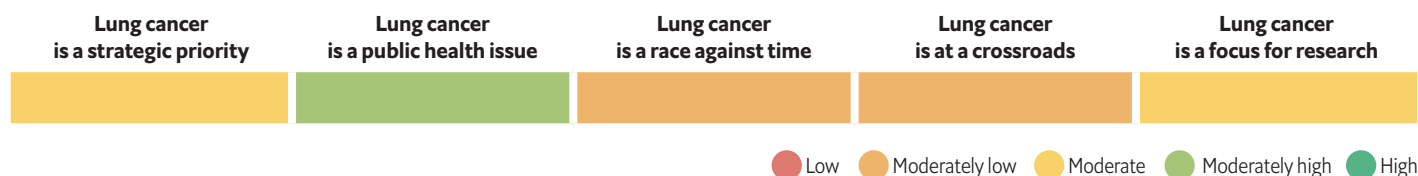




Romania: Lung Cancer Country Profile



Scorecard Summary

Romania has moderate scores across all five domains: scoring 'moderately high' in the second domain, 'moderate' in the first and fifth domains, and 'moderately low' in the third and fourth domains. Poor performance in the first domain is because Romania does not have a national cancer control plan. Adequate performance in the second domain is due to strong anti-tobacco and environmental policies, while moderate performance in the third domain can be addressed by developing a timeframe for fast-tracking people suspected of having lung cancer for diagnostic testing and developing a rapid referral system for moving a patient from secondary to tertiary care. We discuss opportunities for improvement at the end of this country profile.

National cancer control plans demonstrate that cancer is a priority




























Awareness of lung cancer and the challenges it poses to Romanians is increasing at the governmental level. A national cancer control plan describes how a country intends to prioritise and address its cancer burden. Without a plan, little coordinated action is likely to occur. The plan must include details on how the country will focus on the oncological needs through the prioritisation and coordination of the following elements: discussion of prevention, screening, early detection, symptoms to look for in primary care, diagnosis and treatment. High-quality plans are regularly updated, realistic and goal-oriented, with a detailed implementation plan and an appropriate, sufficient and clearly identified source of funding. Romania is currently working on a plan, which will help to ensure a coordinated approach for oncology services. Workshop participants emphasised that understanding how to develop focused early detection programmes and improving access to the latest treatments are two important areas in need of attention.

Lung cancer incidence (Rate per 100,000, 2017)



Romania



		Lung cancer is a strategic priority	Lung cancer is a public health issue	Lung cancer is a race against time	Lung cancer is at a crossroads	Lung cancer is a focus for research
 Austria (AT)		Moderate	Moderately high	Moderate	Moderately high	High
 Belgium (BE)		Moderately low	Moderately high	Moderate	Moderate	Moderately high
 Bulgaria (BG)		Moderately low	Moderately high	High	High	High
 Croatia (HR)		Moderately low	Moderately high	Moderately low	Moderate	Moderately high
 Czech Republic (CZ)		Moderate	Moderately high	Moderately low	Moderately low	Moderately high
 Denmark (DK)		High	High	High	High	Moderately high
 Finland (FI)		Moderate	Moderately high	Low	High	High
 France (FR)		Moderate	High	Moderately low	Moderately high	Moderate
 Germany (DE)		Moderate	Moderately high	Moderately low	Moderately high	Moderate
 Greece (GR)		Moderate	Moderately high	Low	Moderate	Moderately low
 Hungary (HU)		Moderately low	Moderately high	Low	Moderate	Moderate
 Ireland (IE)		Moderately high	Moderately high	High	Moderate	High
 Israel (IL)		Moderate	Moderate	Moderately high	High	Moderately high
 Italy (IT)		Moderate	Moderately high	Moderately low	Moderately high	Moderate
 Netherlands (NL)		Moderate	Moderately high	High	High	Moderately high
 Norway (NO)		Moderately high	Moderately high	High	High	Moderately high
 Poland (PL)		High	High	Moderately low	Moderate	Moderate
 Portugal (PT)		Moderately high	Moderately high	High	Moderately high	Moderate
 Romania (RO)		Moderate	Moderately high	Moderately low	Moderately low	Moderate
 Russia (RU)		Moderately high	Moderately high	Moderately low	Moderate	Moderate
 Serbia (RS)		Moderate	Moderate	Moderately low	Moderately low	Moderate
 Slovakia (SK)		Moderately high	Moderate	Moderately high	Low	High
 Slovenia (SI)		Moderately high	Moderate	High	Moderately high	High
 Spain (ES)		Moderate	Moderate	Low	Moderately high	Moderate
 Sweden (SE)		High	Moderately high	High	High	Moderately high
 Switzerland (CH)		Moderately high	Moderate	Moderately low	Moderate	Moderately high
 United Kingdom (UK)		Moderately high	High	High	High	High

