Pattern of Cancers, Co-Existing Non Communicable Diseases, and Quality of Life among Elderly in a Tertiary Oncology Health-care Facility in Southwestern Nigeria

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Abstract

Background: Cancer burden is worldwide in distribution, but there is an increasing proportion of the burden in low- and middle-income countries. Cancer has been shown to be responsible for poor health-related quality of life (QoL) in the elderly who are usually more affected. The aim of the study was to determine the pattern of cancers and QoL amongst elderly patients attending the Oncology Clinic in Lagos University Teaching Hospital (LUTH), Idi – Araba, Lagos, Nigeria. **Methods:** This cross-sectional study was carried out among 160 elderly patients in Oncology Clinic in LUTH using consecutive sampling method. Data were collected using a validated questionnaire that was interviewer administered. Data entry and analysis were done using Epi-info 7.1 software. Chi-squared test was used to determine the association between patterns of cancer and QoL. The level of significance was set at P < 0.05. **Results:** The mean age of the respondents was 67.90 ± 19.3 years. About two-thirds (65.6%) were females, married (78.8%), and above one-half (52.5%) were employed. Majority of the respondents (92.5%) had caregivers who were their family members. The most common cancers seen were breast (44.4%), prostate (16.9%), cervical (9.4%), colorectal cancer (3.8%), and nasal carcinoma (3.8%) Two-third of the respondents (66.9%) had poor QoL scores. The mental component of QoL summary, (47.65 ± 17.1) was slightly higher than the physical component summary, (46.4 ± 14.6). No association was found between pattern of cancer and QoL (P > 0.05). **Conclusion:** Most participants in this study had poor QoL. Improving the socioeconomic status of these patients as well as affordable access to health-care may impact positively on their QoL.

Keywords: Cancer, Lagos, quality of life

INTRODUCTION

Cancer is a global and growing noncommunicable disease with an increasing proportion of the burden in low- and middle-income nations.^[1] It is a rising public health problem in Africa owing to changes in lifestyle factors, urbanization, and economic growth.^[2] Worldwide, in 2018, the top three cancers in male and female were lung, prostate, and colorectal cancers, which caused 44.4% of all cancers (excluding nonmelanoma skin cancer).^[3] For women, breast cancer was the most common, contributing 25.4% of the total number of new cases diagnosed while cervical cancer accounted for 6.9%^[3] and was the fourth most common cancer in women.^[3] According to a study, it was shown that in Africa, the leading cancers among men include prostate, lung, colorectal, liver, esophagus, Kaposi

| Ac | cess this article online |
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| Quick Response Code: | Website: www.njgp.org |
| | DOI: 10.4103/njgp.njgp_7_22 |

sarcoma, leukemia, stomach, and nonHodgkin lymphoma.^[4] Among females, breast and cervical cancers are the most frequently diagnosed cancers in Africa. These cancers account for more than 60% of the total global cases and deaths.^[4]

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How to cite this article: Akodu B, Layefa O, Ladi-Akinyemi T, Lawal A, Sonnen A, Sowunmi A, *et al.* Pattern of cancers, co-existing non communicable diseases, and quality of life among elderly in a tertiary oncology health-care facility in Southwestern Nigeria. Niger J Gen Pract 2022;20:23-8.

