



## The Psychological Impact on 472 Gynecological Cancer Patients: First Diagnosis vs. Disease Recurrence

Daniela Pia Rosaria Chieffo<sup>1,4\*</sup>, Letizia Lafuenti<sup>1</sup>, Ludovica Mastrilli<sup>1,2</sup>, Barbara Costantini<sup>1</sup>, Silvia Riccardi<sup>1,5</sup>, Gabriella Ferrandina<sup>1,4</sup>, Vanda Salutaris<sup>3</sup>, Francesco Fanfani<sup>3,4</sup>, Giovanni Scambia<sup>3,4</sup> and Anna Fagotti<sup>3,4</sup>

<sup>1</sup>Agostino Gemelli University Policlinic, IRCCS, Italy

<sup>2</sup>Fondazione Umberto Veronesi, Italy

<sup>3</sup>Department of Woman and Child Health and Public Health, Agostino Gemelli University Policlinic, IRCCS, Italy

<sup>4</sup>Catholic University of the Sacred Heart, Italy

<sup>5</sup>Clinical Psychology Unit, Santo Spirito Hospital, Italy

### Abstract

**Objective:** The diagnosis of gynecological cancer, or its recurrence, is often reflected in dramatic changes in a woman's life, and in her family too. The level of emotional distress associated with cancer treatment varies greatly at different stages of the treatment pathway and is determined not only by the severity of the clinical symptoms, but also by the therapeutic outcome and a number of individual psychological characteristics.

This study aims to assess the difference in the psychological impact of the diagnosis of recurrence compared to the first diagnosis, in patients with gynecological cancer, comparing distress, anxiety, and depression scores.

**Method:** Four hundred seven women with gynecological cancer who were admitted to the Female Tumors Day Hospital or oncological gynecology ward of Policlinico Universitario Agostino Gemelli Foundation IRCCS were recruited. All patients completed questionnaires to assess distress, anxiety and depression at T0 on the admission.

**Results:** It was observed that group of patients with recurrence scored higher than the group with the first diagnosis, in all three scales: distress ( $p=0.000$ ), anxiety ( $p=0.000$ ) and depression ( $p=0.000$ ).

**Conclusion:** Our findings show that patients with recurrence have obtained statistically higher scores in all three scales administered to assess distress, anxiety and depression. In line with other study, these results indicate that recurrence has a worse psychological impact on patients.

**Keywords:** Anxiety; Cancer; Depression; Emotional distress; Female tumor; First diagnosis; Gynecology; Oncology; Psycho-oncology; Recurrence

### Introduction

A cancer diagnosis can lead to severe psychological distress and anxiety. Regardless of the prognosis, the major anxieties of patients are fear of pain and uncertainty about the future [1]. The level of emotional distress associated with the cancer care pathway varies considerably and is determined not only by the severity of clinical symptoms, but also by the therapeutic outcome, the patient's general state, and a number of individual psychological and/or social characteristics. In oncology settings, the prevalence of combined diagnoses was 20.7% for any type of depression (major, minor, or dysthymia), 31.6% for depression (according to DSM or ICD) or adjustment disorder, and 38.2% for depression (according to DSM or ICD), adjustment disorder, or anxiety [2]. In accordance with NCCN, the "distress" is defined: "An unpleasant multifactorial emotional experience of a psychological (cognitive, behavioral, emotional), social, and/or spiritual nature that can interfere with the ability to effectively cope with cancer, its physical symptoms, and its treatment. Distress extends along a continuum from common normal feelings of vulnerability, sadness, and fears to problems that can become disabling, such as depression, anxiety, panic, social isolation, and existential and spiritual crisis" [3].

Routine assessment of the emotional state of cancer patients allows for early identification of emotional and psychological disorders and consequently the provision of appropriate psychological

### OPEN ACCESS

#### \*Correspondence:

Daniela Pia Rosaria Chieffo, Clinical Psychology Unit, Agostino Gemelli University Policlinic, Gemelli IRCCS, Rome, Italy,  
E-mail: [danielapiarosaria.chieffo@policlinicogemelli.it](mailto:danielapiarosaria.chieffo@policlinicogemelli.it)

Received Date: 26 Jul 2021

Accepted Date: 30 Aug 2021

Published Date: 06 Sep 2021

#### Citation:

Chieffo DPR, Lafuenti L, Mastrilli L, Costantini B, Riccardi S, Ferrandina G, et al. The Psychological Impact on 472 Gynecological Cancer Patients: First Diagnosis vs. Disease Recurrence. *Clin Oncol.* 2021; 6: 1855.

