



# A pilot feasibility study to address global inequities in breast cancer genetic testing, counselling, and management among breast cancer patients in Nigeria

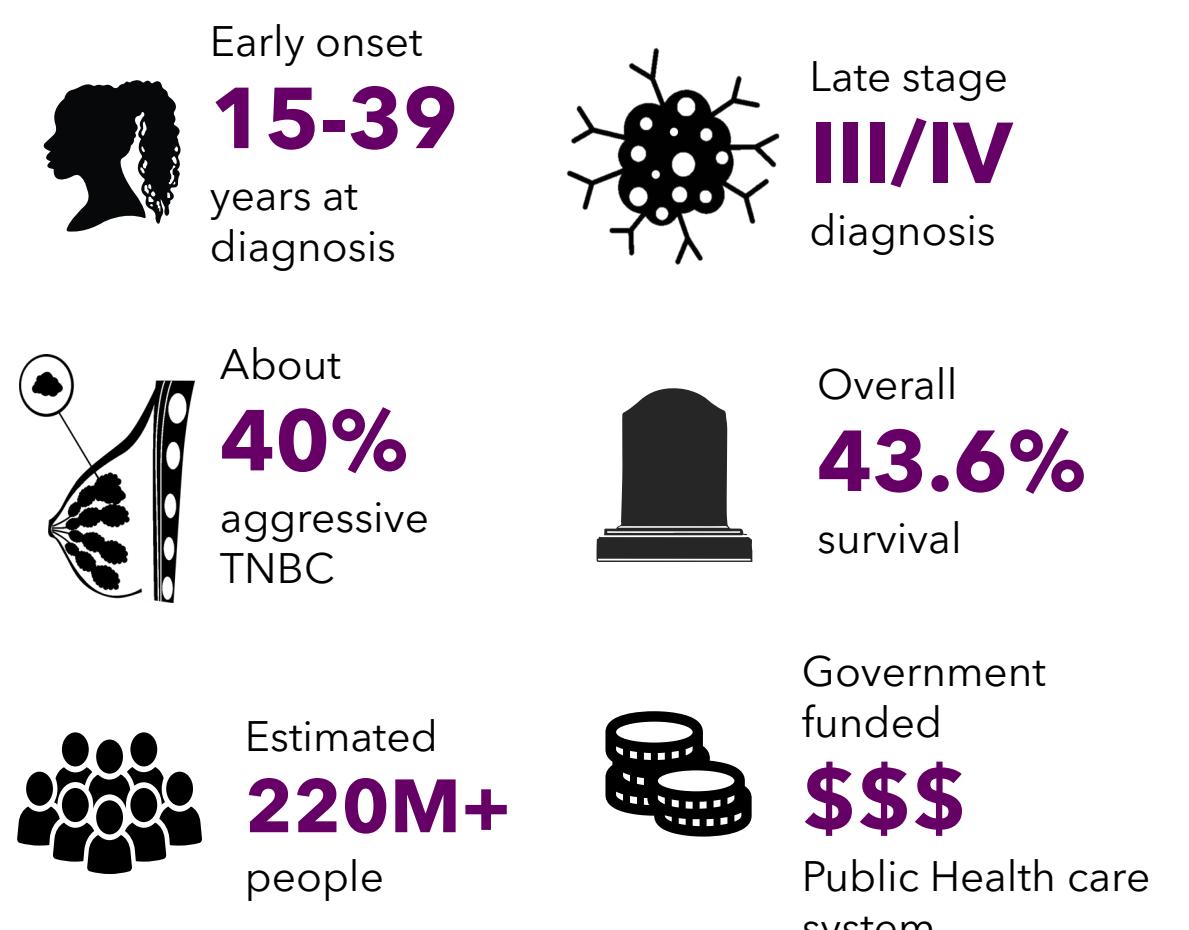
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## Challenges of treating Breast cancer in Nigeria

**Background:** Access to genetic testing and counselling remains limited in Nigeria due to insufficient infrastructure, referral systems, and lack of trained genetic counsellors.

- *BRCA1/2* pathogenic variants are the most common heritable risk factors for breast cancer, yet their prevalence and impact in Nigeria are not well characterized.
- A single institution case control study in Ibadan, reported *BRCA1* and *BRCA2* carrier rates as high as 7.0% and 4.1%, respectively.
- **While genetic testing and counseling are routinely available in high-income countries to guide cancer risk assessment and management, access in Nigeria remains extremely limited.**



