



Lung Cancer Factsheet: Insights & Key Developments

Key Insights on Lung Cancer Care
and Infrastructure

Core Pillars:

1. 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. Lung Cancer Screening

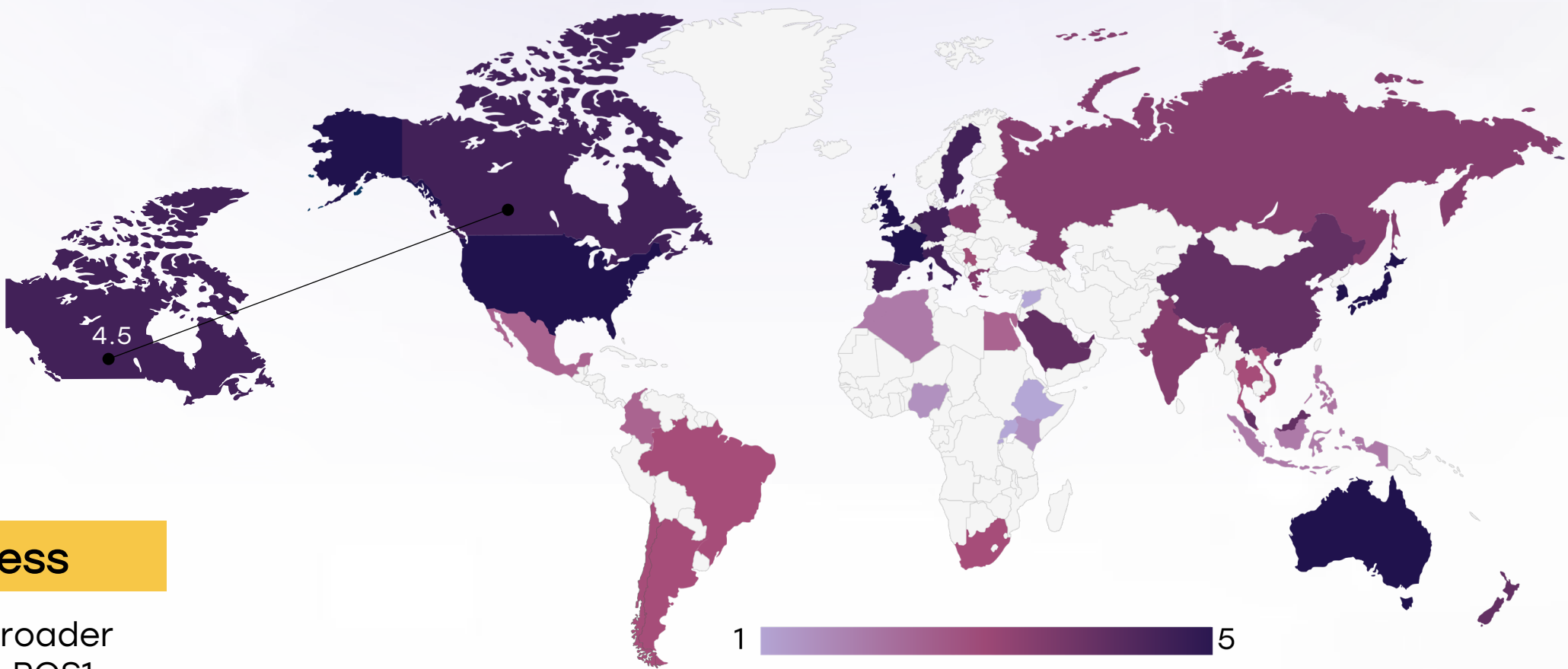
Lung cancer remains one of the most prevalent cancers worldwide, affecting millions of individuals each year. Despite advancements in diagnostics, treatment, and awareness, disparities in access to care, molecular testing, and specialized centers persist.

