

# Not Telling Patients Their Cancer Diagnosis in Egypt: Is It Associated With Less Anxiety and Depression and Better Quality of Life?

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**PURPOSE** In many countries, including Egypt, it is still believed that not telling patients their cancer diagnosis is associated with less psychological morbidity. This study was conducted to explore whether not telling Egyptian patients their cancer diagnosis is associated with less anxiety and depression and better quality-of-life (QoL) or not.

**METHODS** A cross-sectional observational study was conducted in two Egyptian cancer care facilities and included 292 adult patients with cancer of whom 197 (67%) were aware of their diagnosis and 95 (33%) were unaware. The Hospital Anxiety and Depression Scale (HADS) was used to assess anxiety and depression and the Functional Assessment of Cancer Therapy-General 7 questionnaire to assess QoL.

**RESULTS** Patients unaware of their cancer diagnosis were significantly more likely to be less educated, with no family history of cancer, interviewed within 6 months of cancer diagnosis, diagnosed with a cancer other than breast and colorectal cancer, in a poorer performance status, and with no history of anticancer treatment. There was no significant difference between unaware and aware patients in the scores of HADS-Anxiety (median [interquartile range (IQR)] = 6 [3-11] and 7 [4-11],  $P = .203$ ), HADS-Depression (median [IQR] = 8 [4-12] and 8 [4-11],  $P = .64$ ), and Functional Assessment of Cancer Therapy-General 7 (median [IQR] = 16 [12-20] and 16 [11-21],  $P = .754$ ). In multiple regression analysis with adjustment, diagnosis unawareness did not associate significantly with anxiety, depression, and QoL ( $P = .394$ ,  $.662$ , and  $.845$ , respectively).

**CONCLUSION** The results of the current study confirm that not telling adult patients their cancer diagnosis is not associated with less anxiety and depression nor better QoL.

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## INTRODUCTION

Although the disclosure of cancer-related information to patients is a usual practice in western countries mainly, it is still an issue of debate in many other countries including the Arab ones such as Egypt.<sup>1,2</sup>

Those who argue for truth-telling call for respecting the ethical principles autonomy and beneficence.<sup>3</sup> In the context of autonomy, cancer-related information is disclosed honestly to patients with cancer because the majority of them prefer to know this information, even in countries where nondisclosure is considered an acceptable practice.<sup>4-6</sup> Not telling the truth to patients represents an obstacle to making an informed consent and may lead patients to take unwise and possibly harmful decisions.<sup>7</sup> Furthermore, many studies found that meeting the information needs of patients with cancer is associated with less anxiety and depression and better quality-of-life (QoL).<sup>8</sup>

On the other hand, opponents arguing against truth-telling justify their viewpoint according to the non-maleficence principle as they believe that the harms caused by truth-telling would outweigh benefits.<sup>3</sup> A main cause behind not telling patients the truth is the fear of causing psychological morbidity to them and the assumption that unaware patients have less psychological distress.<sup>2,9</sup>

A number of studies, mainly from Mediterranean and Asian countries, explored the association between the awareness of diagnosis and psychological morbidity in patients with cancer.<sup>10-17</sup> The evidence obtained from these studies is conflicting with some of the results supporting the hypothesis that unaware patients have less psychological morbidity and some others rejecting it.

The aim of this study was to examine the relationship between cancer diagnosis awareness and the psychological morbidity and QoL among Egyptian patients

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## CONTEXT

### Key Objective

Is not telling Egyptian patients their cancer diagnosis associated with less anxiety and depression and better quality of life?

### Knowledge Generated

Compared with patients unaware of their cancer diagnosis, anxiety and depression scores among aware patients did not differ significantly. Similarly, quality-of-life scores did not differ significantly between the two groups. The difference remained insignificant in multiple regression analysis with adjustment.

