Assess the Level of Distress among Treatment-Naïve Cancer Patients in a Tertiary Care Hospital, Jipmer, Puducherry

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Abstract:

Objective: According to GLOBOCAN (Global Cancer Observatory) 2020, about 19.3 million new cases of cancer and 10 million deaths occur because of cancer in 2020. Knowing about the diagnosis of cancer and its treatment, and related side effects will put patients under severe stress. Distress leads to poor quality of life which will harm the health outcomes and cancer treatment. The study aims to assess the level of distress among treatment naïve cancer patients and to associate the level of distress with socio-demographic and clinical variable. **Material and methods:** A cross-sectional analytical study design was used to collect data from 384 treatment-naïve cancer patients. A standardized tool, National Comprehensive Cancer Network (NCCN) Distress thermometer and problem list for the patients version 2.2020 was used to assess the level of distress. **Results:** This study revealed that the majority of the patients were found with severe (135, 35%) levels of distress, and only (45, 12%) reported no distress. We found a significant association between age and distress level (P = 0.020); between gender and distress level ($P = 0.030$) & between occupation and distress level ($P = 0.032$)and between the level of distress and BMI ($P = 0.001$). **Conclusions: I**dentifying the distress in the early phase immediately after diagnosis and before treatment can help to find the cause, and help the patients to start their cancer treatments with good psychological health. There is a need for psychological counselling or support for cancer patients even before their treatments.

Keywords: Distress, treatment naïve cancer patients, distress assessment

Introduction:

According to GLOBOCAN (Global Cancer Observatory) 2020[1], about 19.3 million new cases of cancer and 10 million deaths occur because of cancer in 2020[2]**.**The cancer burden is predicted to nearly double over the next decade in low- and middle-income countries. If no actions for prevention are taken, there will be millions of additional premature deaths from cancer over the next decade, and we will fail to achieve the United Nations Sustainable Development Goals target to reduce the total premature mortality

from Non-communicable diseases, including cancer, by one-third by 2030. Knowledge regarding the diagnosis of cancer and its treatment, and related side effects will put patients under severe stress[3].

Avoiding risk factors and implementing existing evidence-based prevention strategies will reduce 30- 50% of cancer. When cancer gets diagnosed and treated earlier, patients can reduce their psychological stress. Many cancers have a high chance of being cured if diagnosed early and treated appropriately[4]. Distress leads to poor quality of life which will harm health outcomes and cancer treatment. This study will help understand the level of distress in the patients before the cancer treatment.

Methods:

A cross-sectional analytical design has conducted in the Radiation Oncology outpatient department (OPD) at regional cancer centre in tertiary care hospital, Pondicherry. This setting receives around 100 patients per day. The data collection period was six weeks. The patient's socio-demographic data were obtained using data collection proforma which includes age, gender, education, occupation, nativity, marital status, living status, smoking, alcohol, previous knowledge of the disease, socioeconomic status, tobacco/Betal Nut chewing, previous history of cancer among family members, dietary habits, medication history. This was done by face-to-face interview with the patient.

The clinical data like diagnosis, co-morbidities, site of cancer, stage of cancer, time since diagnosis, the intent of treatment, vital signs, and BMI of the patient were obtained by reviewing the medical records.

The level of Distress among the patients was assessed using the National Comprehensive Cancer Network (NCCN) Distress thermometer and problem list for patients (version 2. 2020). This tool consists of a visual analog scale called the Distress Thermometer which had a score from 0-10 in which 0 indicates no distress; 10 indicates a high level of distress. The patient was asked to circle the number (0-10) that best describes how much distress they have been experiencing the past week including today. Then the patient was allowed to read the problem list which divides into 5 subgroups (40 problems in total) and was allowed to tick yes or no to the problem list.

Considering a cut-off score of >3 in the Distress Thermometer and concerning previous studies[5]patient's level of distress in the Distress Thermometer Score was categorized into no distress (0); mild distress (1-3); moderate distress (4-6); high distress (7-10).

Data analysis

The data collected from the participants were transferred into an Excel master sheet and analyzed using the statistical package for social science (SPSS) version 28.

