

LUNG CANCER QUALITY PERFORMANCE INDICATOR TECHNICAL SPECIFICATIONS

Updated 2025

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CONTENTS

Introduction	1
Sources of national data for the indicators	3
LCQI 1: Route to diagnosis	4
Measure items	4
Case eligibility criteria (denominator)	5
Numerator criteria	6
LCQI 3: pathological diagnosis	8
Measure items	8
Case eligibility criteria (denominator)	9
Numerator criteria	9
LCQI 6: Surgical resection for lung cancer	11
Measure items	11
Case eligibility criteria (denominator)	12
Numerator criteria	13
Curative resection ACHI procedure codes	13
LCQI 7: Systemic anti-cancer therapy for lung cancer	15
Measure items	15
Case eligibility criteria (denominator)	16
Numerator criteria	18
Chemotherapy drug codes and names	19
LCQI 8: Radiation therapy	21
Measure items	21
Case eligibility criteria (denominator)	22
Numerator criteria	23
Chemotherapy drug codes and names	24
LCQI 9: Treatment mortality	26
Measure items	26
Case eligibility criteria (denominator)	28
Numerator criteria	30
Curative resection ACHI procedure codes	30
Chemotherapy drug codes and names	31
LCQI 10: Overall survival	33



Measure items	33
Case eligibility criteria (denominator)	34
Numerator criteria	35
LCQI 11: Cancer treatment at the end of life	37
Measure items	37
Case eligibility criteria (denominator)	38
Numerator criteria	39
Chemotherapy drug codes and names	39



INTRODUCTION

Te Aho o Te Kahu – Cancer Control Agency (the Agency) and the national lung cancer working group (the working group) identified a set of 11 quality performance indicators (QPIs) for lung cancer. Of these 11, eight are currently measurable with available data.

Those QPIs that were able to be calculated using the national collections of Health New Zealand | Te Whatu Ora are presented in the *Lung Cancer Quality Improvement Monitoring Report Update* (the monitoring report).

This document accompanies the monitoring report and aims to make it easier for analysts to replicate our calculations. For each measure we have provided supporting information, a table and a flow diagram.

This document provides specifications for the eight QPIs. Please note the term lung cancer quality indicator and its abbreviation (LCQI), which is used going forward.

Indicator	Measure	Measure abbreviation	Measure type
LCQI 1. Route to diagnosis	Proportion of people with lung cancer who were diagnosed within 14 days after an acute admission to hospital or a visit to an emergency department (emergency presentation)	Emergency	Quality improvement
LCQI 3. Pathological diagnosis	Proportion of people who have a pathological diagnosis of lung cancer	Pathology	Quality improvement
LCQI 6. Surgical resection for lung cancer	Proportion of people with non-small cell lung cancer (NSCLC) receiving surgical resection with curative intent	Resection	Quality improvement
LCQI 7. Systemic anti-cancer therapy for lung cancer	(i) Proportion of people with NSCLC receiving systemic anti-cancer therapy (SACT)	(i) NSCLC_SACT	Quality improvement
	(ii) Proportion of people with small cell lung cancer (SCLC) receiving SACT	(ii) SCLC_SACT	Quality improvement
LCQI 8. Radiation therapy	(i) Proportion of people with lung cancer receiving radiation treatment, by intent and type of lung cancer (NSCLC/SCLC)	Radiation	Quality improvement



Indicator	Measure	Measure abbreviation	Measure type
	(ii) Proportion of people with primary lung cancer receiving SABR, by intent and type of lung cancer (NSCLC/SCLC)	SABR	Quality improvement
	(iii) Proportion of people with lung cancer receiving concurrent chemoradiation, by intent and type of lung cancer (NSCLC/SCLC)	Chemoradiation	Quality improvement
LCQI 9. Treatment mortality	Proportion of people with lung cancer who died within 30 days of treatment with curative intent (surgery, SACT, chemoradiation, radiotherapy), by type (NSCLC/SCLC)	death_30	Quality improvement
	Proportion of people with lung cancer who died within 90 days of treatment with curative intent (surgery, SACT, chemoradiation, radiotherapy), by type (NSCLC/SCLC)	death_90	Quality improvement
LCQI 10. Overall survival	Proportion of people with lung cancer alive at 1, 2 and 3 years from diagnosis, by type (NSCLC/SCLC)	survival_1, survival_2, survival_3	Quality improvement
LCQI 11. Cancer treatment at the end of life	Proportion of people with lung cancer who died (from any cause) and received SACT within 30 days prior to death	SACT_EOL	Quality improvement

