

**Statistical analysis of the outcome of treatment of cervical cancer patients in Tanzania: a case of ocean road cancer institute**

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Cervical cancer is a major problem facing women especially for those aged 40 years and above. In developed countries the situation is already handled to a large extent but in developing countries like Tanzania the situation is still critical. This study aimed at constructing a statistical model to enable the prediction of the outcome of treatment for cervical cancer patients in Tanzania from the given determinant factor such as patient screening status, HIV status, disease stage, age, treatment type and the intent of the treatment.

The study employ Chi-square ( $\chi^2$ ) test and the logistic regression model for its analysis. The Chi-square ( $\chi^2$ ) test result shows that, there is a significant relationship between outcome of treatment and the patient screening status, HIV status, disease stage and intent of treatment at 5% level. On the hand the logistic regression results found only patient disease stage and intent of the treatment of the patient variables were statistically significant at 5% level. Logistic regression results also showed that, those patients who attended Ocean Road Cancer Institute (ORCI) when their disease were at a late stage had an odds ratio of 0.128 times less likely to have favorable outcome compared to those patients who attended ORCI when their disease stage were at early stages.

The results reflected that more emphases and campaign should be made in order to encourage women all over the country to visit cancer centers for screening and treatment at early stages or even before any symptoms for cervical cancer and other types of cancers. Also in order to reduce the burden to ORCI, it is suggested that, more cancer centers should be established, at least one to each zone or region across the country.