

# RISK OF BREAST CANCER UNDERSTAGING THROUGH STANDARD CLINICAL AND RADIOGRAPHIC STAGING, BOTSWANA

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## BACKGROUND

- Accurate staging is essential to determine best treatment approach for breast cancer.
- Access to cross-sectional imaging is limited in Botswana and most African contexts.
- Most commonly breast cancer staging relies on physical exam, frontal chest radiography, abdominal ultrasound and blood chemistries.
- Knowledge of the performance of this standard clinical and radiographic staging in African context is limited .
- We sought to evaluate the frequency of previously undetected lesions and their impact on the patient treatment plan among women participating in a cardiac imaging study.

## METHODS

### Study Population

- Consenting patients with newly-diagnosed, non-metastatic breast cancer at Princess Marina Hospital, Gaborone
- Planned anthracycline chemotherapy
- September 2019 to October 2020.

### Information abstracted

- Clinical exam findings, radiographic results, and recorded oncologic stage (ACJJ) from clinical records.

### MRI Imaging

- All patients underwent pre-treatment cardiac MRI which included incidental partial imaging of adjacent thoracic structures.
- Cardiac MRI images (and adjacent structures) were reviewed by two experts in the cardiac imaging department.

## RESULTS

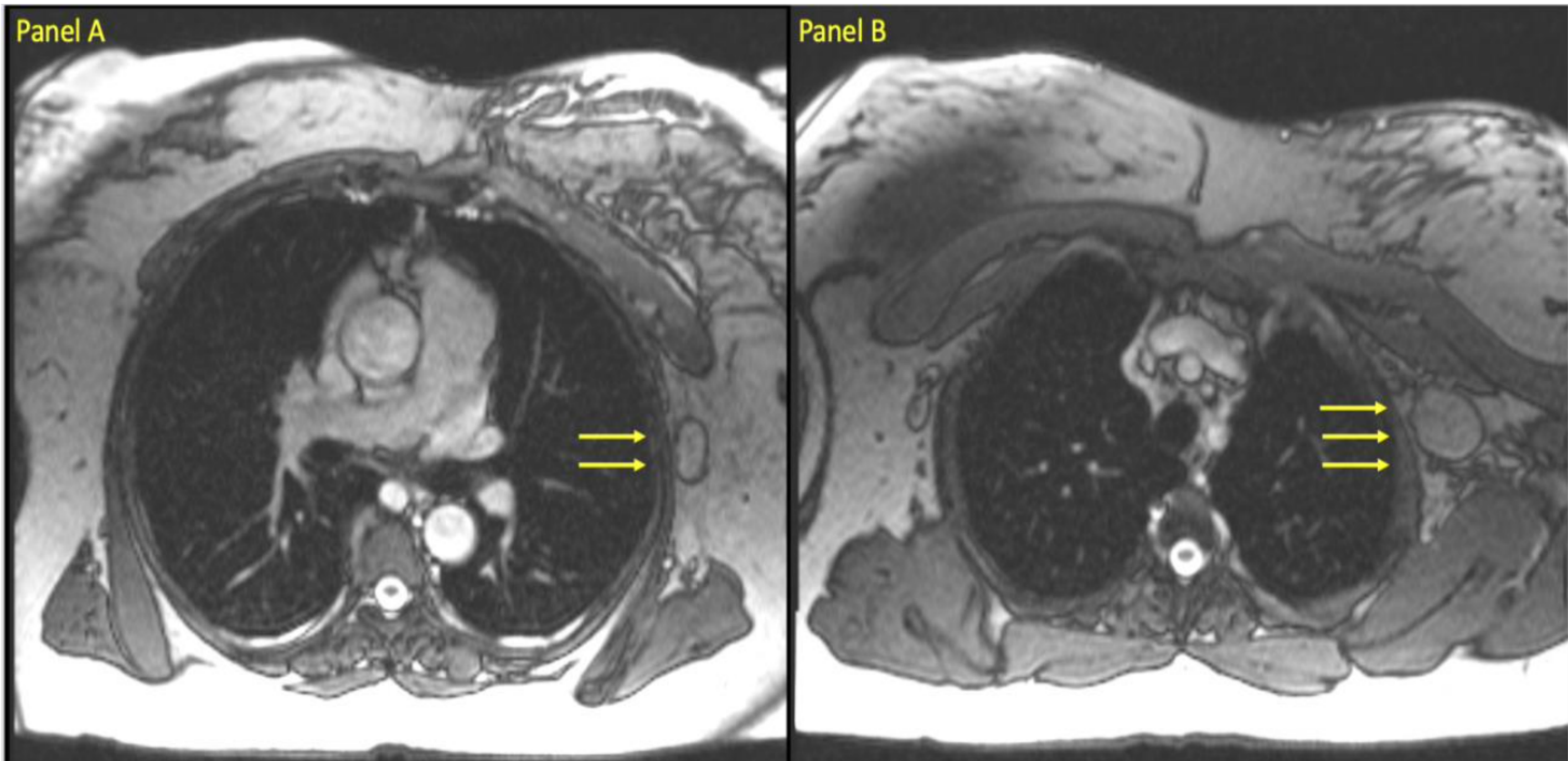
22 participants were enrolled

- 17 (77%) with locally advanced cancer, stage III
- 11 (50%) were living with HIV