This document uses the abbreviation DHB (district health boards) because the data used is from the time-period when DHBs existed. DHBs were disestablished as part of the 1 July 2022 health and disability sector reforms and are now referred to as districts.



SOURCES OF NATIONAL DATA FOR THE INDICATORS

The data sources are as follows:

- **New Zealand Cancer Registry (NZCR)** – a population-based registry of all primary malignant diseases diagnosed in New Zealand, excluding squamous and basal cell skin cancers.
- **National Minimum Dataset (NMDS)¹** – a collection of public and private hospital discharge information, including coded clinical data for inpatients and day patients.
- **National Non-Admitted Patients Collection (NNPAC)** – includes event-based purchase units that relate to medical and surgical outpatient events and emergency department events.
- **Pharmaceutical Collection (PHARMS)** – a data warehouse that supports the management of pharmaceutical subsidies and contains claim and payment information from pharmacists for subsidised dispensings.
- **Radiation Oncology Collection (ROC)** – a collection of radiation oncology treatment data, including both public and private providers.

More information on these data sources can be found on the Health New Zealand | Te Whatu Ora website [here](#).

¹ Hospital events in the NMDS are coded using the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) for diagnoses and the Australian Classification of Health Interventions (ACHI) for procedures. Both ICD-10-AM and ACHI are from the Independent Hospital Pricing Authority, Australia.



LCQI 1: ROUTE TO DIAGNOSIS

Description: Proportion of people with lung cancer who were diagnosed within 14 days after an acute admission to hospital or a visit to an emergency department (emergency presentation)

Measure items

Data set	Data item	Description
NZCR	NHI	Patient identifier
NZCR	Cancer event ID	Cancer registration identifier
NZCR	Date of initial diagnosis	Date person first diagnosed with lung cancer
NZCR	Diagnosis year	Calendar year of first diagnosis
NZCR	Site	Primary organ of origin of the cancer (ICD-10-AM Eighth Edition code)
NZCR	Morphology code	4-digit code (ICD-O-3) for microscopic or cellular anatomy of the cancer
NZCR	Basis	Basis of diagnosis
NZCR	DHB of domicile	DHB code for domicile of patient at diagnosis
NZCR	DHB	DHB name based on domicile of patient at diagnosis
NZCR	Age at diagnosis	Age of patient at diagnosis in years
NZCR	Prioritised ethnicity	Ethnic group derived from patient's ethnicity
NZCR	Sex	Sex of patient
NZCR	Deprivation quintile	NZDep2013 index of social deprivation quintile based on patient's domicile
NZCR	Date of death	Date patient died
NZCR	TNM_T	Stage at diagnosis – tumour
NZCR	TNM_N	Stage at diagnosis – node
NZCR	TNM_M	Stage at diagnosis – metastases
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
NMDS	Purchase unit code	Type of inpatient admission
NMDS	Event start date	Date of admission



Data set	Data item	Description
NNPAC	Purchase unit code	Type of outpatient attendance
NNPAC	Date time of service	Date and time of outpatient service
NNPAC	Attendance code	Attendance of outpatient event

Case eligibility criteria (denominator)

