



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.

- Incidence Rates:
 - Lung cancer accounts for approximately 4.0% of all cancers diagnosed among males in
 - The age-standardized incidence rate (ASIR) for lung cancer in males is 8.95 per 100,000.
- Gender Disparities: Lung cancer is among the top three cancers in men and ranks seventh among women.
- The ASIR for lung cancer among males varies by racial group:
 - Coloured males: 13.72 per 100,000.
 - White males: 3.1% of all cancers diagnosed.
 - Black African males: 4.3% of all cancers diagnosed.
 - Indian/Asian males: 9.3% of all cancers diagnosed.
- Mortality Rates: Lung cancer is the leading cause of cancer-related deaths in South Africa.
- Projected lung cancer deaths by 2025:
 - Men: 5,591 deaths.
 - Women: 3,462 deaths.



Infrastructure



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 Tertiary hospitals such as Groote Schuur Hospital (Cape Town), Charlotte Maxeke Johannesburg Academic Hospital, and Steve Biko Academic Hospital offer oncology services including surgery, chemotherapy, and radiotherapy.

Opportunity

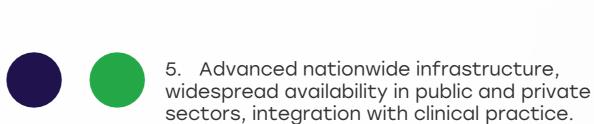
 National Health Insurance (NHI) rollout plans include investment in strengthening oncology infrastructure and publicprivate collaboration.

Weakness

 Significant disparity exists between urban and rural regions-many public hospitals lack advanced diagnostics or oncology capacity.

Threats

 Load-shedding (power outages) and healthcare worker shortages affect equipment availability and continuity of care.



4. Strong infrastructure in major hospitals and cancer centers, some regional disparities.

Moderate infrastructure, primarily in private settings or research institutions.

2. Limited infrastructure, available only in select centers or for high-cost private testing.

1. Minimal or no infrastructure, testing mostly unavailable or sent abroad.

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



Treatment Access, Research Funding and Awareness Campaigns

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Strengths

 Public sector covers basic treatment for cancer (chemotherapy and radiotherapy); the private sector provides access to advanced therapies and clinical trials.

ОТ

Weakness

 Advanced therapies like immunotherapy and targeted agents are rarely accessible through public services—out-ofpocket costs in the private sector can exceed ZAR 100,000-200,000.



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.



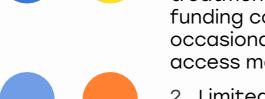
4. Well-developed system with good treatment availability, strong research funding, and effective but regionally focused awareness campaigns. Some disparities may exist in rural areas or between public and private sectors.



 Growing collaborations with international partners (e.g. NIH, AstraZeneca's Africa PUMUA initiative) are supporting research and access projects.



 Low public awareness of lung cancer symptoms, coupled with stigma associated with smoking and late presentation.



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	0	0	
Kenya			
Nigeria			
Egypt			
Morocco			
Algeria			
Ethiopia			
India	<u> </u>	<u> </u>	<u> </u>
Japan			
South Korea		0	
China	0	<u> </u>	
Thailand	<u> </u>		
Singapore			
United Kingdom			
Germany			
France			
Netherlands			
Sweden			
Italy			
Spain			0
Poland		\bigcirc	0
Mexico	<u> </u>		<u> </u>
Brazil	<u> </u>	\bigcirc	<u> </u>
Argentina	<u> </u>	\bigcirc	<u> </u>
Chile	<u> </u>	\bigcirc	<u> </u>
Colombia	0		0
United States			
Canada			
Australia			
Zealand	0		
Greece	0		
Rwanda			
Uganda			
Serbia	0	0	0
Saudi Arabia	0	0	0
UAE	0	0	0
Syria			
Indonesia	0	0	0
Vietnam	0	0	0
Philippines	0	0	0
Russia	0	0	0
Malaysia			

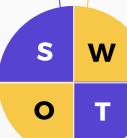


Survival Rates, Early **Detection** and Palliative Care

Strengths

• South Africa has made notable progress in palliative care policy integration, with national frameworks emphasizing access to opioids and symptom management.