● Low
 ● Moderately low
 ● Moderate
 ● Moderately high
 ● High

Lung cancer in numbers

Lung cancer statistics (Rate per 100,000, 2017)	Romania	Europe	Global
Incidence	30	33	27
Prevalence	32	54	41
Mortality	30	27	24
Disability-Adjusted Life Years (DALYs)	760	628	503
Years Lived with Disability (YLDs)	7	8	7
Years of Life Lost (YLLs)	754	619	496

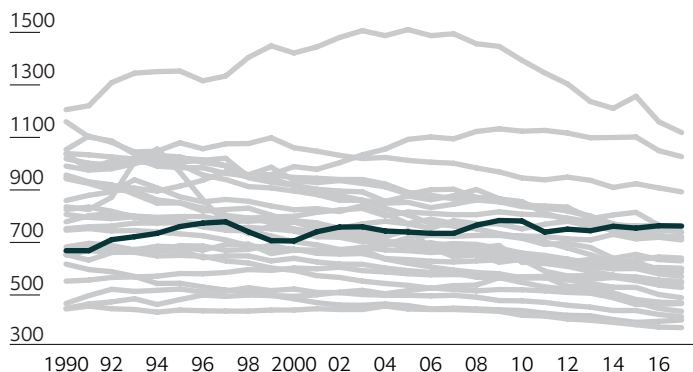
Source: Global Burden of Disease, 2017.¹ All figures are age-standardized.

The costs of tobacco

Tobacco costs the economy 24,704 million new leu in terms of direct costs to health expenditures and indirect costs due to lost productivity from morbidity and early mortality.² Every year, tobacco-related diseases cause more than 36,600 deaths in Romania.²

Burden trend

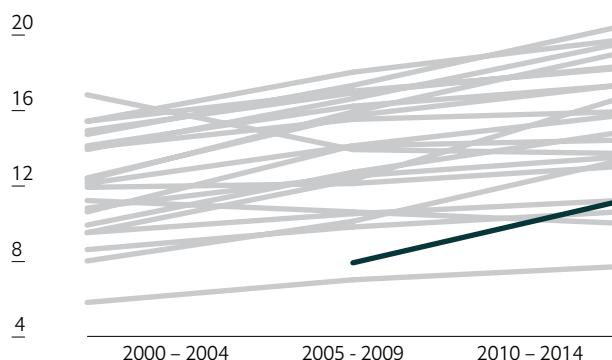
(DALY rate per 100,000, 1990-2017)



Source: Global Burden of Disease, 2017.¹ All figures are age-standardized.

Survival trend

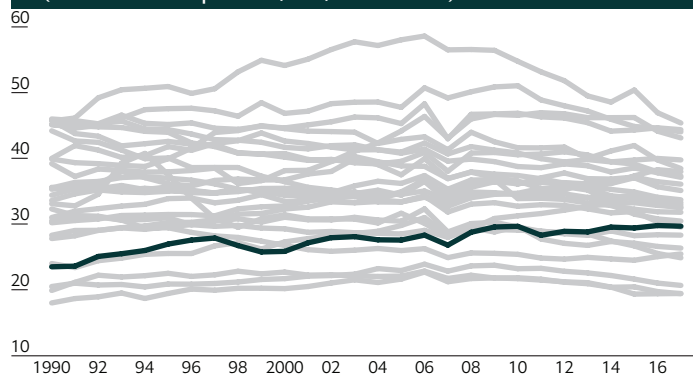
(% 5 year survival)