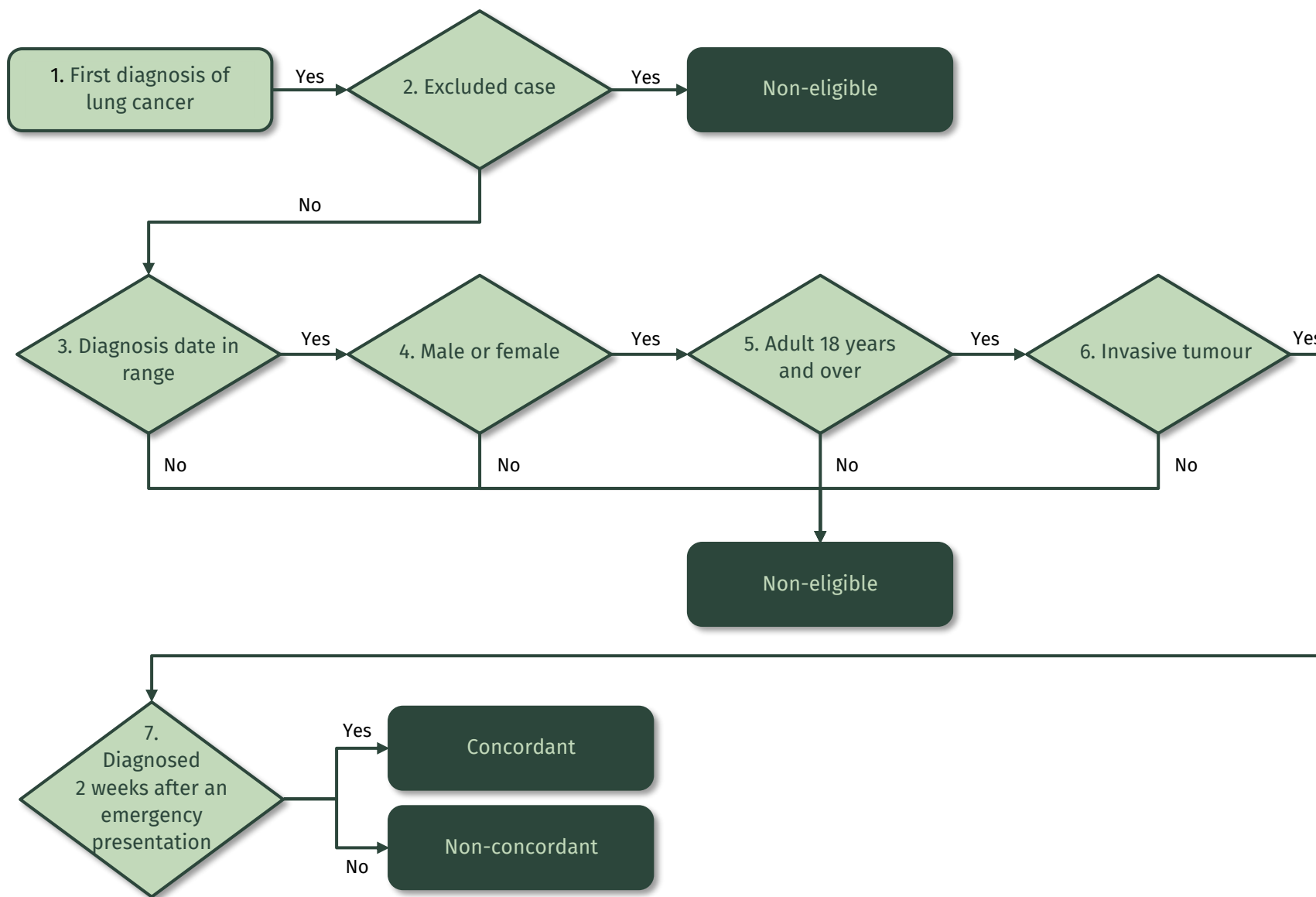
Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of lung cancer (trachea C33 or bronchus C34)
2	Exclude manually censored case	Exclusion	<p>Registration codes not R_C (registered complete) or R_R (registered)</p> <p>No incident cancer (exclude people with multiple tumour flags = yes)</p> <p>People diagnosed following death certificate only (basis = 0)</p> <p>People domiciled outside of New Zealand (DHB_code = 999)</p> <p>Cancer morphologies of melanoma, sarcoma and other unusual morphologies (codes 8333, 8720, 8772, 8800, 8801, 8803, 8805, 8815, 8890, 9040, 9041, 9133)</p>
3	Diagnosis date	Date of initial diagnosis	<p>Period one: 2015–2018</p> <p>Period two: 2019–2022</p>
4	Male or female	Sex	M or F
5	Adult patient 18 years and older at diagnosis	Age at diagnosis	18 years and older
6	Invasive tumours	Behaviour code	3



