NLCA
National Lung Cancer Audit

NATCAN
National Cancer Audit Collaborating Centre

State of the Nation Report 2024

An audit of care received by patients diagnosed with lung cancer in England and Wales during 2022

Version 2: May 2024

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NATCAN
National Cancer Audit Collaborating Centre

The National Cancer Audit Collaborating Centre (NATCAN) is a national centre of excellence to evaluate cancer care in England and Wales. It is part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP) and is funded by NHS England and the Welsh Government.

Royal College of Surgeons of England
ADVANCING SURGICAL CARE

The Royal College of Surgeons of England (RCS) is an independent professional body committed to enabling surgeons to achieve and maintain the highest standards of surgical practice and patient care. The Project Team based in the Clinical Effectiveness Unit (CEU) at the RCS carried out the analysis of the data for the State of the Nation report 2024.

British Thoracic Oncology Group BTOG

The British Thoracic Oncology Group (BTOG) is the multi-disciplinary group for healthcare professionals involved with thoracic malignancies throughout the UK. Registered Charity no: 1166012

Society for Cardiothoracic Surgery in Great Britain and Ireland

The SCTS is the representative body for cardiothoracic surgery in Great Britain & Ireland. Registered Charity no: 1113536

HQIP
Healthcare Quality Improvement Partnership

The NLCA is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). HQIP is led by a consortium of the Academy of Medical Royal Colleges, and the Royal College of Nursing. Its aim is to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP holds the contract to commission, manage and develop the National Clinical Audit and Patient Outcomes Programme (NCAPOP), comprising around 40 projects covering care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual projects, other devolved administrations and crown dependencies. https://www.hqip.org.uk/national-programmes

Cancer Registration in England and Wales
This work uses data that has been provided by patients and collected by the NHS as part of their care and support. For patients diagnosed in England, the data is collated, maintained and quality assured by the National Disease Registration Service (NDRS), which is part of NHS England. Access to the data was facilitated by the NHS England Data Access Request Service.

For patients diagnosed in Wales, the NLCA dataset is captured through a national system, Cancer Information System for Wales (CaNISC), after identification by hospital cancer services and uploaded via electronic MDT data collection systems to the Wales Cancer Network (WCN), Public Health Wales.

Version 2: May 2024

This version of the report includes the correction of typographical errors in the infographics on page 5, figures 2 and 3 on pages 7 and 12 and the final paragraph of the commentary on page 14.

Contents

Table 1. Recommendations and key findings

	Recommendation	Audience	Key results
R1	Ensure services are implementing targeted lung cancer screening for people aged 55 to 74 who are at high risk of lung cancer.	NHS England, Integrated Care Boards (ICBs), Welsh health boards, cancer alliances	England: the proportion of patients with stage I/II disease was 33.8% in 2022, an increase from 30.5% in 2021. Wales: the proportion was 30.0%, up from 24.0% in 2021.
R2	Ensure providers have thoracic surgery capacity to meet both current demand for curative surgery and to accommodate the increase in activity caused by the national rollout of the Targeted Lung Health Check programme.	NHS England, ICBs, Welsh health boards, cancer alliances, Welsh Health Specialised Services Committee	England: 18% of Non-Small Cell Lung Cancer (NSCLC) patients diagnosed in 2022 had a lung resection, compared with 20% in 2019; rates within Alliances ranged from 14% to 32%. Wales: 14% of NSCLC patients diagnosed in 2022 had a lung resection, compared with 16% in 2019.
R3	Ensure NHS hospitals have the necessary resources and capacity (1) to reduce the proportion of patients waiting more than 21 days from diagnosis to first treatment, and (2) for biomarker testing and the timely delivery of results for patients considered for systemic anti-cancer therapy (SACT)	NHS England, ICBs, Welsh health boards, cancer alliances	England: For patients with stage IV NSCLC, the median time from diagnosis to SACT was 43 days (35 days in 2021). For patients with Small Cell Lung Cancer (SCLC), the median was 17 days (15 days in 2021). Wales: For patients with stage IV NSCLC, the median time from diagnosis to SACT was 52 days (47 days in 2021). For patients with SCLC, the median was 21 days (16 days in 2021).
R4	Ensure at least 70% of patients with NSCLC stage IIIB-IVB and PS 0-1 receive systemic anti-cancer therapy (SACT) in line with NICE guidance.	NHS England, ICBs, Welsh health boards, cancer alliances	England: 60% of patients with NSCLC stage IIIB-IVB and PS 0-1 had SACT, reduced from 63% in 2021. Wales: 60% of patients with NSCLC stage IIIB-IVB and PS 0-1 had SACT, increased from 57% in 2021
R5	Aim to achieve high levels of data completeness in the cancer registration datasets, particularly the Rapid Cancer Registration Dataset and Cancer Outcome and Services Dataset (COSD) in England.	NHS England, ICBs, Welsh health boards, cancer alliances	England: Completeness of data on seen by Lung Cancer Nurse Specialist (LCNS) and smoking status was 60.3% (59% in 2021) and 48.2% (49% in 2021), respectively. Wales: Completeness of data was excellent overall, 98-100%, in key data items (97-100% in 2021)

1. Introduction

The aim of the National Lung Cancer Audit (NLCA) is to evaluate the patterns of care and outcomes for patients with lung cancer in England and Wales, and to support services to improve the quality of care for these patients.This State of the Nation report publishes information on the care received by patients diagnosed with lung cancer during 2022 in England and Wales.