ISSN: 2474-1663

Copyright © 2021 Daniela Pia Rosaria Chieffo. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

care to individuals at increased risk for cancer-related mental disorders [4,5].

The diagnosis of gynecologic cancer, or its recurrence, is often reflected in dramatic changes in the patient's situation, both individual and family.

Therefore, a "woman's cancer" can be considered a "family affair" because it violently and unexpectedly impacts the life of the woman/mother/wife, and consequently the entire family unit around her. Surgery constitutes a severe trauma frequently associated with harmful side effects, such as loss of reproductive organs, early menopause, and loss of normal abilities and autonomy [6]. Another interesting point is patients' individual perception of "time". We realized in our group work, that for cancer patients in general, but especially in those with recurrences, the concept of "time" varies greatly, and around a cancer recurrence, a woman's first thought is "I'm out of time," or something like "every treatment I've done so far has been completely useless". This type of thinking increases anxiety and depression, generating little adherence to proposed cancer treatments.

Cancer recurrence can be defined as the return of cancer after completing treatment and having a length of time during which the cancer has not been detected. Recurrence after a period of remission differs from cancer progression, which is when an existing cancer spreads or worsens. A recurrence or progression of the cancer will, in turn, lead to more work-ups and treatments, and will most likely evoke many emotions and questions [7]. Among the various psychological and psychopathological disorders most commonly reported by cancer patients are depression and anxiety. The psychological aspect has been shown to have a great impact on the clinical course of patients; specifically, gynecologic cancer patients suffering from depression and anxiety run a significantly higher risk of mortality, longer periods of hospitalization and worse treatment outcomes [8].

Therefore, in order to ensure an optimal therapeutic outcome, the cancer pathway of patients with gynecologic cancer should take place in centers that provide interdisciplinary care, thus including not only medical, but also psychological and social aspects.

In line with other studies [9,10], in fact Singer and Schwarz [11] report that 78% of women would like to have psycho-oncological support already during their hospital stay.

The work with gynecological patients allows us to understand how the "fear of recurrence" is directly related to the "trauma of cancer diagnosis", and that is why its management - with clinical and psychological approach - must be considered an integral part of the path of treatment and oncological care.

The aim of our study is therefore to investigate the difference in the viewpoint of psychological distress, in terms of levels of distress, anxiety and depression, between patients who are diagnosed with a first diagnosis, and patients who are diagnosed with a relapse of the disease.

## Methods

### Participants

Four hundred seven women with gynecological cancer were considered in this observational study. All patients were related to the women's cancer day hospital or gynecological cancer ward.

As per standard daily clinical activity, all patients were given questionnaires to assess levels of distress, anxiety and depression,

upon their admission to the ward or day hospital.

Participants were recruited according to the following inclusion criteria: 1) age  $\geq$  18 years; 2) diagnosis of ovarian, endometrial or cervical cancer; 4) active oncological treatment. Exclusion criteria for were the following: 1) previous or current psychiatric diseases; 2) age  $>$ 75 years.

Table 1 shows the number of patients according to tumour site, age and mean scores obtained at the clinical scales.

### Measures

All enrolled patients were given two questionnaires with the aim of measuring the levels of distress, anxiety and depression.

The Hospital Anxiety and Depression Scale (HADS) [12] is a self-report questionnaire investigated Anxiety (HADS-A) and Depression (HADS-D), and consists of 14 items, 7 for assess anxiety and 7 for assess depression and has proven validity and reliability. Both HADS subscales consist of 7 item answered on a 4-point Likert scale (from 0= lack of symptom to 3= maximum severity, resulting in scores from 0 to 21. A score of 0 to 7 is considered normal anxiety or depression, score of 8 to 10 is considered borderline abnormal and 11 to 21 abnormal.

The Distress Thermometer [13] is a questionnaire for the evaluation of psychosocial distress in cancer patients. Is a single anchor item, which evaluates the emotional distress perceived by the patient, through an analogue-visual scale (thermometer with score 0 to 10) plus a list of problems listed in five areas (practical, family, emotional, spiritual-religious and physical problems).

