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**Dismal pathological response to neoadjuvant chemotherapy in stage III breast cancer patients in Tanzania: A retrospective review**

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**Abstract**

Response to neoadjuvant treatment in breast cancer has been associated with good oncological outcomes. In Tanzania, a majority of breast cancer patients are diagnosed at stage III; hence, they almost always require neoadjuvant therapy. However, the response to neoadjuvant therapy in these patients remains unknown. This study examined the pathological responses in women with stage III breast cancer who underwent neoadjuvant therapy and identified sociodemographic and clinical predictors of the pathological response in this cohort. This hospital-based retrospective cohort study was conducted between December 2021 and April 2022. It included women with breast cancer who received neoadjuvant therapy and underwent surgery for breast cancer at Muhimbili National Hospital in Tanzania, from January 2018 through December 2021. Data analysis was performed using SPSS version 25. A complete pathological response was identified upon pathological review of the mastectomy specimen. Chi-square tests and Fischer’s exact tests were used to evaluate the factors associated with a complete pathological response, with a p value of less than 0.05 indicating statistical significance. Ethical approval was obtained from the Muhimbili University of Health and Allied Sciences Institutional Review Board. The study complied with the Helsinki Declaration on studies involving human subjects. A total of 181 breast cancer patients were recruited for the study, with a mean age of 51±12.6 (28–89) years. A complete pathological response to neoadjuvant therapy was observed in 40 (22.1%) patients which is relatively lower compared to studies from Western countries. Disease stage at diagnosis was associated with response to neoadjuvant therapy, with those at stage IIIA showing better complete response than those at stages IIIB and IIIC indicating a need to improve diagnostic strategies to capture patients in the earlier stages to improve outcomes