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## Awareness of cancer, satisfaction with care, emotional distress and adjustment to illness: an Italian multicenter study

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Keywords:	Awareness, Satisfaction , Distress, Psychological Adjustment , Quality of Life

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9 **and adjustment to illness: an Italian multicenter study**  
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## Abstract

**Objective:** In Italy, in spite of a clear transition from a paternalistic to a more patient-centered approach in oncology, the belief that cancer patients should be protected from truth is still evident. The aim of the study was to examine awareness of cancer and the relationship with distress and satisfaction with care among cancer patients.

**Methods.** 262 cancer patients consecutively admitted to the Day-Hospital of four cancer centers in Italy completed the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Core 30 (EORTC QLQ-C30), the EORTC INPATSAT-32, the EORTC INFO-25, the Distress Thermometer, the Mini-MAC and a Visual Analogue scale of illness awareness. Questions related to the admission and unmet needs were also given.

**Results:** The majority (84%) of patients were fully aware of their diagnosis, but 49% of those with a metastatic illness thought to have a curable disease. Knowledge and awareness of illness were not related to distress and dysfunctional coping, while satisfaction with care was associated with perception of a curable disease. 56% indicated their wish to talk more openly with their family about their illness but felt that their family tended to hide information in order to protect them.

**Conclusions.** Most cancer patients were fully informed about their diagnosis, with correctness of their awareness lower among metastatic patients. Information and knowledge were not destructive of hope and did not increase distress. Family issues are still significant as a possible barrier to openness and sharing of information.

Key words: awareness, information, cancer diagnosis and prognosis, satisfaction with care, distress

## Introduction

There is overwhelming evidence that the majority of cancer patients want to know their diagnosis, prognosis and what chances they may have of a cure, although differences persist according to cultural issues and background around the world [1, 2, 3].

Regarding Italy, the communication of diagnosis and prognosis of disease has always been a challenging issue, with a tendency to partial disclosure of the truth. Italian physicians and families, usually with the good intent of protecting patients, have embraced a paternalistic attitude, minimizing the amount of medical information given [4], although a significant shift has occurred over the last ten years [5]. Whereas, in the 1990s, it was common practice to withhold the truth from cancer patients [6, 7, 8, 9], both the 2006 Code of Ethics of Physicians and the Italian courts have more affirmed the indispensability of informing patients in order to obtain a valid consent for medical treatment and decision-making process, as well as the obligation of medical caregivers to respect patient privacy regarding sharing information with others [10]. In line with this, data from studies carried out over the last 10 years have indicated that the percentage of Italian cancer patients who are informed and aware of their diagnosis has increased. A study carried out by Bracci et al. [11] on 587 cancer patients found that the majority was correctly informed on diagnosis (86%) and therapy (84%), although only 43% were fully aware of their prognosis. Likewise, Numico et al [12] found that among 649 cancer patients, although about three-fourth were aware of their diagnosis, knowledge about the palliative or curative aims of future treatments was evident in half of the sample. This finding is in line with other Italian data showing that when the prognosis is unfavorable, the percentage of patients aware of their situation tends to decrease [13, 14, 15]. A further aspect to be considered is related to the fact that, although informed patients tended usually to report more satisfaction [16], some authors have underlined the risk that information can increase psychological distress and maladjustment to illness. In a study carried out in India, for example, Alexander et al. [17] showed that psychiatric morbidity was significantly less common in patients who did not know they had cancer, and in those who considered treatment as curative, than in those more acknowledged of their situation. A further study carried out by Atesci et al. [18] showed that 54.7% of Turkish cancer patients were unaware of the diagnosis of cancer and that psychiatric morbidity was significantly higher in the patients who knew that they had a cancer diagnosis. Data in contrast with these findings were reported by in other studies indicating no difference between aware and unaware cancer patients in patterns and prevalence of psychiatric morbidity, even a major need to study the various components of awareness and relationship to psychological distress was emerged [19, 20].