Source: CONCORD-3, 2018.³

Incidence trend

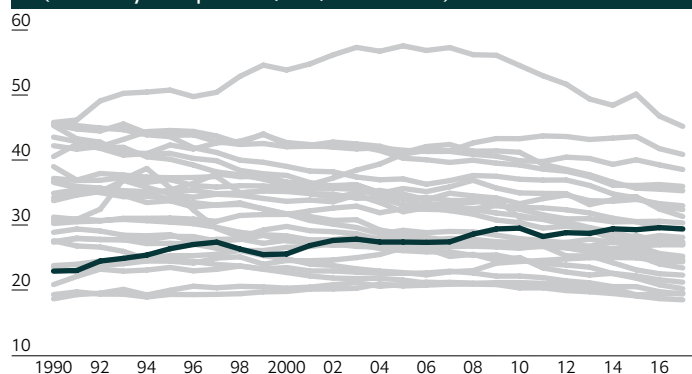
(Incidence rate per 100,000, 1990-2017)



Source: Global Burden of Disease, 2017.¹ All figures are age-standardized.

Mortality trend

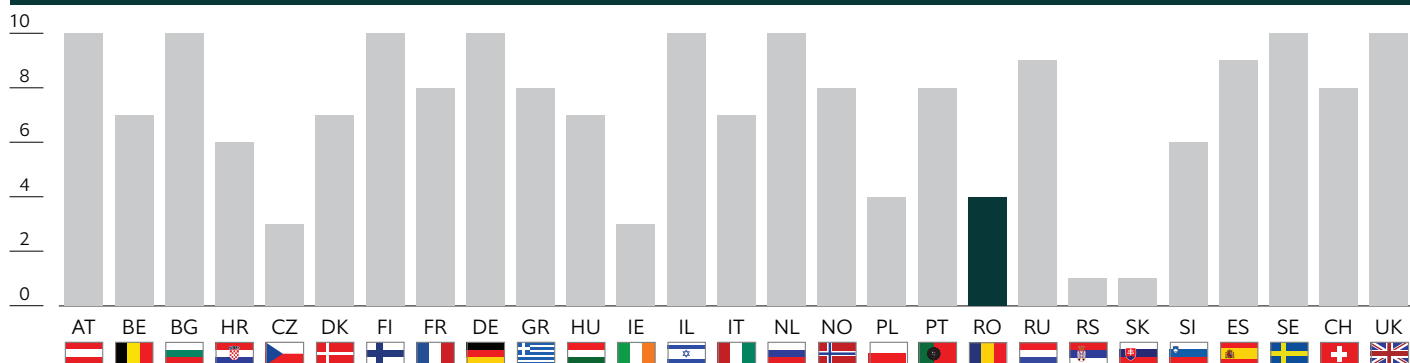
(Mortality rate per 100,000, 1990-2017)



Source: Global Burden of Disease, 2017.¹ All figures are age-standardized.

Access to medicines

National score for indicator 13 of the scorecard, which measures reimbursement status for a basket of drug/indication combinations



Source: Economist Intelligence Unit research.

