International Cancer Patient Coalition

Serbia

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: ~6,400 new cases annually
- Incidence rate: ~70 per 100,000 population
- Lung cancer deaths annually: ~5,700
- Leading cause of cancer-related deaths in Serbia
- Higher prevalence among men, though rates in women are rising
- Most cases diagnosed at Stage III or IV
- 5-year survival rate: ~15–18%
- Smoking prevalence: ~34% in adults (one of the highest in Europe)
- High correlation between smoking and lung cancer incidence
- No national lung cancer screening program in place
- Access to targeted therapies and immunotherapies is limited but improving
- PET/CT and molecular testing available in specialized centers

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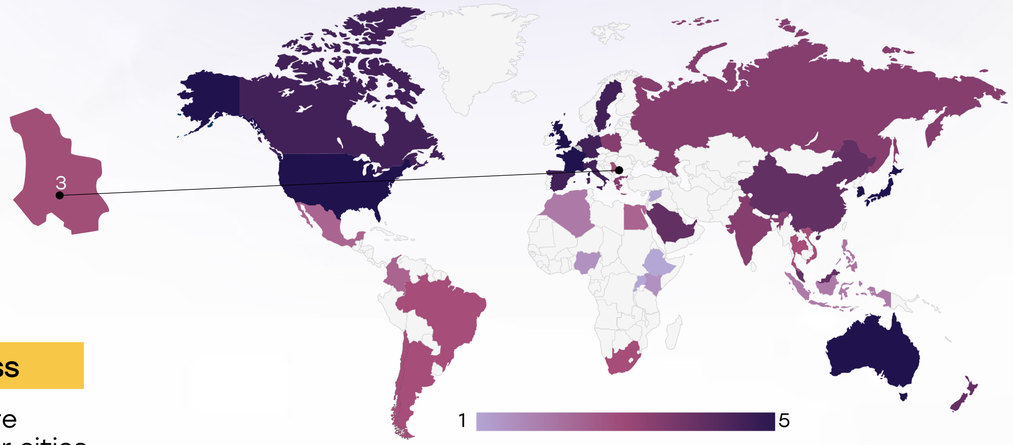
Infrastructure



Strengths

- Serbia has a centralized oncology care system with specialized institutions such as the Institute for Oncology and Radiology of Serbia (IORS) in Belgrade, offering comprehensive diagnostics and treatment.

Weakness

- Infrastructure outside major cities is limited, with long wait times for imaging (CT, PET-CT) and pathology services in regional centers.

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Opportunity

- Ongoing national investments under Serbia's Cancer Control Plan 2020–2025 aim to expand radiology and oncology infrastructure across districts.

Threats

- Regional disparities persist, with rural populations often facing delayed referrals and diagnosis due to under-resourced primary health facilities.

5. Advanced nationwide infrastructure, widespread availability in public and private sectors, integration with clinical practice.

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	3	3
Kenya	1	2
Nigeria	1	2
Egypt	2	3
Morocco	2	2
Algeria	2	2
Ethiopia	1	1
India	3	4
Japan	4	4
South Korea	4	4
China	4	4
Thailand	3	3
Singapore	4	4
United Kingdom	4	4
Germany	5	4
France	4	4
Netherlands	5	4
Sweden	5	4
Italy	4	3
Spain	4	3
Poland	4	3
Mexico	2	4
Brazil	3	3
Argentina	3	3
Chile	3	3
Colombia	2	4
United States	5	5
Canada	5	4
Australia	4	4
New Zealand	4	3
Greece	4	3
Rwanda	1	1
Uganda	1	1
Serbia	3	3
Saudi Arabia	4	4
UAE	4	3
Syria	1	1
Indonesia	2	2
Vietnam	4	4
Philippines	2	2
Russia	3	3
Malaysia	3	3