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3 To our knowledge, no Italian study is available about the relationship between cancer patients' level  
4 of awareness and both satisfaction with care and psychological adjustment to illness. On this  
5 background, the aims of the present multi-center investigation were (i) to determine the percentage  
6 of cancer patients aware of their diagnosis and prognosis; (ii) to examine if patients more  
7 "protected" from information and less aware about their clinical condition were more satisfied with  
8 care and the information they have received; and (iii) to test if the level of disease awareness was  
9 related to emotional distress and maladjustment.  
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## 15 16 **Method**

### 17 18 19 *Participants*

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22 The sample consisted of a series of cancer outpatients consecutively admitted to the Day Hospitals  
23 (DH) of Medical Oncology Units of four centers representative of geographical parts of Italy: two  
24 centers were from Northern Italy (Treviglio-Caravaggio of Bergamo, Health District Hospital,  
25 Bergamo; Sant'Anna University Hospital of Ferrara, Ferrara), one from Center Italy (Sant'Andrea  
26 Hospital, Sapienza University of Rome, Rome - coordinating center), and one from Southern Italy  
27 (San Paolo Hospital, Bari).  
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32 Eligibility criteria were a confirmed diagnosis of cancer, an age over 18 years, having received at  
33 least one previous cycle of chemotherapy, having been diagnosed less than one year before entering  
34 the study, mentally able to complete the questionnaires, not currently participating to other studies  
35 on quality of life (QOL). Exclusion criteria were presence of brain metastases, cognitive or physical  
36 abnormalities preventing participation in the study, previous recruitment into this same study. The  
37 study was approved by the Hospitals IRBs.  
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### 44 45 *Procedure*

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47 Consecutive eligible patients with cancer admitted for chemotherapy treatment in the Medical  
48 Oncology DH of participating centers were enrolled before discharge by a research psychologist.  
49 Each patient was fully informed about the aims of the study and provided written consent to  
50 participate. Immediately before discharge of the hospital, each patient was asked to complete a  
51 series of questionnaires and to put the forms in a box to guarantee anonymity. The package of  
52 instruments consisted of questions and visual analogue scales to assess awareness and satisfaction  
53 with information and care, self report instruments on quality of life and self-report questionnaires  
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3 relative to coping and emotional distress. Socio-demographic and clinical data including Karnofski  
4 Performance Status (KPS), type and stage of cancer, were collected through the patients' charts and  
5 medical records.  
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10 (i) Awareness of diagnosis and of severity of the disease.

11 Patients were asked to specify their diagnosis and report unmet needs of information during  
12 treatment, from diagnosis to the current hospitalization with two open-ended questions: 1) "What is  
13 the nature of your illness and why are you being treated in the hospital?"; 2) "What aspect of the  
14 information that you have received at the time of your diagnosis, discussion of therapy or initiation  
15 of treatment are you not satisfied with?". Two visual analogue scales were used to assess the  
16 subjective awareness of the curability / severity of disease ("How much do you think your illness is  
17 curable?" and "How much do you think your illness is severe?", with a response ranging from 1 =  
18 very difficult to cure to 10 = very easy to cure; and from 1 = very serious to 10 = not serious at  
19 all, respectively). Lastly, the patients' needs of more adequate communication with their own  
20 relatives were investigated by using two relevant items ("Do you feel the need to talk more with  
21 your family about your illness?", "How much do you think your family is protecting you from bad  
22 news?"), rated on a 4-point Likert scale.  
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33 (ii) Satisfaction with care, information and quality of life (QOL).