Scorecard results

Indicator		Range	Score	Justification
Lung cancer is a strategic priority				
1	Operational, comprehensive, up to date national cancer control plan	0 – 5	0	<ul style="list-style-type: none"> 0 Romania does not have a National Cancer Control Plan. There is a National Health Strategy, 2014-2020, but this is not a national cancer control plan. 0 A specific lung cancer control plan has not been published by the government or health ministry.
2	Comprehensive clinical guidelines for lung cancer	0 – 6	6	<ul style="list-style-type: none"> +1 Lung cancer clinical guidelines were published jointly by the Society of Medical Oncology, Society of Thoracic Surgery, Romanian Society of Radiotherapy and Medical Oncology, Romanian Society of Pneumology, Section of Pulmonary Cancer and Section of Bronchology in 2015.⁴ +1 Guidelines mention screening but no particular method is endorsed. +4 Guidelines cover diagnosis, treatment, supportive / palliative care and shared decision-making.
Lung cancer is a public health issue				
3	Tobacco control policies and public health measures	0 – 9	9	<ul style="list-style-type: none"> +2 National objectives on tobacco control and a national agency for tobacco control exist.⁵ +1 Romania is party to the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC). +1 At least one national mass media campaign ran during the survey period (up to 2016). +1 Advertising is banned on national TV and radio. +1 Law mandates that health warnings appear on tobacco packages. +3 National smoke-free legislation exists for indoor offices, restaurants/ cafes/pubs/bars and public transportation.
4	E-cigarettes regulation and public health measures	0 – 4	2	<ul style="list-style-type: none"> +1 E-cigarettes are regulated by law. +1 Law restricts advertising, promotion and sponsorship related to e-cigarettes. 0 No clear evidence to suggest that the sale of e-cigarettes is subject to age restrictions. 0 E-cigarettes are only banned on public transport.
5	National policies and programmes for environmental exposure control	0 – 2	2	<ul style="list-style-type: none"> +1 Air quality strategy mentioned within the general National Strategy of Romania on Climate Change, 2013-2020. +1 A radon control programme has been published by the Romanian Government.
6	Evidence-based approach to lung cancer screening	0 – 1	0	<ul style="list-style-type: none"> 0 No data found to show that Romania has conducted a lung cancer screening study or trial.
7	Patient organisations involvement in policy development	0 – 3	1	<ul style="list-style-type: none"> 0 A specific lung cancer patient organisation has not been identified in Romania. 0 There is no clear evidence to suggest that patients were represented in clinical guideline development. +1 Civil society has the opportunity to comment on Health Technology Assessment (HTA) recommendations.
Lung cancer is a race against time				
8	Suspected lung cancer patient diagnosis within a specific time frame	0 – 2	0	<ul style="list-style-type: none"> 0 Lung cancer guidelines do not mention fast-tracking suspected patients to obtain diagnostic testing. 0 Lung cancer guidelines do not mention any specific timeframe for diagnostic referral for suspected lung cancer patients. However, guidelines mention that an immediate chest x-ray is to be done if red flag symptoms are present.
9	Guidelines/ pathways for rapid referral to quality care	0 – 2	1	<ul style="list-style-type: none"> 0 Lung cancer guidelines do not mention pathways for rapid referral for patients to secondary or tertiary care. However, guidelines recommend rapid referral for radiography, stating that pulmonary radiographs should be available to the family physician as soon as possible. +1 Multidisciplinary team mentioned to guide treatment plan in lung cancer guidelines.

Indicator	Range	Score	Justification
Lung cancer is at a crossroads			
10 Medical and surgical specialists	number per 100,000	unscored	<ul style="list-style-type: none"> In 2015: 5.70 pulmonologists 3.10 oncologists 1.60 thoracic surgeons 12.83 general surgeons⁶
11 Radiotherapy accessibility	unmet need	unscored	<ul style="list-style-type: none"> -77 = the difference between demand and supply of radiotherapy megavoltage machines (MVM). (minus sign = deficit) There is an insufficient supply of radiotherapy megavoltage machines in relation to demand. Percent of unmet need between observed and expected number of radiotherapy megavoltage machines is -77%. No data available to assess the length of time a lung cancer patient must wait in order to access radiotherapy treatment.
12 Tumour testing recommendations and accessibility	0 – 6	3	<ul style="list-style-type: none"> +1 Lung cancer guidelines mention molecular testing. +1 Specific markers are identified: EGFR and ALK. +1 EGFR approved and reimbursed. 0 ALK, ROS1 and PD-L1 are approved but not reimbursed.
13 Key personalised medicines reimbursement and accessibility	0 – 10	4	<ul style="list-style-type: none"> +4 Of the 13 drug and indication combinations we looked at, 7 were reimbursed: Afatinib (indications 1), Crizotinib (indications 1, 2), Pembrolizumab (indications 1, 2), Nivolumab (indication 1), Osimertinib (indication 1). See matrix in the report's chapter 'Lung Cancer is at a crossroads'.
14 Understanding psychological burden of lung cancer and access to support services	0 – 2	0	<ul style="list-style-type: none"> 0 Lung cancer guidelines do not include psychological assessment or mention the psychological burden of lung cancer. 0 Lung cancer guidelines do not present a referral pathway to psychological support services.
15 Patient access to supportive / palliative care services	0 – 2	0	<ul style="list-style-type: none"> 0 Lung cancer guidelines do not include a referral pathway to supportive / palliative care services. However, guidelines recommend that early initiation of palliative care be provided in parallel with standard oncological therapy. 0 There is no evidence to demonstrate that oncologists in Romania have training in supportive / palliative care.
Lung cancer is a focus for research			
16 Clinical and outcomes data collection	0 – 7	5	<ul style="list-style-type: none"> +1 Population-based cancer registry (PBCR national or regional) (1 point out of a possible 3).⁷ +4 High quality complete vital registration (4 points out of a possible 4).⁷
17 Research support and funding	R&D as % of GDP; ratio of clinical trials	unscored	<ul style="list-style-type: none"> 0.48% of GDP spent on research and development in 2016.⁸ Number of clinical trials between 2009-2018 = 147.⁹ The ratio of 2009-2018 clinical trials to GDP (billions) = 0.69.

