

### Nigeria I

# Breast Cancer Factsheet: Insights & Key Developments

Key Insights on Breast Cancer Care and Infrastructure

### Core Pillars:

- I. Infrastructure
- 2. Treatment Access, Research Funding and Awareness Campaigns
- 3. Survival Rates, Early Detection and Palliative Care
- 4. Utilization of Biomarkers
- 5. Clinical Guidelines
- 6. Reimbursement
- 7. Breast Cancer Screening

Breast cancer remains one of the most prevalent cancers worldwide, affecting millions of individuals each year. Despite advancements in diagnostics, treatment, and awareness, disparities in access to care, molecular testing, and specialized centers persist.

This factsheet provides a comprehensive overview of key pillars shaping breast cancer care, including specialized infrastructure, treatment accessibility, research funding, early detection, and palliative care.

- Annual Diagnoses: Breast cancer is the most common cancer among Nigerian women, accounting for approximately 25.7% of all cancer cases.
- Incidence Rate: The age-standardized incidence rate is approximately 54.3 per 100,000 women.
- Annual Mortality: Breast cancer is the leading cause of cancer-related deaths among Nigerian women, with an age-standardized mortality rate of 25.5 per 100,000.
- Prevalence: The prevalence rate is 69.1 per 100,000 women.
- Most Affected Age Group: Breast cancer incidence in Nigeria has a bimodal distribution, with a significant proportion of cases occurring in younger women, often reaching 50% of cases in those under 40 years.
- Stage at Diagnosis: Up to 80% of breast cancer cases in Nigeria present at advanced stages (Stage III or IV), contributing to higher mortality rates.



### Nigeria Infrastructure

### Strengths

- Specialized cancer centers exist in major cities like Lagos, Abuja, and Ibadan, primarily within tertiary hospitals.
- Government initiatives like the National Cancer Control Plan aim to improve laboratory and oncology infrastructure.

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### Opportunity

- Establish in-country molecular labs and expand services through public-private partnerships.
- Increase integration of precision diagnostics via regional capacity-building and donor engagement.

| 2  | TO- TO-   |
|--|---|
|  |   |
|  |   |
| Weakness   |   |
| olecular diagnostics<br>e.g., HER2, BRCA)                                      | 1 4.5   |
| re largely<br>navailable or sent<br>proad due to                               |   |
| nderdeveloped<br>frastructure.   | 5. Advanced nationwide infrastructure, widespread availability in public and private sectors, integration with clinical practice. |
| ost testing services<br>e inaccessible to                                      |   |
| ral populations and w-income patients.   | 4. Strong infrastructure in major hospitals and cancer centers, some regional disparities.  |
|  | 3. Moderate infrastructure, primarily in  |
| Threats  | private settings or research institutions.  |
| frastructure<br>evelopment is slow<br>ue to funding and                        | 2. Limited infrastructure, available only in select centers or for high-cost private testing.                                     |
| esource constraints.<br>verreliance on   | Minimal or no infrastructure, testing mostly unavailable or sent abroad.  |
| ternational testing<br>nits scalability and<br>estainability of cancer<br>are. |   |
|  |   |

| Country        | Specialized<br>Centers | Genetic & Molecular<br>Testing Infrastructure |
|----------------|------------------------|---|
| South Africa   | 0                      | <u> </u>                                      |
| Kenya          |                        |   |
| Nigeria        |                        |   |
| Egypt          | 0                      |   |
| Morocco        |                        |   |
| Algeria        |                        |   |
| Ethiopia       |                        |   |
| India          | <u> </u>               | <u> </u>                                      |
| Japan          |                        |   |
| South Korea    |                        |   |
| China          | 0                      | <u> </u>                                      |
| Thailand       | 0                      | <u> </u>                                      |
| Singapore      |                        |   |
| United Kingdom |                        |   |
| Germany        |                        |   |
| France         |                        |   |
| Netherlands    |                        |   |
| Sweden         |                        |   |
| Italy          |                        |   |
| Spain          |                        |   |
| Poland         |                        |   |
| Mexico         |                        |   |
| Brazil         |                        |   |
| Argentina      |                        |   |
| Chile          |                        |   |
| Colombia       |                        |   |
| United States  |                        |   |
| Canada         |                        |   |
| Australia      |                        |   |
| New Zealand    |                        |   |
| Greece         | <u> </u>               | <u> </u>                                      |
| Rwanda         |                        |   |
| Uganda         |                        |   |
| Serbia         | 0                      | <u> </u>                                      |
| Saudi Arabia   | 0                      | <u> </u>                                      |
| UAE            | <u> </u>               |   |
| Syria          |                        |   |
| Indonesia      |                        |   |
| Vietnam        |                        |   |
| Philippines    |                        |   |
| Russia         |                        |   |