Submitted: 23-Jul-2022 Published: 12-Nov-2022 Accepted: 13-Sep-2022

Cancer causes a lot of deaths than all stroke or all coronary heart condition according to a World Health Organization estimate released in 2011.^[5] Worldwide, cancer deaths are more than the percentage of deaths caused by HIV/AIDS, tuberculosis, and malaria put together. It is the second leading cause of death in developed countries and is among the three leading causes of death for adults in developing countries.^[6] Cancer caused 208.3 million disability-adjusted life years (DALYs) in 2015. Overall for both sexes, cancer caused 208.3 million DALYs worldwide in 2015.^[7] Due to relatively favorable prognosis, breast cancer is ranked as the 5th cause of death (522,000, 6.4%) but it is the 2nd most common cancer.^[5] As regards the incidence of cancer, lung and breast cancer are the most two common cancers, followed by colorectal cancer (694,000 deaths, 1.4 million cases), prostate cancer (307,000 deaths, 1.1 million cases), stomach cancer (723,000 deaths, 951,000 cases), and liver cancer (745,000 deaths, 782,000 cases).^[5] In 2012, these six cancers accounted for more than half of the global cancer burden.^[5] While breast, prostate, lung, and colorectal cancers comprise half of the total incidence in more developed regions, lung, breast, stomach, and colorectal cancers combined with liver and cervical cancers are responsible for over half the burden (54%) in less developed regions of the world.^[5] Risk factors that are modifiable for cancers are tobacco, alcohol consumption, poor diet (low intake of fruits and vegetables, and high intake of red or processed meat), obesity, physical inactivity, infectious agents, and carcinogens associated with the environment.^[8,9] As a result of transitions in these risk factors, there is an increasing proportion of the burden of cancer on low-income and middle-income nations.^[7]

Quality of life (QOL) is assumed to be multidimensional among cancer patients, and it is responsible for at least four aspects, which include social, functional, physical (or physical symptom related), and emotional or psychological.^[10] QOL has been recommended as one of the hard endpoints in clinical cancer research.^[11] In a cross-sectional study carried out among cancer patients in India, it was observed that the mean of QOL in physical aspect was 2.51, role play 2.34, pain dimension 2.35, emotional dimension 2.62, social dimension 2.50, and the total 2.43.^[12] The aim of this study was to determine the patterns and QoL among the elderly attending Oncology Clinic in Lagos University Teaching Hospital (LUTH), Idi – Araba, Lagos State, Nigeria.

METHODS

Study area, design, and population

The study was conducted at the cancer treatment center of a tertiary teaching hospital in Lagos, Nigeria. Structured under a public–private partnership (PPP) arrangement between the Nigerian Sovereign Investment Authority (NSIA), the tertiary center is a US\$11 million investment for the rehabilitation, equipping, and operation of cancer ailment, which provides advanced radiotherapy and chemotherapy treatment services. The PPP is executed as a Build-Operate-Transfer. The NSIA owns the center 100% today but full ownership is expected to revert to LUTH after 10 years of operations. The study design

was descriptive cross-sectional. The study population consisted of elderly men and women (60 years and above) attending the Oncology Clinic. Those who were too ill or with impaired memory were excluded from the study.

Sample size determination and sampling technique

In determining the sample size, Cochran's formula was used to calculate the minimum sample required, as follows:

$$n = \frac{Z^2 pq}{d^2}$$

where n = Minimum sample size, Z = Value of standard normal deviate at 95% confidence interval (1.96), P = Expected prevalence rate for the population from which the sample is taken.^[13] q = 1 - p, d = Margin of error acceptable = 0.05. The estimated minimum sample size was 160. A consecutive sampling method was used to select the participants.

Data collection tool

Data collection was done using an interviewer-administered questionnaire adapted from past literature.^[14,15] The questionnaire consisted of sociodemographic characteristics; patterns of cancer; general health (GH), physical, emotional, and social domains; and well- being of the QoL of respondents using the 36-Item short form Health Survey (SF-36) questionnaire developed by the Boston Health Research Institute in the United States. The SF-36 items are combined to form four physical domain scales, namely physical functioning (PF), physical role functioning, bodily pain (BP), and GH, summarized as the physical component summary Scale (PCS), and four mental domain scales, namely vitality (VT), social functioning (SF), emotional role, and functioning and mental health (MH) summarized as the mental component summary Scale (MCS).^[16]

Grading systems and scoring method

The QoL of the respondents was assessed using SF-36 which has 36 questions and 8 subscale scores. There are also two main components score – the physical and the mental component. The physical component consists of GH, PF, role physical and BP, while MH consists of role emotional (RE), SF, and VT. The two main component scores were obtained by computing and averaging all the domains in each of them.