### Statistical methods

The scoring of the questionnaires was performed according to the test manuals. To compare the groups and check their homogeneity considering age the T-test for non-parametric sample was applied, considering diagnosis and levels of distress, anxiety and depression was used the  $\chi^2$ -test for nominal variables, as appropriate.

Results were expressed as p value, arithmetic means with Standard Deviations (SD) or frequencies with percentages. The statistical analysis was conducted to verify whether there were statistically significant differences between the group with the first diagnosis and the group with recurrence to the scores obtained at the administered scales.

Probability (p) values were considered statistically significant for a  $<$ 0.05 value. IBM SPSS Statistics, version 25 was used for all the analysis.

## Results

We analyzed the scores obtained at the scales that assess distress, anxiety and depression to verify the need for psychological care for patients with gynecological cancer. We then analyzed whether there were statistically significant differences in psychological discomfort in patients with a first diagnosis compared to patients with recurrence.

The means and SD for distress, anxiety and depression are shown in Table 1; the probability (p) values for statistical difference between the group of patients with first diagnosis and those with recurrence, are shown in Table 2. As shown by the means in Table 1, the group of patients with recurrence scored higher than the group with the first diagnosis, in all three scales. For this reason, we conducted statistical analysis to verify if this difference was statistically significant.

**Table 1:** Overview of patients divided by tumour site, age and mean scores on the basis of clinical scales.

Diagnosis	N. tot	n. of pt with score >cut-off			% of pt with score >cut-off			M (SD)		
		DT	HADS A	HADS D	DT	HADS A	HADS D	DT	HADS A	HADS D
<b>FIRST DIAGNOSIS</b>										
Entire Group	208	170	123	101	82%	60%	49%	6.4 (2.3)	8.8 (4.5)	7.6 (4.6)
Ovary	130	105	84	68	81.5%	65%	53%	6.5 (2.4)	9.5 (4.7)	8.2 (4.7)
Cervix	26	22	14	15	85%	54%	58%	6.3 (1.7)	8.4 (4.0)	7.7 (4.3)
Endometrium	29	20	9	7	69%	31%	24%	5.5 (2.5)	6.4 (3.6)	5.3 (4.2)
Uterus	18	16	11	9	89%	61%	50%	6.3 (2.2)	8.3 (4.2)	7.6 (3.8)
Vulva	7	7	5	2	100%	71%	28,5%	7.9 (1.5)	9.7 (4.4)	7.1 (3.7)
<b>RECURRENCE</b>										
Entire Group	220	204	179	155	93%	82%	71%	7.3 (1.9)	10.9 (4.0)	9.6 (4.3)
Ovary	154	138	121	104	90%	79%	68%	7.2 (2.0)	10.6 (4.0)	9.5 (4.5)
Cervix	29	29	27	24	100%	93%	83%	7.7 (1.3)	12.7 (3.4)	10.3 (3.4)
Endometrium	19	19	15	13	100%	79%	68%	7.7 (1.8)	10.8 (4.8)	9.2 (4.5)
Uterus	17	15	14	11	88%	82%	65%	7.1 (2.5)	10.4 (4.4)	9.4 (4.8)
Vulva	3	3	2	3	100%	66%	100%	8.3 (1.5)	11.3 (4.5)	10.3 (2.5)

**Table 2:** p values for statistical difference between first diagnosis and recurrence.

Diagnosis	p value		
	DT	HADS A	HADS D
Entire group	0.000	0.000	0.000
Ovary	0.033	0.009	0.013
Cervix	0.028	0.001	0.041
Endometrium	0.007	0.001	0.002
Vulva	0.091	0.880	0.038
Uterus	0.006	0.127	0.020

Statistically significant differences were found between the group with first diagnosis and the group with recurrence of both distress ( $p=0.000$ ), anxiety ( $p=0.000$ ) and depression ( $p=0.000$ ). We then investigated whether there was a difference between the scores obtained at the three scales by dividing the two groups into subgroups based on the lesion site.

As can be seen from Table 2, statistically significant differences were found in the ovary group, where statistical significance was found in the scores obtained at the HADS A scale ( $p=0.009$ ), as well as in the cervix group ( $p=0.001$ ). Statistical significance was found in all three scales within the endometrium group (DT:  $p=0.007$ ; HADS A:  $p=0.001$ ; HADS D:  $p=0.002$ ). Finally, statistical significance was found in the scores obtained at the DT test in the uterus group ( $p=0.006$ ). No difference emerged in the vulvar group.