### Nigeria

Treatment Access, Research Funding and Awareness Campaigns

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### Strengths

- Urban centers offer chemotherapy, surgery, and radiotherapy for breast cancer patients.
- Awareness campaigns by groups like BRECAN and Pink Pearl Foundation are gaining visibility.

### Opportunity

- Strengthen domestic cancer research funding and increase trial participation through public-private initiatives.
- Expand awareness and education campaigns to rural regions and underserved populations.

### Weakness

- Targeted therapies (e.g., HER2 inhibitors) remain inaccessible due to high cost and limited insurance.
- Research is underfunded, with minimal government support and reliance on international projects.

- Financial constraints prevent timely diagnosis and full treatment adherence.
- Cultural stigma and misinformation continue to hinder early health-seeking behavior.

- 5. Strong healthcare infrastructure with comprehensive treatment access, high research funding, and nationwide awareness campaigns. Patients have access to advanced therapies, clinical trials, and widespread early detection programs.
- 4. Well-developed system with good treatment availability, strong research funding, and effective but regionally focused awareness campaigns. Some disparities may exist in rural areas or between public and private sectors.
- 3. Moderate development, with specialized treatments available in major hospitals, research funding concentrated on specific cancers, and occasional but limited awareness efforts. Healthcare access may be restricted by cost or geography.
- 2. Limited system where cancer treatment is available only in select urban centers, research funding is minimal or sporadic, and awareness campaigns are rare or underfunded. Patients often face long wait times or financial barriers.
- 1. Poor infrastructure with severe barriers to treatment, little to no research funding, and lack of structured awareness campaigns. Cancer care is largely inaccessible, with many patients relying on out-of-pocket expenses or external aid.

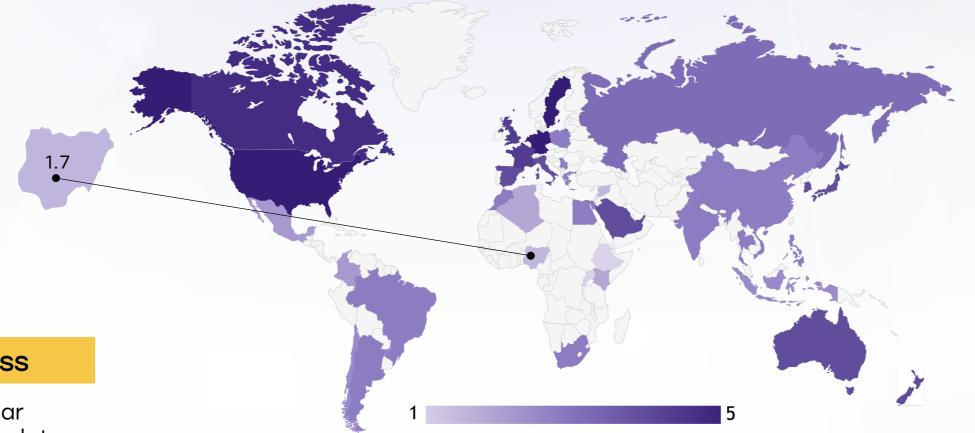
| Country        | Treatment<br>Access | Research<br>Funding | Awareness<br>Campaigns |
|----------------|---------------------|---------------------|------------------------|
| South Africa   |                     | <u> </u>            | <u> </u>               |
| Kenya          |                     |                     |                        |
| Nigeria        | 0                   |                     | <u> </u>               |
| Egypt          | <u> </u>            | <u> </u>            | <u> </u>               |
| Morocco        | 0                   | <u> </u>            | <u> </u>               |
| Algeria        | 0                   | 0                   | <u> </u>               |
| Ethiopia       |                     |                     |                        |
| India          | <u> </u>            | <u> </u>            | <u> </u>               |
| Japan          |                     |                     | 0                      |
| South Korea    |                     | 0                   | 0                      |
| China          | <u> </u>            | 0                   | <u> </u>               |
| Thailand       | <u> </u>            | 0                   | <u> </u>               |
| Singapore      |                     |                     |                        |
| United Kingdom |                     |                     |                        |
| Germany        |                     |                     |                        |
| France         |                     |                     |                        |
| Netherlands    |                     |                     |                        |
| Sweden         |                     |                     |                        |
| Italy          |                     |                     | 0                      |
| Spain          | 0                   |                     | 0                      |
| Poland         | $\bigcirc$          | <u> </u>            | <u> </u>               |
| Mexico         |                     |                     | <u> </u>               |
| Brazil         | $\bigcirc$          | <u> </u>            | <u> </u>               |
| Argentina      | <u> </u>            | <u> </u>            | <u> </u>               |
| Chile          |                     | <u> </u>            | <u> </u>               |
| Colombia       |                     |                     | <u> </u>               |
| United States  |                     |                     |                        |
| Canada         |                     |                     |                        |
| Australia      | 0                   | 0                   |                        |
| New Zealand    | 0                   |                     | 0                      |
| Greece         | <u> </u>            | <u> </u>            | <u> </u>               |
| Rwanda         |                     |                     |                        |
| Uganda         |                     |                     |                        |
| Serbia         | <u> </u>            | <u> </u>            | <u> </u>               |
| Saudi Arabia   |                     | 0                   | 0                      |
| UAE            |                     | 0                   | 0                      |
| Syria          |                     |                     |                        |
| Indonesia      | $\bigcirc$          |                     | <u> </u>               |
| Vietnam        | $\bigcirc$          |                     | <u> </u>               |
| Philippines    |                     |                     | <u> </u>               |
| Russia         |                     |                     |                        |