For the scoring, each item was recoded on a 0–100 range. So, for the subscales and their number of items, we have the following: PF has 10 items, role limitation due to physical health has 4 items, role limitation due to emotional problems has 3 items, energy/ fatigue has 4 items, emotional well-being/MH has 5 questions, SF has 2 items, pain has 2 items, and GH has 6 items. For the PF, it has 3 responses ranging from score 0 to 100, with the best response having a score of 100, the worst response having a score of 0, and the average response will attract a score of 50. For the role limitation due to physical health, it has 2 responses ranging from score 0 to 100, with the best response having a score of 100 and the worst response having a score of 100 and the worst response having a score of 0. For the role limitation due to emotional problems, it also has 2 responses ranging from score 0 to 100, with the best response having a score of 100 and the worst response having a score of 0. For the energy/fatigue, it has 6 responses which attract scores of 0, 20, 40, 60, 80, and 100 from the worst response to the best response. For emotional well-being/MH, it has 6 responses which attract scores of 0, 20, 40, 60, 80, and 100 from the worst response to the best response. For SF, it has 5 responses which attract scores of 0, 25, 50, 75, and 100 from the worst response to the best response. Pain has 2 items: one of the items has 6 responses which attract scores of 0, 20,40, 60, 80, and 100 from the worst response to the best response and the other item has 5 responses which attract scores of 0, 25, 50, 75, and 100 from the worst response to the best response. For GH, it has 5 responses which attract scores of 0, 25, 50, 75, and 100 from the worst response to the best response. All questions were scored on a scale from 0 to 100, with 100 representing the highest level of functioning possible and 0 representing the lowest level of functioning possible. The total maximum score was 100 and the total minimum score was 0.

For grading, the scores from those questions that are in each sub-scales were added and then averaged together for a final score that will represent the subscale. For example, to measure the patients energy/fatigue level, which normally has about 4 questions/items with about 6 responses/options, as follows: all of the time/option A (100%), most of the time/option B (80%), a good bit of the time/option C (60%), Some of the time/Option D (40%), A little of the time/Option E (20%), None of the time/ option F(0). If the answer to question 1 is option D, the score is 40%, if the answer to question 2 is option C, the score is 60%, if the answer to question 3 is option D, the score is 40%, and if the answer to question D is F, the score is 0. The score for this subscale is 40 + 60 + 40 = 140. Now we divide by the 3 answered questions to get a total of 46.7%. A score of 100 represents high energy with no fatigue, while the lower score of 46.7% suggests the patient is experiencing a loss of energy and is experiencing some fatigue. All the eight subscales were scored and graded that way. Any score >50 indicates a good GH status and scores <50 indicates poor GH status.

Data analysis

Data collected were checked for correction and completeness. It was analyzed using the statistical software for Epidemiology, Epi-info 7.1, developed by the Centers for Disease Control and Prevention in Atlanta Georgia. Descriptive statistics was done using frequency and percentage for categorical variables and mean and standard deviation (SD) for continuous variables. The relationship between patterns of cancer and QoL was assessed using the Chi-square test. A P < 0.05 was considered statistically significant.

Ethical consideration

Ethical approval was obtained from the Health Research and Ethics Committee of LUTH (ADM/DCST/HREC/APP/476). Written informed consent was obtained from each participant.

RESULTS

One hundred and sixty respondents participated in the study.