The categorical variables (gender, education, occupation, nativity, marital status, living status, smoking status, alcoholic status, previous knowledge of disease, socioeconomic status, tobacco/betel nut chewing, previous history of cancer among family members, dietary habits, medication history, diagnosis, co-morbidities, type of cancer, stage of cancer, intent of treatment, BMI) was expressed as the frequency with percentage. The continuous variables such as age, time since diagnosis, and vital signs were expressed as mean with S.D. or median with IQR according to the distribution of data.

The association of all the categorical variables mentioned above with the level of distress was assessed using the Chi-square test / Fisher's Exact test. The comparison of the level of distress with other continuous variables was done using the One-way ANOVA/Kruskal Wallis test.

Results:

The results were obtained from 384 treatment naïve cancer patients attending radiation oncology out-patient department.Table 1 showsthat the median age group found in the study was 56 years with an

interquartile range of 48 years to 64 years. Totally, 204 (53.1%) patients were females. The majority of the patients 164 (42.7%) had only primary level of education. The majority of the patients 256(66.7%) were found employed. Only 104 (27.1%) had a history of smoking, and the majority of the patients 262(68.2%) had no history of alcoholism, whereas only 86(22.4%) had a history of tobacco/betel nut chewing. Almost 349(90.9%) patients did not have any knowledge about cancer. Very minimal patients 26(6.8%) had a previous family history of cancer. Only 88(22.9%) patients had a history of taking medication for other comorbidities.

Table 2 shows the distribution of clinical variables among treatment-naïve cancer patients.

Majority of the patients 121(31.5%) were diagnosed with cervical cancer and 83(21.6%) had cancer in the oral cavity. The leading site of cancer found in this study was Head and Neck Cancer 148 (38.5%) followed by that the majority of the females 122(31.8%) had cervical cancer. Only a minority of the patients 22(5.7%) had their cancer diagnosis in the early stage. The majority of the patients 295(76.8%) had their cancer diagnosis (time since diagnosis revealed to the patients) between the period of more than 1 month - 6months back. Underweight BMI (< 18.5 Kg/m^2) was recorded in 113 (29.4%) patients whereas more than half of the population 219 (57%) had Normal BMI (18.5 – 25Kg/m^2).

The figure 1 shows the frequency of level of distress among the patients. It depicts that the majority of the patients 135(35%) and 124(32%) had a severe and moderate level of distress. Whereas only 45(12%) had no distress in this study.

The table 3 shows that this study found a significant association between age and level of distress. The median age group found with moderate and severe levels of distress was 55(46,60) and 56(49,64) years (P - 0.020). There was also a significant association between gender and level of distress. More than 30% of both males and females were found to have moderate and severe levels of distress (P- 0.030). We also found a significant association between occupation and level of distress (P-0.032). About 91(35.5%) who were employed had a severe level of distress.

Table 4 shows that Distress score was not significantly associated with diagnosis, comorbidities, site of cancer, stage of cancer, time since diagnosis, or intent of cancer except that it was associated with BMI (P – 0.001) and respiration (P – 0.016).

Discussion:

In this study's results, the distress level was severe in 135(35%). A study by Ciambella et al., on 2019[6] reported a mean Distress thermometer score of 4.98 in the initial period of breast cancer diagnosis, before their treatment and 66.5% of the patients were found under severe distress. On discussion with the problem list of the patients, the most common problems found in this study were worry 311(81%), fatigue 305(79.4%), pain 301(78.4%), eating difficulty 265(69%), sleep 245(63.8%), transportation 230(59.9%), nervousness 229(59.6%), sadness 226(58.9%), fear 213(55.5%), loss of interest in usual activities, work/school which was reported in 202(52.6%) patients. The problems which were rarely reported were the ability to have children 1(6.3%), substance use 2(0.5%), and fever 7(1.8%). No patients reported sexual problems.

