

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

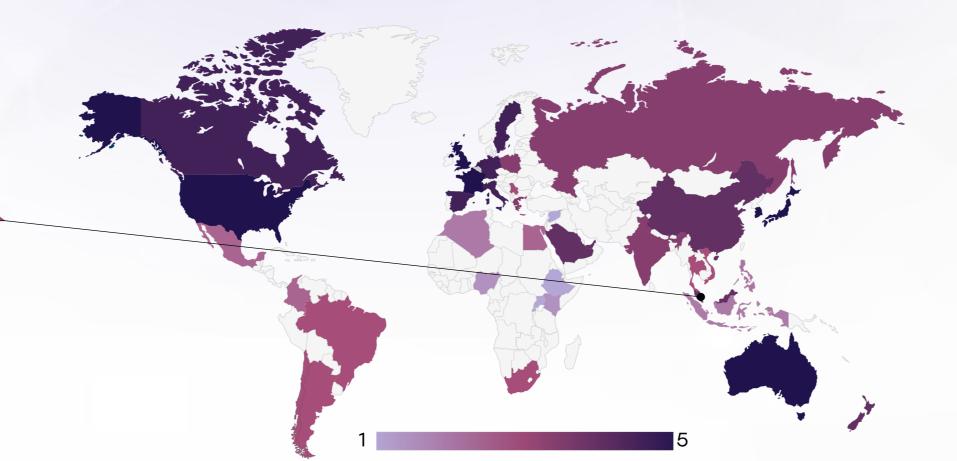
Lung cancer remains one of the most prevalent cancers worldwide, affecting millions of individuals each year. Despite advancements in diagnostics, treatment, and awareness, disparities in access to care, molecular testing, and specialized centers persist.

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: ~1,500-1,600 new cases annually
- Incidence rate: ~35 per 100,000 population
- Lung cancer deaths annually: ~1,200-1,300
- Leading cause of cancer-related deaths in Singapore
- More common in men than women, though female cases are increasing
- Most affected age group: 60-79 years
- 5-year survival rate: ~25% (higher for early-stage diagnoses)
- Non-smokers account for ~30% of lung cancer cases, especially among women
- Adenocarcinoma is the most common subtype
- EGFR mutations common in Asian population, with molecular testing widely used



Infrastructure



Strengths

 Singapore has a highly developed healthcare infrastructure with comprehensive cancer care provided by toptier institutions like the National Cancer Centre Singapore (NCCS), National University Cancer Institute, and Tan Tock Seng Hospital.

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Opportunity

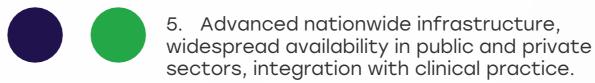
 Expansion plans for new cancer centers (e.g., the new NCCS building) and continued investment in digital health and Al diagnostics can enhance efficiency.

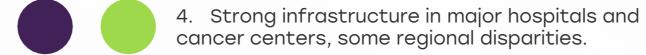
Weakness

• While advanced infrastructure is available, resource demand continues to increase due to population aging, creating occasional bottlenecks in diagnostics and specialist access.

Threats

· Reliance on a limited pool of highly specialized oncologists could lead to future capacity constraints as cancer incidence rises.





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



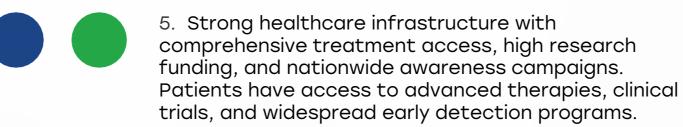
Strengths

 Patients have access to the latest treatments, including EGFR, ALK inhibitors, and immunotherapies, under Medisave and MediShield Life schemes.



Weakness

 Co-payment schemes can still lead to out-ofpocket expenses, which may deter some patients from accessing the most advanced therapies.



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.

Opportunity

• The Singapore **Translational Cancer** Consortium and National **Medical Research Council** (NMRC) fund significant lung cancer research, with cross-institutional collaboration.

Threats

 Public awareness of lung cancer remains lower than for other cancers (e.g., breast), leading to delayed presentation despite high care availability.