Their mean age (\pm SD) was 67.9 \pm 19.3 years. Most (65.6%) respondents were females, more than half (55.0%) had attained tertiary education, and only a few (3.8%) had no formal education. Majority (78.8%) of the respondents were married and most (92.5) had family members as their caregiver. Majority (97.5%) of the respondents pay out of pocket for their treatment [Table 1]. Breast cancer had the highest proportion of participants (44.4%), followed by prostate cancer (16.9), cervical cancer (9.4%), and colorectal cancer and nasal carcinoma (3.8%) [Table 2]. The MCS (47.65 ± 17.1) was slightly higher than the PCS (46.4 \pm 14.6). RE (27.08 \pm 10.8) contributed the least and GH (61.72 \pm 13.4) contributed the most to total SF-36 score, which had a mean \pm SD of 47.02 \pm 13.5 years [Table 3]. For the mean QoL among the cancers, colorectal cancer had the best PF (72.50 \pm 10.8), followed by laryngeal cancer (58.00 \pm 18.2), breast cancer (55.92 \pm 20.9) and cervical cancer (52.67 \pm 19.3), while the worst PF was bladder cancer (35.00 \pm 12.9). The highest mean score for SF accounted to lung cancer (75.00 \pm 14.4) followed by

| Table 1: | Sociodemographic | characteristics | of the |
|----------|----------------------|-----------------|--------|
| responde | nts (<i>n</i> =160) | | |

| Variables | Frequency, <i>n</i> (%) |
|----------------------------|-------------------------|
| Age group (years) | |
| 60-69 | 118 (73.8) |
| 70-79 | 30 (18.8) |
| 80-89 | 12 (4) |
| Mean±SD | 67.90±19.3 |
| Gender | |
| Male | 55 (34.4) |
| Female | 105 (65.6) |
| Highest level of education | |
| No formal education | 6 (3.8) |
| Primary education | 19 (11.9) |
| Secondary education | 47 (29.4) |
| Tertiary education | 88 (55.0) |
| Occupation | |
| Employed | 84 (52.5) |
| Retired | 41 (25.6) |
| Unemployed | 35 (21.9) |
| Religion | |
| Christianity | 137 (85.6) |
| Islam | 23 (14.4) |
| Ethnic group | |
| Yoruba | 89 (55.6) |
| Igbo | 43 (26.9) |
| Hausa | 2 (1.3) |
| Others | 26 (16.3) |
| Family type | |
| Extended | 26 (16.3) |
| Nuclear | 134 (83.7) |
| Health-care access | |
| NHIS | 4 (2.5) |
| Out of pocket | 156 (97.5) |

NHIS: National Health Insurance Scheme, SD: Standard deviation

| Table 2: Patter | ns of cance | ' among th | e respondents |
|------------------|-------------|------------|---------------------|
| (<i>n</i> =160) | | | |
| Variables | | | Frequency, <i>i</i> |

| Variables | Frequency, <i>n</i> (%) |
|-------------------------------|-------------------------|
| Breast cancer | 71 (44.4) |
| Prostate cancer | 27 (16.9) |
| Cervical cancer | 15 (9.4) |
| Colorectal cancer | 6 (3.8) |
| Nasal carcinoma | 6 (3.8) |
| Laryngeal cancer | 5 (3.1) |
| Anal cancer | 4 (2.5) |
| Bladder cancer | 4 (2.5) |
| Lung cancer | 3 (1.9) |
| Endometrial cancer | 3 (1.9) |
| Oral cancer | 2 (1.3) |
| Others (e.g., brain, stomach, | 5 (3.2) |
| eye, soft-tissue sarcoma) | |

| Table 3: Quality | y of life | score of | the res | pondents | (<i>n</i> =160) |
|------------------|-----------|----------|---------|----------|------------------|
|------------------|-----------|----------|---------|----------|------------------|

| Variables | $Mean \pm SD$ |
|----------------------------|------------------|
| Physical functioning | 50.21±21.2 |
| Role-physical | 27.18±12.4 |
| Bodily pain | 46.43±11.4 |
| General health | 61.72±13.4 |
| Vitality | 47.13±13.4 |
| Social functioning | 60.47±26.6 |
| Role-emotional | $27.08{\pm}10.8$ |
| Mental health | 55.92±17.6 |
| Physical component summary | 46.4±14.6 |
| Mental component summary | 47.65±17.1 |
| Overall | 47.02±13.5 |
| CD 0/ 1 11 1/ | |