### Relevance

The unfounded fear of causing psychological harm to patients with cancer by telling them their diagnosis should not deprive them of their right to honest disclosure.

with cancer. The current study adds to the available evidence by conducting it in a different culture where non-disclosure is practiced. In addition, the study was designed to avoid some of what may be considered weaknesses in previous studies.

## METHODS

This cross-sectional observational study was conducted in two Egyptian cancer centers, one in Cairo (Kasr Al-Ainy Center of Clinical Oncology and Nuclear Medicine, Kasr Al-Ainy School of Medicine, Cairo University) and the other in Damietta in North Egypt (Damietta Cancer Center, Ministry of Health). Although Cairo, the capital of Egypt, is urban with a population of > 10 million, Damietta is a small partially urban governorate located in the Nile Delta at the Mediterranean Sea with a population of < 2 million.

The protocol of the study was approved by the Ethics Committee of Kasr Al-Ainy Center of Clinical Oncology and Nuclear Medicine. All participants signed (or fingerprinted) written informed consent before participation.

Adult (older than 18 years) Arabic-speaking patients with histologically confirmed diagnosis of cancer and no communication barriers were included in the study. Patients residing in villages were considered from rural areas. A purposive convenience sampling method was used to recruit participants.

### Assessment of Cancer Diagnosis Awareness

To determine the awareness of cancer diagnosis, patients were asked to answer the following question: *What is the diagnosis of the disease that you are treated for here or has been diagnosed on the basis of the tests?* Those who answered the question using the words cancer or malignant were considered aware. Those who answered by saying tumor were further asked about the nature of the tumor and were considered aware if they said that it is a malignant tumor.

### Assessment of Anxiety and Depression

Anxiety and depression were assessed using the Hospital Anxiety and Depression Scale (HADS) which comprises two

subscales, one for anxiety and the other for depression.<sup>18</sup> Each subscale includes seven questions with a 4-point Likert scale (from 0 to 3), and the final score ranges from 0 to 21. Patients were grouped according to the subscale score into normal (0-7), borderline abnormal (8-10), and abnormal (11-21). For imputing missing HADS items, subject's subscale mean was used.<sup>19</sup> The Arabic version of HADS was used in this study.<sup>20</sup>

### Assessment of QoL

The QoL of patients was measured using the Arabic version of the Functional Assessment of Cancer Therapy-General 7 (FACT-G7). The FACT-G7 is an abbreviated version of the FACT-G health-related QoL questionnaire.<sup>21</sup> It is a seven-item scale which is answered on a 5-point Likert scale with a score ranging from 0 to 4. The total FACT-G7 score ranges from 0 to 28 with the higher scores indicating better QoL. Scoring was according to the guidelines provided by the tool developer.

### Data Collection

Patients were interviewed to complete the Arabic versions of the HADS and FACT-G7 questionnaires in addition to sociodemographic data collection. Disease and treatment information were collected from the patients' files.

### Sample Size

The primary end point of the study was to detect a difference in the total HADS score between aware and unaware patients. Secondary end points included the difference in QoL measured by the FACT-G7 between the two groups, the relation between variables and awareness of cancer diagnosis and the relation between variables and HADS and FACT-G7 scores.

Statulator beta online software was used to calculate the sample size.<sup>22</sup> The predetermined ratio of aware to unaware patients was 2:1. The sample size was calculated to detect a true difference in the mean HADS-total score of four points assuming a pooled standard deviation (SD) of nine points according to a study from Jordan, a neighbor country with largely similar culture.<sup>23</sup> To achieve a power of 90%