Opportunities for Improvement

Opportunity 1

Recommendation

- Romania needs to publish a National Cancer Control Plan.

Rationale

- *Indicator 1: Romania does not have a National Cancer Control Plan. It has a National Health Strategy 2014-2020, but this is not a national cancer control plan. A national cancer control plan should ideally include the following elements: discussion of prevention, screening and early detection, symptoms to look for in primary care, diagnosis, treatment, an implementation plan and a funding source. A specific lung cancer control plan has not been published by the government or health ministry.*

Opportunity 2

Recommendation

- Participation in lung cancer screening trials and studies may enable Romania to determine whether screening is appropriate for its population.

Rationale

- *Indicators 6 & 17: There is no evidence to show that Romania has participated in a lung cancer screening study or clinical trial. Workshop participants felt that this is an important area to be addressed in Romania as involvement in scientific research can improve patient access to new treatments.*

Opportunity 3

Recommendation

- Involvement of patient organisations in national assessments of disease and policy development can help to build consensus.

Rationale

- *Indicator 7: A specific lung cancer patient organisation has not been identified in Romania. Therefore we have no evidence that patients were represented in clinical guideline development. Involving patients in the development of clinical guidelines can 1) help to identify issues that may be overlooked by health professionals, 2) influence the development of recommendations from a patient and carer perspective, and 3) emphasise the importance of including shared decision-making. A defined structure for obtaining patient involvement is key. There is a process to involve civil society in Health Technology Assessments (HTAs) in Romania.*

Opportunity 4

Recommendation

- Referral for diagnostic assessment for people suspected of having lung cancer should be prioritised within a specified time period as there is currently no mention of fast-tracking for diagnostic testing and lung cancer patients need a rapid referral system to obtain secondary or tertiary care.

Rationale

- *Indicators 8 & 9: Providing a timeframe within which people suspected of having lung cancer should receive diagnostic testing is an important milestone for delivery of care as well as having a timeframe for confirmed lung cancer patients to receive secondary or tertiary care. Romania does not provide such timeframes, nor does it have a dedicated fast-track referral process for diagnostic testing or a rapid referral system for secondary or tertiary care in its lung cancer guidelines. It would benefit patients in Romania to have pathways and specific timeframes set in the national lung cancer guidelines because it helps to establish a national benchmark.*

Opportunity 5

Recommendation

- Improved diagnostic testing (including increased capacity) is needed for people suspected of having lung cancer.

Rationale

- *Indicator 8: Streamlining the time to diagnosis through improved diagnostic testing will advance the ability to identify people with the disease in earlier stages and help to ensure treatment is started sooner in the disease process. Workshop participants called for a coherent programme to provide tests that are cost efficient and offered within an organised programme to assist clinicians, who are often overloaded.*

Opportunity 6

Recommendation

- Ensure that the psychological burden faced by lung cancer patients is addressed with pathways to access psychological support services. Supportive and palliative care should be included in the lung cancer guidelines.