Numerator criteria

Diagram reference	Assessment	Item	Codes
7	Numerator: Number of people with lung cancer who were diagnosed within 14 days after an acute admission to hospital or a visit to an emergency department (emergency presentation)	Emergency	Inpatient (NMDS) <ul style="list-style-type: none"> Emergency medicine admission Purchase unit code = M05.01 Outpatient (NNPAC) <ul style="list-style-type: none"> Outpatient attendance Purchase unit code like ED% Attendance code = ATT ED admission/presentation within 2 weeks prior to diagnosis date





LCQI 3: PATHOLOGICAL DIAGNOSIS

Description: Proportion of people who have a pathological diagnosis of lung cancer

Measure items

Data set	Data item	Description
NZCR	NHI	Patient identifier
NZCR	Cancer event ID	Cancer registration identifier
NZCR	Date of initial diagnosis	Date person first diagnosed with lung cancer
NZCR	Diagnosis year	Calendar year of first diagnosis
NZCR	Site	Primary organ of origin of the cancer (ICD-10-AM Eighth Edition code)
NZCR	Morphology code	4-digit code for microscopic or cellular anatomy of the cancer (ICD-O-3)
NZCR	Basis	Basis of diagnosis
NZCR	DHB of domicile	DHB code for domicile of patient at diagnosis
NZCR	DHB	DHB name based on domicile of patient at diagnosis
NZCR	Age at diagnosis	Age of patient at diagnosis in years
NZCR	Prioritised ethnicity	Ethnic group derived from patient's ethnicity
NZCR	Sex	Sex of patient
NZCR	Deprivation quintile	NZDep2013 index of social deprivation quintile based on patient's domicile
NZCR	Date of death	Date patient died
NZCR	TNM_T	Stage at diagnosis – tumour
NZCR	TNM_N	Stage at diagnosis – node
NZCR	TNM_M	Stage at diagnosis – metastases
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing



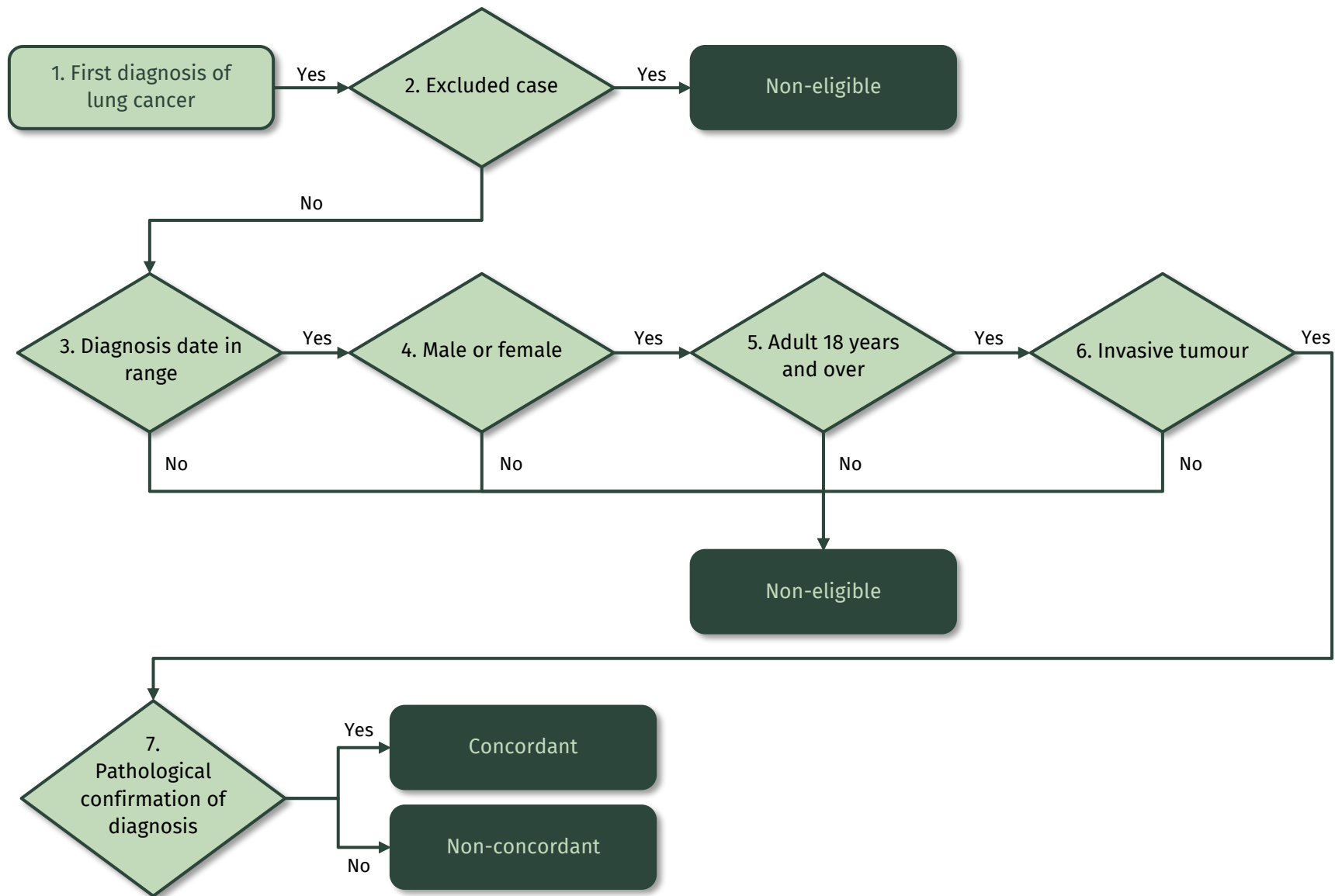
Case eligibility criteria (denominator)

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of lung cancer (trachea C33 or bronchus C34)
2	Exclude manually censored case	Exclusion	Registration codes not R_C (registered complete) or R_R (registered) Non-incident cancer (exclude people with multiple tumour flags = yes) People diagnosed following death certificate only (basis = 0) People domiciled outside of New Zealand (DHB_code = 999) Cancer morphologies of melanoma, sarcoma and other unusual morphologies (codes 8333, 8720, 8772, 8800, 8801, 8803, 8805, 8815, 8890, 9040, 9041, 9133)
3	Diagnosis date	Date of initial diagnosis	Period one: 2015–2018 Period two: 2019–2022
4	Male or female	Sex	M or F
5	Adult patient 18 years and older at diagnosis	Age at diagnosis	18 years and older
6	Invasive tumours	Behaviour code	3

Numerator criteria

Diagram reference	Assessment	Item	Codes
7	Number of people with pathological confirmation of the diagnosis of lung cancer	Pathology	Basis of diagnosis with values: 5 – Cytology or haematology 6 – Histology of metastases 7 – Histology of primary 8 – Autopsy with histology





LCQI 6: SURGICAL RESECTION FOR LUNG CANCER

Description: Proportion of people with non-small cell lung cancer receiving surgical resection with curative intent