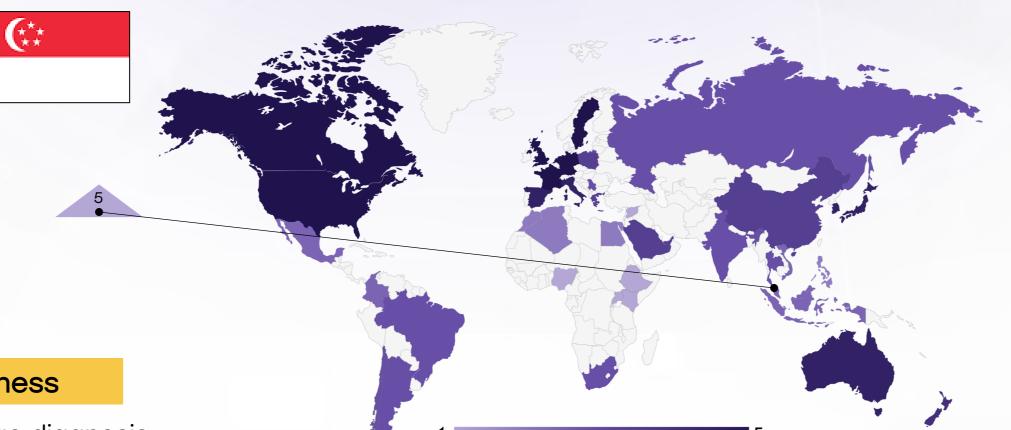
- 3. Moderate development, with specialized treatments available in major hospitals, research funding concentrated on specific cancers, and occasional but limited awareness efforts. Healthcare access may be restricted by cost or geography.
 - 2. Limited system where cancer treatment is available only 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	0
Kenya			
Nigeria			
Egypt			
Morocco			
Algeria			
Ethiopia			
India	\bigcirc	<u> </u>	<u> </u>
Japan			
South Korea			
China		<u> </u>	0
Thailand	<u> </u>	<u> </u>	<u> </u>
Singapore			
United Kingdom			
Germany			
France		0	
Netherlands			
Sweden			
Italy		0	0
Spain		0	0
Poland		<u> </u>	0
Mexico		<u> </u>	0
Brazil	<u> </u>	0	0
Argentina	<u> </u>	0	0
Chile	<u> </u>	<u> </u>	<u> </u>
Colombia			<u> </u>
United States			
Canada			
Australia			
Zealand			
Greece			
Rwanda			
Uganda			
Serbia	<u> </u>	<u> </u>	0
Saudi Arabia		0	0
UAE	0	0	0
Syria			
Indonesia	0	0	O
Vietnam	0	0	0
Philippines		0	0
Russia	0	0	0
Malaysia			



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Survival Rates, Early Detection and Palliative Care



Strengths

 The 5-year relative survival rate for lung cancer in Singapore has improved to approximately 20-22%, higher than regional averages due to early detection and precision treatment.

Weakness

 Late-stage diagnosis is still common-more than 60% of cases are identified at stage III or IV-partly due to stigma and low screening uptake.

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.

Opportunity

 National palliative care initiatives like the LIFE programme and integration of palliative services into community care help improve quality of life for late-stage patients.

Threats

 As demand for palliative care rises, uneven training and limited staffing in community palliative units could become a barrier.

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.

 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.

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



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Utilization of Biomarkers

Strengths

 Widespread availability of EGFR, ALK, ROS1, PD-L1, and NGS-based panels across major hospitals and laboratories, with quick turnaround times.

Weakness of broader

 Use of broader biomarker panels (e.g., TMB, MET exon 14 skipping) may be inconsistent outside academic settings.