## Nigeria

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Survival Rates, Early Detection and Palliative Care



### Strengths

- Some NGOs and public institutions are piloting subsidized screening and mobile outreach programs.
- Palliative care is slowly expanding through groups like Hospice Nigeria and regional centers.

### Weakness

- <40% five-year survival due to latestage diagnoses and treatment delays.
- Palliative care services are underdeveloped and often inaccessible outside urban centers.

### Opportunity

- Task-shift screening and early detection to trained nurses and community health workers.
- Scale up access to morphine and other essential palliative drugs by reforming regulation and training providers.

- 70% of patients are diagnosed at Stage III or IV, limiting curative potential.
- Regulatory and logistical barriers hinder expansion of palliative care and opioid availability.

- 5. High survival rates, strong early detection programs, and well-established palliative care services. Patients have access to timely diagnosis, advanced treatments, and comprehensive end-of-life care.
  - Good survival rates, effective early detection efforts, and accessible but regionally limited palliative care. Some disparities may exist in rural areas or for specific cancer types.
  - Moderate survival rates, early detection available but not widespread, and palliative care services mainly in urban centers. Some patients experience delays in diagnosis or limited end-of-life care.
  - 2. Low survival rates, early detection efforts are inconsistent or underfunded, and palliative care is minimal or only available in select hospitals. Cancer patients face significant access barriers.
  - 1. Very low survival rates, poor early detection infrastructure, and almost no palliative care services. Many patients are diagnosed late and lack proper support for pain management and end-of-life care.