Measure items

Data set	Data item	Description
NZCR	NHI	Patient identifier
NZCR	Cancer event ID	Cancer registration identifier
NZCR	Date of initial diagnosis	Date person first diagnosed with lung cancer
NZCR	Diagnosis year	Calendar year of first diagnosis
NZCR	Site	Primary organ of origin of the cancer (ICD-10-AM Eighth Edition code)
NZCR	Morphology code	4-digit code for microscopic or cellular anatomy of the cancer (ICD-O-3)
NZCR	Basis	Basis of diagnosis
NZCR	DHB of domicile	DHB code for domicile of patient at diagnosis
NZCR	DHB	DHB name based on domicile of patient at diagnosis
NZCR	Age at diagnosis	Age of patient at diagnosis in years
NZCR	Prioritised ethnicity	Ethnic group derived from patient's ethnicity
NZCR	Sex	Sex of patient
NZCR	Deprivation quintile	NZDep2013 index of social deprivation quintile based on patient's domicile
NZCR	Date of death	Date patient died
NZCR	TNM_T	Stage at diagnosis – tumour
NZCR	TNM_N	Stage at diagnosis – node
NZCR	TNM_M	Stage at diagnosis – metastases
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing



Data set	Data item	Description
NMDS	Surgical procedure code	ACHI procedure code
NMDS	Surgical procedure	Description of surgical procedure
NMDS	Admission type	Type of inpatient admission
NMDS	Event start date	Date of admission
NMDS	Event end date	Date of discharge
NMDS	Length of stay	Length of stay of admission
NMDS	Date of curative surgery	Date of procedure considered as curative treatment of the primary site
NMDS	DHB of service	DHB of service for patient
NMDS	Purchase unit code	Purchase unit for inpatient event

Case eligibility criteria (denominator)

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of lung cancer (trachea C33 or bronchus C34)
2	Exclude manually censored case	Exclusion	<p>Registration codes not R_C (registered complete) or R_R (registered)</p> <p>No incident cancer (exclude people with multiple tumour flags = yes)</p> <p>People diagnosed following death certificate only (basis = 0)</p> <p>People domiciled outside of New Zealand (DHB_code = 999)</p> <p>Cancer morphologies of melanoma, sarcoma and other unusual morphologies (codes 8333, 8720, 8772, 8800, 8801, 8803, 8805, 8815, 8890, 9040, 9041, 9133)</p>
3	Diagnosis date	Date of initial diagnosis	<p>Period one: 2015–2018</p> <p>Period two: 2019–2022</p>
4	Male or female	Sex	M or F



5	Adult patient 18 years and older at diagnosis	Age at diagnosis	18 years and older
6	Invasive tumours	Behaviour code	3
7	Non-small cell lung cancer	Morphology code	Include all morphology codes except codes for SCLC (8041, 8042, 8043, 8044 and 8054) and other/unspecified lung cancers (8000, 8010, 8020, 8240, 8244, 8249)