## Discussion

This study aims to investigate the psychological differences, regarding distress, anxiety, and depression, between patients with first diagnosis and patients with gynecologic cancer recurrence. Accordingly, we used a routine psychodiagnostic assessment consisting of the Distress Thermometer to assess levels of distress and the HADS test to assess levels of anxiety and depression.

In the present study, our first hypothesis was that patients diagnosed with relapse had higher levels of distress, anxiety, and depression than patients with first diagnosis. This hypothesis emerged

from our daily clinical experience, in which we noticed that patients with relapse approach (or are convinced to approach) the oncology pathway with fewer resources, more anxiety, less confidence in the proposed treatment pathway, and more depressive attitude.

In general, the study proves the presence of a greater psychological impact of recidivism compared to the first diagnosis, thus replicating previous findings [7].

In fact, our results show that patients with recurrence obtained statistically higher scores in all three scales administered to assess distress, anxiety and depression. In line with another study [14], these results indicate that recurrence has a worse psychological impact on patients than the communication of an initial disease diagnosis.

In line with these findings, it has indeed been shown that substantially more patients with disease recurrence reported the perception of a worse quality of life than those without recurrence [14]. Most women without recurrence returned that they felt calm, stress-free (64.9%) and almost one-half also added that they felt "full of energy"; in contrast, only 15.5% of those with recurrence referred to feeling calm and full of energy.

In the same vein, it was found that patients with relapse reported feeling sad, discouraged, and with lower levels of motivation, and reported that their mental and physical health also negatively affected their social lives.

In line with our findings that both anxiety and depression occurred at a statistically greater level in patients with recurrence, Wen et al. [15] demonstrated that gynecologic cancer survivors experience repeated recurrences and that this event results in significant physical burden and mental distress to these patients.

Fear of cancer recurrence is commonly reported among gynecologic cancer patients [16,17]. Moreover, there is evidence that fear of cancer recurrence is a predominant theme that has emerged among gynecological cancer patients [7].

The most common response to a question about worry in all age groups was a single-word response: Recurrence [18]. Women expressed that fears of recurrence dominated their lives due to

the awareness that recurrence is common and indicates a poorer prognosis. For those who experienced a recurrence, thought focused on the distress caused by recurrence and the need to accept gynecologic cancer as a chronic condition.

These evidences support what emerged from our study, that is the negative psychological and consequently also the social and familiar impact of the disease recurrence. We hypothesize that this psychological discomfort can negatively influence the outcomes of the treatment pathway: for this reason it could be interesting in a future study to investigate this aspect.

The lack of adequate support regarding fear of cancer recurrence is further concerning in light of the trend indicating that fear of cancer recurrence is associated with psychosocial outcomes such as hopelessness, faith/spirituality, PTSD, anxiety about death and dying, and uncertainty about one's future medical health [7].

### Study limitations

A limitation of our study is the lack of homogeneity of the sample: In particular, patients with ovarian cancer are definitively much more numerous than all the others considered in the study (Cervix, Endometrium, Vulva, Uterus). The main reason of this difference is actually related to the diagnosis of treated patients, in fact the number of patient with ovarian cancer diagnosis is statistically higher than others. This gap does not allow us to have a complete perspective of the difference, in term of psychological diseases, on the entire group of "gynecological patients". Another limit of the study is that we actually have not verified any kind of results concerning the effectiveness of the psychological support in those patients, and in specific pathologies, among a long period: In our daily work, we found out that during the oncological path, with a structured psychological support, women with cancer recurrence can be helped to find adequate resources and re-activate good psychological coping strategies to face cancer.

### Clinical implications

Our study has shown that in general all patients facing gynecological cancer, at any stage of the treatment process, experience high levels of distress, anxiety and depression.

Specifically, our results have shown that compared to the first diagnosis of the disease, the diagnosis of recurrence has a worse impact on the psychological aspect of these patients. According to these results, the important message of this study is therefore the need for psychological support that can accompany the patient throughout the entire course of treatment to alleviate psychological suffering and to help the patient to identify appropriate resources for a healthy adaptive process.