**TABLE 1.** Characteristics of 292 Patients With Cancer and Comparison According to Their Cancer Diagnosis Awareness

Variable	All Patients (N = 292) No. (%)	Unaware (n = 95) No. (%)	Aware (n = 197) No. (%)	P <sup>a</sup>
Age, years				
< 60	235 (80.5)	71 (30.2)	164 (69.8)	.0860
≥ 60	57 (19.5)	24 (42.1)	33 (57.9)	
Sex				
Female	177 (60.6)	50 (28.2)	127 (71.8)	.0530
Male	115 (39.4)	45 (39.1)	70 (60.9)	
Education level				
≥ High school	166 (56.8)	32 (19.3)	134 (80.7)	< .0001
< High school	54 (18.5)	25 (46.3)	29 (53.7)	
Illiterate	72 (24.7)	38 (52.8)	34 (47.2)	
Marital status				
Married	233 (79.8)	70 (30.0)	163 (70.0)	.0710
Other	59 (20.2)	25 (42.4)	34 (57.6)	
Having a job				
No	144 (49.3)	45 (31.2)	99 (68.7)	.6450
Yes	148 (50.7)	51 (53.1)	98 (66.2)	
Urbanization				
Urban	183 (62.7)	54 (29.5)	129 (70.5)	.0830
Rural	109 (37.3)	41 (37.6)	68 (62.4)	
Comorbidities				
No	191 (65.4)	61 (31.9)	130 (68.1)	.7650
Yes	101 (34.6)	34 (33.7)	67 (66.3)	
Family history of cancer				
No	194 (66.4)	76 (39.2)	118 (60.8)	.0007
Yes	98 (33.6)	19 (19.4)	79 (80.6)	
Duration since cancer diagnosis, months				
< 6	139 (47.6)	59 (42.4)	80 (57.6)	.0006
≥ 6	153 (52.4)	36 (23.5)	117 (76.5)	
Primary cancer				
Breast	66 (22.6)	14 (21.2)	52 (78.8)	.0432
Colorectal	56 (19.2)	15 (26.8)	41 (73.2)	
Head & neck	21 (7.2)	7 (33.3)	14 (66.7)	
Hematological	37 (12.7)	16 (43.2)	21 (56.8)	
Pancreas	20 (6.8)	11 (55.0)	9 (45.0)	
Other	92 (31.5)	32 (34.8)	60 (65.2)	
Distant metastases (n = 256)				
No	144 (56.5)	45 (31.2)	99 (68.7)	.9160
Yes	111 (43.5)	34 (30.6)	77 (69.4)	
ECOG PS				
0-1	178 (61.0)	45 (25.3)	133 (74.7)	.0010
2-4	114 (39.0)	50 (43.9)	64 (56.1)	
Treatment plan				
Curative	180 (61.6)	61 (33.9)	119 (66.1)	.5320

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**TABLE 1.** Characteristics of 292 Patients With Cancer and Comparison According to Their Cancer Diagnosis Awareness (Continued)

Variable	All Patients (N = 292) No. (%)	Unaware (n = 95) No. (%)	Aware (n = 197) No. (%)	P <sup>a</sup>
Palliative	112 (38.4)	34 (30.4)	78 (69.6)	
Received anticancer treatment				
No	47 (16.1)	25 (53.2)	22 (46.8)	.0010
Yes	245 (83.9)	70 (28.6)	175 (71.4)	
City of interview				
Damietta	156 (53.4)	53 (34.0)	103 (66.0)	.5740
Cairo	136 (46.6)	42 (30.9)	94 (69.1)	
Setting of interview				
Inpatient	135 (46.2)	47 (34.8)	88 (65.2)	.4410
Outpatient	157 (53.8)	48 (30.6)	109 (69.4)	

Abbreviations: ECOG PS, Eastern Cooperative Oncology Group performance status.

<sup>a</sup>Chi-square test.

and a two-sided significance level of 5% and considering an exclusion rate of 20%, the required sample size was 192 for the aware group and 96 for the unaware (total 288). It was decided to recruit 300 patients.