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

- Lung cancer incidence (2023): ~31,000 new cases annually
- Incidence rate: ~66 per 100,000
- Lung cancer deaths (2023): ~20,700 deaths
- 5-year survival rate: ~22%
- 10-year survival rate: ~13%
- Most affected age group: 70–79 years
- Daily new diagnoses: ~85 per day
- Daily deaths: ~57 per day
- Smoking prevalence (adults): ~12%
- Stage at diagnosis: ~50% diagnosed at Stage IV
- Common histological type: Non-small cell lung cancer (NSCLC)

Canada

Infrastructure



Strengths

- Over 90% of lung cancer patients in major provinces (e.g., Ontario, British Columbia) have access to EGFR, ALK, and PD-L1 testing.
- National programs like Genomics4Lung and Canadian Partnership Against Cancer enhance standardization in care.

Weakness

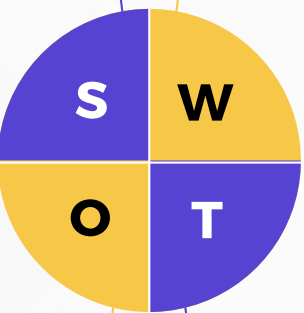
- Access to broader panels (e.g., ROS1, BRAF, MET) is often limited to select reference labs, especially in rural provinces.
- Turnaround time for NGS results can exceed 3 weeks outside major academic centers.

Opportunity

- Expansion of routine NGS testing in underserved provinces could reduce time to treatment initiation by up to 30%.
- Investment in provincial lab networks could improve equity in biomarker access across Canada.

Threats

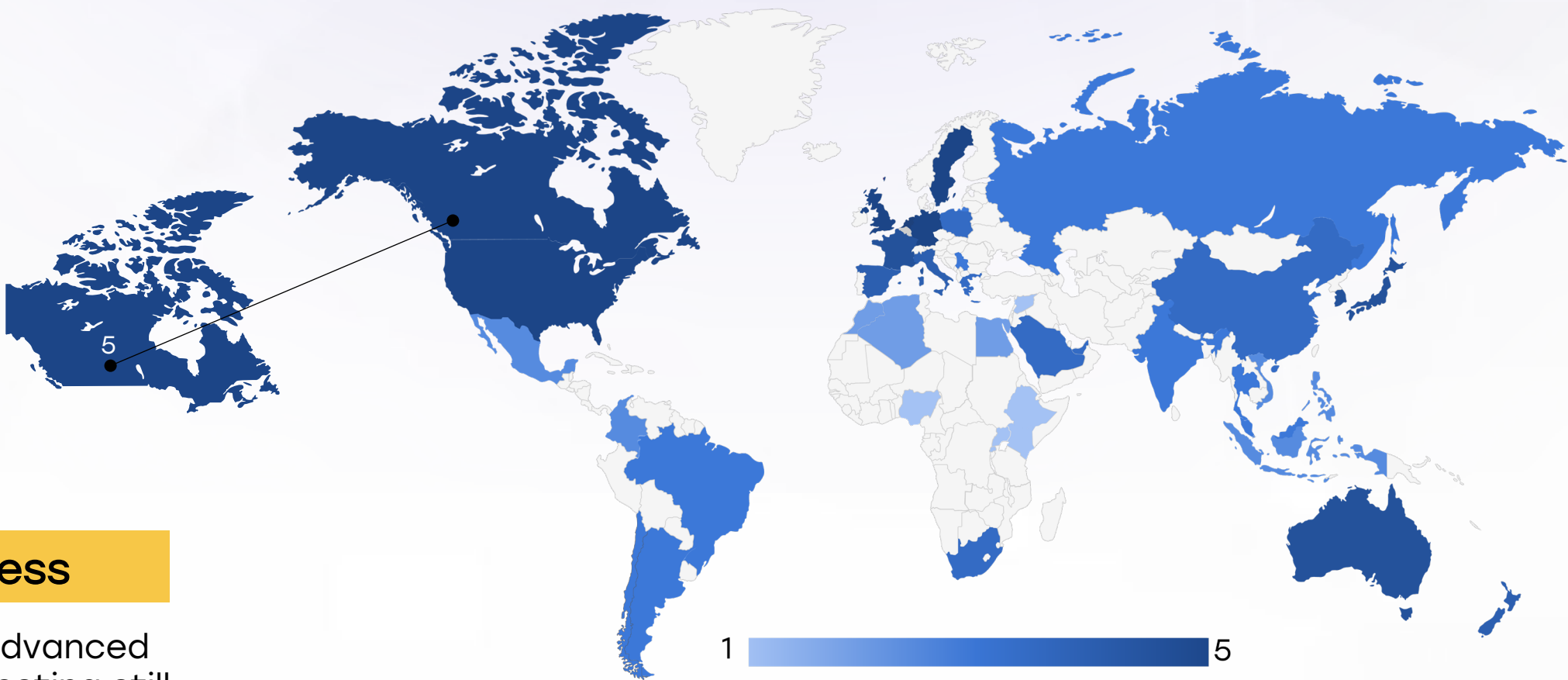
- Interprovincial variation in molecular testing funding and logistics risks creating a two-tier system.
- Delayed or incomplete biomarker results may affect eligibility for targeted therapies, which could impact survival rates.



