Title: EFFECTS OF DIFFERENT CANCER TREATMENTS ON NUTRITION STATUS OF CANCER PATIENTS ATTENDING TEXAS CANCER CENTRE CENTRE.

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Introduction

- Cancer is a term used to refer to the uncontrolled growth and spread of cells in any part of the body (http://www.who.int/topics/cancer/en/)

- It is the 3rd leading cause of mortality in Kenya. There are about 36,000 new cancer cases in Kenya every year. (Kenya cancer statistics and strategies, 2013)
PROBLEM STATEMENT

- Different cancer treatments are used to treat cancer patients and most can have adverse effects to the body, such as weight gain, weight loss or weakening of the immune system.

- The extent to which each treatment option or combined treatment affects nutrition status of cancer patients remains unknown in Kenya.
OBJECTIVE

➢ To determine the effect of radiotherapy, surgery, chemotherapy and combined therapy on the nutrition status of cancer patients attending Texas Cancer Center.
Methodology

➢ RESEARCH DESIGN
Descriptive research design
Cross-sectional study was used.

➢ STUDY SITE
Texas Cancer Center
Location: Mbagathi way, Nairobi west.
Methodology

➢ TARGET POPULATION
  o Inclusion criteria: all adult (>18) out-patients and in-patients diagnosed with cancer attending Texas Cancer Center.
  o Exclusion criteria: patients were excluded from the study if they are past grade 4 of the ECOG Scale performance status.

➢ RESEARCH INSTRUMENT
  o An interview schedule and a structured questionnaire was used to collect data on socio-economic factors and disease description.
  o Mini nutrition assessment tool was used to assess nutrition status
  o Food frequency was used to assess dietary intake.
Methodology

- **SAMPLING TECHNIQUE**
  - Systematic sampling was used, where every third patient was recruited until the required sample size is achieved.

  \[
  \text{Systematic Interval (k) } = \frac{\text{Population size (N)}}{\text{Sample size (n)}} = \frac{631}{210} = 3
  \]

- **SAMPLE SIZE**
  - 210 respondents were selected for this study based on the number of patients visiting the hospital per month.
Methodology

DATA ANALYSIS AND PRESENTATION
The data was analyzed statistically using Microsoft excel and exported to IBM SPSS (version 21). Chi square test of independence was used to analyze the relationship between variables such as nutrition status, type of cancer etc. The data was presented in tables, pie charts and bar graphs.

ETHICAL CONSIDERATIONS
Ethics approval was acquired from JKUAT Ethics Committee. Authorization to proceed with data collection was granted by Texas Cancer Center Management. Consent was sought from the Respondents.
Findings
SOCIO-DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS (n = 210)

Chart Title

- MALE: 34%
- FEMALE: 66%

Chart Title

- 18-29 yrs: 4%
- 30-39 yrs: 14%
- 40-49 yrs: 17%
- 50-59 yrs: 28%
- >60 yrs: 37%
Findings

<table>
<thead>
<tr>
<th>HOMETOWN</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban area</td>
<td>21</td>
</tr>
<tr>
<td>Rural area</td>
<td>79</td>
</tr>
</tbody>
</table>
Dietary can be affected by type of treatment and type of cancer. Only 15% of the population had good dietary intake.

<table>
<thead>
<tr>
<th>DIETARY INTAKE</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>32</td>
<td>15</td>
</tr>
<tr>
<td>Consumption of foods from all food groups in recommended quantities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>131</td>
<td>62</td>
</tr>
<tr>
<td>consumption in &lt;6-&gt;4 food groups in relatively adequate quantities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>47</td>
<td>23</td>
</tr>
<tr>
<td>Consumption in low quantities in less than 4 food groups</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Findings: Nutrition Status

- Normal: 28%
- At risk of malnutrition: 47%
- Malnourished: 25%
## Findings

### CHI- SQUARE TEST

<table>
<thead>
<tr>
<th>NUTRITION STATUS IN RELATION TO:</th>
<th>Pearson Chi-square value (P- Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage of cancer</td>
<td>0.265</td>
</tr>
<tr>
<td>Type of cancer</td>
<td>0.032</td>
</tr>
<tr>
<td>Dietary intake</td>
<td>0.000</td>
</tr>
</tbody>
</table>
### Findings

<table>
<thead>
<tr>
<th>TYPE OF TREATMENT</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemotherapy &amp; Radiotherapy</td>
<td>84</td>
<td>40</td>
</tr>
<tr>
<td>Chemotherapy</td>
<td>37</td>
<td>17</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>23</td>
<td>11</td>
</tr>
<tr>
<td>Chemotherapy, radiotherapy &amp; surgery</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>Radiotherapy &amp; Surgery</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Chemotherapy &amp; Surgery</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>chemotherapy &amp; palliative care</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>palliative care</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>chemotherapy, radiotherapy, brachytherapy</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>chemotherapy, radiotherapy, hormonal therapy</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Radiotherapy, surgery, brachy therapy</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Surgery</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>chemotherapy, brachytherapy</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>radiotherapy, brachytherapy</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>radiotherapy, palliative care</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>chemotherapy, radiotherapy, physiotherapy</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>radiotherapy, brachy therapy, palliative care</td>
<td>1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Type of treatment vs nutrition status

P value=0.321
Findings

Side effects of different cancer treatments

Bar Chart

- None
- 1 side effect
- 2 side effects
- 3 side effects
- > 3 side effects

Count

Type of treatment:
- Chemotherapy
- Radiation therapy
- Surgery
- Palliative care
- Radiotherapy & chemotherapy
- Chemotherapy & radiotherapy
- Radiotherapy & surgery
- Chemotherapy & radiation therapy
- Chemotherapy, radiation therapy & hormonal therapy
- Chemotherapy & radiation therapy, brachytherapy
- Chemotherapy, radiation therapy, brachytherapy & palliative care
- Chemotherapy, radiation therapy, brachytherapy & surgery

SIDEEFFECTS
Findings

Relation between nutrition status, cancer treatment
Conclusion

• There was no significant relationship between type of cancer treatment and nutrition status (p= 0.321).
• Notable patterns that emerged in this study are the significant relationship between type of cancer and nutrition status (p= 0.032) as well as dietary intake and nutrition status (p=0.000).
• Therefore, type of cancer has a more significant effect on dietary intake and nutrition status of the study population as compared to the type of cancer treatment they undergo.
• Nutrition education on cancer management and a diet plan should be incorporated as part of the treatment package for Cancer patients not only in-patients but also out-patients and their caregivers. This should be based on the type of cancer and type of treatment to reduce risk of malnutrition and weight loss as well as improve prognosis.
Thank you...