SD: Standard deviation

colorectal cancer (70.83 \pm 15.1), breast cancer (67.43 \pm 14.0), and cervical cancer (61.67 ± 13.8) , while endometrial cancer had the lowest mean score (50.00 ± 7.2) . For MH, the highest mean score was colorectal cancer (65.40 ± 12.7) followed by laryngeal cancer (64.64 ± 10.6), lung cancer (60.53 ± 16.7) and cervical cancer (59.17 \pm 15.2), while the lowest mean score was for nasal carcinoma (6.93 ± 17.5). Overall, colorectal cancer accounted for the highest mean score (63.09 ± 19.8) followed by lung cancer (53.98 \pm 15.8), anal cancer (53.12 \pm 15.4), and cervical cancer (50.56 ± 19.4) , while the least mean score was for endometrial cancer (35.76 ± 6.6) [Table 4] There was no significant association between the patterns of cancer and QoL [P > 0.05 Table 5]. In general, two-third (66.9%) of the respondents had poor QoL scores, while 33.1% had good QoL. There was no statistically significant association between QoL and prevalence of self-reported noncommunicable diseases [Table 6].

DISCUSSION

This study was carried out to assess the pattern of cancers and QoL among the elderly attending the oncology clinic in LUTH, Idi-Araba, Lagos State, Nigeria. Almost two-third (65.6%) of the respondents were female, while 34.4%% were males. This is similar to a study carried out in the USA where the female respondents were 65.9%.^[17] Approximately 60% of cases and 70% of deaths of colon cancer occur in those aged 65 years and older. Among women, almost 30% of cases and more than 40% of deaths will occur in those aged 80 years and older, compared with approximately 20% of cases and 30% of deaths among men.^[18] Also, in a South African study, the female cancer population was higher than male, 59.1% and 40.9% respectively.^[19] Majority (85.6%) of the respondents were married, which is similar to a study carried out in the North of Minas Gerais (Brazil) where the married population was 80%.^[20] It is however higher than a research among the elderly in the USA where the respondents who were married were 56.7%. This is most likely due to the culture of universality of marriage which is accorded more premium value in the less and developing countries of the world. The marriage union is believed to provide strong social support both in times of health and illness. Almost all respondents in this study (97.5%) accessed healthcare through out-of-pocket payment, with just the remaining few (2.5%) covered by the National Health Insurance Scheme. This is different from the study done in Iran where those who had health insurance were 34.4%.^[12] The disparity can be explained from the latter being a more developed country and with better health policies and health-care financing mechanisms compared to Nigeria. To achieve universal health coverage, all people in all places, especially the vulnerable groups such as the elderly, need to be covered by one form of prepaid mechanism or the other.

This study found that the most common cancers seen in the oncology clinic were breast, prostate, and cervical cancers. This is different from a study done in forty countries in Europe where lung cancer was reported as the most common cancer (12.9%).^[5] For lung cancer, our study found a prevalence of just 1.9%. In China, lung cancer was also the leading cancer found among the elderly population which together with stomach, colorectal, liver, and esophageal cancers accounted for about 67.70% of all cancer cases.[21] For prostate cancer, however, our study agrees with others from the USA and China where prostate cancer was also found as the second most common cancer.^[7,22] In the current study, less than half (41.3%) of the respondents were limited a lot when doing vigorous activities, doing moderate activities (40.0%), and bathing/dressing oneself (35.0%), that is, there had inability to perform >2 of 6 activities of daily living (ADLs). This is similar to the study done in the USA amongst African-Americans having breast cancer, where they had the inability to perform >2 of 6 ADLs done.^[23] In general, majority of them felt that their health was a bit worse when compared to the previous year (40.6%); this agrees with studies done in the Netherlands and Iowa where the QoL for cancer patients reported worse physical function and GH.^[24,25] Furthermore, more than one-third (37.5%) of the respondents