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

Canada

Treatment Access, Research Funding and Awareness Campaigns



Strengths

- Over 85% of lung cancer patients receive guideline-recommended first-line therapies, including EGFR and ALK inhibitors.
- CAD 20 million+ allocated annually by CIHR supports robust research and over 30 active clinical trials.

Weakness

- Access to advanced biomarker testing still varies by province, creating delays in targeted treatment initiation.
- Rural and Indigenous communities may face barriers to timely diagnosis and specialist care.

Opportunity

- Lung Cancer Awareness Month campaigns and outreach programs have led to a 9% rise in early-stage diagnoses (2022).
- Expansion of screening and biomarker programs in underserved regions could further improve outcomes.

Threats

- Uneven implementation of screening and testing may widen health disparities between urban and remote areas.
- Long diagnostic timelines in smaller provinces risk reducing survival benefits of early treatment.



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.

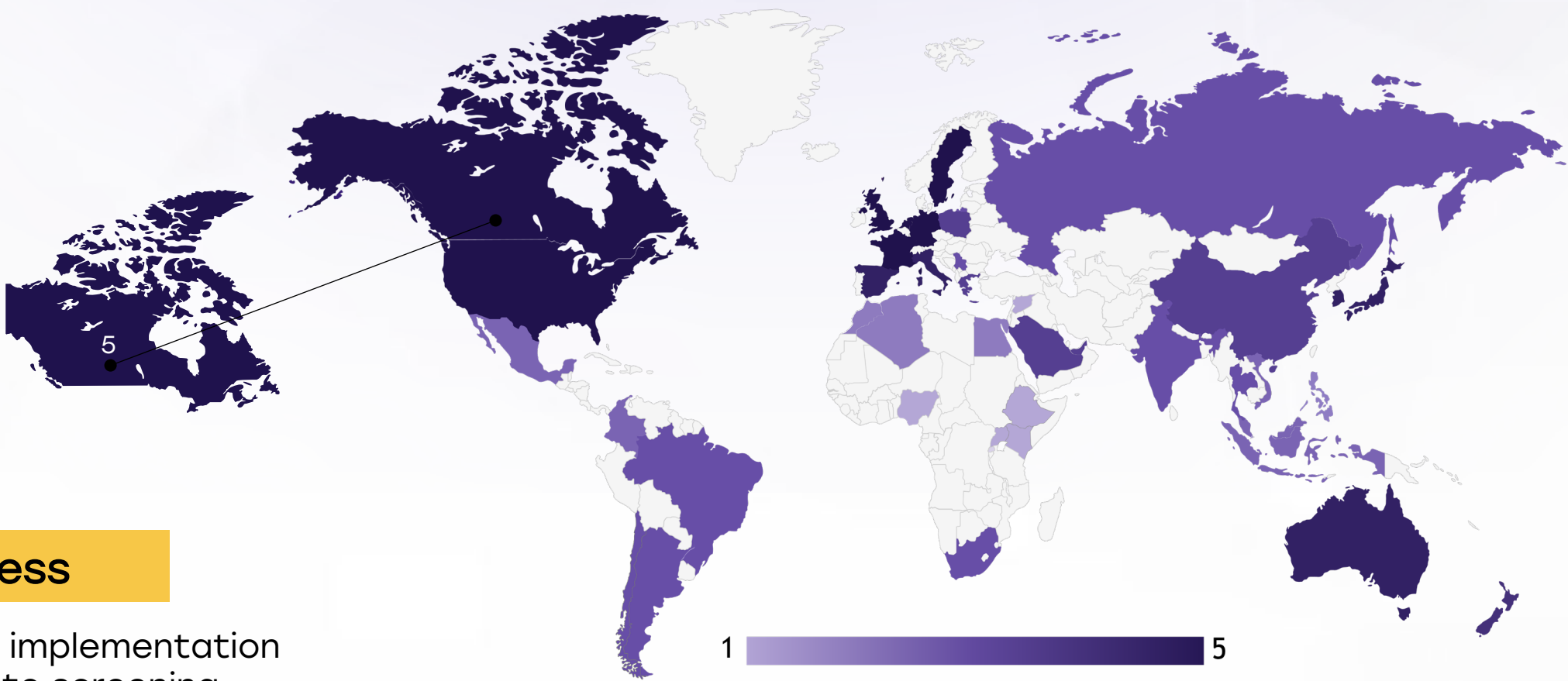


1. Poor infrastructure with severe barriers to treatment, little to no research funding, and lack of structured awareness campaigns. Cancer care is largely inaccessible, with many patients relying on out-of-pocket expenses or external aid.

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

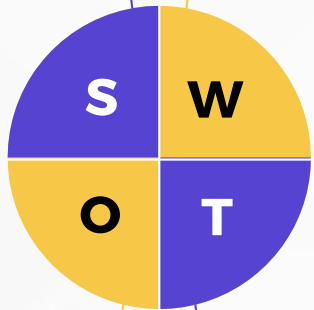
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Survival Rates, Early Detection and Palliative Care



Strengths

- The 5-year lung cancer survival rate has improved to ~26%, driven by early diagnosis and advanced treatments.
- Over 80% of cancer patients have access to integrated palliative care services, including home-based support.



Weakness











- Variability in implementation and access to screening programs across provinces may limit national impact.
- Workforce shortages in rural areas may affect consistent delivery of palliative and diagnostic services.






























































































































Opportunity

- Ontario's LDCT screening program detected 70% of cancers at stage I or II—model for national expansion.
- Mobile screening units in provinces like Alberta and BC enhance outreach to rural and Indigenous populations.