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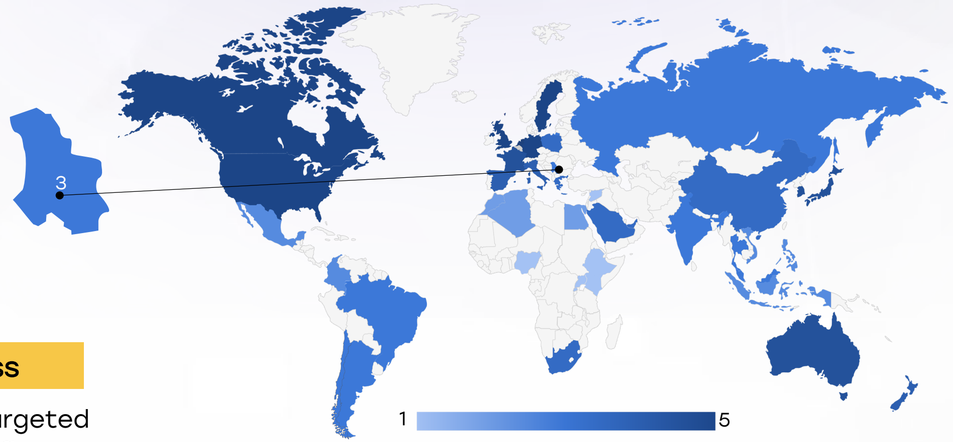
Treatment Access, Research Funding and Awareness Campaigns



Strengths

- Chemotherapy, surgery, and radiation therapy are covered by Serbia's public health insurance and available in tertiary centers.

Weakness

- Access to targeted therapies (e.g., osimertinib, immunotherapy) is limited and often requires complex approvals; inclusion in the positive reimbursement list is slow.

S W O T

Opportunity

- Increased participation in EU-funded projects and Horizon Europe research initiatives may enhance research capacity and funding.

Threats

- Limited national lung cancer-specific awareness campaigns result in low public knowledge and late presentation of symptoms.

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	3	3	4
Kenya	1	1	1
Nigeria	1	1	1
Egypt	2	2	2
Morocco	2	2	2
Algeria	2	2	2
Ethiopia	1	1	1
India	3	3	3
Japan	5	4	5
South Korea	5	4	5
China	4	3	4
Thailand	3	3	3
Singapore	5	5	5
United Kingdom	5	5	5
Germany	5	5	5
France	5	4	5
Netherlands	5	5	5
Sweden	5	5	5
Italy	5	4	4
Spain	5	4	4
Poland	4	3	4
Mexico	2	2	3
Brazil	3	3	3
Argentina	3	3	3
Chile	3	3	3
Colombia	2	2	3
United States	5	5	5
Canada	5	5	5
Australia	5	4	5
Zealand	4	4	4
Greece	4	3	4
Rwanda	1	1	1
Uganda	1	1	1
Serbia	3	3	3
Saudi Arabia	4	3	4
UAE	4	3	4
Syria	1	1	1
Indonesia	3	2	3
Vietnam	3	2	3
Philippines	2	2	3
Russia	4	3	3
Malaysia	4	3	3

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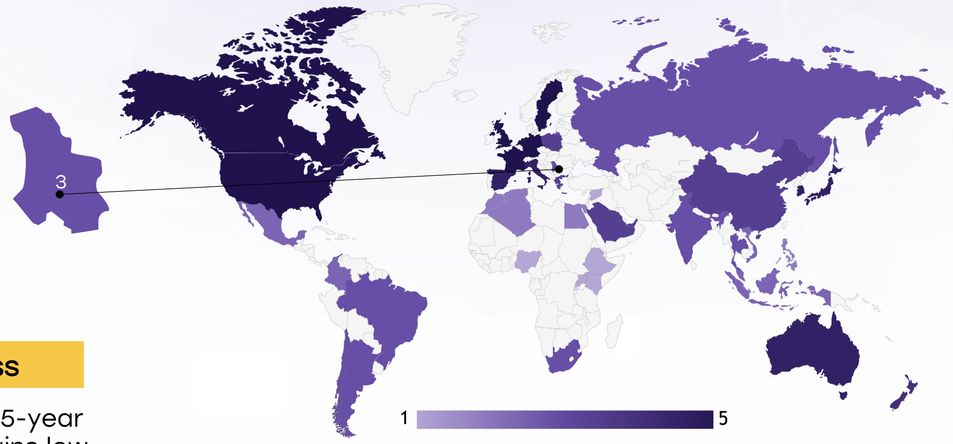
Survival Rates, Early Detection and Palliative Care



Strengths

- Serbia has developed a national palliative care strategy and is integrating services into primary care, with basic training available for general practitioners.

Weakness

- Lung cancer 5-year survival remains low—estimated around 13%—due to late-stage diagnosis and limited access to novel treatments.