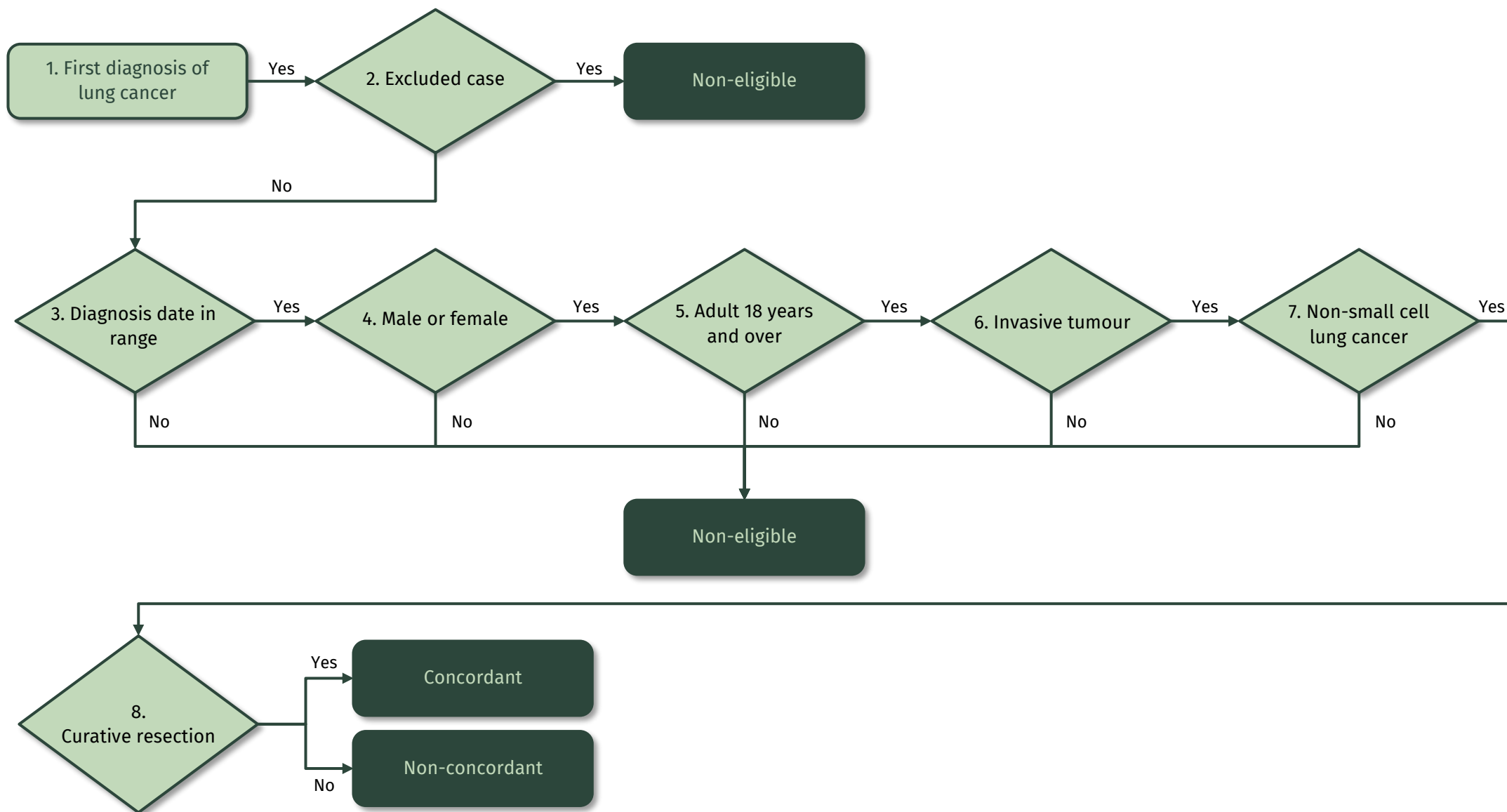
Numerator criteria

Diagram reference	Assessment	Item	Codes
8	Number of people who receive surgical resection with curative intent	Resection	Include ACHI (Eighth Edition) procedure codes: 3844000, 3844001, 3843800, 9016900, 3843801, 3844100, 3844101, 3843802 AND surgery date between -30 and 183 days from diagnosis date

Curative resection ACHI procedure codes

Clinical code	Clinical code description	Block description
3844000	Wedge resection of lung	Partial resection of lung
3844001	Radical wedge resection of lung	Partial resection of lung
3843800	Segmental resection of lung	Partial resection of lung
9016900	Endoscopic wedge resection of lung	Partial resection of lung
3843801	Lobectomy of lung	Lobectomy of lung
3844100	Radical lobectomy	Lobectomy of lung
3844101	Radical pneumonectomy	Pneumonectomy
3843802	Pneumonectomy	Pneumonectomy





LCQI 7: SYSTEMIC ANTI-CANCER THERAPY FOR LUNG CANCER

Description:

- (i) Proportion of people with non-small cell lung cancer (NSCLC) receiving systemic anti-cancer therapy
- (ii) Proportion of people with small cell lung cancer (SCLC) receiving systemic anti-cancer therapy