Threats

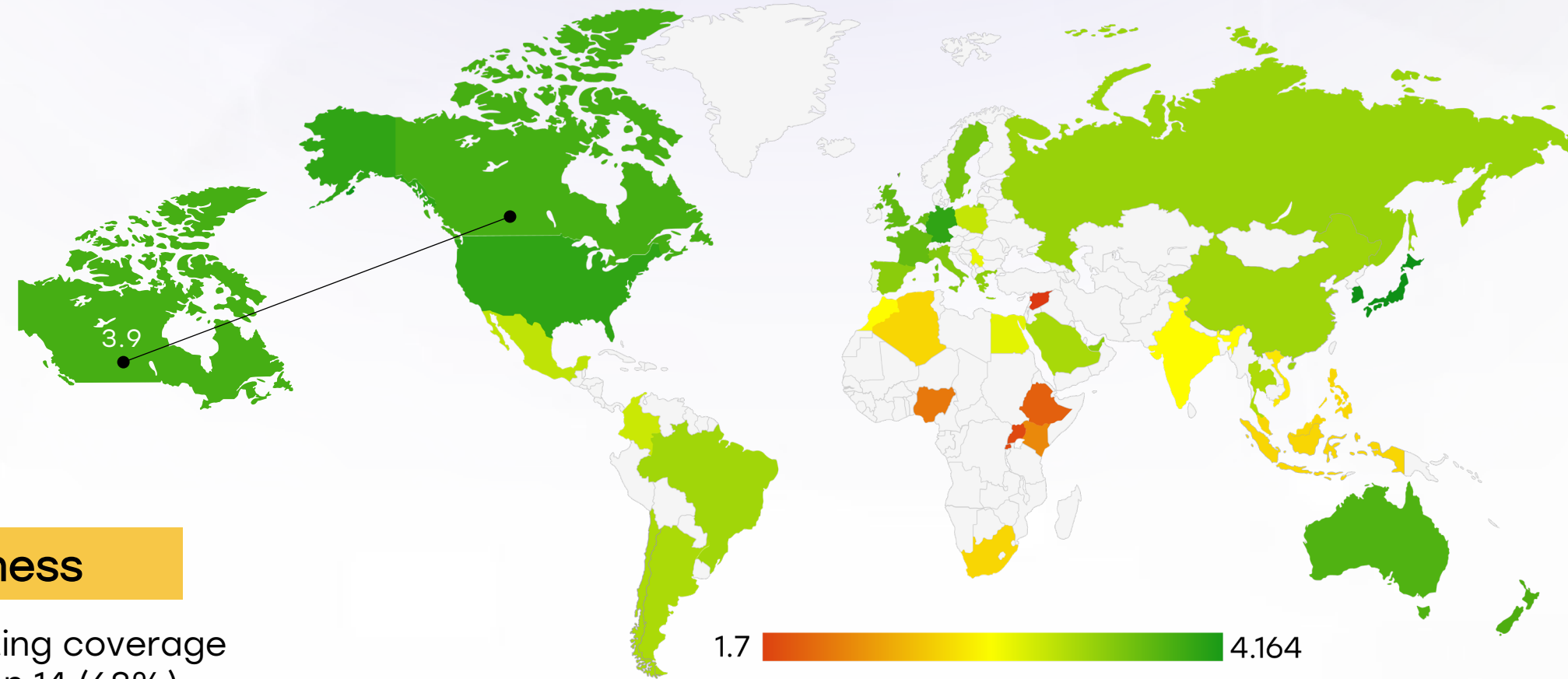
- Gaps in early detection access in underserved communities may persist without long-term funding and coordination.
- Increasing incidence in aging populations could strain palliative care infrastructure without continued investment.

-   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.
-   4. 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.
-   3. 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 Rates	Early Detection	Palliative Care
South Africa			
Kenya			
Nigeria			
Egypt			
Morocco			
Algeria			
Ethiopia			
India			
Japan			
South Korea			
China			
Thailand			
Singapore			
United Kingdom			
Germany			
France			
Netherlands			
Sweden			
Italy			
Spain			
Poland			
Mexico			
Brazil			
Argentina			
Chile			
Colombia			
United States			
Canada			
Australia			
New Zealand			
Greece			
Rwanda			
Uganda			
Serbia			
Saudi Arabia			
UAE			
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Indonesia			
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Russia			
Malaysia			

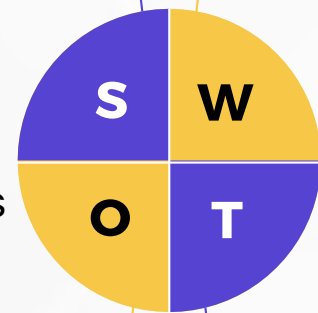
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Utilization of Biomarkers



Strengths

- High uptake of biomarker testing (e.g., 88% for EGFR, 93% for PD-L1), ensuring timely access to targeted therapies.
- Strong molecular diagnostic infrastructure supported by NGS panels and national standards.