A total of 13 (59%) participants had extracardiac findings identified

- All the axillary masses (11, 50%) that were identified on MRI were also identified on clinical exam, with no subsequent change in staging
- None of the identified metastatic lesions (3, 14%) were clinically apparent

Treatment intent and plan was modified for 3 (14%) patients with subsequently confirmed metastatic disease



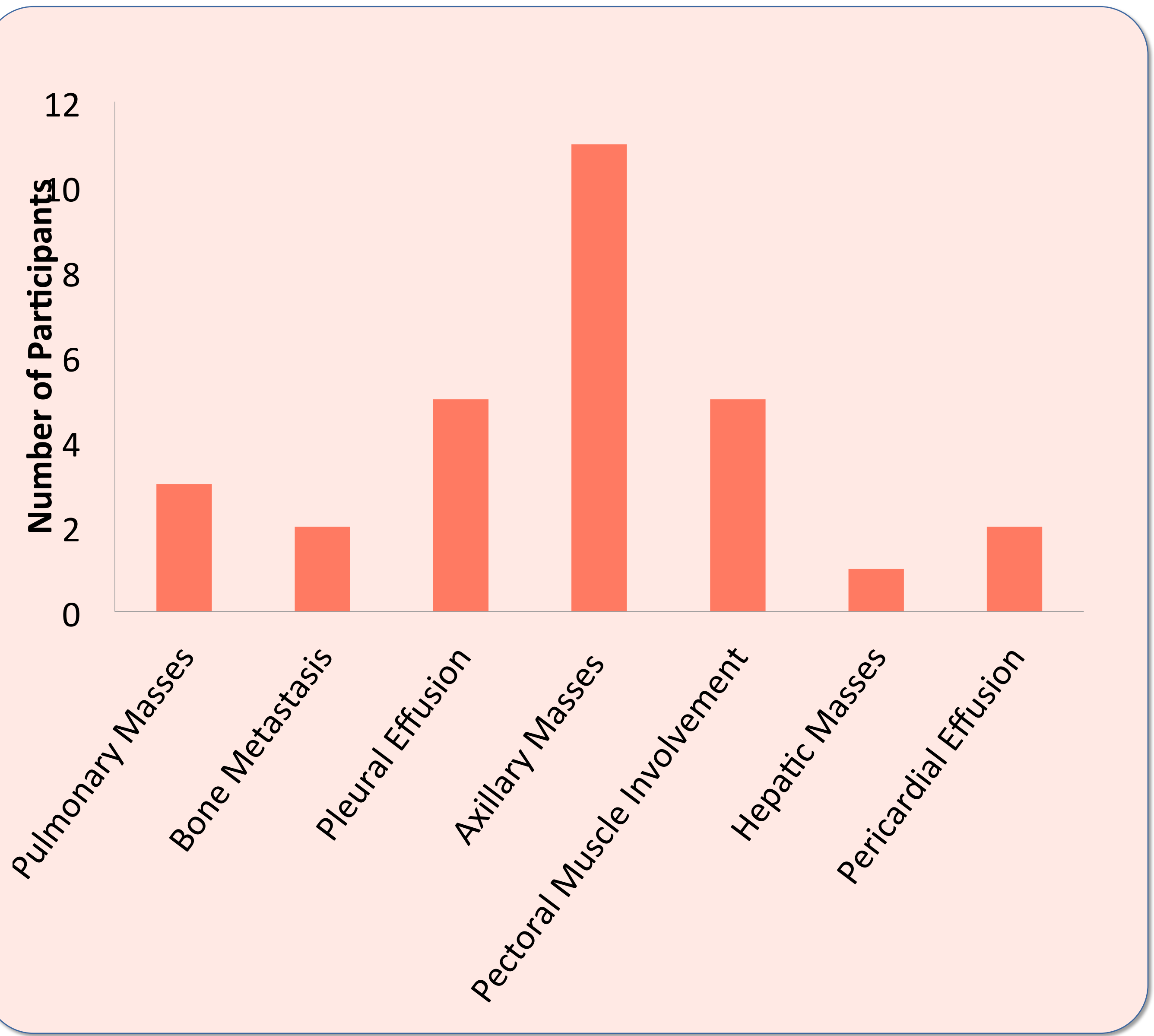
**Figure 2:** Axial Images for two participants with left axillary masses (arrows)

## CONCLUSION

- Cardiovascular MRI identified extracardiac findings in pre-operative breast cancer patients confirming the underperformance of the actual routine staging procedure.
- Patients with locally advanced breast cancer could benefit from cross sectional imaging.
- As delays for CT imaging are long in many African contexts, a pragmatic approach can be to start neo-adjuvant hormonal therapy or chemotherapy, and if necessary, adapt treatment with subsequent imaging results.

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**Figure 1:** Participants with extracardiac findings