The management of patients with lung cancer is informed by various national guidelines and the NLCA evaluates current patterns of care against the standards that these set.Specific standards were defined in publications from: The National Institute for Health and Care Excellence (NICE) QS17, Roy Castle Lung Cancer Foundation's national commissioning guidance, the National Optimal Lung Cancer Pathway and the 2022 "Getting it Right First Time" (GIRFT) report. The NLCA has developed a set of indicators to reflect these and encourages healthcare professionals to review the findings of this report and to understand why unwarranted differences in practice exist.

Additional materials that accompany this report are available at: lungcanceraudit.org.uk. These materials include data tables that contain results for individual NHS organisations and a description of the audit methods. We encourage NHS lung cancer services to make use of this information to understand their comparative performance. The NLCA website also provides access to:

- Links to resources that support local services' quality improvement initiatives
- Quarterly reports that provide more recent information for each NHS lung cancer unit in England
- Links to other sources of information about lung cancer.

The NLCA is one of ten national cancer audits commissioned within the National Clinical Audit and Patient Outcomes Programme (NCAPOP) which is funded by NHS England and the Welsh Government.More information about the national cancer audits for England and Wales can be found at: www.natcan.org.uk

2. Results for England (2022)

2.1 Data completeness

Key Messages:

NHS trusts should ensure the data on key data items submitted for the Rapid Cancer Registration Dataset is complete. Particular attention should be given to data on "patient seen by a LCNS at diagnosis" and "smoking status". Completeness of data on tumour morphology, disease stage, and performance status items could also be better. Services should ensure the "route to diagnosis" data item captures information on whether patients were diagnosed after being screened.

Several data items are essential for the NLCA to identify appropriate patient groups and assess NICE quality standards. The audit therefore defines targets for completeness for these data items and monitors what NHS organisations achieve. The completeness of demographic data items (age, ethnicity, social deprivation) was excellent, being complete for over 95% of records, with little variation between NHS trusts and cancer alliances. However, completeness on tumour morphology, disease stage, and performance status items were below the target levels (Table 2).

Levels of completion on patient smoking status and whether a lung cancer nurse specialist (LCNS) was present at diagnosis were 48.2% and 60.3%, respectively, well short of our target of 90% for both data items. There was substantial variation between NHS trusts in the completeness of these two data items (Figure 1).

Table 2: Completeness of key data items for patients diagnosed in 2022 in the Rapid Cancer Registration Dataset

Data item	Completeness	Target level	No. of NHS trusts above target (n=124)
TNM stage	88.7	90%	68
Performance Status (PS)	82.5	90%	50
Basis of diagnosis	91.7	90%	95
Morphology	66.6*	75%	27

* 97.5% complete for patients whose diagnosis included microscopic examination (cytology/histology)

National Lung Cancer Audit

Summary of results for patients diagnosed in England 2022

Diagnosis & staging

36,886 patients were diagnosed with lung cancer in 2022

34,235 in 2021 , **31,371** in 2020
33,091 in 2019

74 years — age at diagnosis (median)

84% of patients **with stage I/II disease, performance status (PS) 0-1** had pathological confirmation of their diagnosis
83% in 2021, **77%** in 2020 & **84%** in 2019

45% of patients presented **with stage IV disease**
48% in 2021, **50%** in 2020 & **47%** in 2019

32% of patients were diagnosed **via emergency presentation**
35% in 2021, **35%** in 2020 & **31%** in 2019

Key
- improving from 2021
- worsening from 2021
- unchanged from 2021

93% of patients* were assessed at diagnosis by a **lung cancer clinical nurse specialist:**
92% in 2021, **75%** in 2020 and **80%** in 2019

≥90% ? Audit standard*

*information available for 60% of patients so this is uncertain

Treatment allocation

Surgery for non-small cell lung cancer (NSCLC)

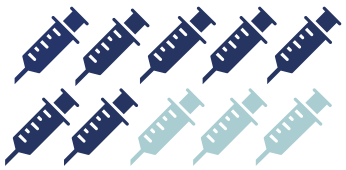
18% of patients with NSCLC had surgical treatment for their cancer

≥17% Audit standard

17% in 2021
15% in 2020
20% in 2019

Chemotherapy for small cell lung cancer (SCLC)

71% of patients with SCLC received treatment with chemotherapy



≥70% Audit standard

72% in 2021
66% in 2020
69% in 2019

Treatment with curative intent

78% of patients with NSCLC (stage I/II, PS 0-2) received treatment with curative intent**

≥80% Audit standard

80% in 2021
73% in 2020
81% in 2019

59% of patients with NSCLC (stage IIIA, PS 0-2) received treatment with curative intent***

N/A

61% in 2021
51% in 2020
57% in 2019

**surgery or radical radiotherapy

***surgery, radical radiotherapy or multimodal combination with chemotherapy

Systemic anti-cancer therapy

60% of patients with NSCLC (stage IIIB/IV, PS 0-1) received systemic anticancer therapy

≥70% Audit standard

63% in 2021
55% in 2020
54% in 2019

Survival outcomes

17,564 patients were diagnosed between 1 January and 30 June 2022. For these patients:

Median survival

327 days

280 days in 2021
306 days in 2020
316 days in 2019

One year survival

48%

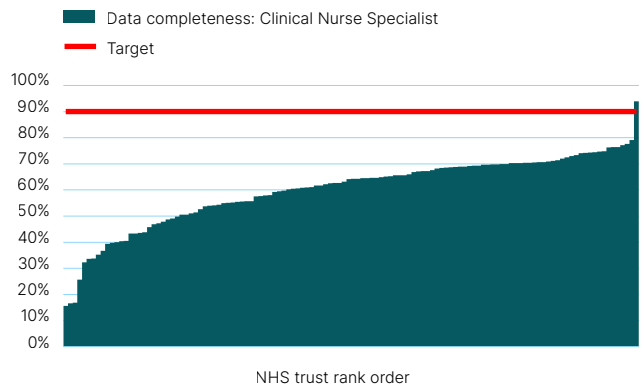
44% in 2021
44% in 2020
41% in 2019

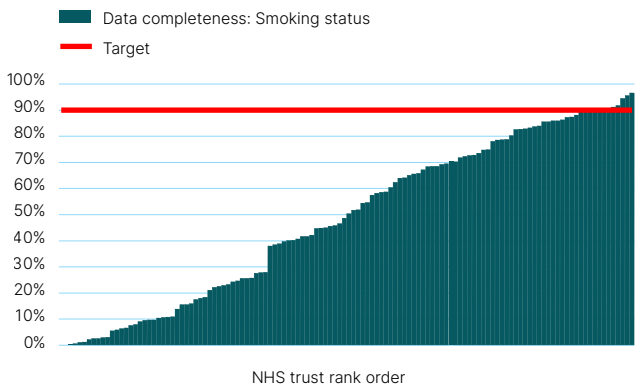
Data quality

Completeness of key routine data items

Stage	Performance status	Morphology	Basis of diagnosis	CNS at diagnosis	Smoking status
89% (90% Audit standard ✗)	83% (90% Audit standard ✗)	67% (75% Audit standard ✗)	92% (90% Audit standard ✓)	60% (90% Audit standard ✗)	48% (90% Audit standard ✗)
86% in 2021	83% in 2021	65% in 2021	90% in 2021	59% in 2021	49% in 2021

Figure 1: Completeness of data in 2022: access to a lung cancer nurse specialist and smoking status of patients by English NHS trust. Overall levels of completeness were 60.3% and 48.2%, respectively.





2.2 Patient characteristics

Key Messages:

The percentage of patients with lung cancer who are diagnosed with stage I/II disease has increased from 30.5% in 2021 to 33.8% in 2022. Cancer alliances should promote the uptake of lung cancer screening for people aged 55 to 74 who are at high risk of lung cancer.

We analysed RCRD data on 36,886 patients diagnosed with lung cancer in England during 2022. The 2022 figure compares to 34,235 in 2021, 31,371 in 2020 and 33,091 in 2019. There were 124 English NHS trusts which cared for patients with lung cancer. Table 3 summarises the characteristics of the patients diagnosed in 2022. The proportion of lung cancers identified as small cell lung cancers (SCLC) was 6.8% in 2022, down from 11% in 2014.The median age at diagnosis was 74.0 years overall (IQR: 66.6 – 80.5); for non-small cell lung cancer (NSCLC), the median age was 74.0 years, while for SCLC, it was 70.0 years. There were similar numbers of men and women diagnosed; 50.2% of patients were male and 49.8% female. The median age at diagnosis was 74.0 years among both men and women.

Among patients with known values in 2022:

- The proportion of patients with stage IV disease was 45.2%, a decrease compared to 47.8% in 2021.
- The proportion of patients with stage I-II disease was 33.8%, an increase from 30.5% in 2021.
- The proportion of patients with a PS 0-1 was 55.5%, which is similar to 2021 (54.2%). However, the completeness of data on performance status requires improvement.
- There was a gradient in the proportion of patients with lung cancer who came from the most deprived to the least deprived areas (1=Most: 25.8%, 3=19.9%, 5=Least: 15.1%).

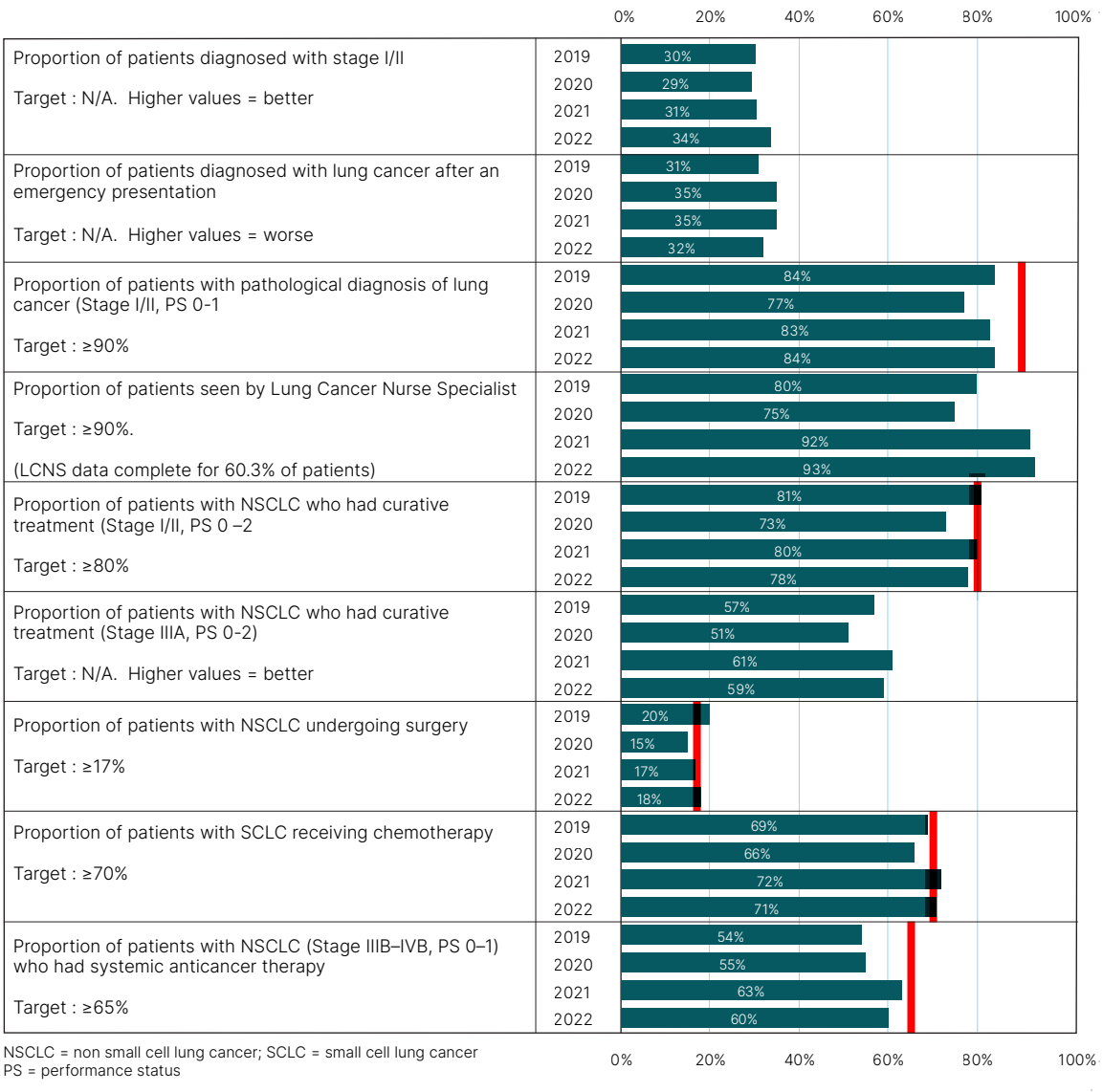
Table 3: Characteristics of patients diagnosed with lung cancer in England during 2022