| Country        | Survival<br>Rates | Early<br>Detection | Palliative<br>Care |
|----------------|-------------------|--------------------|--------------------|
| South Africa   | 0                 | <u> </u>           | 0                  |
| Kenya          |                   |                    |                    |
| Nigeria        |                   |                    |                    |
| Egypt          | 0                 | 0                  | <u> </u>           |
| Morocco        | 0                 | <u> </u>           | <u> </u>           |
| Algeria        |                   |                    |                    |
| Ethiopia       |                   |                    |                    |
| India          | 0                 | <u> </u>           | 0                  |
| Japan          | 0                 | 0                  | 0                  |
| South Korea    | 0                 | 0                  | 0                  |
| China          | 0                 | <u> </u>           | 0                  |
| Thailand       | 0                 | 0                  | 0                  |
| Singapore      | 0                 |                    | 0                  |
| United Kingdom | 0                 |                    |                    |
| Germany        |                   |                    |                    |
| France         | 0                 |                    | 0                  |
| Netherlands    |                   |                    |                    |
| Sweden         |                   |                    |                    |
| Italy          | 0                 | 0                  | 0                  |
| Spain          |                   |                    |                    |
| Poland         | 0                 | <u> </u>           | 0                  |
| Mexico         | 0                 | <u> </u>           |                    |
| Brazil         | 0                 | <u> </u>           | 0                  |
| Argentina      | 0                 | <u> </u>           | 0                  |
| Chile          |                   | <u> </u>           | <u> </u>           |
| Colombia       |                   | <u> </u>           |                    |
| United States  |                   |                    |                    |
| Canada         |                   |                    |                    |
| Australia      |                   |                    |                    |
| New Zealand    |                   |                    |                    |
| Greece         | <u> </u>          |                    |                    |
| Rwanda         |                   |                    |                    |
| Uganda         |                   |                    |                    |
| Serbia         | <u> </u>          | <u> </u>           |                    |
| Saudi Arabia   |                   |                    |                    |
| UAE            |                   |                    |                    |
| Syria          |                   |                    |                    |
| Indonesia      | <u> </u>          | <u> </u>           |                    |
| Vietnam        | <u> </u>          | 0                  |                    |
| Philippines    |                   | <u> </u>           |                    |
| Russia         |                   |                    |                    |



# Nigeria Utilization of Biomarkers

### Strengths

- HER2, ER, and PR testing available at some tertiary and private labs in cities.
- International collaborations occasionally support subsidized testing.

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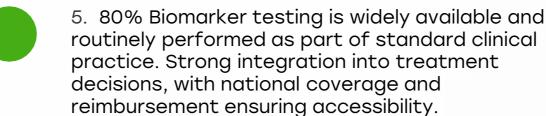
### Weakness

- Testing is unaffordable for most and largely unavailable in public hospitals.
- BRCA testing limited to select private centers and research programs.

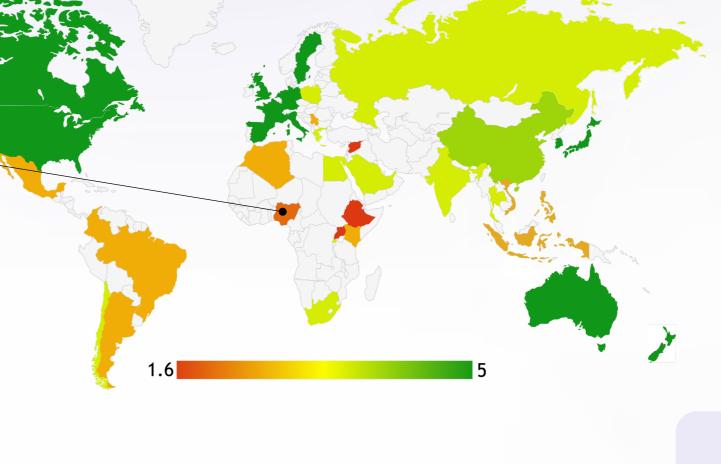
### Opportunity

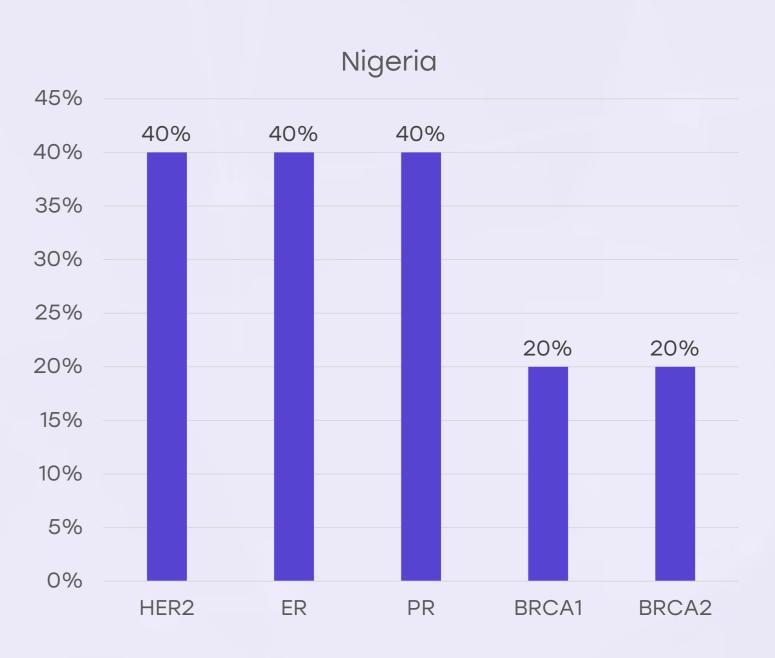
- Integrate biomarker testing into national oncology protocols with support from donors and NGOs.
- Expand public lab infrastructure and training to ensure equitable testing access.