### Statistical Methods

Categorical data were presented as number and percentage and continuous data as mean and SD or median and interquartile range (IQR). The chi-square test was used to test the significance of difference in proportions. The distribution of HADS and FACT-G7 data was tested for normality using the Shapiro-Wilk test. For abnormally distributed data, the Mann-Whitney test was used to determine the significance of difference between two groups and the Kruskal-Wallis test for more than two groups. The correlation between abnormally distributed data was tested using Spearman's test. Multiple linear regression analysis with adjustment for age, sex, and variables related significantly to cancer diagnosis awareness or the studied outcomes (HADS-Anxiety, HADS-Depression, or FACT-G7) was performed to test the association of cancer diagnosis awareness with these outcomes. The significance of *P* value was set at < .05. Statistical analysis was performed using the MedCalc Statistical Software version 20.009 (MedCalc Software Ltd, Ostend, Belgium).

### RESULTS

Between December 2017 and September 2018, 300 patients were recruited. Eight (2.7%) patients were excluded because of missing data (five patients), no malignancy (two patients), and wrong completion of the HADS questionnaire (one patient). The final analysis included 292 patients; 197 (67.5%) were aware of diagnosis and 95 (32.5%) were unaware. The characteristics of patients with comparison between unaware and aware patients are presented in Table 1.

The most common primary cancer sites were breast, colorectum, hematological, head and neck, and pancreas as presented in Table 1. Less common tumors included sarcomas in 18 (6.2%), gynecological in 15 (5.1%), lung in 14 (4.8%), and others in 45 (15.4%). The anticancer treatment received was systemic chemotherapy in 201 (68.8%) patients, surgery in 159 (54.5%), radiotherapy in 85 (29.1%), and hormonal therapy in 30 (10.3%).

For the whole group of patients, the mean (SD) and median (IQR) scores were 7.5 (5.2) and 6 (3.3-11) for HADS-Anxiety, 8 (4.8) and 8 (4-11) for HADS-Depression, 15.5 (8.7) and 15 (9-22) for HADS-Total, and 15.6 (5.7) and 16 (11-20) for FACT-G7. HADS-Anxiety, HADS-Depression, and FACT-G7 values were abnormally distributed (Shapiro-Wilk test *P* < .001 for all).

The relationship between HADS-Anxiety, HADS-Depression, and FACT-G7 score and cancer diagnosis awareness and the other study variables is presented in Table 2. There was no significant difference in HADS-Anxiety, HADS-Depression, and FACT-G7 scores between aware and unaware patients.

A significantly higher HADS-Anxiety score was associated with younger age, female gender and having no job. Significantly higher HADS-Depression score was associated with younger age, presence of distant metastases, poorer performance status, and palliative treatment plan. Similar to HADS-Depression, mainly disease-related variables were associated with significantly lower FACT-G7 scores.

The effect of cancer diagnosis awareness on studied outcomes in univariate and multivariate linear regression analyses for the whole group of patients is presented in Table 3. Unawareness of cancer diagnosis did not associate significantly with any of the outcomes. The analysis presented in Table 3 did not include distant metastases among the variables adjusted for because 37 patients had hematological malignancies. When the analysis was

**TABLE 2.** HADS-Anxiety, HADS-Depression, and FACT-G7 Scores According to Cancer Diagnosis Awareness and the Other Study Variables

