

# Recommendations for a modified breast cancer screening protocol in females living with HIV

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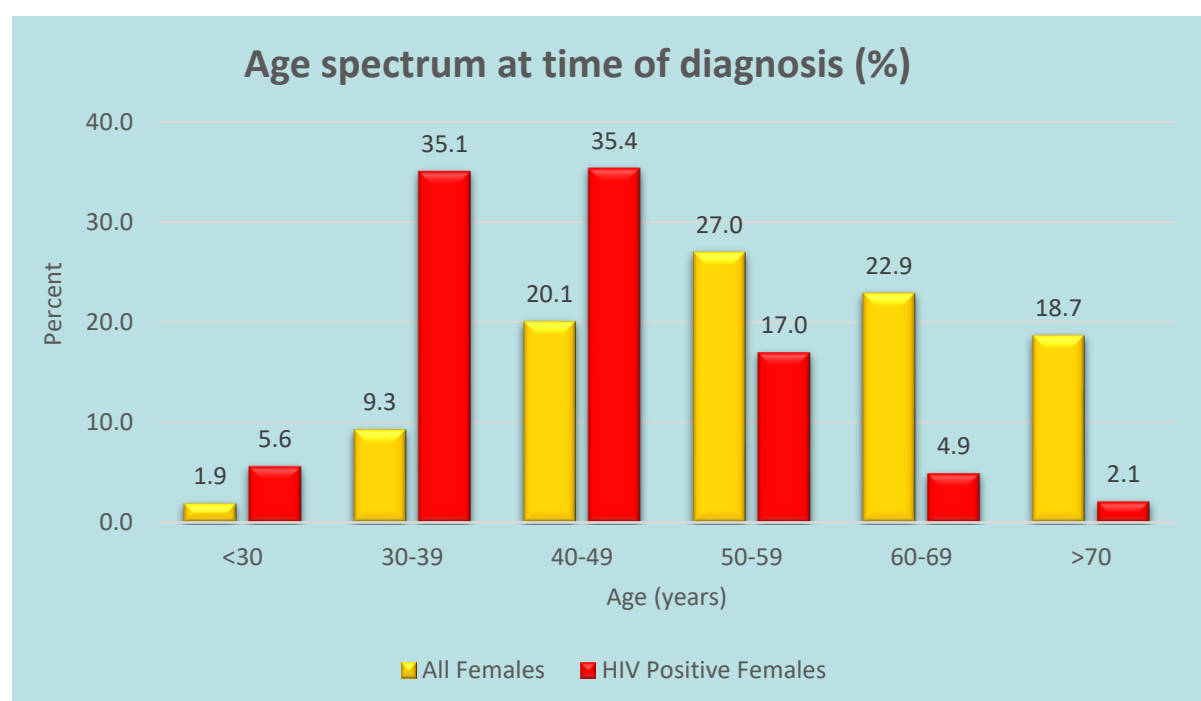
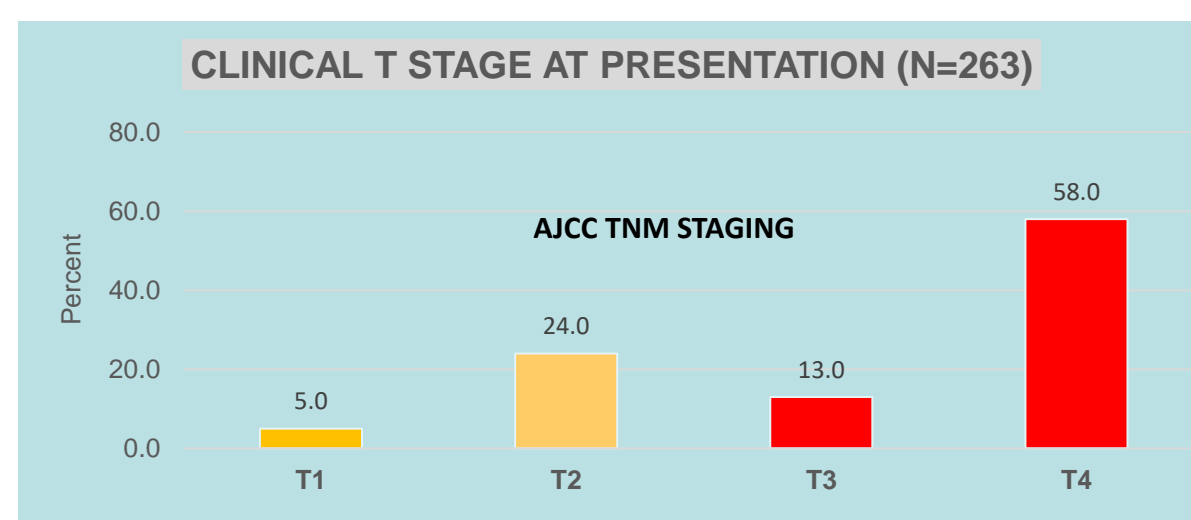
## Introduction

Evidence has shown that breast cancer is diagnosed at a younger age in females living with HIV (FLHIV), and with a more advanced stage of cancers. The current breast cancer screening recommendations are inadequate for HIV positive female as many present later, which is likely to negatively impact on overall survival rates. This study aims to explore the demographic distribution and presentation of breast cancer diagnoses among FLHIV, with the aim of improving screening guidelines to potentially achieve an earlier stage of diagnosis which is associated with improved outcomes. A high index of suspicion and a low threshold to biopsy is required in FLHIV.

## Methods

A combined retrospective and prospective audit was performed of folders of patients diagnosed with breast cancer. A total of 285 HIV positive females presenting with breast cancer were identified at the clinical breast unit (CBU) between 2008-2016. (Ethics approval BE002/14)

Duration of signs and symptoms prior to presentation to the clinic	Number (%) (N=220)
<1 months	19 (8.7)
1-3 months	35 (15.9)
3-6 months	74 (33.6)
6-12 months	52 (23.6)
1-2 years	25 (11.4)
2-3 years	11 (5.0)
>3 years	4 (1.8)



## Results

The mean ( $\pm$  standard deviation) age of the FLHIV who presented with breast cancer was 42.8 ( $\pm$ 9.9) years compared to the HIV negative/Naïve group which was 56.6 ( $\pm$ 13.1) years. This difference was statistically significant ( $p < 0.001$ ).

More than half waited more than 6 months before presenting to the clinic with 71% ( $p < 0.001$ ) presenting with clinically advanced disease at the time of first presentation to the CBU (combined T3 & T4 clinical staging (AJCC-TNM)).

## Conclusion

The development of breast cancer in females living with HIV (FLHIV) appears to present at a much younger age, with a significant number being diagnosed before the age of 40 years and exhibiting more advanced clinical disease. Current population-based screening protocols, which implement mammographic screening between the ages of 40 years and 50 years, seem inadequate for FLHIV. It is recommended that HIV-positive females begin breast cancer screening at an earlier age, around 30 years. Further research is necessary to determine the appropriate screening modality and the optimal age to commence screening. A high index of suspicion should be maintained, and there should be a low threshold for biopsying all concerning lesions. Early diagnosis and access to multi-modal therapies improve survival rates and outcomes in this population. Additionally, patient delays in presenting to the clinic underscore issues at the primary healthcare level, necessitating a multi-tiered approach involving the government, health departments, and other key agencies to ensure effective programme implementation.

## Recommendations for Modified Breast Cancer Screening in HIV Positive Females

\*SBE- Self-Breast Examination  
\*CBE- Clinic Breast Examination  
\*U/S- Ultrasound