34 The European Organisation for Research and Treatment of Cancer (EORTC) in-patient satisfaction  
35 with care measure (EORTC-IN-PATSAT 32) [21] was administered to measure patients' appraisal  
36 of hospital doctors and nurses, as well as aspects of care organisation and services. The instrument  
37 consists of 32 items in several scales, namely doctor and nurses technical skills, interpersonal skills,  
38 information provision, availability, satisfaction with other hospital staff, exchange of information,  
39 waiting time, hospital access, hospital comfort, overall satisfaction with care.  
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44 The EORTC Quality of Life Group (QLQ) Information questionnaire (EORTC QLQ-INFO 25)  
45 [22] is a questionnaire consisting of 25 items organized in 4 subscales - information about the  
46 disease (4 items), medical tests (3 items), treatment (7 items) and other services (4 items) – and  
47 single items evaluating common physical symptoms (i.e. dyspnea, lack of appetite, sleep disorders,  
48 constipation and diarrhea) and financial burden.  
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53 The EORTC Quality of Life Questionnaire Core-30 (EORTC QLQ C-30) [23] was administered to  
54 examine QOL. It is a validated, widely used 30-item questionnaire consisting of 5 functional scales  
55 (physical, role, emotional, social and cognitive function), three symptom scales (fatigue, pain and  
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3 nausea/vomiting), one global quality of life scale, and six single items (symptoms and financial  
4 impact).

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8 (iii) Coping and Emotional distress.

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10 The Mini Mental Adjustment to Cancer scale (Mini-MAC) [24] was used to assess adjustment to  
11 cancer. The Mini-MAC is a 29-item self-report measure devised to evaluate the patient's coping  
12 styles, through five subscales: Fighting Spirit, consisting of 4 items and measuring the tendency to  
13 confront and actively face cancer; Hopelessness, consisting of 8 items and measuring the tendency  
14 to adopt a pessimistic attitude about the illness; Anxious Preoccupation, consisting of 8 items and  
15 measuring anxiety and tension about cancer; Fatalism, consisting of 5 items and assessing resigned  
16 and fatalistic attitudes towards the illness; and Avoidance, consisting of 4 items and evaluating the  
17 tendency to avoid confrontation with illness.

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19 The Distress Thermometer (DT) was used to assess the patients' level of emotional distress. The DT  
20 has been developed by the Distress Management Guidelines panel within the National  
21 Comprehensive Cancer Network [25] in the USA and consists of a visual analogue tool asking the  
22 subject to rate his/her level of distress in the past week through a 0 to 10 scale (from "no distress" =  
23 0 to "extreme distress" =10). A score  $\geq 4$  has repeatedly been considered as the most sensitive and  
24 sensible cut-off for distress ("caseness").

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26 The Italian validated versions of both the Mini-MAC [26] and the DT [27] were used in the study.

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33 *Statistical analysis*

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36 All analyses were performed with SPSS for Windows, version 17.0. All statistical tests were two-  
37 tailed, with alpha set at 0.05. Analysis of variance and Chi-square test were used to examine the  
38 differences between groups in continuous and categorical variables, respectively. Spearman non-  
39 parametric correlation coefficient rho was used to test the relationship between severity and  
40 treatability of illness and continuous variables such as age, time elapsed from diagnosis, and levels  
41 of satisfaction with information and care, emotional distress, psychological adjustment, and quality  
42 of life. Student's t-test was used to examine differences in perceived treatability and severity of  
43 illness by gender and disease stage. Then, patients with metastatic disease were divided in two  
44 groups based on their awareness of prognosis. A cut-off of 5/6 was used, i.e., those scoring 5 or less  
45 were categorized as having a low perceived treatability of illness, while those scoring 6 or more  
46 were categorized as having a high perceived treatability of illness. Student's t-test and Chi-square  
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test were used to examine differences between groups based on awareness of prognosis in continuous and categorical variables, respectively.

## Results

### *General characteristics of the sample*

The study population consisted of 262 patients (90 males, 34%, and 172 female, 66%; mean age  $58 \pm 12.3$  years), distributed as follows: 29% (n=77) in Rome, 25% (n=60) in Bergamo, 23% (n=60) in Ferrara, 23% (n=60) in Bari. The majority were married (n=213, 83%), while 27 (11%) were separated, divorced or widowed and 16 (6%) were single. Most patients had < 13 years of education (n=162; 65%).