Variable	HADS-Anxiety		HADS-Depression		FACT-G7	
	Median (IQR)	P	Median (IQR)	P	Median (IQR)	P
Aware of cancer diagnosis						
No	6 (3.0-10.8)	.2030	8 (4.4-11.5)	.6400	16 (12.0-20.0)	.7540
Yes	7 (4.0-11.3)		8 (3.9-11.0)		16 (11.0-21.0)	
Age, years						
< 60	7 (4.0-12.0)	.0001	8 (4.0-12.0)	.0490	15 (11.0-20.0)	.2130
≥ 60	4 (2.0-7.0)		6 (3.0-9.3)		17 (12.8-21.0)	
Sex						
Female	7 (4.0-12.0)	.0140	8 (4.0-11.0)	.5200	15 (11.0-20.0)	.3190
Male	5 (3.0-10.0)		8 (4.4-11.8)		16 (12.0-21.0)	
Education level						
< High school	6 (3.0-11.0)	.1790	7.5 (3.0-11.0)	.2840	17 (11.7-21.0)	.0270
≥ High school	7 (4.0-12.0)		8 (5.0-12.0)		15 (11.0-19.0)	
Marital status						
Married	7 (4.0-11.0)	.3850	8 (4.0-11.0)	.7830	16 (11.0-21.0)	.9350
Other	6 (3.0-10.0)		7 (4.0-12.8)		17 (12.0-20.0)	
Having a job						
Yes	6 (3.0-10.0)	.0500	9 (5.0-11.9)	.0790	16 (11.0-21.0)	.5750
No	7 (4.0-12.0)		7 (3.0-11.0)		16 (11.8-20.0)	
Urbanization						
Urban	6 (3.0-11.0)	.1520	8 (4.0-11.5)	.9850	15 (11.0-20.8)	.3090
Rural	7 (4.0-11.0)		8 (4.2-11.0)		17 (11.9-20.0)	
Comorbidities						
Yes	5 (3.0-11.0)	.2850	8 (3.0-13.0)	.8220	16 (10.0-21.0)	.5460
No	7 (4.0-11.0)		8 (4.0-11.0)		16 (11.0-20.0)	
Family history of cancer						
Yes	8 (4.0-12.0)	.1070	8 (3.0-13.0)	.8810	15.5 (11.0-20.0)	.3510
No	6 (3.0-11.0)		8 (4.0-11.0)		16 (11.0-21.0)	
Time since cancer diagnosis, months						
< 6	7 (3.0-11.0)	.8280	8 (4.0-12.0)	.7710	15 (10.3-20.0)	.1050
≥ 6	6 (4.0-11.0)		8 (4.0-11.0)		17 (11.5-20.3)	
Primary cancer						
Breast	7 (4.0-11.0)	.5960	7 (3.0-11.0)	.1800	16 (11.0-20.0)	.5040
Colorectal	5.5 (3.0-11.0)		9 (5.0-13.0)		15 (11.0-22.0)	
Head & neck	9 (4.8-14.0)		9 (7.8-13.3)		13 (9.8-16.3)	
Hematological	5 (3.8-9.0)		7 (3.8-9.0)		17.5 (13.8-21.0)	
Pancreas	5.5 (3.5-10.5)		6 (2.0-12.0)		16.2 (10.5-20.0)	
Other	7 (3.5-10.5)		8 (3.3-12.0)		16 (12.8-20.0)	
Distant metastases (n = 254)						
Yes	7 (4.0-12.0)	.4340	9 (6.0-13.0)	.0010	14 (10.0-18.8)	.0070
No	6 (3.0-11.0)		7 (3.0-11.0)		16 (13.0-21.0)	
ECOG PS						
0-1	6 (3.0-12.0)	.7840	8 (4.0-10.0)	.0070	17 (13.0-21.0)	.0040
2-4	6 (4.0-10.0)		9 (4.2-13.0)		14 (10.0-18.0)	

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**TABLE 2.** HADS-Anxiety, HADS-Depression, and FACT-G7 Scores According to Cancer Diagnosis Awareness and the Other Study Variables (Continued)

Variable	HADS-Anxiety		HADS-Depression		FACT-G7	
	Median (IQR)	P	Median (IQR)	P	Median (IQR)	P
Treatment plan						
Curative	6 (3.0-11.0)	.1760	7 (3.0-10.0)	.0001	16.5 (13.0-21.0)	.0130
Palliative	7 (4.0-11.5)		9 (6.0-13.0)		15 (10.5-19.0)	
Anticancer treatment history						
Yes	6 (3.0-11.0)	.5680	8 (4.0-11.0)	.8670	16 (11.0-20.0)	.2800
No	8 (4.0-11.0)		9 (3.6-11.8)		15 (10.3-20.8)	
City of interview						
Damietta	6 (3.0-10.0)	.3590	7.5 (4.0-10.3)	.1220	16 (11.0-20.0)	.8460
Cairo	7 (4.0-11.5)		9 (4.0-13.0)		16 (11.0-20.5)	
Setting of interview						
Inpatient	6 (3.0-11.0)	.9280	8 (4.1-12.0)	.3350	16.3 (11.0-20.8)	.3820
Outpatient	6 (4.0-11.3)		8 (3.9-11.0)		15 (11.0-20.0)	