Opportunity



Weakness

• Lung cancer is often 70% of patients

Threats

 Strengthening Palliative services integration of early remain limited outside detection with TB/HIV major cities, and are under-resourced due programs could to competing health facilitate earlier identification of priorities (e.g., HIV, respiratory TB). symptoms.

diagnosed late-over present with stage III or IV disease.

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



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Utilization of Biomarkers

Strengths

 Academic institutions like the University of Cape Town and University of Pretoria offer molecular testing through partnerships and research initiatives.

 Routine access to EGFR, ALK, and PD-L1 testing is largely limited to private sector or research studies-testing in public hospitals is rare.

Weakness

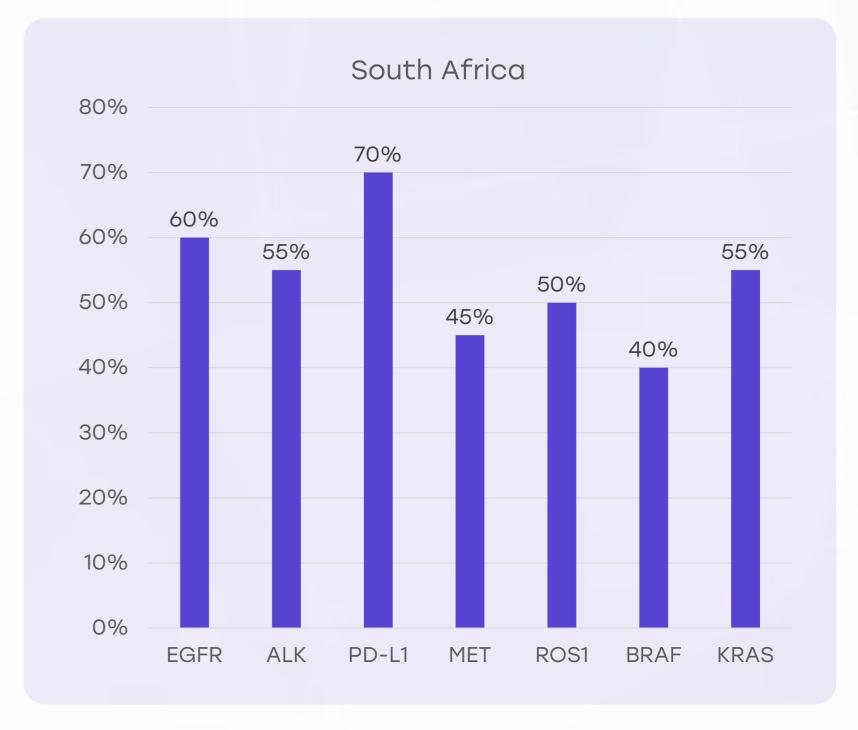
Opportunity

 Expansion of molecular pathology services at provincial laboratories could facilitate more equitable biomarker access.

Threats

 High cost and lack of reimbursement mechanisms for biomarker testing in public settings hamper routine implementation.

- 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.
- 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.

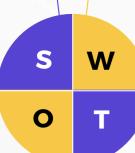




Clinical Guidelines

Strengths

 South Africa has national oncology guidelines developed by the South African Oncology Consortium and other professional bodies.



Weakness

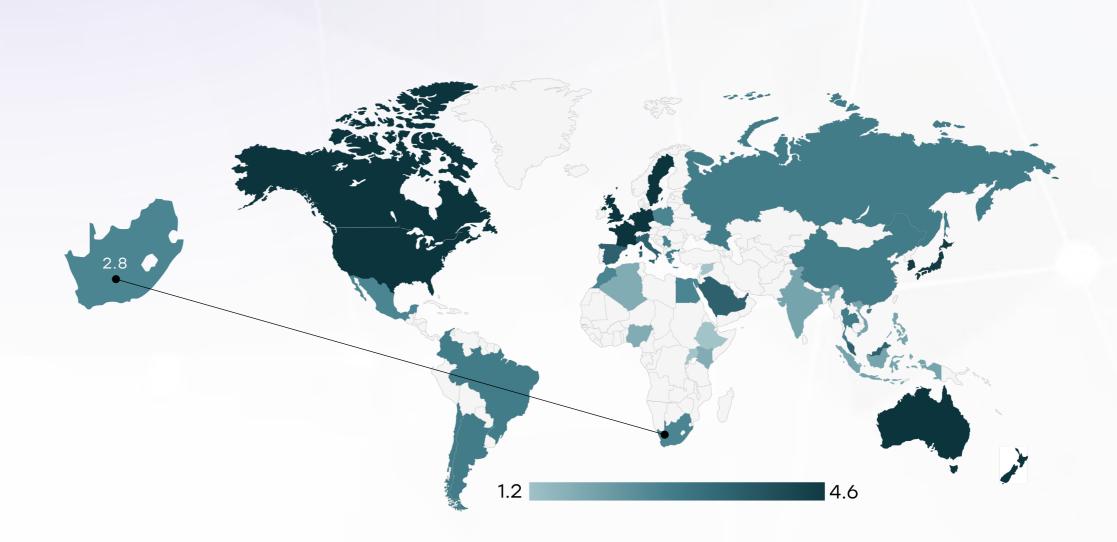
 Guidelines are not consistently implemented across provinces—treatment pathways may vary between urban and rural facilities.

