



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.

- Annual new cases: ~7,353
- Annual deaths: ~6,551
- Incidence rate (males): ~38.4 per 100,000
- Mortality rate (males): ~34.8 per 100,000
- 5-year survival rate: ~3.4%
- Most affected age group: 60+ years
- Gender distribution: ~89% male, ~11% female
- Smoking prevalence: ~18.5%
- Stage at diagnosis: ~52% diagnosed at Stage IV
- Common histological types: Adenocarcinoma (~40%), Squamous cell carcinoma (~32%)
- Survival after diagnosis: ~66% of Stage IV patients die within 6 months
- Mortality rate: ~18.1 per 100,000 overall; ~33 per 100,000 in men
- Smoking-related deaths: ~9.7% of deaths in people 35+ attributed to tobacco, with lung cancer as the leading cause





Infrastructure

Strengths

 Morocco has expanded its National Cancer Plan (2010-2019 and renewed in 2020) to establish regional oncology centers in cities like Casablanca, Rabat, Marrakesh, Fez, and Agadir.



Weakness

 Specialized cancer services are concentrated in urban areas; rural regions often lack diagnostic imaging (CT, PET scans) and radiation therapy units.

Opportunity

 New oncology centers under development through public-private partnerships could reduce patient travel time and diagnostic delays.

Threats

 Regional disparities in access to radiology, surgery, and pathology services limit timely intervention and affect outcomes.



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



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	0	0
Morocco	0	
Algeria	0	
Ethiopia		
India	0	0
Japan		
South Korea		
China		
Thailand	0	0
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	0	0
Greece	0	0
Rwanda		
Uganda		
Serbia	0	0
Saudi Arabia	0	0
UAE	0	
Syria		
Indonesia		
Vietnam	0	0
Philippines		
Russia		0
Malaysia		O
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Treatment Access, Research Funding and Awareness Campaigns

Strengths

 The public system (RAMED and AMO) covers basic treatment including chemotherapy and surgery in cancerdesignated hospitals.

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Weakness

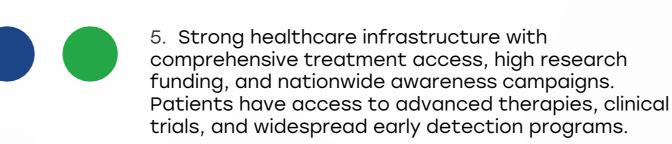
· Limited access to targeted therapies (e.g., EGFR, ALK inhibitors) and immunotherapy; out-of-pocket expenses remain high for advanced treatments.

Opportunity

 Morocco's partnership with Lalla Salma Foundation for Cancer Prevention and Treatment has led to the development of awareness campaigns and subsidized care pathways.

Threats

· Lack of sustained research funding (less than 1% of total health budget) and few ongoing clinical trials restrict innovation and local drug development.



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

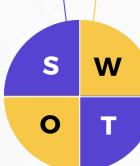




Survival Rates, Early **Detection** and Palliative Care

Strengths

 Palliative care is included in the updated national cancer strategy, and services are integrated into regional centers like the National Institute of Oncology in Rabat.



Weakn

• Over 75% c cancer cas diagnosed at advanced stages, with 5-year survival rates under 10%, among the lowest globally.

Opportunity

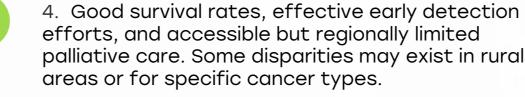
 Pilot early detection programs in highburden regions and mobile outreach services can improve stage-at-diagnosis rates

Threats

• Delays in diagnosis (often exceeding 2-3 months) and limited community-level awareness of lung cancer symptoms perpetuate late presentation.



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.



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.

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

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Utilization of Biomarkers

Strengths Weakness

 Biomarker testing (EGFR, ALK) is available in a few tertiary hospitals and private labs in Casablanca and Rabat.

 Limited public reimbursement; low utilization due to costs, physician awareness, and lack of local lab capacity estimated <30% of eligible patients tested.

Opportunity

 Collaborations with academic centers in France and Belgium can improve biomarker training and infrastructure via twinning projects.

Threats

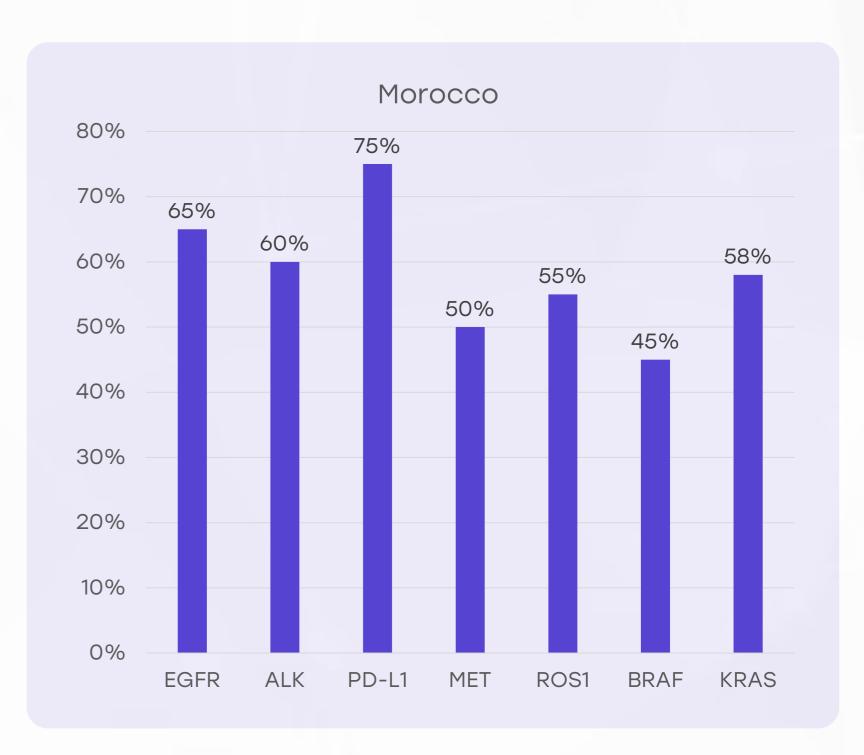
 Absence of a national mandate or registry for biomarker testing leads to inconsistencies in treatment personalization. 5. Biomarker testing is widely available and routinely performed as part of standard clinical practice. Strong integration into treatment decisions, with national coverage and reimbursement 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.