Weakness

- Partial testing coverage for MET exon 14 (68%) and BRAF V600E (62%).
- Potential regional disparities in funding and access to biomarker testing.

Opportunity

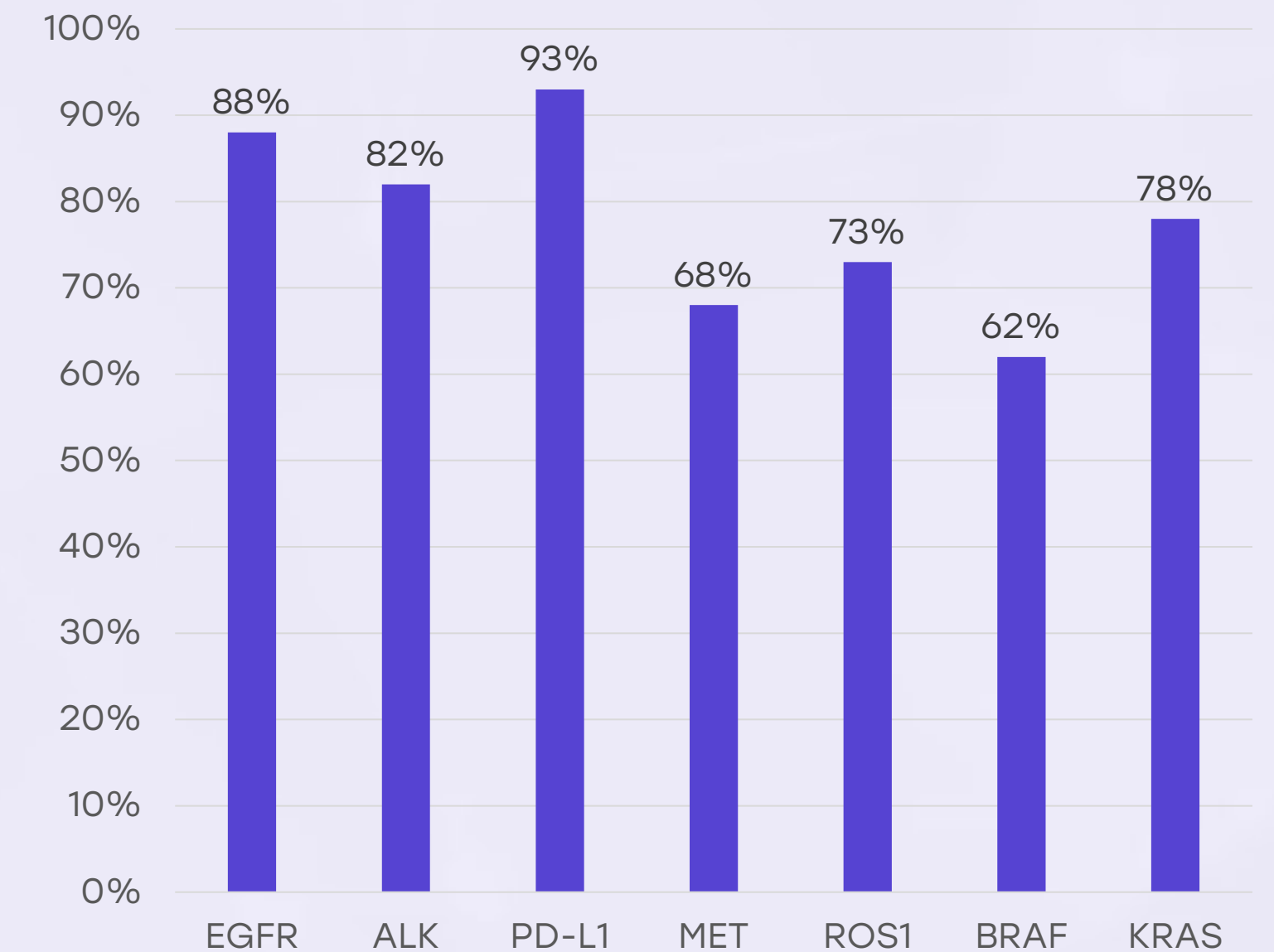
- Expand adoption of emerging biomarker tests and increase awareness.
- Improve access to targeted therapies through broader education and policy support.