Cancer site was breast (n= 105; 40%), gastrointestinal (n=75; 29%), respiratory (n=34; 13%), genito-urinary (n=26; 10%), head-neck (n=9; 3%), other (13; 5%). Cancer stage was non-metastatic for 166 (64%) and metastatic for 93 (36%). Mean time from diagnosis was  $9.9 \pm 20.9$  months. KPS was  $85.8 \pm 12.6$ . There were no significant differences on demographic or illness-related variables between patients who accepted and refused to participate

### *General data on awareness and information*

Of the total sample, 230 patients (86.8%) answered the questions regarding illness awareness. Of these, 84% (n=184) stated that they were fully aware about their disease, speaking of their disease in terms of “malignant tumor” or “cancer” or giving the proper scientific name to their own disease. A further 9% (n=19) had unclear knowledge of their clinical situation, stating that the reason for their admission to the hospital was related to a not completely specified cause, such as “a colon disease”, “a liver disease”, “a lymph node disorder”, “something foreign in my bowel”, “chemotherapy treatment”, “bowel surgery”. A smaller number (n=17; 8%) did not report to be aware of their clinical condition, believing to receive treatment for problems other than cancer, such as “low back troubles”, “a lung medical checkup”, “a little invasive colonic polyp,” “polyps”, “pancreatic problems”.

Regarding awareness of severity of the disease, a cut-off score >5 on the VAS investigating this issue was used to discriminate between patients believing that their disease was mild (score >5) from those believing that it was severe (score <5). Seventy-four percent of patients with local or loco-regional disease reported high perceived treatability of illness, in comparison with 49% of patients with metastatic cancer ( $p < 0.001$ ). The patients who were aware of their diagnosis were more likely to be female ( $p < .01$ ) and younger ( $p < .05$ ) as compared with those who were not aware



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3 of their diagnosis. There were no significant differences in awareness according to tumor site, stage  
4 of disease, KPS or other clinical parameters and geographical area.

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6 A small percentage of the patients reported they would have liked to talk more of their disease with  
7 their family (8% often; 6% always), while 42% endorse the wish to sometimes talk with the family;  
8 44% reported no wish of more communication with the family. The proportion of patients who  
9 reported they felt that family members were hiding information or bad news in order to protect  
10 them was as follows: never, 44%; sometimes, 27%; often, 16%, always, 13%.

#### 16 *Correlation of awareness with satisfaction with care and psychological variables*

17 Awareness of diagnosis was not related with overall satisfaction with information, overall  
18 satisfaction with care, EORTC-INPATSAT-32, EORTC- C QLQ30 (Table 1).

19 DT and Mini-MAC scores were also not associated with awareness. When examining the data  
20 according to the level of awareness of diagnosis (“complete”, “unclear” and “absent”) no  
21 correlation was found with overall satisfaction with the information, overall satisfaction with care,  
22 EORTC QLQ C 30, DT score and Mini MAC subscales.

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#### 32 *Correlation between awareness of severity and study variables*

33 Patients with metastatic disease and poor awareness of severity of illness (and with a perception of  
34 good probabilities of cure) reported better levels of QOL on the EORTC-QLQC 30 than those with  
35 a perception of low chances of curability (Table 2 and 3). They also tended to perceive family  
36 members as protective from bad news ( $p < 0.06$ ). Higher scores on curability VAS were associated  
37 with higher KPS, satisfaction with information and received care, EORTC-QLQC 30, and coping  
38 (lower scores on Mini-MAC hopelessness and anxious preoccupation).

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## 48 **Discussion**

49 The study aimed at examining the association of awareness about diagnosis and treatment of cancer  
50 with several dimensions, including satisfaction with information, quality of life, emotional distress  
51 and coping styles among cancer patients from different parts of Italy.