Opportunity

 Updated lung cancer clinical pathways incorporating biomarkers and global standards could standardize care.

Threats

 Workforce shortages (e.g. oncologists, pulmonologists) may limit guideline adherence in overburdened public settings.



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

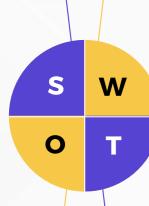




Reimbursement

Strengths

• The state offers free cancer treatment through public hospitals; private insurance covers advanced therapies for insured populations (~16% of population).



Weakness

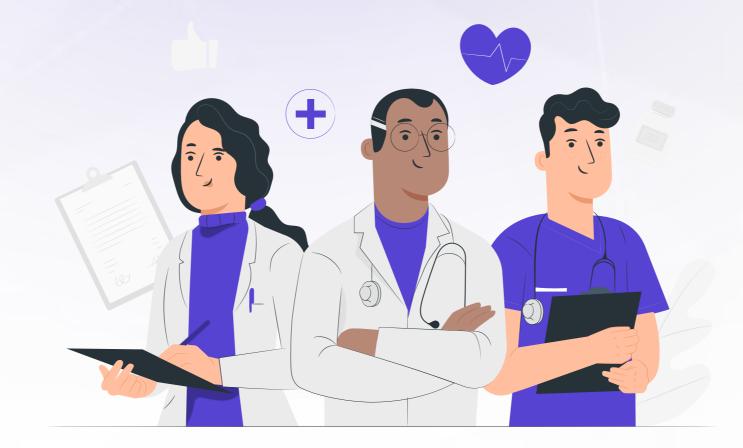
· Reimbursement for advanced diagnostics and targeted therapies is limited or non-existent in the public sector.

Opportunity

 NHI implementation could improve equity by expanding access to diagnostics and newer therapies.

Threats

• Financial constraints and limited oncology drug budget in public sector delay adoption of innovative therapies.



- A structured reimbursement system exists, ensuring biomarker testing is covered through national healthcare systems, insurance, or publicprivate 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
South Africa	0	0
Kenya		
Nigeria		
Egypt		
Morocco		
Algeria		
Ethiopia		
India		
Japan		
South Korea		
China		
Thailand		
Singapore		
United Kingdom		
Germany	0	0
France		
Netherlands		
Sweden	0	\bigcirc
Italy	0	\circ
Spain	0	\bigcirc
Poland	0	0
Mexico		\bigcirc
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Argentina	0	\bigcirc
Chile		
Colombia		
United States		
Canada		
Australia		
Zealand		
Greece		
Rwanda	0	0
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Syria		0
Indonesia		0
Vietnam		0
Philippines		0
Russia		
Malaysia		

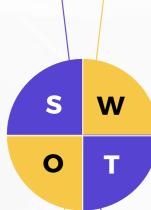




Lung Cancer Screening

Strengths

• Chest X-rays are routinely used in TB screening and could be leveraged for lung cancer detection in highrisk populations.



Weakness

• No formal low-dose CT screening program existsscreening remains opportunistic and inaccessible for most high-risk individuals.

Opportunity

 Pilot studies or integration with TB screening campaigns could provide a foundation for costeffective LDCT programs

Threats

 High smoking prevalence and low screening awareness in certain populations (e.g., mining communities) increase risk of late-stage detection.

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
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