Threats

- Budget constraints may limit testing availability.
- Inconsistent implementation of national guidelines across regions.

5. Biomarker testing is widely available and routinely performed as part of standard clinical practice. Strong integration into treatment decisions, with national coverage and reimbursement ensuring accessibility.
4. 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
3. 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. 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.
1. 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.

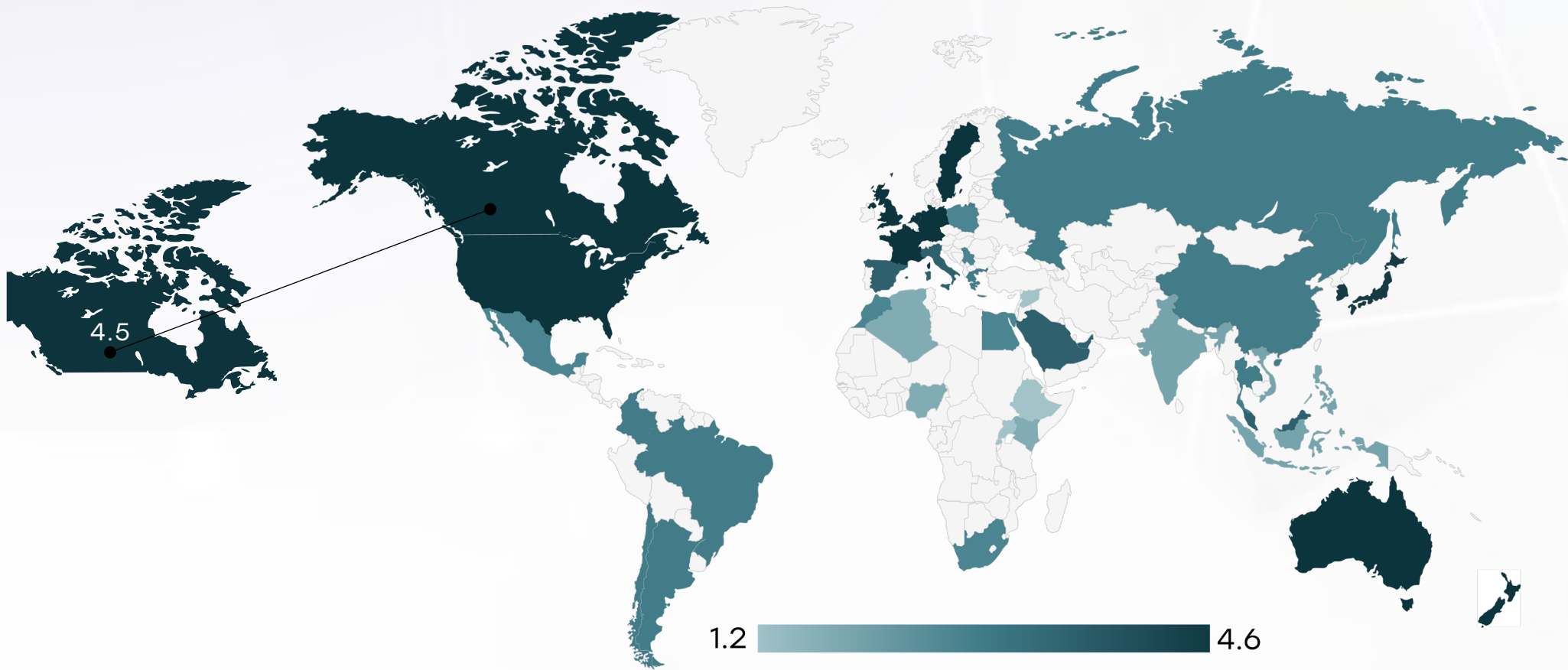
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Clinical Guidelines