- Out-of-pocket costs and testing delays prevent evidencebased treatment planning.
- Absence of national funding may limit adoption of biomarker-driven care pathways.



- 4. 61-80%. Biomarker testing is commonly used, but access may be limited in certain regions or patient groups. Some disparities exist in coverage or affordability, but it is still a crucial part of cancer diagnostics
- 41-60% Moderate utilization, often restricted to major hospitals or private healthcare settings.
   Some patients may not receive biomarker testing due to cost or limited availability in public healthcare systems.
- 2. 20-40% Biomarker testing is available but underutilized, with significant barriers such as high costs, lack of awareness, or limited infrastructure. Many patients may not receive recommended biomarker assessments.
- <20% Biomarker testing is rarely performed, often due to lack of infrastructure, awareness, or financial barriers. Patients typically do not receive targeted therapies based on biomarker status.







# Nigeria I I Clinical Guidelines

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### Strengths

- National oncology guidelines exist and are followed in major urban centers.
- Some alignment with ESMO and NCCN through modified local versions.

### Opportunity

- Develop simplified, resource-adapted HER2 guidelines to improve nationwide applicability.
- Use digital CME platforms to train practitioners in regional and rural hospitals.

### Weakness

- Implementation is inconsistent across regions and facility types.
- Lack of CME and workforce shortages hinder updates and adoption of current protocols.

- Without enforcement and funding, guideline integration remains fragmented.
- Inconsistent care pathways may lead to suboptimal treatment outcomes.



|  | Very<br>High | High | Medium | Low | Very<br>Low |
|--|--------------|------|--------|-----|-------------|
| Clinical Guideline<br>Implementation       | *            | *    | ×      | 0   | ×           |
| Feasibility of<br>Integration              | ×            | *    | *      | 0   | *           |
| Adoption of<br>International<br>Guidelines | *            | *    | *      | 0   | *           |
| Engagement<br>with Updates                 | *            | *    | *      | *   | 0           |
| ESMO Guidelines<br>Implementation          | *            | *    | *      | 0   | *           |



# Nigeria I I Reimbursement

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### Strengths

- The National Health Insurance Scheme (NHIS) provides partial support for basic cancer care.
- Some local governments and NGOs offer financial aid for low-income patients.

### Opportunity

- Expand NHIS
   coverage to include
   essential diagnostics
   and targeted
   treatments.
- Introduce risk-pooling or governmentsubsidized oncology benefit packages.

### Weakness

- HER2-targeted therapies and diagnostics are not reimbursed; patients pay out-of-pocket.
- Insurance coverage is limited, and most cancer-related costs are borne by individuals.

- High treatment costs result in delayed care or abandonment of therapy.
- Lack of a structured reimbursement system exacerbates health inequities.



- Yes A structured reimbursement system exists, ensuring biomarker testing is covered through national healthcare systems, insurance, or public-private partnerships. Patients face no direct financial burden.
- Partial A reimbursement framework is in place, but patients may still have out-of-pocket expenses such as co-pays, limited coverage, or financial caps on testing.
- No No formal reimbursement system exists, meaning patients must fully cover the cost of biomarker testing out-of-pocket.

