



CANCER EPIDEMIOLOGY, BIOMARKERS & PREVENTION

Poster Presentations - Proffered Abstracts

Abstract PO-213: Relationship between travel distance and radiotherapy waiting time in Zaria, Northwestern Nigeria

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Abstract

Background Travel distance to healthcare facility has been recognized as a factor associated with treatment outcomes, utilization and a measure of the accessibility of health care services. In Nigeria, radiotherapy facilities are limited and machine breakdown is frequent, patients travel miles to access radiotherapy services.

Objectives The aim of this study is to examine the distance travelled for radiotherapy and the relationship between distance to radiotherapy facility and radiotherapy waiting time in Zaria, Nigeria **Materials and Methods** The radiotherapy & oncology centre, Ahmadu Bello University Teaching Hospital, Zaria is located in Kaduna state, the northwestern part of Nigeria. It is the first radiotherapy centre in northern Nigeria and patients are referred from all over the country for treatment. Records of patients treated for cervix, breast and nasopharyngeal cancer from 2010 to 2014 were reviewed, the nearest distance by road from capital cities of patient's state of residence to Zaria was measured using the web-based Geographic Information System Google map The distance was categorized into those who are near (≤ 300 km) and those who are far (>300 km) We defined radiotherapy waiting time as the interval from the first consultation to radiotherapy measured in days and was categorized into those who commenced radiotherapy within 31 days and those who delayed. We used the Mann-Whitney test to compare between groups. Data were analyzed using IBM SPSS Statistics for Windows, version 25 (IBM Corp., Armonk, N.Y., USA) Results A

total of 233 cases were reviewed, cervix (55%), breast (31%) and nasopharynx (14 %). The mean age is 46.7(SD±12.0), females account for 92% of cases. The mean distance to Zaria is 407 (SD±250.1)km, the median is 350(IQR 165- 584.5), minimum 98.5km, maximum 941km. Only 18% of cases lived within 100km of the Zaria radiotherapy centre, 25.4% lived within 101-300 km of the centre, 16.3% within 301-500km and 40% of cases >500km from the centre. The mean radiotherapy waiting time is 162 (SD±192.7) days, median 145(IQR 18-217.5) days.

Only 31% of cases started radiotherapy within 31 days after consultation and 69% commenced more than 31 days. Radiotherapy waiting time is negatively correlated with travel distance. Although the correlation was weak ($r = -0.183$) it is statistically significant ($p=0.005$) Patients who travelled ≤ 300 km waited longer than those who travelled > 300 km. ($p=0.007$), and those who commenced treatment within 31 days travelled longer than those who commenced after 31 days ($p= 0.032$) Conclusion This study shows that patients travel far to access radiotherapy services, however, there is an inverse relationship between travel distance and radiotherapy waiting time. longer travel is associated with a shorter wait for radiotherapy. More and equitable distribution of radiotherapy facilities are needed and further studies to understand the factors responsible for this relationship.

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