Most common problems reported in a study among cancer patients in Nepal[7] showed that more than 50% of patients had spiritual/religious concerns, fatigue, pain, worry, and insurance or financial problems and this study's results were almost similar to the present study. While observing the problems identified among the treatment naïve cancer patients we found that most of the patients experienced worry, fatigue, pain, eating difficulty, sleep disturbance, transportation, nervousness, sadness, fear, loss of interest in usual activities, and work/school related problems. This may be due to the fact that these patients were actually experiencing pain and other problems at the time of the study. Otherwise only very few were actually

worried about their cancer diagnosis and its impact on them. Many patients were eager to know about their radiation therapy and its effect on cancer.

This study found a significant association between age and Distress level *P*-value (0.020) with a median age of 56 (49,64) years had a severe level of distress, median age of 61(51,70) years had no distress. A study conducted by Ciambella et al. on 2019[6] also found a significant association between age and distress scores with age < 65 years reported a higher level of distress ($P < 0.003$). They also found a significant reduction in distress scores pre and post Multidisciplinary clinic visits among breast cancer patients. The gender distribution among 384 patients showed that subjects were mostly females 204(53.1%) when compared with the male population. A study conducted by Herschbach et al. on 2020[8]found similar results in which 54% of the subjects were only females. The present study also found a significant association between gender and distress level. More than 35% of the females 77(37.7%) had a severe level of distress (*P*-value- 0.030). In support of this present study, a study conducted by Keir et al., 2008[5]among brain tumor patientsfemales reported significantly higher distress than males (t=2.70, $P < 0.01$). Regarding alcoholism, smoking and other habits like tobacco chewing among 384 patients, 122 (31.8%) were alcoholics and 104 (27.1%) were smokers, and 86 (22.4%) had the habit of chewing tobacco and betel nut. Although majority of this study population were non-smoker, non-alcoholic, these results were comparably similar to a study conducted by Sah, 2019[7]which showed that out of 169 patients, 47 (27.8%) were alcoholics and 54 (31.9%) were smokers. In discussion with previous knowledge of cancer among patients, results showed that most of the patients 349 (90.9%) had no previous knowledge about cancer. These findings were contradictory to the study results found by Sah, 2019[7]in that only 41 (24.3%) had no previous knowledge and 127 (75.2%) had good knowledge about cancer.

According to patient's diagnoses in this study, the majority of the patients 121(31.5%) had cervical cancer, and cancer of the oral cavity 83(21.6%). Though we did not find any significant association between the diagnosis of the patient and the level of distress, the majority of the cervical cancer patients 48(39.7%) had a severe level of distress. The common site of cancer found in this study was Head and Neck Cancer 148 (38.5%), and gynaecological cancer 122 (31.8%). These results were similar to the study findings of Sah, 2019[7]as they have shown that the majority of the patients 31 (18%) were diagnosed with gynecological cancer. While describing the stage of cancer highest number of patients were diagnosed only at stage -IV 124(32.3%), whereas only 22 (5.7%) had stage I cancer. These results were similar to the results found by Sah, 2019[7] as they had the highest number of patients 62 (36.7%) with stage IV cancer.Baba et al., 2021[9]as per their study on prostate cancer patients didn't find any association between level of distress and stage of cancer. These results were similar to the present study results as we did not find any significant association between the stage of cancer and distress level ($P = 0.457$).

When discussing the time since diagnosis, the results of this study showed that 295 (76.8%) patients had their diagnosis in > 1 month – 6 months back. Another study[10] had the highest number of patients with their diagnosis < 1 year 169 (56.7**%).** While describing the association of distress with time since diagnosis, we found no significant association between level of distress and time since diagnosis of cancer. This result was not similar to a study results[11]in which patients with the diagnosis of cancer within 1-4 weeks before the assessment to distress screening showed a high level of distress ($p < 0.05$). Regarding the BMI, patients were mostly 219(57%) with healthy BMI(18.5-25Kg/m^2), however, 113(29.4%) were found underweight(BMI <18.5Kg/m^2). These results showed similar results according to a study[12] conducted by Gosak et al., 2020[12]as 4.96% of the patients were found with healthy BMI before cancer treatment for head and neck cancer. We found a good association between level of distress and BMI (*P*-value – 0.001). This result was completely similar to the results found by Gosak et al., 2020[12]where the assessment of BMI found that anxiety was mostly seen among malnourished/cachectic patients (assessment 1, p=0.017; assessment 2, p=0.020) who were also found to be more frequently depressed (assessment 2, p=0.045; assessment 3, p=0.023). While discussing the comorbidities, the common comorbidities which existed in this study population were Diabetes Mellitus (6.30%); Hypertension (5.70%); Diabetes Mellitus with Hypertension (5.70%). These results though not similar to the study conducted byC & S, 2002[13]found that