	Overall percentage	Percentage among known		Overall percentage	Percentage among known
Smoking status			**Type of Lung cancer***		
Never smoked	4.6	9.5	Non-small cell (NSCLC)	58.2	
Current / Ex-smoker	43.6	90.5	Small cell (SCLC)	6.8	
Unknown	51.8		Carcinoid	1.6	
			Type not assessed**	33.4	
Stage at diagnosis			**Performance status**		
Stage I	22.5	25.4	0	18.1	22.0
Stage II	7.5	8.4	1	27.6	33.5
Stage IIIA	10.7	12.1	2	16.3	19.8
Stage IIIB/C	7.9	9.0	3	15.7	19.1
Stage IV	40.1	45.2	4	4.7	5.7
Unknown	11.3		Unknown	17.6	

*Data is complete for 'Type of Lung cancer'; ** analysed together with NSCLC elsewhere

Figure 2 shows how performance metrics have changed over time for patients with lung cancer diagnosed and treated in England.

Figure 2: Performance metrics over time for patients with lung cancer diagnosed and treated in England



NSCLC = non small cell lung cancer; SCLC = small cell lung cancer
PS = performance status

2.3 Diagnosis, staging and treatment planning

Key Messages:

The proportion of patients (Stage I/II, PS 0–1) with a pathological diagnosis of lung cancer was 84%, which is below the NLCA target of 90%. NHS trusts with low rates of pathological diagnosis should explore opportunities to increase it. 32% of patients were diagnosed via emergency presentation in 2022 compared to 35% in 2021. 93% of patients in 2022 saw a LCNS at diagnosis, but actual levels of performance are uncertain due to poor data completeness.

Rates of diagnosis following an emergency admission improved slightly in 2022 (32%) compared with 2021 (35%), but continued to show substantial regional variation (table 4).

Pathological confirmation of diagnosis is encouraged to aid treatment planning. The proportion of patients (Stage I/II, PS 0–1) with a pathological diagnosis was 84%, which is below the NLCA target of 90%. The target was exceeded by only 42 of the 124 NHS trusts.

A NICE quality standard is that all patients should have access to a lung cancer nurse specialist. Among patients diagnosed in 2022 who had this data entered, 93% of patients saw a LCNS at diagnosis, which exceeded the 90% target adopted by the NLCA. The target was exceeded by 98 of the 124 NHS trusts. However, data completeness for this metric was poor and levels of performance are therefore uncertain.

Table 4: Indicators by English NHS trusts for patients diagnosed in 2022

	NLCA target	2022	No. of NHS trusts above target
Diagnosis via emergency presentation	N/A	32%	n/a
Proportion of patients with pathological diagnosis (Stage I/II, PS 0–1)	≥90%	84%	44
Proportion of patients seen by LCNS	≥90%	93%	98

2.4 Time from diagnosis to treatment for patients

Key Messages:

The overall median time from diagnosis to treatment was 41 days in 2022 (IQR: 23 – 62). For patients with stage IV NSCLC diagnosed in 2022, the median time from diagnosis to systemic anti-cancer therapy (SACT) was 43 days (IQR: 30 – 62). For patients with SCLC diagnosed in 2022, the median time from diagnosis to start of SACT was 17 days (IQR: 10 – 29).

The benchmark defined for cancer waiting times from decision to treat to treatment is 31 days. While diagnosis may occur sometime before treatment decision, the median waiting time from diagnosis to treatment has increased since 2019 from 34 days to 41 days in 2022 (from 18,262 patients who had surgery, chemotherapy or curative radiotherapy in 2022). The median time from diagnosis to treatment was also greater than 21 days within every cancer alliance. The National Optimal Lung Cancer Pathway (NOLCP) encourages NHS services to shorten the time from referral to the start of treatment to 49 days, and for patients with suspected lung cancer to be given a diagnosis within 28 days.