	Very High	High	Medium	Low	Very Low
Clinical Guideline Implementation	○	×	×	×	×
Feasibility of Integration	○	×	×	×	×
Adoption of International Guidelines	○	×	×	×	×
Engagement with Updates	×	○	×	×	×
ESMO Guidelines Implementation	○	×	×	×	×

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Reimbursement



Strengths

- Comprehensive reimbursement framework ensuring broad access to diagnostics and treatments with no out-of-pocket costs for most patients.
- High-cost biomarker tests (e.g., EGFR, ALK, PD-L1) are reimbursed when clinically indicated.

Weakness

- Access to treatments and tests may vary slightly between provinces due to decentralized healthcare governance.
- Potential delays in reimbursement approval or coverage differences between provinces.

Opportunity

- Strengthen coordination between provinces to ensure uniform access to treatments and tests.
- Expand equity-based initiatives to further enhance access for underserved populations.

Threats

- Regional disparities in healthcare funding could affect access to some treatments or services.
- Policy changes or budget constraints could impact the sustainability of no-cost access for patients.

- 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.
- 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 formal reimbursement system exists, meaning patients must fully cover the cost of biomarker testing out-of-pocket.

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

Canada

Lung Cancer Screening

Strengths

- LDCT screening programs for high-risk individuals (aged 55-74) are evidence-based and publicly funded, ensuring equitable access.
- Ontario's pilot program showed a 20% reduction in mortality, aligning with international studies like NLST.

Weakness

- Access to screening programs may vary between provinces due to ongoing expansion efforts.
- Limited awareness or participation could hinder the full effectiveness of screening programs.

Opportunity

- Expand screening access to additional provinces and engage primary care providers to increase participation.
- Promote educational campaigns to raise awareness of lung cancer risks and the benefits of early detection.

Threats

- Regional disparities in program implementation may lead to inconsistent access to screening.
- Budget limitations or policy changes could slow down the expansion of screening initiatives.

Country	Lung Cancer Screening
United States	Annual LDCT (50-80 years, high-risk smokers)
United Kingdom	LDCT for high-risk individuals (55-74 years)
Canada	LDCT for high-risk individuals (55-74 years)
Australia	No national program, high-risk groups advised LDCT
Germany	No national program, under evaluation
France	No national LDCT screening
Netherlands	Participating in European screening studies
Sweden	No national LDCT screening
Italy	Regional pilot LDCT screening
Spain	No national LDCT program
Poland	No national program
Japan	No national LDCT program
South Korea	LDCT for high-risk individuals (50-74 years)
China	No national LDCT program
India	No national LDCT program
Singapore	No national LDCT program
Saudi Arabia	No national LDCT program; some hospital-based opportunistic screening
UAE	No national LDCT program; early-stage pilot studies ongoing in select hospitals
Syria	No national LDCT program; screening not prioritized due to conflict
Malaysia	No program; high-risk CT pilots

Country	Lung Cancer Screening
Thailand	No national LDCT program
South Africa	No national LDCT program
Kenya	No national LDCT program
Nigeria	No national LDCT program
Egypt	No national LDCT program
Morocco	No national LDCT program
Algeria	No national LDCT program
Ethiopia	No national LDCT program
Mexico	No national LDCT program
Brazil	No national LDCT program
Argentina	No national LDCT program
Chile	No national LDCT program
Colombia	No national LDCT program
New Zealand	No national LDCT program
Greece	No national LDCT program
Rwanda	No national LDCT program
Uganda	No national LDCT program
Serbia	No national LDCT program
Indonesia	No national LDCT program; opportunistic screening in private sector
Vietnam	No national LDCT program; early pilot screening studies in Hanoi and Ho Chi Minh
Philippines	No national LDCT program; feasibility and awareness programs under discussion
Russia	No formal national LDCT program; regional pilot screening programs in large cities