81% of the cancer patients had comorbidities and among them 24-48 % of the cancer patients had hypertension, 8-18% had diabetes, etc.

Ethical consideration:

The study was approved by Nursing Research Monitoring Committee, JIPMER (Regn. No. of the proposal: JIP/CON/NRMC/M.Sc./2020/MSN/4) and the Institute (JIPMER) ethical main committee for Nursing college (Human studies) (Ref. No.JIP/CON/IEC/MSN/4) The data collection period was 6 months from 01.12.2021 to 31.05.2022. The investigator obtained clearance from Department HOD, Department of Radiation Oncology, RCC, JIPMER. A brief description of the study was given to the patients and informed consent was obtained from each participant. Confidentiality was maintained all throughout the study.

Conclusion:

The cancer diagnosis is already a burden for the patients and thinking about radiation therapy, chemotherapy or other cancer treatments can cause some impact on a patient's psychological wellbeing. So, identifying the distress in the early phase (i.e., immediately after diagnosis and before treatment) can help identify the cause, and help the patients to start their cancer treatments with good psychological health. By this study, it is clear that most of the patients 135(35%) had severe distress and 124(32%) had moderate distress. This indicates that there is a need for psychological counselling or support for cancer patients even before their treatments.

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Table1: Socio-demographic Variable of Treatment Naïve Cancer Patients
N= 384

Socio-Demographic Variable		**Frequency (n)**	**Percentage (%)**
Age*		56.50	(48.00,64.00)
Gender	Male	180	46.9
	Female	204	53.1
Education	Illiterate	7	1.8
	Primary	164	42.7
	Elementary	126	32.8
	High school	56	14.6
	Higher Secondary	11	2.9
	Diploma/ Graduate/ Graduate and above	20	5.2
Occupation	Employed	256	66.7
	Housewife	101	26.3
	Unemployed	16	4.2
	Student	1	0.3
	Retired	10	2.6
Nativity	Tamilnadu	315	82.0
	Pondicherry	62	16.1
	Others	7	1.8
Marital status	Single	11	2.9
	Married	294	76.6
	Divorced	7	1.8
	widow/ widower	69	18.0
	living separately	3	0.8
Living status	living with family	365	95.1
	Alone	18	4.7
	lives in institution	1	0.3
Smoking habits	Yes	104	27.1
	No	280	72.9
Alcoholism	Yes	122	31.8

	No	262	68.2
Previous knowledge of the disease	Yes	35	9.1
	No	349	90.9
Socio-economic status	EWS: <3lakhs per annum	380	99.0
	LIG: 3-6 lakhs per annum	4	1.0
	MIG: 6-12 lakhs per annum	0	0
Tobacco /Betal nut chewing	Yes	86	22.4
	No	298	77.6
Family history	Yes	26	6.8
	No	358	93.2
Diet	Vegetarian	12	3.1
	Mixed	372	96.9
Medication history	Yes	88	22.9
	No	296	77.1