It is particularly important that patients with SCLC are diagnosed and treated quickly because SCLC tumours can be progressive and spread rapidly, and ultimately prove fatal. In 2017, the NLCA set a standard that at least 80% of patients should receive SACT within 14 days of pathological diagnosis. In 2021, the median time from diagnosis to treatment was 16 days, but this increased slightly in 2022 to 17 days. It will be important to continue monitoring this metric to ensure NHS trusts have the necessary resources to ensure rapid access to SACT for SCLC patients and consequently meet the 14 days NLCA standard.

2.5 Curative treatment for non-small cell lung cancer

Key Messages:

Overall, 18% of patients with NSCLC diagnosed in 2022 had a lung resection, with rates within alliances ranging from 14% to 32% (IQR 15.6-21.6). The proportion of patients with stage I/II disease and a good performance status (PS 0-2) who had curative treatment was 78%, below the NLCA standard of 80%. Cancer alliances with comparatively low curative intent treatment rates for stage I–IIIA patients should examine whether more patients have the potential to have curative treatment.

Patients with stage I/II lung cancer, and a good performance status (PS 0-2) are candidates for treatments with curative intent. The proportion of patients treated with curative intent has increased from the low rates observed in 2020 (73%), but is still lower than in 2019 (81%). There was variation across NHS trusts (Table 5).

Patients with stage IIIA NSCLC and a good performance status (PS 0-2) can be considered for treatment with curative intent. In 2022, only 59% of patients were offered curative intent treatments with just over 40% of patients receiving either palliative intent therapies or no active treatment at all. Cancer alliances with comparatively low curative intent treatment rates for stage I–IIIA patients could benefit from exploring ways to ensure that these patients are offered the most appropriate treatments with curative intent.

Table 5: Performance on curative intent treatment indicators for patients diagnosed in England in 2022

	NLCA target	2022	No. of NHS trusts above target
Proportion of patients with NSCLC undergoing resection surgery	>17%	18%	75
Proportion of patients with NSCLC who had curative treatment (Stage I/II, PS 0–2)	>80%	78%	50
Proportion of patients with NSCLC who had curative treatment (Stage IIIA, PS 0–2)	N/A	59%	n/a

2.6 Systemic anti-cancer therapy rates for advanced NSCLC (stage IIIB-IVB) with good performance status

Key Messages:

60% of patients diagnosed with NSCLC (stages IIIB-IVB, PS 0–1) in 2022 had SACT. But only 44 of 124 NHS trusts (35%) met or exceeded the NLCA audit standard of 65% for patients with NSCLC (stages IIIB-IVB, PS 0–1). NHS trusts should monitor their performance against the NLCA standard and ensure there are necessary resources for biomarker testing as well as timely access and adequate capacity for SACT delivery.

Clinical trials have demonstrated that systemic anti-cancer therapy can improve quality of life, extend survival, and improve cancer related symptoms for patients with advanced and incurable NSCLC. In 2017, the NLCA set an audit standard that at least 65% of patients with advanced NSCLC (stages IIIB-IV) and a good performance status (PS 0–1) should receive SACT. In 2022 this audit standard was not met with only 60% of patients diagnosed with NSCLC (stages IIIB-IVB, PS 0–1) receiving SACT. The proportion of patients with advanced NSCLC (stage IIIB – IVB, PS 0-2) that had SACT was 49%.

2.7 Chemotherapy treatment for small cell lung cancer

Key Messages:

In 2022, 71% of patients with SCLC received systemic anti-cancer therapy. Overall, 45 out of 92 NHS trusts met or exceeded the NLCA target (70%). NHS trusts should monitor their performance against the NLCA standard and ensure there are necessary resources for timely access to SACT.

SCLC is a particularly aggressive type of lung cancer which typically presents at an advanced stage at the time of diagnosis. In 2017, the NLCA set an audit standard that at least 70% of SCLC patients should receive SACT. In 2022, this audit standard was met with 71% of SCLC patients receiving SACT overall compared to 72% of SCLC patients receiving SACT in 2021. However, there was variation across NHS trusts, with only 45 out of 92 eligible NHS trusts having more than 70% of patients having SACT.

3. Results for Wales (2022)

3.1 Source of Welsh patient data and data completeness

The Welsh results contained in this report were derived using the standard dataset collected through the Cancer Network Information System Cymru (CANISC). The figures should not be compared to the English data which is derived from the Rapid Cancer Registration Dataset.

The analysis included 2,211 patients diagnosed with lung cancer in Wales in 2022. The completeness of the key data items in the Welsh data was excellent. The levels of completeness for the 2,211 patients analysed were: 100% for basis of diagnosis, 100% for tumour morphology, 99% for disease stage, and 98% for performance status. 99% of records had data on whether a lung cancer nurse specialist was present at diagnosis. Data was not provided for the ethnicity or smoking status data items.

In 2022, the proportion of lung cancers proven to be small cell lung cancers (SCLC) was 9.4%. The median age was 74 years overall (IQR: 67 – 79), and was 74 and 71 years for patients with NSCLC and SCLC tumours. 51.3% of patients were male and 48.7% female. Among patients with known values in 2022, the proportion of patients with stage IV disease was 47.0% (50.3% in 2021), while the proportion with stage I/II disease was 30.0% (24.0% in 2021). The proportion of patients with performance status 0-1 was 41.9% (40.6% in 2021).