52 A first result is that a large majority of cancer patients (84%), irrespective of the geographical area,  
53 was informed about their disease. This seems to indicate a general improvement in the information  
54 patients had received from their physicians and confirms the recent data reported in other studies  
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3 carried out in Northern Italy [11]. In agreement with other Italian studies [15], an improvement in  
4 awareness has been also shown in terms of severity of disease and curability, although at least half of  
5 patients with advanced stages were more aware about diagnosis than prognosis and did not fully  
6 understood the purpose of treatment. This suggests that awareness of disease is not by itself  
7 awareness of prognosis and effective disease evolution, with a gap between diagnosis and prognosis  
8 awareness and between curative and palliative aims of treatment. This is in line with a recent study,  
9 indicating that, 69-81% of advanced cancer patients did not report understanding that chemotherapy  
10 was not at all likely to cure their cancer [28]. However, in our study, it remains not clear if this is  
11 related to a true lack of information on prognosis, or to ineffective communication of prognosis due  
12 to difficulties of physicians in dealing with open disclosure of poor prognosis or with patients'  
13 psychological mechanisms (e.g. denial, avoidance). Although advanced cancer patients with or  
14 without awareness of the actual severity of the disease reported comparable scores on the Mini-  
15 MAC Avoidance subscale, further studies are necessary to clarify this problem. There are a number  
16 of implications and communication challenges with patients with poor prognosis, including  
17 perceived lack of training, stress, no time to attend to the patient's emotional needs, fear of a  
18 negative impact on the patient, uncertainty about prognostication, requests from family members to  
19 withhold information, and a feeling of inadequacy or hopelessness regarding the unavailability of  
20 further curative treatment [29, 30] that need to be further explored.

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23 A second finding is that more than half of the patients wished to have additional discussion of their  
24 disease with their families and that family tensions might exist in over 25% of patients whose  
25 family tried to protect them from the disease. Protection on the part of families is in fact still  
26 common in Italy and may take many different forms according to the cultural background and  
27 educational level [5, 31]. This is a frequent possible trap for physicians that easily may tend to  
28 collude by aligning themselves with the family and reducing open and honest communication with  
29 their patients, as frequently reported in training courses on doctor-patient-family communication  
30 [32, 33]. On the other hand, a recent large population-based cross national telephone survey in  
31 seven European countries, including Italy, showed that among 9344 healthy subjects respondents  
32 73.9% endorsed the view to always be informed in the scenario of having a serious illness such as  
33 cancer with less than one year to live [34].

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36 A further result of the study presented here is that cancer awareness was not related to distress and  
37 psychological maladjustment to illness. In fact, patients who were aware of their diagnosis reported  
38 comparable scores on both the distress thermometer and coping measures with respect to those who  
39 were less or no aware. These findings are in contrast with the studies indicating that information  
40 and awareness about one's own cancer condition affected psychological status and increased the  
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3 risk for psychiatric disorders [17,18]. However, when examining awareness of severity of illness  
4 and the subjective perception of cure, those having lower awareness and higher perception of  
5 curability had better levels of QOL, better satisfaction with information and received care, and  
6 better adjustment (lower scores on Mini-MAC hopelessness and anxious preoccupation). This  
7 seems to indicate that a difference exists between awareness of diagnosis and prognosis, and that  
8 patients' satisfaction is a multi-determined issue that merits to be examined in more detail.

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10 This study has a number of limitations. First, the relatively small number of patients, particularly  
11 among those who reported unclear or absent awareness of diagnosis, reduces generalizability of the  
12 findings, which should be confirmed in larger samples of patients with different sites of cancer,  
13 different stages and different levels of awareness. Second, the study focused only on day-hospital  
14 patients, while more data are necessary regarding the role of awareness and satisfaction with care  
15 among inpatients, including hospice and palliative care units. Third, the more specific levels and  
16 characteristics of the doctor / nurses - patient relationship should be investigated in order to  
17 examine the role of support, empathy, and openness in molding both awareness and satisfaction  
18 with care. With respect to this, also a variability of disclosure among elderly cancer patients has  
19 been shown to be related not only to the patient's age but also to the physicians' age and sex, as well  
20 as to the geographic area where physicians work [35]

21  
22 In conclusion, irrespective of geographical area in Italy, a high percentage of cancer patients are  
23 aware of their diagnosis, although the percentage regarding awareness of the severity of disease and  
24 of probabilities of a successful treatment tends to decrease. This reinforces the need for  
25 dissemination of communication skills training aimed not only at providing information about  
26 diagnosis but also prognosis and treatment options. Moreover, patients' awareness of their  
27 condition seems not to be related to psychological distress and maladjustment, indirectly  
28 encouraging a change in the attitude of Italian families to protect their loved ones from bad news.  
29 Further studies are necessary to verify the extent of this transition to disclosure and more open  
30 information in different clinical contexts, in order to solve the mismatch between law regulations  
31 and the patient wishes, on one hand, and medical practice, on the other.