***Median with Interquartile range.**

Table 2: Clinical Variable of Treatment-Naïve cancer patients N= 384

Clinical Variable		**Frequency (n)**	**Percentage (%)**
Diagnosis	Ca. Oral Cavity	83	21.6
	Ca. Pharynx	49	12.8
	Ca. Larynx	16	4.2
	Ca. Lung	23	6.0
	Ca. Breast	2	0.5
	Ca. Esophagus	33	8.6
	Ca. Stomach	7	1.8
	Ca. Colon/ Rectum/ Anus	23	6.0
	Ca. Hepatobiliary system	3	0.8
	Ca. Prostate	3	0.8
	Ca. Cervix	121	31.5
	Ca. Vulva	1	0.3
	Others	20	5.2
Site of cancer	Head & neck	148	38.5
	Lung	23	6.0
	Breast	2	0.5
	Gastrointestinal	63	16.4
	Hepatobiliary system	3	0.8
	prostate	3	0.8
	Gynaecological	122	31.8
	Others	20	5.2
Stage of cancer	I	22	5.7
	II	120	31.3
	III	118	30.7
	IV	124	32.3
Time since diagnosis	Today/within the past week	15	3.9
	1-4 Weeks Ago	58	15.1
	>1 Month-6months Ago	295	76.8
	>6 Months Ago	16	4.2
Intent of	Curative	330	85.9

treatment	Palliative	54	14.1
Vital signs	Temperature*	98.60 (98.400, 98.600)	
	Pulse#	88.49 (16.552)	
	Respiration*	20.00 (18.00, 20.00)	
	blood pressure (systolic)#	127.67 (21.333)	
	blood pressure (diastolic)#	79.28 (12.409)	
BMI	underweight <18.5	113	29.4
	healthy 18.5-25	219	57.0
	overweight 25.1-<30	43	11.2
	obesity ≥ 30	9	2.3

***Median with Interquartile range; #Mean with Standard deviation**

TABLE 3: Association of Level of Distress with Socio-demographic variables among Treatment Naïve Cancer Patients N=384

Demographic Variables		**Level Of Distress**				**Chi-square X^2**	**Df**	***P*-value**
		No Distress	**Mild**	**Moderate**	**Severe**			
		n (%)	**n (%)**	**n (%)**	**n (%)**			
Age[1]		61.00 (51.00, 69.50)	57.00 (47.25, 64.50)	55.00 (46.00, 60.00)	56.00 (49.00, 64.00)	9.841#	3	0.020
Gender	Male	30 (16.7%)	33 (18.3%)	59 (32.8%)	58 (32.2%)	8.949	3	0.030
	Female	15 (7.4%)	47 (23.0%)	65 (31.9%)	77 (37.7%)			
Education	Illiterate	1 (14.3%)	1 (14.3%)	2 (28.6%)	3 (42.9%)	15.203	15	0.437
	Primary	16 (9.8%)	34 (20.7%)	52 (31.7%)	62 (37.8%)			
	Elementary	10 (7.9%)	28 (22.2%)	41 32.5%	47 37.3%			
	High School	13 (23.2%)	9 (16.1%)	19 (33.9%)	15 (26.8%)			
	Higher Secondary	3 (27.3%)	2 (18.2%)	3 (27.3%)	3 (27.3%)			
	Diploma/ Graduate / Graduate and Above	2 (10.0%)	6 (30.0%)	7 (35.0%)	5 25.0%			
Occupation	Employed	27 (10.5%)	52 (20.3%)	86 (33.6%)	91 (35.5%)	22.521	12	0.032
	Housewife	9 (8.9%)	22 (21.8%)	33 (32.7%)	37 (36.6%)			