Abbreviations: ECOG PS, Eastern Cooperative Oncology Group performance status; FACT-G7, Functional Assessment of Cancer Therapy-General 7; HADS, Hospital and Anxiety Depression Scale; IQR, interquartile range.

performed for solid tumor patients only with the inclusion of distant metastases in the models, the results were also insignificant (HADS-Depression: coefficient = -0.265, P = .713 and FACT-G7: coefficient = 0.019, P = .982).

The frequency of HADS-Anxiety and HADS-Depression categories is presented in Table 4. The average FACT-G7 score differed significantly according to the categories of HADS-Anxiety and HADS-Depression and was lowest in anxiety and depression cases (Table 4). There was a significant negative correlation between the HADS-Anxiety and HADS-Depression scores and the FACT-G7 score (Spearman's rho = -0.55 and -0.656, respectively, and P < .0001 for both). The categories of HADS-Anxiety and HADS-Depression did not differ significantly according to cancer diagnosis awareness (Table 4).

**DISCUSSION**

In this study that included 292 Egyptian patients with cancer, anxiety and depression were not less and QoL was

not better in those unaware of their cancer diagnosis when compared with those aware. To the best of our knowledge, this is the first study from an Arab country to address that issue.

A number of studies from different countries investigated the relationship between cancer diagnosis awareness and psychological morbidity and provided conflicting evidence. Some studies from India,<sup>10</sup> Turkey,<sup>13</sup> and Iran<sup>14</sup> found that cancer diagnosis awareness is associated with significant psychological morbidity when compared with unawareness. On the other hand, other studies from Italy,<sup>11</sup> India,<sup>12</sup> and China<sup>15,17</sup> found no difference in psychiatric morbidity between aware and unaware patients. Furthermore, in one study from India, unaware patients had significantly higher anxiety and depression scores in bivariate analysis, but not in multivariate analysis.<sup>24</sup> It is difficult to come out with a generalizable conclusion applicable to all cultures from these studies. In addition to cultural differences, there are variabilities in the population studied, sample size, method

**TABLE 3.** Regression Analysis to Determine the Effect of Cancer Diagnosis Awareness on Anxiety, Depression, and Quality of Life

Outcome	Cancer Diagnosis Awareness					
	Univariate			Multivariate		
	Coefficient	P	Variables Adjusted for	Coefficient	P	
HADS-Anxiety	0.856	.184	Age, sex, having a job, education level, family history of cancer, duration since cancer diagnosis, primary cancer, performance status, and history of anticancer treatment	0.376	.600	
HADS-Depression	-0.243	.685	Age, sex, education level, family history of cancer, duration since cancer diagnosis, primary cancer, performance status, history of anticancer treatment, and current treatment plan	-0.520	.426	
FACT-G7	-0.264	.713	Age, sex, education level, family history of cancer, duration since cancer diagnosis, primary cancer, performance status, history of anticancer treatment, and current treatment plan	-0.084	.915	

Abbreviations: FACT-G7, Functional Assessment of Cancer Therapy-General 7; HADS, Hospital and Anxiety Depression Scale.