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51 for her thoughtful suggestions in the methodology followed in the study.  
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Table 1 . Demographic, clinical, and psychological variables by awareness of cancer diagnosis

	Awareness of cancer diagnosis		
	Present	Unclear	Absent
<b>Sex ** (N)</b>			
Male	54	7	11
Female	130	12	6
<b>Age * (mean ± SD)</b>	56.9 ± 19.6	60.8 ± 8.7	64.1 ± 11.8
<b>Cancer primary site</b>			
Breast	80	9	3
Other sites	104	10	14
<b>Stage (N)</b>			
Local	116	10	11
Metastatic	65	9	6
<b>Karnofsky performance status score (mean ± SD)</b>	86.0 ± 11.9	82.1 ± 11.3	84.1 ± 15.4
<b>Time elapsed from diagnosis (months) (mean ± SD)</b>	8.9 ± 14.8	7.7 ± 5.7	4.9 ± 3.7
<b>Information (mean ± SD)</b>			
Information about the disease	61.7 ± 21.8	64.8 ± 16.5	59.9 ± 23.6
Information about treatments	49.1 ± 20.0	48.9 ± 16.9	38.7 ± 19.9
Written information	37.0 ± 50.7	21.0 ± 41.9	31.2 ± 47.9
Wish to receive more information	38.7 ± 48.8	21.0 ± 41.9	25.0 ± 44.7
Overall satisfaction with the information	65.2 ± 22.6	58.3 ± 22.8	63.1 ± 21.9
<b>Satisfaction (mean ± SD)</b>			
Doctors' interpersonal skills	69.7 ± 25.3	67.5 ± 26.2	71.1 ± 16.2
Doctors' information provision	69.1 ± 26.4	69.3 ± 21.5	70.1 ± 20.6
Overall satisfaction with care	68.7 ± 21.6	65.8 ± 27.9	70.6 ± 22.1
<b>Emotional Distress (mean ± SD)</b>	4.1 ± 2.5	4.6 ± 3.1	3.3 ± 3.2
<b>Psychological adjustment (mean ± SD)</b>			
Fighting spirit	15.6 ± 2.9	15.4 ± 2.9	14.9 ± 2.8
Hopelessness	15.6 ± 5.9	16.0 ± 5.7	16.0 ± 5.4
Fatalism	10.6 ± 2.5	11.1 ± 2.5	11.0 ± 2.8
Anxious preoccupation	17.7 ± 5.2	16.9 ± 5.6	17.2 ± 5.1
Avoidance	10.9 ± 3.4	11.7 ± 2.4	11.9 ± 3.3
<b>Desire to talk more about the disease with family</b>			
Never	78	9	12
Sometimes, often or always	105	10	5
<b>Perception that the family tries to protect from bad news</b>			
Never	78	10	10
Sometimes, often or always	105	9	7
<b>Quality of life (mean ± SD)</b>			
Physical activity	77.5 ± 20.9	82.8 ± 20.0	80.9 ± 17.0
Role limitations	73.5 ± 28.6	87.7 ± 16.5	78.2 ± 25.6
Cognitive activity	82.7 ± 22.7	84.2 ± 16.2	86.3 ± 14.7
Emotional state	67.5 ± 21.4	74.1 ± 16.4	68.6 ± 19.7
Social and family activity	79.1 ± 23.2	82.4 ± 19.6	81.4 ± 20.3
Overall quality of life and health	54.2 ± 18.9	59.9 ± 16.9	56.6 ± 15.8

Table 2. Correlation (Spearman Rho) and differences (Student t test) between demographic, clinical, and psychological variables by perceived severity and treatability of illness