| | Breast (n=71) | Prostate (n=27) | Cervical (n=15) | Colorectal (n=6) | Nasal (n=6) |
|----------------------|------------------|---------------------|-------------------|---------------------|------------------|
| Physical functioning | 55.92±20.9 | 40.93±19.6 | 52.67±19.3 | 72.50±10.8 | 65.83±14.2 |
| Role-physical | 32.75±15.2 | 24.07±12.4 | 26.67±15.8 | $50.00{\pm}14.8$ | 16.67±10.0 |
| Bodily pain | 48.78 ± 18.8 | 37.19±11.4 | 61.27±16.2 | 73.50±13.1 | 53.67±15.1 |
| General health | 57.18±14.1 | 65.74±9.7 | 64.00±12.9 | 55.83±10.7 | 66.67±12.9 |
| Vitality | 52.32±15.9 | 39.26±14.5 | 52.33±14.4 | 66.67±18.6 | 63.33±14.6 |
| Social functioning | 67.43±14.0 | 56.02±14.9 | 61.67±13.8 | 70.83±15.1 | 54.17±12.9 |
| Role-emotional | 31.93±14.4 | 24.69±12.9 | 26.67±10.2 | $50.00{\pm}14.8$ | 16.67±5.4 |
| Mental health | 57.52±16.2 | 52.80±14.5 | 59.17±15.2 | 65.40±12.7 | 6.93±17.5 |
| Overall | 50.47±20.3 | 42.59±17.9 | 50.56±19.4 | 63.09±19.8 | 49.74±16.4 |
| | Laryngeal (n=5) | Anal (<i>n</i> =4) | Bladder ($n=4$) | Lung (<i>n</i> =3) | Endometrial (n=3 |
| Physical functioning | 58.00±18.2 | 48.7±17.7 | 35.00±12.9 | 51.67±18.7 | 38.33±7.6 |
| Role-physical | $0.0{\pm}0.0$ | 50.0±12.0 | $0.0{\pm}0.0$ | 33.00±13.3 | $0.0{\pm}0.0$ |
| Bodily pain | 39.80±11.8 | 53.00±14.8 | 28.75±14.9 | 44.67±19.1 | 38.33±17.3 |
| General health | 65.00±5.7 | 62.50±6.0 | 70.00±3.5 | 66.67±11.1 | 75.00±10.0 |
| Vitality | 36.00±13.6 | 45.00±15.5 | 31.25±19.9 | 66.67±16.7 | 25.00±5.0 |
| Social functioning | 50.00±17.6 | 62.50±22.2 | 59.37±15.7 | 75.00±14.4 | 50.00±7.2 |
| Role-emotional | $0.0{\pm}0.0$ | 50.00 ± 28.8 | $0.0{\pm}0.0$ | 33.33±3.3 | $0.00{\pm}0.0$ |
| Mental health | 64.64±10.6 | 53.34±20.5 | 48.9±13.6 | 60.53±16.7 | 58.40±15.4 |
| Overall | 40.43±11.8 | 53.12±15.4 | 34.16±10.9 | 53.98±15.8 | 35.76±6.6 |

| Table | 5: <i>I</i> | Associati | ion | betw | reen | quali | ty | of | life | and | pattern | S |
|--------|-------------|-----------|-----|------|------|-------|-----|----|------|-----|---------|---|
| of car | icer | among | the | res | pond | ents | (n: | =1 | 60) | | | |

| Variables | Qo | L | χ^2 | Р |
|-------------------|--|---------------------------------------|----------|-------|
| | Good (<i>n</i> =107), <i>n</i> (%) | Poor (<i>n</i> =53), <i>n</i> (%) | | |
| Type of cancer | | | | |
| Breast cancer | 28 (39.4) | 43 (60.6) | 3.914 | 0.418 |
| Prostate cancer | 7 (25.9) | 20 (74.1) | | |
| Cervical cancer | 6 (40.0) | 9 (60.0) | | |
| Colorectal cancer | 4 (66.7) | 2 (33.3) | | |
| Nasal carcinoma | 2 (33.3) | 4 (66.7) | | |