	Unemployed	7 (43.8%)	2 (12.5%)	3 (18.8%)	4 (25.0%)			
	Student	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)			
	Retired	2 (20.0%)	3 (30.0%)	2 (20.0%)	3 (30.0%)			
Nativity	Tamilnadu	36 (11.4%)	62 (19.7%)	104 (33.0%)	113 (35.9%)	3.953	6	0.683
	Pondicherry	7 (11.3%)	16 (25.8%)	19 (30.6%)	20 (32.3%)			
	Others	2 (28.6%)	2 (28.6%)	1 (14.3%)	2 (28.6%)			
Marital status	Single	2 (18.2%)	2 (18.2%)	4 (36.4%)	3 (27.3%)	14.987	12	0.242
	Married	30 (10.2%)	66 (22.4%)	99 (33.7%)	99 (33.7%)			
	Divorced	1 (14.3%)	1 (14.3%)	1 (14.3%)	4 (57.1%)			
	Widow/ widower	12 (17.4%)	11 (15.9%)	17 (24.6%)	29 (42.0%)			
	Living separately	0 (0.0%)	0 (0.0%)	3 (100.0%)	0 (0.0%)			
Living status	Living with family	45 (12.3%)	79 (21.6%)	115 (31.5%)	126 (34.5%)	8.517	6	0.203
	Alone	0 (0.0%)	1 (5.6%)	8 (44.4%)	9 (50.0%)			
	Lives in an institution	0 (0.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)			
Smoking habits	Yes	19 (18.3%)	19 (18.3%)	31 (29.8%)	35 (33.7%)	6.037	3	0.110
	No	26 (9.3%)	61 21.8%	93 (33.2%)	100 (35.7%)			
Alcoholism	Yes	21 (17.2%)	23 (18.9%)	42 (34.4%)	36 (29.5%)	6.818	3	0.078
	No	24 (9.2%)	57 (21.8%)	82 (31.3%)	99 (37.8%)			
Previous knowledge of the cancer	Yes	5 (14.3%)	7 (20.0%)	15 (42.9%)	8 (22.9%)	3.218	3	0.359
	No	40 (11.5%)	73 (20.9%)	109 (31.2%)	127 (36.4%)			
Socio-Economic status	EWS	45 (11.8%)	80 (21.1%)	122 (32.1%)	133 (35.0%)	1.962	3	0.580
	LIG	0 (0.0%)	0 (0.0%)	2 (50.0%)	2 (50.0%)			
	MIG	0 (0%)	0 (0%)	0 (0%)	0 (0%)			
Tobacco/ Betel Nut	Yes	12 (14.0%)	14 (16.3%)	31 (36.0%)	29 (33.7%)	2.124	3	0.547
	No	33	66	93	106			

		(11.1%)	(22.1%)	(31.2%)	(35.6%)			
Family history	Yes	2 (7.7%)	3 (11.5%)	13 (50.0%)	8 (30.8%)	4.403	3	0.221
	No	43 (12.0%)	77 (21.5%)	111 (31.0%)	127 (35.5%)			
Diet	Vegetarian	2 (16.7%)	2 (16.7%)	5 (41.7%)	3 (25.0%)	1.063	3	0.786
	Mixed Diet	43 (11.6%)	78 (21.0%)	119 (32.0%)	132 (35.5%)			
Medication history	Yes	12 (13.6%)	18 (20.5%)	23 (26.1%)	35 (39.8%)	2.398	3	0.494
	No	33 (11.1%)	62 (20.9%)	101 (34.1%)	100 (33.8%)			

[1]**Median (IQR); [#]Kruskalwallis test**

Table 4: Association between the Level of Distress and clinical variables among Treatment-Naïve Cancer Patients N=384

Clinical Variable		**Level of Distress**				**Chi-square X^2**	**Df**	***P*-value**
		No Distress	**Mild**	**Moderate**	**Severe**			
		n(%)	**n(%)**	**n(%)**	**n(%)**			
Diagnosis of the patients	Ca. Oral Cavity	15 (18.1%)	11 (13.3%)	32 (38.6%	25 (30.1%)	35.308	36	0.501
	Ca. Pharynx	7 (14.3%)	12 (24.5%)	15 (30.6%)	15 (30.6%)			
	Ca. Larynx	1 (6.3%)	4 (25.0%)	4 (25.0%)	7 (43.8%)			
	Ca. Lung	3 (13.0%)	4 (17.4%)	8 (34.8%)	8 (34.8%)			
	Ca. Breast	0 (0.0%)	0 (0.0%)	2 (100.0%)	0 (0.0%)			
	Ca. Esophagus	5 15.2%	7 21.2%	13 39.4%	8 24.2%			
	Ca. Stomach	1 14.3%	1 14.3%	1 14.3%	4 57.1%			
	Ca. Colon/ Rectum/ Anus	1 4.3%	4 17.4%	8 34.8%	10 43.5%			
	Ca. Hepatobiliary system	0 0.0%	0 0.0%	1 33.3%	2 66.7%			
	Ca. Prostate	1 33.3%	2 66.7%	0 0.0%	0 0.0%			
	Ca. Cervix	10 8.3%	28 23.1%	35 28.9%	48 39.7%			
	Ca. Vulva	0 0.0%	1 100.0%	0 0.0%	0 0.0%			
	Others	1 5.0%	6 30.0%	5 25.0%	8 40.0%			
Number of co-morbidities	Nil	33 (11.2%)	62(21.0%)	101 (34.2%)	99(33.6%)	5.706	9	0.769
	1 comorbidity	9(14.5%)	12(19.4%	18(29.0%	23(37.1%)			