Rationale

- *Indicators 14 & 15: Romania neither includes psychological assessment nor mentions the psychological burden of lung cancer in their lung cancer guidelines. Additionally, there is no referral pathway for either psychological support or supportive / palliative care services. While the guidelines recommend that early initiation of palliative care be provided in parallel with standard oncological therapy, no referral pathway is provided. There is also no evidence that oncologists in Romania receive formal training in supportive and palliative care.*

Opportunity 7

Recommendation

- Cancer registries lack clinical data. In Romania, a clinical cancer registry could provide helpful data.

Rationale

- *Indicator 16: Romania has a cancer registry but Romania has a cancer registry but it needs improvement, although the complete vital registration system has been evaluated as being high quality. The population-based cancer registry (PBCR) needs to be modernised to improve access to information. Additionally, clinicians have suggested that adding a stronger clinical component to the cancer registry could help to improve the overall care that lung cancer patients receive. Workshop participants want to see improvements in the quality of the cancer registry to ensure it provides sufficient information to support budgetary decision making.*

Methods

An initial literature review identified key frameworks and programmes that have been previously used to prioritise policy approaches for the prevention and control of lung cancer in a range of countries. From this a draft set of indicators was developed. An editorial advisory board was then convened to review and advise on the development of the indicator framework. Out of this process, The EIU identified a set of 17 indicators to evaluate each selected country across five domains.

A range of international and national sources were used for the data collection. The EIU team carried out both primary and secondary research to identify recent authoritative data to populate the country scorecard. Judgments were made based on the best information available. Because of the nature of scoring—wherein complex matters are collapsed into simple scores—we note that not all readers will agree with all scores. After draft scores were assigned, the EIU attended a workshop of external country-based experts, hosted by the sponsor, in order to discuss the scores and help develop recommendations.

The focus of the research programme is not to rank countries but rather to identify opportunities to improve patient outcomes in each country.

See the regional paper for the full methodology.

References

1. Institute for Health Metrics and Evaluation (IHME). GBD Results Tool [Internet]. Seattle, WA: University of Washington; [cited 3 June 2019]. Available from: <http://ghdx.healthdata.org/gbd-results-tool>.
2. Drope J, Schluger N, Cahn Z, et al. The Tobacco Atlas [Internet]. Atlanta: American Cancer Society and Vital Strategies; [cited 3 June 2019]. Available from: <https://tobaccoatlas.org/>.
3. Allemani C, Matsuda T, Di Carlo V, et al. Global surveillance of trends in cancer survival 2000-14 (CONCORD-3): analysis of individual records for 37 513 025 patients diagnosed with one of 18 cancers from 322 population-based registries in 71 countries. *Lancet*. 2018;391(10125):1023-75.
4. Ghid Pentru Managementul Cancerului Pulmonar: Partea A li-A – Tratament. Bucurest: Societatea Romana de Pneumologie, 2015. Available from: <https://www.srp.ro/ghiduri/Ghid%20pentru%20managementul%20cancerului%20pulmonar%20-%20Partea%20a%20II-a%20-%20Tratament.pdf>.
5. WHO. Tobacco control country profiles [Internet]. Geneva: World Health Organization; [cited 23 August 2019]. Available from: https://www.who.int/tobacco/surveillance/policy/country_profile.
6. Eurostat. Healthcare personnel statistics [Internet]. Luxembourg: European Commission [cited 23 August 2019]. Available from: https://ec.europa.eu/eurostat/statistics-explained/index.php/Healthcare_personnel_statistics_-_physicians#Healthcare_personnel.
7. American Cancer Society, WHO, UICC. The cancer atlas [Internet]. Atlanta (GA): American Cancer Society; [cited 23 August 2019]. Available from: <http://canceratlas.cancer.org/data/#?view=map>.
8. World Bank. Research and development expenditure (% of GDP). Washington, DC: World Bank Group, 2019. Available from: <https://data.worldbank.org/indicator/gb.xpd.rsdv.gd.zs>.
9. WHO. International Clinical Trials Registry Platform (ICTRP) [Internet]. Geneva: World Health Organization; [cited 23 August 2019]. Available from: <http://apps.who.int/trialsearch/>.