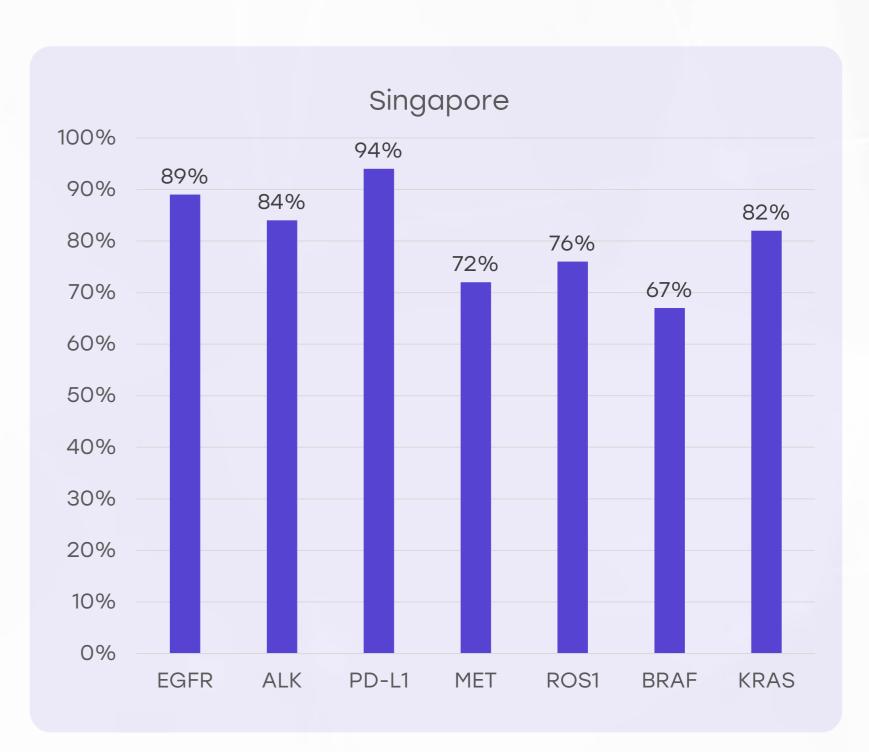
Opportunity

• Singapore's PRECISE initiative (Precision Health Research Singapore) is integrating genomic data to optimize biomarker-driven cancer care.

Threats

 High cost of full NGS panels may limit accessibility for uninsured foreign nationals or patients outside subsidy eligibility.

- 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.







Clinical Guidelines

Strengths

 National guidelines are aligned with NCCN and ESMO standards, regularly updated through the Ministry of Health and leading oncology societies.

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Weakness

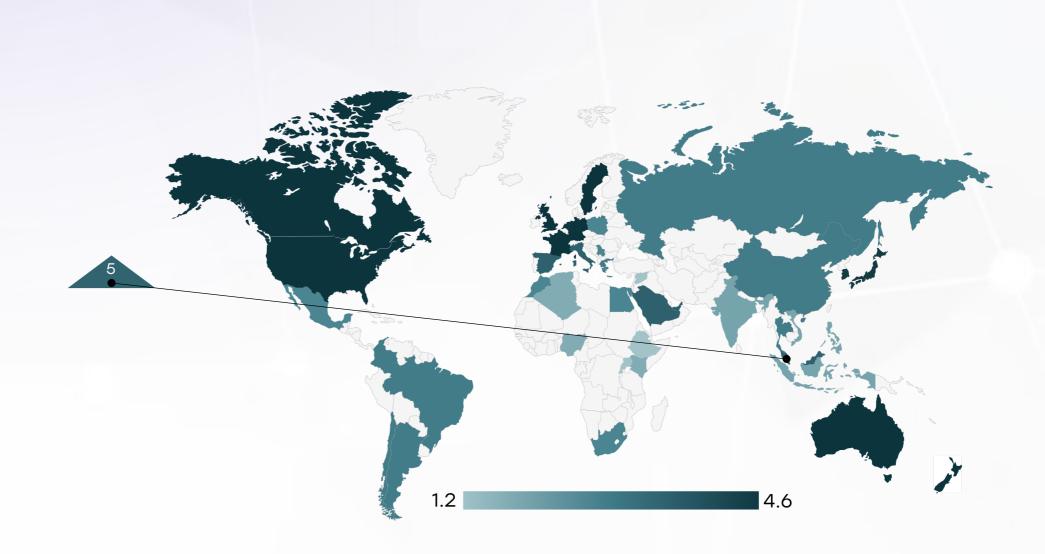
 Implementation may vary between public and private sectors, especially regarding use of high-cost drugs.

Opportunity

 Expansion of decisionsupport tools and electronic clinical pathways can improve adherence to evidence-based care.

Threats

 Increasing complexity of biomarker-based treatments could challenge general practitioners without ongoing training.



	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	*	*	*	*

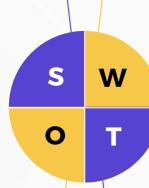




Reimbursement

Strengths

 The national insurance framework-MediShield Life, MediSave, and MediFund-supports access to both basic and advanced lung cancer treatments.



Weakness

• Some high-cost targeted therapies and off-label uses may require case-bycase financial assessment or are not fully subsidized.

Opportunity

 Government reviews of the Cancer Drug List (CDL) and Health Technology Assessment (HTA) processes aim to improve equitable access.

Threats

• Rising cancer care costs may pressure public financing systems, especially if new therapies are not quickly evaluated and subsidized.



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





Lung Cancer Screening

Strengths

• Pilot low-dose CT screening projects have been launched for high-risk populations, including smokers over 55, with promising results.

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Weakness

 No national LDCT screening program yet-screening remains opportunistic or research-based rather than systematized.

Opportunity

 High-level policy discussions are ongoing to integrate LDCT into broader national cancer screening frameworks.

Threats

 Low public perception of lung cancer risk among non-smokers may hinder screening uptake even when made widely available.

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