3.2 NLCA performance indicators for Wales in 2022

Key Messages:

The analysis of data from 2,211 patients diagnosed with lung cancer in 2022 found:

- Curative treatment rates of NSCLC patients with stage I/II and good performance status (0-2) was 76.2%. For patients with stage IIIA disease, curative treatment rate was 61.2%
- The surgical resection rate for patients with NSCLC was 14.0%
- The proportion of patients with lung cancer diagnosed after an emergency presentation was 29.4%
- The proportion of patients seen by a LCNS was 92.4%
- The use of systemic anti-cancer therapy for stage IIIB/IIIC–IV NSCLC patients (PS 0–1) remained below the audit standard (70%) at 60.1% although this was an increase since 2021.
- The median time from diagnosis to treatment for patients with NSCLC (stage IV) was 52 days (IQR: 37-69); for patients with SCLC, the median was 21 days (IQR: 14-29)

Figure 3 describes the overall level of performance within Wales for patients diagnosed in 2022, compared with earlier years.

National Lung Cancer Audit

Summary of results for patients diagnosed in Wales 2022

Diagnosis & staging

2,211 patients were diagnosed with lung cancer in 2022

2,244 in 2021, **2,067** in 2020
2,240 in 2019

74 years — age at diagnosis (median)

89% of patients **with stage I/II disease, performance status (PS) 0-1** had pathological confirmation of their diagnosis
85% in 2021, **83%** in 2020 & **86%** in 2019

47% of patients presented **with stage IV disease**
50% in 2021, **49%** in 2020 & **48%** in 2019

29% of patients were diagnosed **via emergency presentation**
24% in 2021, **28%** in 2020 & **29%** in 2019

Key
- improving from 2021
- worsening from 2021
- unchanged from 2021

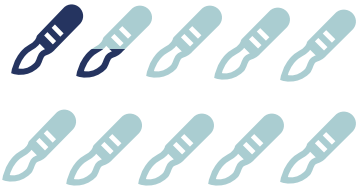
92% of patients* were assessed at diagnosis by a **lung cancer clinical nurse specialist:**
94% in 2021, **93%** in 2020 and **95%** in 2019

≥90% Audit standard*

Treatment allocation

Surgery for non-small cell lung cancer (NSCLC)

14% of patients with NSCLC had surgical treatment for their cancer

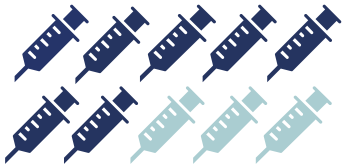


≥17% Audit standard

13% in 2021
11% in 2020
15% in 2019

Chemotherapy for small cell lung cancer (SCLC)

71% of patients with SCLC received treatment with chemotherapy



≥70% Audit standard

71% in 2021
58% in 2020
65% in 2019

Treatment with curative intent

76% of patients with NSCLC (stage I/II, PS 0-2) received treatment with curative intent**

≥80% Audit standard

67% in 2021
68% in 2020
74% in 2019

**surgery or radical radiotherapy

61% of patients with NSCLC (stage IIIA, PS 0-2) received treatment with curative intent***

N/A

61% in 2021
48% in 2020
56% in 2019

***surgery, radical radiotherapy or multimodal combination with chemotherapy

Systemic anti-cancer therapy

60% of patients with NSCLC (stage IIIB - IV, PS 0-1) received systemic anticancer therapy

≥70% Audit standard

57% in 2021
53% in 2020
55% in 2019

Survival outcomes

2,211 patients were diagnosed between 1 January and 31 December 2022. For these patients:

Median survival

262 days

222 days in 2021
224 days in 2020
235 days in 2019

One year survival

43%

39% in 2021
40% in 2020
42% in 2019

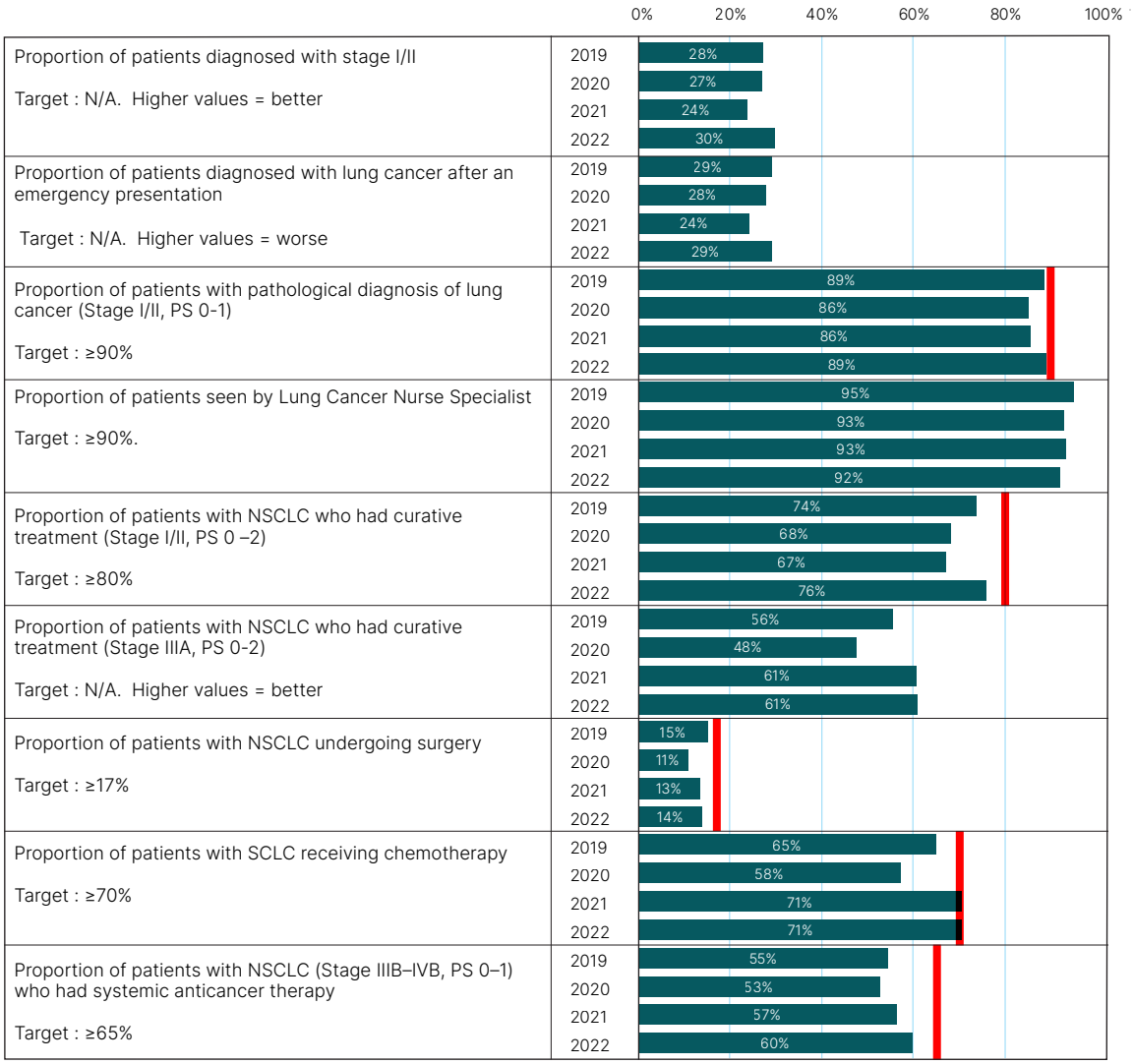
Data quality

Completeness of key routine data items***

***information on smoking status unavailable

Stage	Performance status	Morphology	Basis of diagnosis	CNS at diagnosis
99%	98%	100%	100%	99%
90% Audit standard	90% Audit standard	75 % Audit standard	90% Audit standard	90% Audit standard
98% in 2021	97% in 2021	100% in 2021	100% in 2021	98% in 2021

Figure 3: Performance metrics over time for patients with lung cancer diagnosed and treated in Wales



NSCLC = non small cell lung cancer; SCLC = small cell lung cancer
PS = performance status

4. Survival after cancer diagnosis

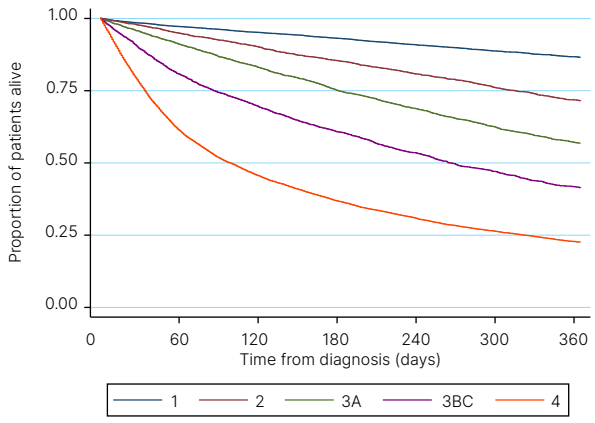
In this report, we describe survival for the 17,564 patients diagnosed in England between 1 January and 30 June 2022. Median survival was 327 days (95% CI: 316 to 340). The proportion of patients who survived at least one year was 48.0% overall (95% CI: 47.3% to 48.8%). Figure 4A shows survival by stage at diagnosis and Figure 4C shows the risk-adjusted 1-year mortality rates for the cancer alliances, there were no outliers at the 99.8% limit.

In last year's report, we reported the median survival for patients diagnosed in England between January and June 2021 was 268 days. For patients diagnosed in the whole of 2021 (January to December), median survival was 280 days.

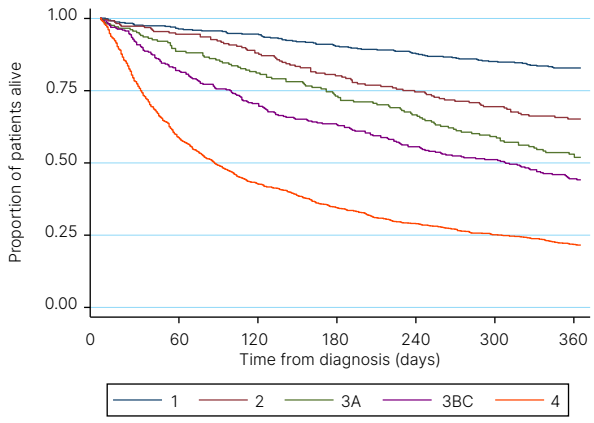
For patients diagnosed with lung cancer in Wales during 2022, the median survival was 262 days (95% CI: 233 to 292) and 1-year survival in this cohort was 43.2%. Survival by stage for 2022 is shown in Figure 4B. The median survival for patients with stage IV disease was 85 days (CI: 74 to 95). Figure 4D also shows risk-adjusted 1-year survival rates for the Welsh hospitals for patients diagnosed in 2022, and the rates fall within the expected range around the national Welsh average. See NLCA website for more details.