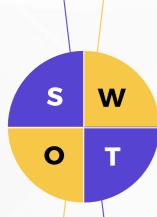




Clinical Guidelines

Strengths

 Morocco has published national guidelines for common cancers through the Ministry of Health, partly aligned with ESMO and WHO recommendations.



Weakness

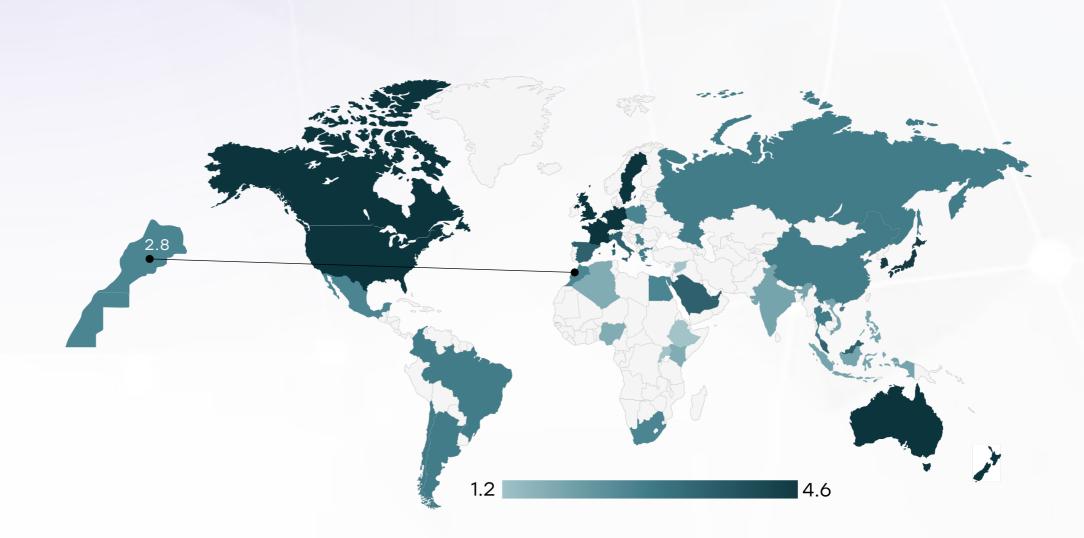
 Lung cancer-specific guidelines are outdated and not systematically implemented across all regions.

Opportunity

 Digital health integration can help disseminate up-todate protocols to physicians in remote regions.

Threats

 Lack of enforcement and auditing mechanisms leads to wide variability in adherence to best practices.



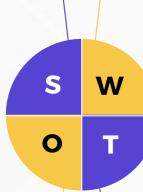
	Very High	High	Medium	Low	Very Low
Clinical Guideline Implementation	×	0	*	*	*
Feasibility of Integration	*	0	*	*	*
Adoption of International Guidelines	*	0	*	*	*
Engagement with Updates	*	*	0	*	*
ESMO Guidelines Implementation	×	0	*	*	*



Reimbursement

Strengths

 RAMED (for lowincome patients) and CNOPS/AMO (for insured workers) cover standard chemotherapy and imaging.



Weakness

 Delayed market access and high costs of novel treatments like osimertinib or nivolumab—mean they are rarely reimbursed outside of private care.

Opportunity

 Expansion of the new mandatory universal health coverage (AMO Généralisé) by 2025 may improve equitable access if well implemented.

Threats

 Budget constraints and bureaucratic delays risk excluding costly personalized therapies from national reimbursement lists.



- 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.

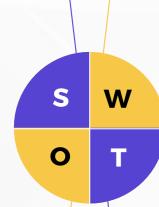
Country	Reimbursement Framework	No-cost Access
United States		0
United Kingdom		
Canada		
Australia		
Germany		
France		
Netherlands		
Sweden		
Italy		
Spain	0	
Poland		
Japan		
South Korea		
China		
India	0	0
Singapore		
Thailand		
South Africa	0	0
Kenya	0	0
Nigeria	0	0
Egypt	0	0
Morocco	0	0
Algeria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



Lung Cancer Screening

Strengths

 Anti-smoking campaigns and some early detection efforts are in place, supported by the Lalla Salma Foundation.



Weakness

 No national low-dose CT screening program; most cases are detected via symptomatic presentation.

Opportunity

 Pilot LDCT programs in high-risk populations (e.g., smokers, occupational exposure groups) could be modeled on breast cancer screening efforts in Rabat.

Threats

 Smoking prevalence remains high (men ~25%), and occupational/environ mental exposures (e.g., mining, pollution) contribute to under-addressed risk.

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