Ridner SH. (2014). Body image and depressive symptoms in patients with head and neck cancer: an important relationship. Support Care Cancer. 22(11):3053-3060.
- Rowland J. (1999). Anxiety and the blues after breast cancer: how common are they? CNS Spectr; 4:40–54.
- Saykin AJ, Ahles TA, McDonald BC (2003). Mechanisms of chemotherapy induced cognitive disorders: neuropsychological, pathophysiological, and neuroimaging perspectives. Semin Clin Neuropsychiatry;8: 201–16.
- Schagen SB, van Dam FS, Muller MJ, Boogerd W, Lindeboom J, Bruning PF (1999). Cognitive deficits after postoperative adjuvant chemotherapy for breast carcinoma. Cancer; 85:640–50.
- Sefik Tagay, Stephan Herpertz, Matthias Langkafel, Yesim Erim, Lutz Freudenberg, Nicole Schopper, Andreas Bockisch, Wolfgang Senf and Rainer Gorges, (2005). Health-related quality of life, anxiety and depression in thyroid cancer patients under short-term

- hypothyroidism and TSH-suppressive levothyroxine treatment. European Journal of Endocrinology 153 755–763.
- Sehlen S, Lenk M, Herschbach P, et. al. (2003). Depressive symptoms during and after radiotherapy for head and neck cancer. Head Neck. 25(12):1004-1018.
- Singer S, Krauss O, Keszte J, et. al. (2012). Predictors of emotional distress in patients with head and neck cancer. Head Neck. 34 (2):180-187.
- Sneeuw KCA, Aaronson NK, van Wouwe MCC, et. al. (1993). Prevalence and screening of psychiatric disorder in patients with early stage breast cancer. Qual Life Res 2: 50-51.
- Soo Hyun Kim, Sokbom Kang, Yong-Man Kim, Byoung-Gie Kim, Seok Ju Seong, Soon Do Cha, Chan-Yong Park, Young Ho Yun (2010). Prevalence and Predictors of Anxiety and Depression Among Cervical Cancer Survivors in Korea. Int J Gynecol Cancer;20: 1017Y1024
- Spiegel D, Giese-Davis J. (2003) Depression and cancer: mechanisms and disease progression. Biol Psychiatry;54:269–82.
- Statistica Globocan 2018. România, fără date exacte privind cancerul | Ro Health Review. (2018). Retrieved from https://rohealthreview.ro/statistica-globocan-2018-romania-fara-date-exacte-privind-cancerul/
- Thompson DS, Spanier CA, Vogel VG. (1999). The relationship between tamoxifen, estrogen, and depressive symptoms. Breast J;5: 375–82.
- van Dam FS, Schagen SB, Muller MJ, Boogerd W, vd Wall E, Droogleever Fortuyn ME, et. al. (1998). Impairment of cognitive function in women receiving adjuvant treatment for high-risk breast cancer: highdose versus standard-dose chemotherapy. J Natl Cancer Inst;90: 210–8.
- Vistad I, Fossa SD, Dahl AA. (2006). A critical review of patient-rated quality of life studies of long-term survivors of cervical cancer. Gynecol Oncol. 102:563Y572.
- Ware JE, Snow KK, Korinski M, Gandeck B. (1993). SF-36 Health Survey Manual and Interpretation Guide. Boston: New England Medical Center, The Health Institute,
- Wefel, J., Kesler, S., Noll, K., & Schagen, S. (2014). Clinical characteristics, pathophysiology, and management of noncentral nervous system cancer-related cognitive impairment in adults. CA: A Cancer Journal For Clinicians, 65(2), 123-138. doi: 10.3322/caac.21258
- Yi Zhou, Xiaohui Gu, Feng Wen, Jing Chen et. al. (2016). Association of KRAS gene mutations with depression in older metastatic colorectal cancer patients. Int Psychogeriatr. 28 (12):2019-2028.