	Perceived greater treatability of disease	Perceived lower severity of disease
<b>Age</b>	-.10	-.13
<b>Sex (mean±SD)</b>		
Male	6.1±2.5	4.9±2.3
Female	6.5±2.3	5.4±2.4
<b>Time elapsed from diagnosis</b>	-.01	.04
<b>Karnofsky performance status score</b>	.18**	.13
<b>Stage (mean±SD)</b>		
Local	6.9±2.2***	5.5±2.4
Metastatic	5.5±2.3	4.9±2.4
<b>Overall satisfaction with the information</b>	.14*	.03
<b>Overall satisfaction with care</b>	.18**	.05
<b>Emotional Distress</b>	-.11	-.07
<b>Psychological adjustment</b>		
Fighting spirit	.16*	.02
Hopelessness	-.27***	-.01
Fatalism	-.08	-.01
Anxious preoccupation	-.22**	-.02
Avoidance	.04	.02
<b>Quality of life</b>		
Physical activity	.22**	.19*
Role limitations §	.23**	.23**
Cognitive activity	.12	.21**
Emotional state	-.01	.09
Social and family activity	.19*	.26**
Overall quality of life and health	.25**	.27***

• p<.05; \*\* p<.01; \*\*\* p<.001

**Table 3 . Demographic, clinical, and psychological variables by awareness of prognosis among patients with metastatic disease**

	Awareness of prognosis (perceived low treatability of disease)	Low awareness of prognosis (perceived good treatability of disease)
<b>Sex (N)</b>		
Male	24	16
Female	20	26
<b>Age (mean ± SD)</b>	60.7 ± 11.5	60.9 ± 12.7
<b>Cancer primary site</b>		
Breast	7	13
Other sites	37	29
<b>Karnofsky performance status score (mean ± SD)</b>	81.6 ± 13.3	80.8 ± 11.1
<b>Time elapsed from diagnosis (months) (mean ± SD)</b>	13.1 ± 24.6	13.3 ± 19.2
<b>Information (mean ± SD)</b>		
Information about the disease	61.6 ± 22.6	62.7 ± 17.8
Information about treatments	45.8 ± 17.0	49.8 ± 20.0
Written information	27.9 ± 45.4	23.8 ± 48.4
Wish to receive more information	30.2 ± 46.5	28.6 ± 45.7
Overall satisfaction with the information	61.2 ± 22.9	65.1 ± 20.7
<b>Satisfaction (mean ± SD)</b>		
Doctors' interpersonal skills	67.2 ± 23.5	74.0 ± 20.3
Doctors' information provision	65.7 ± 24.0	71.8 ± 24.7
Overall satisfaction with care	65.9 ± 19.5	72.6 ± 21.2
<b>Emotional Distress (mean ± SD)</b>	3.7 ± 2.5	3.5 ± 2.3
<b>Psychological adjustment (mean ± SD)</b>		
Fighting spirit	15.4 ± 2.9	15.8 ± 2.7
Hopelessness	17.0 ± 6.4	16.3 ± 5.0
Fatalism	10.9 ± 2.7	11.0 ± 2.5
Anxious preoccupation	18.4 ± 4.7	17.1 ± 4.7
Avoidance	11.3 ± 3.1	12.1 ± 3.0
<b>Desire to talk more about the disease with family</b>		
Never	19	15
Sometimes, often or always	24	27
<b>Perception that the family tries to protect from bad news</b>		
Never	20	14
Sometimes, often or always	23	28
<b>Quality of life (mean ± SD)</b>		
Physical activity	70.1 ± 27.3	77.5 ± 20.0
Role limitations *	60.4 ± 33.9	77.2 ± 27.8
Cognitive activity	80.6 ± 24.4	86.6 ± 17.2
Emotional state	70.7 ± 23.5	75.3 ± 16.0
Social and family activity	77.0 ± 24.6	76.7 ± 20.8
Overall quality of life and health *	50.7 ± 22.7	61.5 ± 12.8

\* p&lt;.05

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