### Conclusion

This finding suggests that psychological support to the patient in general, but especially the one with recurrence, can be very important to reduce the patient's levels of distress, anxiety and depression and to accompany her on the path of treatment. On this basis, it would be interesting to evaluate the impact of psycho-oncological therapy on the patient with first diagnosis and on the one with recurrence, to assess whether the psychological support has a greater impact on one of the two groups. Those could be future studies for our group.

### Acknowledgement

The authors thank the "Fondazione Umberto Veronesi", Milan, Italy, for having contributed to this project.

## References

- Ryan H, Schofield P, Cockburn J, Butow P, Tattersall M, Turner J, et al. How to recognize and manage psychological distress in cancer patients. *Eur J Cancer Care (Engl)*. 2005;14:7-15.
- Mitchell AJ, Chan M, Bhatti H, Halton M, Grassi L, Johansen C, et al. Prevalence of depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: A meta-analysis of 94 interview-based studies. *Lancet Oncol*. 2011;12:160-74.
- Holland JC, Andersen B, Breitbart WS, Buchmann LO, Compas B, Deshields TL, et al. Distress management. *J Natl Compr Cancer Netw*. 2013;11(2):190-209.
- Greimel ER, Freidl W. Functioning in daily living and psychological well-being of female cancer patients. *J Psychosom Obstet Gynaecol*. 2000;21(1):25-30.
- National Cancer Institute. Adjustment to cancer: Anxiety and distress (PDQ).
- Grann VR, Jacobson JS, Sundararajan V, Albert SM, Troxel AB, Neugut AI. The quality of life associated with prophylactic treatments for women with BRCA1/2 mutations. *Cancer J Sci Am*. 1999;5(5):283-92.
- Ozga M, Aghajanian C, Myers-Virtue S, McDonnell G, Jhanwar S, Hichenberg S, et al. A systematic review of ovarian cancer and fear of recurrence. *Palliat Supp Care*. 2015;13(6):1771-80.
- Pasquini M, Biondi M. Depression in cancer patients: A critical review. *Clin Pract Epidemiol Ment Health*. 2007;3:2.
- Wenzel LB, Donnelly JP, Fowler JM, Habbal R, Taylor TH, Aziz N, et al. Resilience, reflection, and residual stress in ovarian cancer survivorship: A gynecologic oncology group study. *Psychooncology*. 2002;11(2):142-53.
- Matulonis UA, Kornblith A, Lee H, Bryan J, Gibson C, Wells C, et al. Long-term adjustment of early-stage ovarian cancer survivors. *Int J Gynecol Cancer*. 2008;18(6):1183-93.
- Singer S, Schwarz R. Psychoonkologische Nachbetreuung von Patientinnen mit einem Zervix und Endometriumkarzinom. *Zentralbl Gynakol*. 2002;124(1):64-70.
- Zigmond AS, Snaith RP. The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica*. 1983;67(6):361-70.
- Grassi L, Johansen C, Annunziata MA, Capovilla E, Costantini A, Gritti P, et al. Italian Society of Psycho-Oncology Distress Thermometer Study Group. Screening for distress in cancer patients: A multicenter, nationwide study in Italy. *Cancer*. 2013;119(9):1714-21.
- Colombo N, Lorusso D, Scollo P. Impact of recurrence of ovarian cancer on quality of life and outlook for the future. *Int J Gynecol Cancer*. 2017;27(6):1134-40.
- Wen Q, Shao Z, Zhang P, Zhu T, Li D, Wang S. Mental distress, quality of life and social support in recurrent ovarian cancer patients during active chemotherapy. *Eur J Obstet Gynecol Reprod Biol*. 2017;216:85-91.
- Shinn EH, Taylor CL, Kilgore K, Valentine A, Bodurka DC, Kavanagh J, et al. Associations with worry about dying and hopelessness in ambulatory ovarian cancer patients. *Palliat Supp Care*. 2009;7(3):299-306.
- Steginga SK, Dunn J. Women's experiences following treatment for gynaecological cancer. *Oncol Nurs Forum*. 1997;24(8):1403-8.
- Cesario SK, Nelson LS, Broxson A, Cesario AL. Sword of Damocles cutting through the life stages of women with ovarian cancer. *Oncol Nurs Forum*. 2010;37(5):609-17.