Figure 4: Kaplan Meier survival curves from patients diagnosed in England (January to June 2022) and Wales (January to December 2022) stratified by disease stage and risk-adjusted estimates for English cancer alliances and Welsh hospitals.

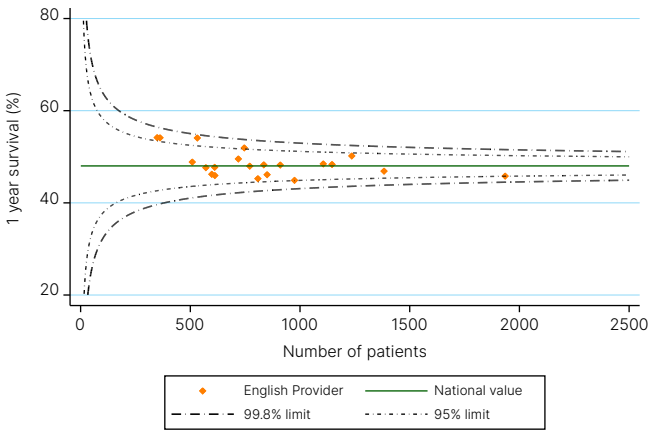
(A) England (Jan–June 2022*), by disease stage



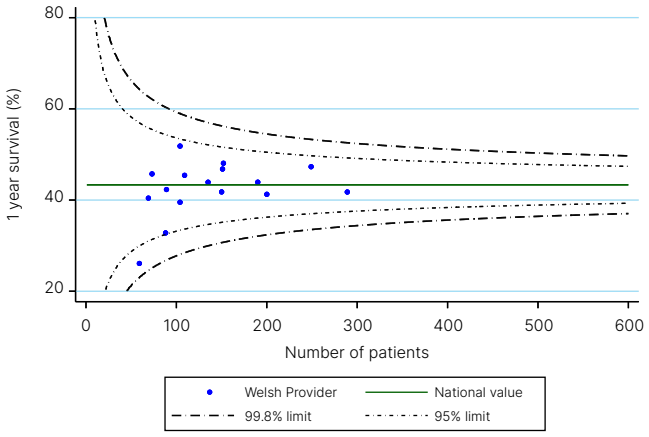
(B) Wales (Jan–Dec 2022), by disease stage



(C) English cancer alliances (Jan – Jun 2022)



(D) Welsh hospitals (Jan-Dec 2022)



click on individual graphs to enlarge

5. Commentary

In this second State of the Nation report, we summarise the patterns of care received by patients with lung cancer in England and Wales diagnosed in 2022. Patients are analysed based on their place of diagnosis, either an English NHS trust or Welsh hospital (https://www.lungcanceraudit.org.uk/wp-content/uploads/2024/04/NLCA-Methodology-Supplement_SotN-report-2024.pdf). For each indictor, we have reported overall national figures and these do not show the wide variation among NHS organisations. It is essential that NHS trusts and cancer alliances in England and NHS hospitals and health boards in Wales use the additional online materials to review their performance and, where necessary, initiate local quality improvement activities (https://www.lungcanceraudit.org.uk/data/).

An important and encouraging finding from this report is that the proportion of patients diagnosed with stage I/II lung cancer has increased; in England, the proportion rose to 33.8% in 2022 compared to 30.5% in 2021 and 30.2% in 2019. There has been an increase of over 3,000 patients in the overall number of lung cancers in the Rapid Cancer Registration Dataset when the number of patients diagnosed in 2022 is compared with 2019. While there may be various reasons for this, one contribution to the greater number of patients with early-stage disease could be the Targeted Lung Health Check (TLHC) Programme in England that diagnosed 1,087 cases in 2022. Similar programmes are recommended in Wales.

It is reassuring to see that curative treatment rates for patients with early-stage lung cancer have been maintained (at 78% in England; 76% in Wales), despite the growth in demand due to the increase in early-stage presentations. However, several areas of care require significant improvement. Unlike most treatment metrics, the proportion of patients who had a lung resection has still not returned to pre-pandemic levels (18% in England; 14% in Wales), although more patients had surgery in 2022 than 2021 (England: n=6236 vs n=5392). Surgical procedures require an inpatient stay and bed capacity issues may have been a contributing factor to this indicator not yet returning to 2019 levels. Providers must ensure they have capacity to meet both current demand and to accommodate the increase in surgical activity caused by the national rollout of the TLHC programme.

Time from diagnosis to treatment has worsened. In England, the median time was 41 days and no cancer alliance was compliant with the NOLCP. Additional resources are urgently required to bring trusts in line with the latest service specification and NOLCP set out by the clinical expert group. Other areas in which performance could be improved include: patients with stage IIIA NSCLC and good performance status being offered curative intent treatment, and patients with advanced disease and good performance status receiving systemic anti-cancer therapy. We note that a third of patients are still being diagnosed after presenting via the emergency route, and there is marked geographical variation in these rates. Data completeness also requires improvement, particularly 'smoking status', and 'seen by lung cancer CNS' in the English Rapid Cancer Registration Dataset. It is also important that NHS trusts use the 'route to diagnosis' data item to record patients diagnosed after screening by the TLHC. Good quality data on the route to diagnosis is essential for the impact of screening on outcomes to be evaluated.

In 2023, the NLCA introduced dashboards that are updated on a quarterly basis for English NHS trusts. While biomarker results are not currently available, in 2024, data will be available from the Genomic Laboratory Hubs (GLHs). These data may provide further impetus to improve outcomes for patients with advanced lung cancer to complement the improvements seen in early-stage lung cancer seen in this State of the Nation report.