S W O T

Opportunity

- Early detection programs piloted for breast and cervical cancer offer a template for extending screening awareness to lung cancer.

Threats

- Inconsistent palliative care coverage across regions may limit quality of life for advanced-stage lung cancer patients.

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	3	3	3
Kenya	1	1	1
Nigeria	1	1	1
Egypt	2	2	2
Morocco	2	2	2
Algeria	2	2	2
Ethiopia	1	1	1
India	3	3	3
Japan	5	4	5
South Korea	5	4	5
China	3	3	4
Thailand	3	3	3
Singapore	5	5	5
United Kingdom	5	5	5
Germany	5	5	5
France	5	5	5
Netherlands	5	5	5
Sweden	5	5	5
Italy	5	4	5
Spain	5	4	5
Poland	3	3	4
Mexico	2	3	2
Brazil	3	3	3
Argentina	3	3	3
Chile	3	3	3
Colombia	2	3	2
United States	5	5	5
Canada	5	5	5
Australia	5	4	5
New Zealand	4	4	4
Greece	3	3	4
Rwanda	1	1	1
Uganda	1	1	1
Serbia	3	3	3
Saudi Arabia	4	3	4
UAE	4	3	4
Syria	1	1	1
Indonesia	3	2	3
Vietnam	3	2	3
Philippines	2	2	3
Russia	4	3	3
Malaysia	3	2	3

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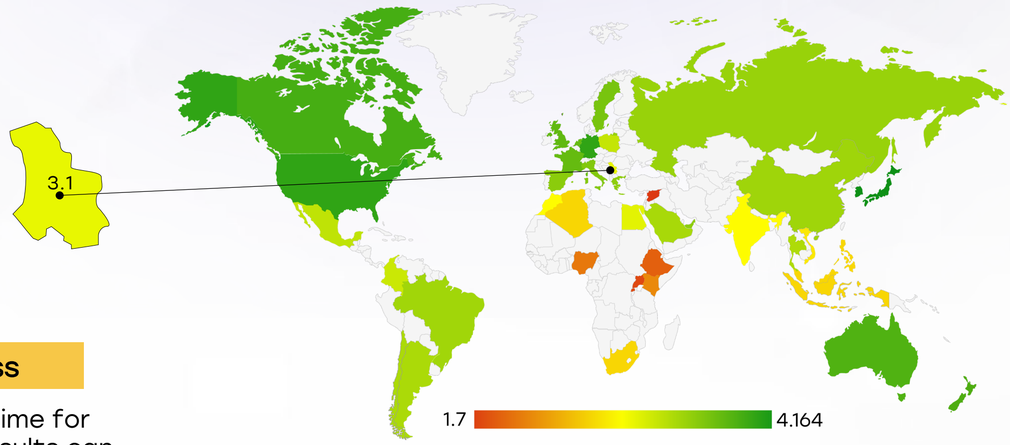
Utilization of Biomarkers



Strengths

- EGFR, ALK, and PD-L1 testing is available in tertiary labs, particularly at the Institute for Oncology and Radiology and other academic hospitals.

Weakness

- Turnaround time for biomarker results can exceed 3 weeks due to high demand and limited lab capacity; testing is not always reimbursed.

S W O T

Opportunity

- Centralizing molecular diagnostics and investing in automation and training can improve efficiency and accessibility.

Threats

- High cost of comprehensive NGS panels and delayed integration into public reimbursement may limit their broader clinical use.

