

A PILOT FEASIBILITY STUDY TO ADDRESS GLOBAL INEQUITIES IN BREAST CANCER GENETIC TESTING AND COUNSELLING IN NIGERIA

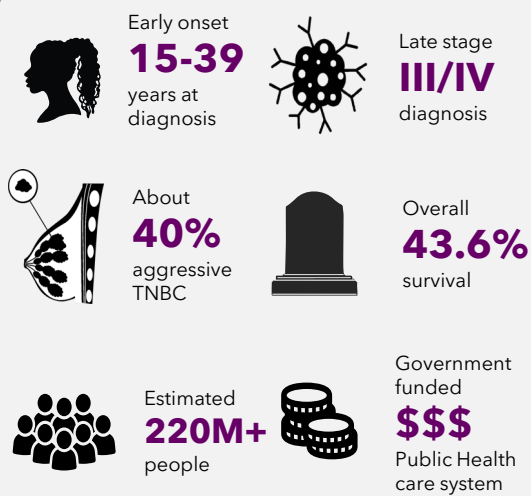
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Action

Addressing global inequities in breast cancer genetic testing, counselling, and management among breast cancer patients in Nigeria

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.

Aim

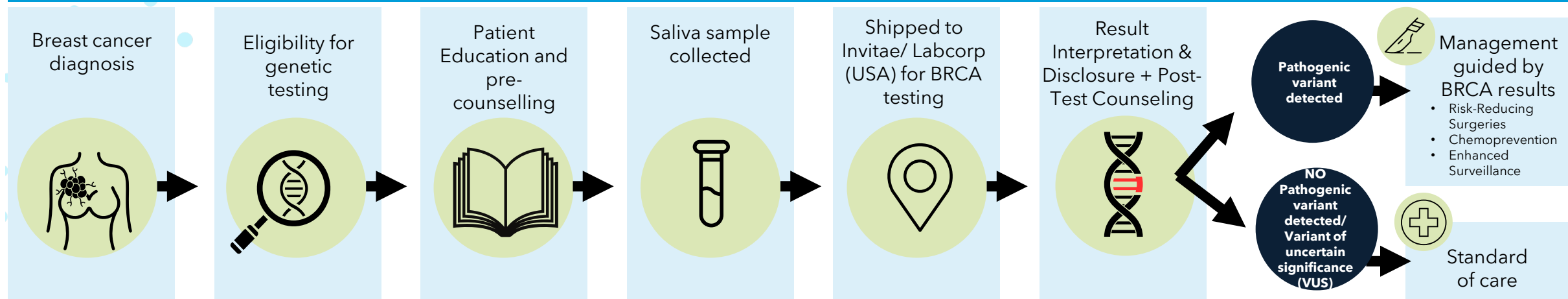
To evaluate the feasibility and clinical utility of BRCA1/2 testing in Nigerian patients with BC.

Study Design:

Prospective observational cohort enrolling **100 patients** (18 to 60 years) across three geopolitical zones (**North central, Southwest, and Southeast**) in Nigeria.



Methods



Feasibility and clinical utility of BRCA1/2 testing in Nigeria



Prevalence of BRCA1/2

Pathogenic variant detected: **16%** (BRCA1:10%; BRCA2: 6%)
Variant of uncertain significance (VUS): 4%
No variant detected: 80%



Turnaround time

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



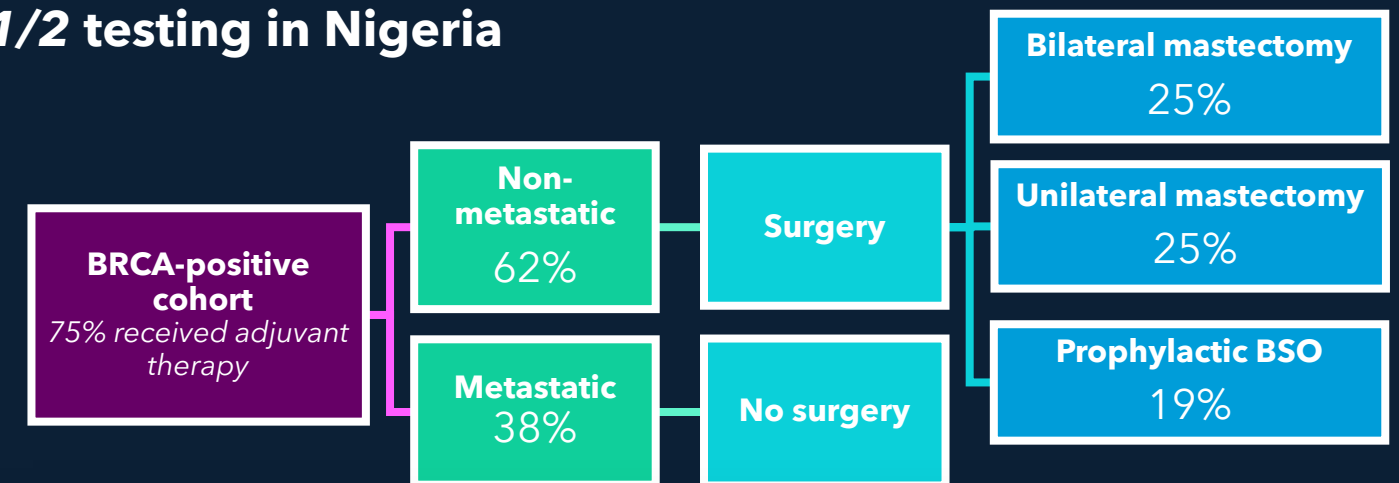
QC

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



Clinicopathologic characteristics

Median age: 42 years; 98% female
Stage III/IV disease: 88% (carriers) vs 82% (noncarriers)
Triple-negative tumors: 46% vs 38%
Family history: 25% vs 3.6%, **higher in carriers (p = 0.012)**
Metastatic disease: Higher in carriers (ns, p = 0.20)



- First study of its kind in Nigeria, offering genetic testing and yielding real-time results used in clinical decision making
- These results lay the groundwork for **evidence-based policy development** for breast cancer care in Nigeria