			)	)				
	2 comorbidities	3 (12.0%)	6(24.0%)	4(16.0%)	12 (48.0%)			
	3 comorbidities	0 (0.0%)	0(0.0%)	1(50.0%)	1(50.0%)			
Site of cancer	Head & neck	23 (15.5%)	27 (18.2%)	51 (34.5%)	47 (31.8%)	20.684	21	0.478
	Lung	3 (13.0%)	4 (17.4%)	8 (34.8%)	8 (34.8%)			
	Breast	0 (0.0%)	0 (0.0%)	2 100.0%)	0 (0.0%)			
	Gastrointestinal	7 (11.1%)	12 (19.0%)	22 (34.9%)	22 (34.9%)			
	Hepatobiliary system	0 (0.0%)	0 (0.0%)	1 (33.3%)	2 (66.7%)			
	prostate	1 (33.3%)	2 (66.7%)	0 (0.0%)	0 (0.0%)			
	Gynaecological	10 (8.2%)	29 (23.8%)	35 (28.7%)	48 (39.3%)			
	Others	1 (5.0%)	6 (30.0%)	5 (25.0%)	8 (40.0%)			
Time since diagnosis	Today/within past week	4 (26.7%)	3 (20.0%)	3 (20.0%)	5 (33.3%)	9.715	9	0.374
	1-4 weeks ago	6 (10.3%)	17 (29.3%)	19 (32.8%)	16 (27.6%)			
	>1 month-6months ago	35 (11.9%)	57 (19.3%)	95 (32.2%)	108 (36.6%)			
	>6 months ago	0 (0.0%)	3 (18.8%)	7 (43.8%)	6 (37.5%)			
Intent of treatment	Curative	41 (12.4%)	75 (22.7%)	104 (31.5%)	110 (33.3%)	7.693	3	0.053
	Palliative	4 (7.4%)	5 (9.3%)	20 (37.0%)	25 (46.3%)			
Vital signs	Temperature[1]	98.600 (98.400, 98.650)	98.600 (98.400, 98.600)	98.600 (98.400, 98.600)	98.600 (98.400, 98.600)	2.237[$]	3	0.525
	Pulse[2]	90.53 (18.343)	89.03 (16.994)	86.48 (15.577)	89.34 (16.538)	0.987*	3	0.399
	Respiration[1]	20.00 (18.00,20.00)	20.00 (18.00, 21.50)	20.00 (20.00, 22.00)	20.00 (18.00, 20.00)	10.344[$]	3	0.016
	Blood pressure (Systolic)[2]	128.04 (24.208)	128.34 (21.444)	126.94 (19.260)	127.82 (22.269)	0.080*	3	0.971
	Blood Pressure (Diastolic)[2]	79.33 (13.218)	79.84 (11.906)	78.56 (12.019)	79.59 (12.877)	0.222*	3	0.881
BMI	Underweight <18.5	19 (16.8%)	23 (20.4%)	34 (30.1%)	37 (32.7%)	29.268	9	0.001

	Healthy 18.5-25	20 (9.1%)	36 (16.4%)	81 (37.0%)	82 (37.4%)			
	Overweight 25.1-<30	6 (14.0%)	16 (37.2%)	5 (11.6%)	16 (37.2%)			
	Obesity ≥ 30	0 (0.0%)	5 (55.6%)	4 (44.4%)	0 (0.0%)			

[1]Median (IQR); [2]Mean (SD); [$]kruskalwallis test; [*]one way ANOVA

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