**TABLE 4.** Anxiety and Depression Categories and Their Relationship to Quality of Life and Cancer Diagnosis Awareness

HADS	All Patients No. (%)	FACT-G7		Cancer Diagnosis Awareness		
		Median (IQR)	<i>P</i> <sup>a</sup>	Unaware No. (%)	Aware No. (%)	<i>P</i> <sup>b</sup>
HADS-Anxiety						
Normal	165 (56.5)	18 (15.0-21.0)	< .0001	54 (56.8)	111 (56.3)	.696
Borderline	46 (15.8)	16 (11.3-20.7)		17 (17.9)	29 (14.7)	
Abnormal	81 (27.7)	11 (7.8-14.0)		24 (25.3)	57 (28.9)	
HADS-Depression						
Normal	138 (47.3)	19.8 (16.0-22.0)	< .0001	44 (46.3)	94 (47.7)	.735
Borderline	60 (20.5)	16 (11.0-19.0)		22 (23.2)	38 (19.3)	
Abnormal	94 (32.2)	11 (8.0-13.0)		29 (30.5)	65 (33.0)	

Abbreviations: FACT-G7, Functional Assessment of Cancer Therapy-General 7; HADS, Hospital and Anxiety Depression Scale; IQR, interquartile range.

<sup>a</sup>Kruskal-Wallis test.

<sup>b</sup>Chi-square test.

of psychiatric morbidity assessment, and definition of cancer diagnosis awareness. For example, studies that showed a higher psychological morbidity among aware patients included relatively smaller sample size<sup>10,13,14</sup> than those found no difference in the psychological morbidity according to awareness.<sup>11,12,15,17,24</sup> Another example is the definition of cancer diagnosis awareness in these studies. Some studies considered a patient aware if he/she said that he/she has cancer or tumor.<sup>15</sup> The current study was designed to avoid some of the pitfalls of other studies answering the same question. The sample size was calculated to determine a meaningful difference in the HADS score between aware and unaware patients. Furthermore, patients who said that they have a tumor were considered aware only when they define the malignant nature of the tumor. Those who stated that they have benign tumors were considered unaware.

The reason why patients unaware of their cancer diagnosis may experience a psychological morbidity equivalent to aware patients may be due to uncertainty about diagnosis, noninvolvement in care planning, and lack of convincing answers to health-related questions. In addition, lying to patients may result in losing their trust in health care professionals and their families.

On the basis of the findings of the current study and on the fact that the vast majority of Egyptian patients with cancer in Egypt prefers to be informed about their cancer diagnosis,<sup>6</sup> the nondisclosure practice by health care professionals in

Egypt needs to be changed. This should be within the context of respecting patients' autonomy and responding to their preferences. Such change may not be easy in cultures resistant to honest disclosure and factors related to health care professionals, patients, and their families that contribute to the nondisclosure practice should be taken into consideration.<sup>9</sup> In Egypt, a minority of cancer patients' family caregivers are still against the honest disclosure of cancer diagnosis which represents a barrier to patient-centered cancer care.<sup>1</sup> Accepting the nondisclosure request of these family caregivers would deprive patients from their right to know their cancer diagnosis. Physicians in Egypt should initiate discussions with family caregivers to explore the reason behind their nondisclosure request and use the current evidence as a tool to change their negative attitude.

The current study has limitations including the purposive sampling method and the use of an abbreviated QoL assessment tool that did not allow for exploring different aspects of QoL. An abbreviated questionnaire was used for the easier administration in the busy study sites. Furthermore, comprehension of the word malignant was not tested, and actual discussion with patients about their disease, especially illiterates, was not explored.

In conclusion, the results of the current study add to the evidence that unawareness of cancer diagnosis is not associated with less psychological burden or better QoL in patients with cancer.

## AFFILIATIONS

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## EQUAL CONTRIBUTION

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**Final approval of manuscript:** All authors

**Accountable for all aspects of the work:** All authors

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Open Payments is a public database containing information reported by companies about payments made to US-licensed physicians ([Open Payments](http://Open Payments)).

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## AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

The following represents disclosure information provided by authors of this manuscript. All relationships are considered compensated unless

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