QoL: Quality of life

in the last 1 month had interference with their social activities as a result of their physical or emotional health most of the time. Most of them also reported having limitation in their emotional health. This agrees with a study done in the USA where those with cancer had reported significant limitations on their emotional health.^[26] Less than two-third (63.7%) of the respondents were the owners of the houses they currently live in despite the fact that majority (72.5%) were employed. Slightly above one--third (36.9%) were earning more than #100,000 before the cancer started and this dropped during the course of the cancer illness. This corroborates the finding in Iran where only 28.4% of the cancer patients still had good earnings during the illness period.^[12] All over the world, the cost of cancer treatment is high, and this can tilt vulnerable families to catastrophic expenditure, leading to loss of jobs and earning as well as sale of family property and assets to cater for both the cancer patient and meeting other household needs.

In this study, about two-third (66.9%) of the respondents had poor QoL scores. This is in contrast to the study in Iran where the QoL of majority (66%) of the cancer patients was good.^[12] A study in the USA reported good QoL in even a higher proportion (73%) of cancer patients.^[27] The disparity in the level of development in Nigeria compared to these countries readily explains this wide difference in QoL. There was no significant association between the pattern of cancer and QoL. This indicates that the QoL is not dependent on the cancer the respondents have. It may be that the factors that influence QoL in this population are stronger than, independent of, and cut across all cancer types. Approaches to improving QoL should therefore be holistic and directed at all cancer patients irrespective of the cancer site. This study shows that there was no statistically significant association between those with hypertension, diabetes, heart failure, stroke, and QoL (P > 0.05). This is similar to a study conducted in Nigeria which revealed that there was no statistically significant relationship between QoL and chronic medical illness.[28] This is similar with a study done in Spain which concluded that diabetes did not reduce the QoL.^[29]

CONCLUSION

The most common cancers in this study were breast, prostate, cervical, colorectal, and nasal carcinoma. Majority of the patients had poor QoL. There was no significant association between the pattern of cancer and QoL. Improving the socioeconomic status of these patients as well as affordable access to health care may impact positively on their QoL.

Acknowledgments

Authors thank all patients with cancers who voluntary participated in the study.

| Table 6: Association between quality of life and | |
|--|---|
| prevalence of self-reported noncommunicable diseases | S |
| among the respondents $(n=160)$ | |

| Variables | Qo | QoL | | | |
|---------------|--|---------------------------------------|-------|-------|--|
| | Good (<i>n</i> =107), <i>n</i> (%) | Poor (<i>n</i> =53), <i>n</i> (%) | | | |
| Hypertension | | | | | |
| Yes | 17 (37.8) | 28 (62.2) | 0.612 | 0.434 | |
| No | 36 (31.3) | 79 (68.7) | | | |
| Heart failure | | | | | |
| Yes | 0 | 1 (100.0) | 2.032 | 0.154 | |
| No | 52 (37.5) | 17 (67.3) | | | |
| Stroke | | | | | |
| Yes | 1 (50.0) | 1 (50.0) | 0.206 | 0.610 | |
| No | 52 (32.9) | 106 (67.1) | | | |
| Diabetes | | | | | |
| Yes | 6 (31.6) | 13 (68.4) | 0.023 | 0.879 | |
| No | 47 (33.3) | 94 (66.7) | | | |

QoL: Quality of life

Financial support and sponsorship Nil.

Conflicts of interest

There are no conflicts of interest.

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