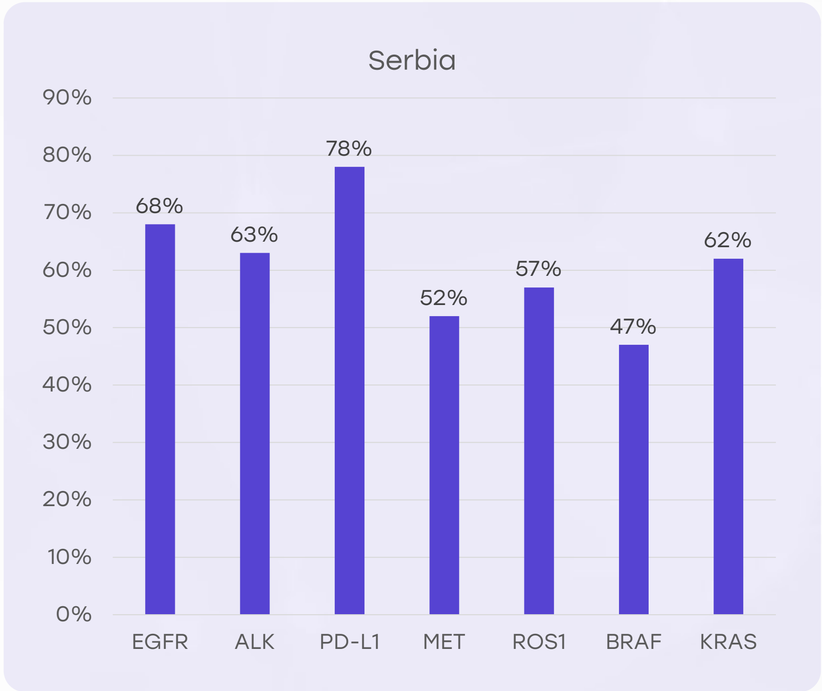
5. Biomarker testing is widely available and routinely performed as part of standard clinical practice. Strong integration into treatment decisions, with national coverage and reimbursement ensuring accessibility.

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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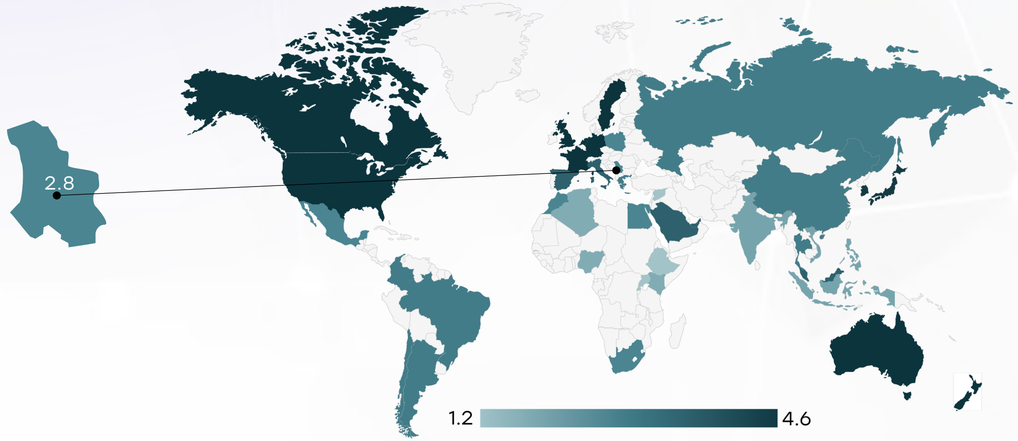
Clinical Guidelines



Strengths

- Serbia has adopted national lung cancer treatment protocols aligned with European Society for Medical Oncology (ESMO) guidelines.

Weakness

- Implementation varies between hospitals, with gaps in monitoring and limited dissemination in rural clinical settings.

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Opportunity

- Expanding continuous medical education (CME) and guideline training for general practitioners and pulmonologists can enhance uptake.

Threats

- Shortage of oncology specialists and limited digital infrastructure may impede real-time guideline updates and standardized care.

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

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Reimbursement

Strengths

- The National Health Insurance Fund covers standard diagnostics and first-line treatments for lung cancer.

Weakness

- Reimbursement for newer therapies (e.g., osimertinib, immune checkpoint inhibitors) is delayed, often requiring exceptional approvals.

S W O T

Opportunity

- Streamlining health technology assessment (HTA) and faster inclusion of evidence-based treatments could improve access.

Threats

- Budget limitations and dependence on centralized approval mechanisms may lead to unequal access based on geography or hospital status.

- 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	●	●

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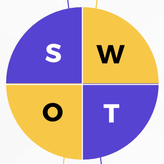
Lung Cancer Screening

Strengths

- Serbia is piloting early detection strategies and is considering lung cancer screening inclusion under national NCD priorities.

Weakness

- No formal low-dose CT (LDCT) screening program exists; detection still relies heavily on symptomatic diagnosis.



Opportunity

- Integration of LDCT screening for high-risk individuals (e.g., smokers over 50) into national NCD programs could enhance early diagnosis.

Threats

- Competing public health priorities (e.g., cardiovascular disease) may delay implementation of formal lung cancer screening programs.

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