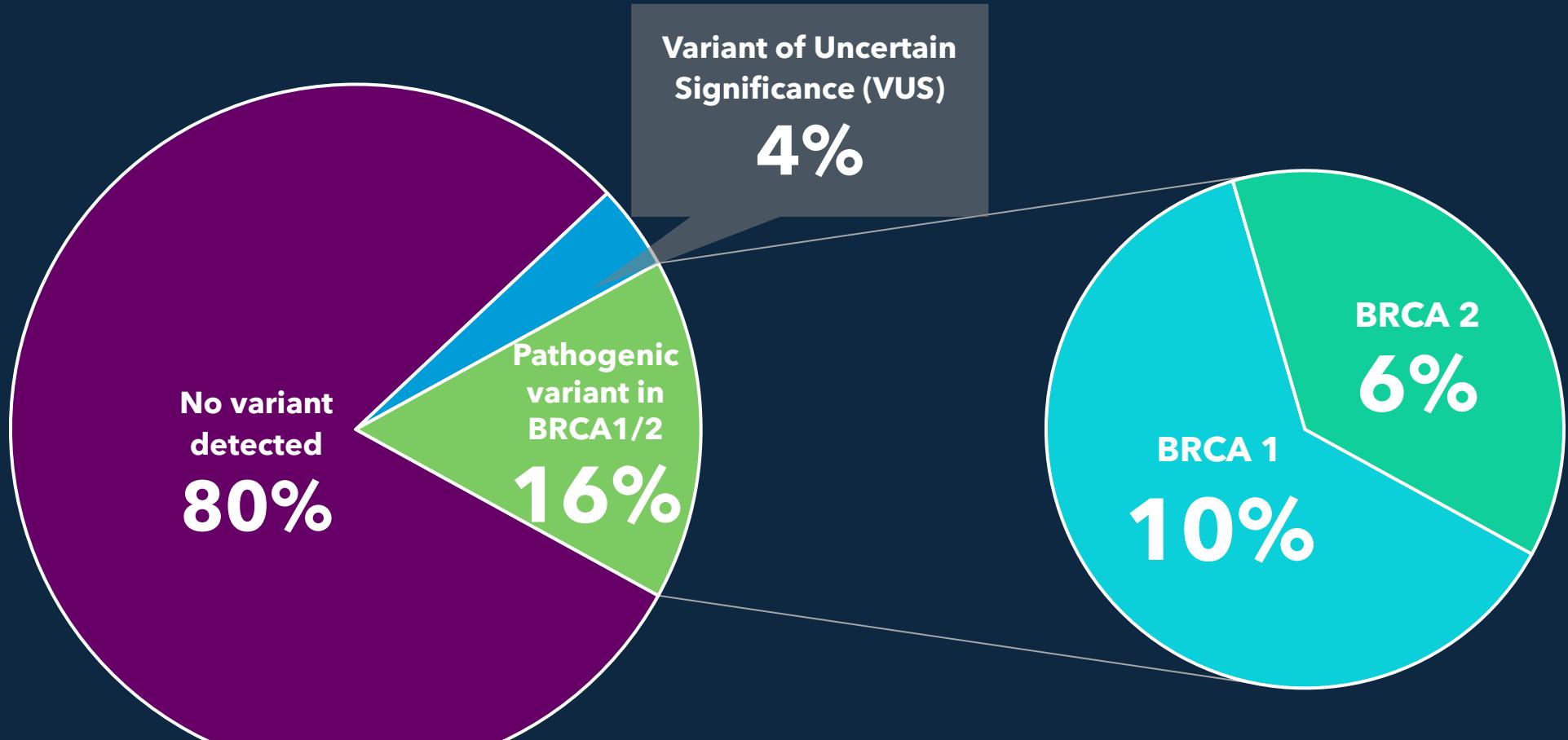
**Aim**  
This pilot study aims to assess the feasibility of *BRCA1/2* genetic testing for Nigerian breast cancer patients



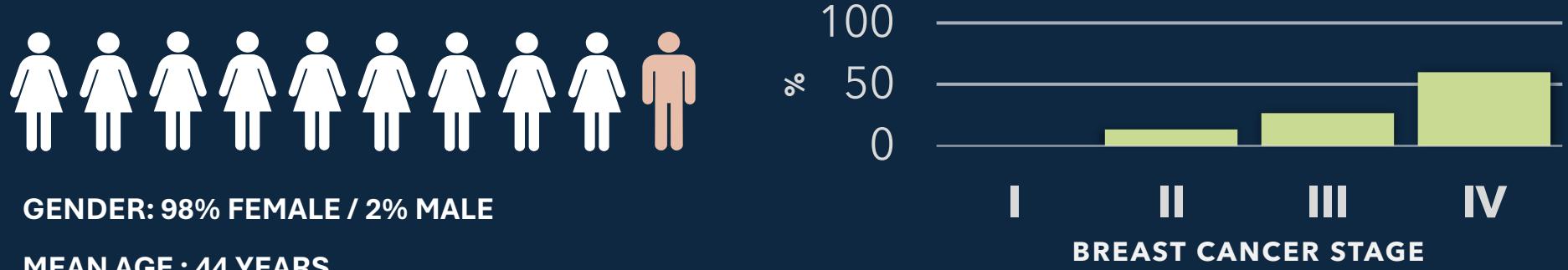
## Methods



## Feasibility, clinical utility and patient reported outcomes of BRCA testing



Prevalence of BRCA1/2 found in Nigerian patients with breast cancer



### Turnaround time

*BRCA1/2* test results provided within **3 weeks**



### QC

**15%** of tests initially failed due to DNA concentration or specimen quality issues, but retesting was successful



### Clinical Management following BRCA results

#### Surgery

- **25%** had bilateral mastectomies
- **25%** had unilateral mastectomies
- **13%** declined treatment
- **38%** had metastatic disease - Surgery not offered

#### Treatment

- **75%** had adjuvant therapy

First study of its kind in Nigeria, offering genetic testing and yielding real-time results used in clinical decision making.

- Our data show that **16% of participants carried pathogenic *BRCA1/2* variants**, and half experienced a change in clinical management as a result of genetic testing.
- Ongoing qualitative studies aim to capture **patient perspectives** and the broader psychosocial impact of testing.
- These results lay the groundwork for **evidence-based policy development** in breast cancer care in Nigeria and highlight the **urgent need for global, multidisciplinary collaboration** to reduce inequities in cancer care

