



STRENGTHENING LUNG CANCER CARE IN SAUDI ARABIA

Bridging Diagnostic Gaps and Advancing Precision Delivery

EXECUTIVE SUMMARY

Saudi Arabia has made strong advances in lung cancer care through investments in tertiary hospitals, biomarker testing, and access to key targeted therapies. Public sector initiatives under Vision 2030 have prioritized cancer infrastructure and introduced national clinical guidelines aligned with international standards. However, **lung cancer remains a leading cause of cancer mortality**, and survival is limited by late diagnosis, underuse of biomarker testing in non-tertiary settings, and the absence of a national screening program.

As a system at **Maturity Level 3 – Intermediate**, Saudi Arabia has a foundation in place—but must now scale early detection, improve biomarker adoption, and ensure timely, regionally equitable access to therapies.

CURRENT SITUATION

Saudi Arabia's healthcare system is publicly funded, with lung cancer care primarily delivered through Ministry of Health (MoH) hospitals and leading academic medical centers. The Saudi Lung Cancer Guidelines align with NCCN/ESMO standards, and some private hospitals provide access to advanced diagnostics and immunotherapy. However, regional hospitals often lack biopsy, pathology, and molecular testing capabilities. The National Cancer Registry exists but lacks granular, mutation-specific survival data. There are isolated biomarker programs and access to targeted therapy in large cities (Riyadh, Jeddah, Dammam), but implementation varies, and early detection is not integrated into primary care workflows. Palliative care is expanding but remains under-resourced in some governorates.

Saudi Arabia is currently at Maturity Level 3 – Intermediate, meaning the country has a functioning healthcare system with partial access to advanced diagnostics and therapies, but continues to face challenges in nationwide implementation, early detection infrastructure, and equitable biomarker adoption.

INTRODUCTION

Lung cancer is the **second most common cause of cancer death** in Saudi Arabia, with a higher burden among males, especially in older age groups. High smoking prevalence and limited early symptom awareness contribute to the majority of cases being detected at advanced stages. EGFR and ALK testing are available in large public hospitals such as King Faisal Specialist Hospital and King Fahad Medical City, and TKIs like osimertinib and alectinib are reimbursed.

Despite these advances, access to molecular testing is limited outside major urban centers. There is **no formal LDCT screening**, and general practitioners are not systematically trained in early symptom referral. To reduce lung cancer mortality, Saudi Arabia must build on its tertiary strength and ensure early, consistent, and precision-focused care across all regions.



LUNG CANCER IN SAUDI ARABIA

Key Issues and Policy Recommendations

Pillar	Fact	Barrier	Policy Recommendations
Infrastructure	Major centers offer biomarker testing and advanced oncology care...	...but smaller and peripheral hospitals lack diagnostic and molecular capacity.	Expand regional molecular labs and enable national sample referral pathways.
Access to Treatment	Public hospitals cover targeted therapies and immunotherapy for eligible patients...	...but regional inconsistencies and late diagnosis delay initiation.	Create fast-track treatment access pathways and improve referral timelines from primary care.
Research & Innovation	Some lung cancer trials are hosted at tertiary centers...	...but broader participation and data collection are limited.	Promote multicenter national lung cancer research and registry-linked clinical trials.
Awareness & Education	Anti-smoking and public health campaigns are growing...	...but lung cancer awareness among non-smokers and younger patients is limited.	Launch tailored campaigns addressing early symptoms and high-risk populations.
Survival Rates	Late-stage diagnosis dominates, with modest 5-year survival...	...and mutation-specific outcomes are not tracked systematically.	Integrate EGFR/ALK/KRAS-specific survival tracking into national cancer registry.
Early Detection & Palliative Care	LDCT is not yet implemented nationally...	...and GPs are not consistently trained in lung cancer suspicion.	Pilot LDCT screening in high-risk populations and embed early detection into GP guidelines.
Biomarker	EGFR and ALK testing is available in main hospitals...	...but HER2, MET, RET, NTRK, and PD-L1 are not routinely tested in many settings.	Standardize comprehensive biomarker panels and include reflex testing in all advanced NSCLC cases.
Clinical Guidelines	Saudi guidelines are aligned with global standards...	...but adherence and updates vary across hospitals.	Enforce lung cancer guideline implementation through hospital audits and CME programs.
Reimbursement	Targeted therapies are reimbursed for eligible patients...	...but coverage delays or denials are reported in some governorates.	Create a national funding mechanism for equitable access to all approved lung cancer drugs.
Screening	No LDCT screening program is currently in place...	...despite a growing high-risk population.	Introduce a national LDCT screening pilot with MoH and link to smoking cessation services.

CONCLUSION

Saudi Arabia has laid the groundwork for modern lung cancer care, with tertiary centers offering high-quality diagnostics and therapies. However, the challenge now lies in ensuring **early diagnosis, consistent biomarker access, and equitable delivery across all regions**. A national LDCT screening program, decentralized biomarker testing, and real-time data reporting can accelerate progress toward reducing lung cancer mortality.



KEY POLICY MESSAGES

- 1 Lung cancer remains a top cause of death due to late-stage presentation and low screening uptake.
- 2 Biomarker testing is uneven, with newer mutations under-tested in non-tertiary settings.
- 3 National guidelines are strong but require consistent implementation and updates.
- 4 Targeted therapies are reimbursed, but region-based access gaps remain.

CALL TO ACTION

- **Establish a national LDCT lung cancer screening initiative** targeting smokers and high-risk individuals aged 55–74.
- **Expand access to biomarker testing** (HER2, RET, MET, NTRK, PD-L1) and mandate re-testing at progression.
- **Ensure full reimbursement of all approved therapies** and equal access across all provinces.
- **Train general practitioners and family physicians** on early signs, risk factors, and timely referral protocols.
- **Launch mutation-linked cancer registry tracking** and publish annual outcome audits to guide precision policy.