| Country        | Reimbursement | No-cost Access |
|----------------|---------------|----------------|
| South Africa   | 0             | ×              |
| Kenya          | ×             | ×              |
| Nigeria        | ×             | ×              |
| Egypt          | 0             | 0              |
| Morocco        | 0             | ×              |
| Algeria        | 0             | ×              |
| Ethiopia       | ×             | ×              |
| India          | 0             | ×              |
| Japan          | 0             | 0              |
| South Korea    | 0             | 0              |
| China          | 0             | 0              |
| Thailand       | 0             | 0              |
| Singapore      | 0             | 0              |
| United Kingdom | 0             | 0              |
| Germany        | 0             | 0              |
| France         | 0             | 0              |
| Netherlands    | 0             | 0              |
| Sweden         | 0             | 0              |
| Italy          | 0             | 0              |
| Spain          | 0             | 0              |
| Poland         | 0             | 0              |
| Mexico         | 0             | ×              |
| Brazil         | 0             | ×              |
| Argentina      | 0             | ×              |
| Chile          | 0             | 0              |
| Colombia       | 0             | ×              |
| United States  | 0             | 0              |
| Canada         | 0             | 0              |
| Australia      | 0             | 0              |
| New Zealand    | 0             | 0              |
| Greece         | 0             | 0              |
| Rwanda         | ×             | ×              |
| Uganda         | ×             | ×              |
| Serbia         | 0             | 0              |
| Saudi Arabia   | 0             | 0              |
| UAE            | 0             | 0              |
| Syria          | 0             | 0              |
| Indonesia      | 0             | 0              |
| Vietnam        | ×             | ×              |
| Philippines    | ×             | ×              |
| Russia         | 0             | 0              |



# Nigeria Breast Cancer Screening

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### Strengths

- NGOs and private clinics provide opportunistic screening and education on breast self-exams.
- Pilot outreach efforts (e.g., mobile clinics) have begun reaching underserved areas.

### Opportunity

- Implement low-cost CBE-based screening at the primary care level.
- Partner with donors to expand diagnostic infrastructure and training.

### Weakness

- No national screening program; access to mammography remains limited and costly.
- Radiologist shortage and equipment scarcity hinder diagnostic scale-up.

- Persistent late-stage diagnoses due to screening inaccessibility.
- Without public financing, national screening coverage will remain fragmented and insufficient.

| Country        | Breast Cancer Screening   |
|----------------|---|
| United States  | Biennial mammograms (50-74 years)                                 |
| United Kingdom | Triennial mammograms (50-71 years)                                |
| Canada         | Mammograms every 2-3 years (50-74 years)                          |
| Australia      | Biennial mammograms (50-74 years)                                 |
| Germany        | Mammograms every 2 years (50-69 years)                            |
| France         | Biennial mammograms (50-74 years)                                 |
| Netherlands    | Mammograms every 2 years (50-75 years)                            |
| Sweden         | Mammograms every 18-24 months (40-<br>74 years)                   |
| Italy          | Mammograms every 2 years (50-69 years)                            |
| Spain          | Mammograms every 2 years (50-69 years)                            |
| Poland         | Mammograms every 2 years (50-69 years)                            |
| Japan          | Mammograms every 2 years (40+ years)                              |
| South Korea    | Biennial mammograms (40+ years)                                   |
| China          | Regional mammogram programs (40-69 years)                         |
| India          | Opportunistic screening   |
| Singapore      | Biennial mammograms (50-69 years)                                 |
| Saudi Arabia   | Opportunistic screening; regional programs for women aged 40+     |
| UAE            | Opportunistic screening; encouraged every 2 years for 40-69 years |
| Syria          | No national program; limited local initiatives due to conflict    |

| Country      | Breast Cancer Screening  |
|--------------|--|
| Thailand     | Biennial mammograms (50-69 years)  |
| South Africa | Opportunistic screening  |
| Kenya        | No national program  |
| Nigeria      | No national program  |
| Egypt        | National awareness campaigns   |
| Morocco      | National program for 45-69 years   |
| Algeria      | Planned national program (50-69 years)                                       |
| Ethiopia     | No national program  |
| Mexico       | Biennial mammograms (40-69 years)  |
| Brazil       | Biennial mammograms (50-69 years)  |
| Argentina    | Biennial mammograms (50-69 years)  |
| Chile        | Mammograms every 3 years (50-69 years)                                       |
| Colombia     | Biennial mammograms (50-69 years)  |
| New Zealand  | Biennial mammograms (45-69 years)  |
| Greece       | Biennial mammograms (50-69 years)  |
| Rwanda       | No national program  |
| Uganda       | No national program  |
| Serbia       | Biennial mammograms (50-69 years)  |
| Indonesia    | Opportunistic screening; no national mammography program                     |
| Vietnam      | Regional mammography programs; pilot programs in urban areas (age 45-69)     |
| Philippines  | Opportunistic screening; mammography recommended every 2 years for women 50+ |
| Russia       | National program for biennial mammograms (50-69 years)                       |