Measure items

Data set	Data item	Description
NZCR	NHI	Patient identifier
NZCR	Cancer event ID	Cancer registration identifier
NZCR	Date of initial diagnosis	Date person first diagnosed with lung cancer
NZCR	Diagnosis year	Calendar year of first diagnosis
NZCR	Site	Primary organ of origin of the cancer (ICD-10-AM Eighth Edition code)
NZCR	Morphology code	4-digit code (ICD-O-3) for microscopic or cellular anatomy of the cancer
NZCR	Basis	Basis of diagnosis
NZCR	DHB of domicile	DHB code for domicile of patient at diagnosis
NZCR	DHB	DHB name based on domicile of patient at diagnosis
NZCR	Age at diagnosis	Age of patient at diagnosis in years
NZCR	Prioritised ethnicity	Ethnic group derived from patient's ethnicity
NZCR	Sex	Sex of patient
NZCR	Deprivation quintile	NZDep2013 index of social deprivation quintile based on patient's domicile
NZCR	Date of death	Date patient died
NZCR	TNM_T	Stage at diagnosis – tumour
NZCR	TNM_N	Stage at diagnosis – node



Data set	Data item	Description
NZCR	TNM_M	Stage at diagnosis – metastases
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
PHARMS	Date of dispensing	Date of dispensing of chemotherapy drugs
PHARMS	Funding DHB code	Code of DHB of service
PHARMS	Funding DHB	DHB of service for patient
PHARMS	Chemical ID	Identifier for drug
PHARMS	Chemical name	Name of chemotherapy drug

Case eligibility criteria (denominator)

(i) NSCLC

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of lung cancer (trachea C33 or bronchus C34)
2	Exclude manually censored case	Exclusion	<p>Registration codes not R_C (registered complete) or R_R (registered)</p> <p>No incident cancer (exclude people with multiple tumour flags = yes)</p> <p>People diagnosed following death certificate only (basis = 0)</p> <p>People domiciled outside of New Zealand (DHB_code = 999)</p> <p>Cancer morphologies of melanoma, sarcoma and other unusual morphologies (codes 8333, 8720, 8772, 8800, 8801, 8803, 8805, 8815, 8890, 9040, 9041, 9133)</p>
3	Diagnosis date	Date of initial diagnosis	<p>Period one: 2015–2018</p> <p>Period two: 2019–2022</p>
4	Male or female	Sex	M or F



5	Adult patient 18 years and older at diagnosis	Age at diagnosis	18 years and older
6	Invasive tumours	Behaviour code	3
7	Non-small cell lung cancer	Morphology code	Include all morphology codes except codes for SCLC (8041, 8042, 8043, 8044 and 8054) and other/unspecified lung cancers (8000, 8010, 8020, 8240, 8244, 8249)

(ii) SCLC

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of lung cancer (trachea C33 or bronchus C34)
2	Exclude manually censored case	Exclusion	Registration codes not R_C (registered complete) or R_R (registered) No incident cancer (exclude people with multiple tumour flags = yes) People diagnosed following death certificate only (basis = 0) People domiciled outside of New Zealand (DHB_code = 999) Cancer morphologies of melanoma, sarcoma and other unusual morphologies (codes 8333, 8720, 8772, 8800, 8801, 8803, 8805, 8815, 8890, 9040, 9041, 9133)
3	Diagnosis date	Date of initial diagnosis	Period one: 2015–2018 Period two: 2019–2022
4	Male or female	Sex	M or F
5	Adult patient 18 years and older at diagnosis	Age at diagnosis	18 years and older
6	Invasive tumours	Behaviour code	3
7	Small cell lung cancer	Morphology code	Include SCLC morphology codes (80413, 80423, 80433, 80443 and 80543)



Numerator criteria

(i) NSCLC

Diagram reference	Assessment	Item	Codes
8	Number of people with non-small cell lung cancer who received systemic anti-cancer therapy	NSCLC_SACT	Drugs with chemical ID 3826, 3825, 2433, 3847, 3811, 3815, 3834, 3842, 3816, 4088, 3966, 3916, 1369, 3813, 2319, 2320

(ii) SCLC

Diagram reference	Assessment	Item	Codes
8	Number of people with small cell lung cancer who received systemic anti-cancer therapy	SCLC_SACT	Drugs with chemical ID 3826, 3825, 2433, 3847, 3811, 3815, 3834, 3842, 3816, 4088, 3966, 3916, 1369, 3813, 2319, 2320

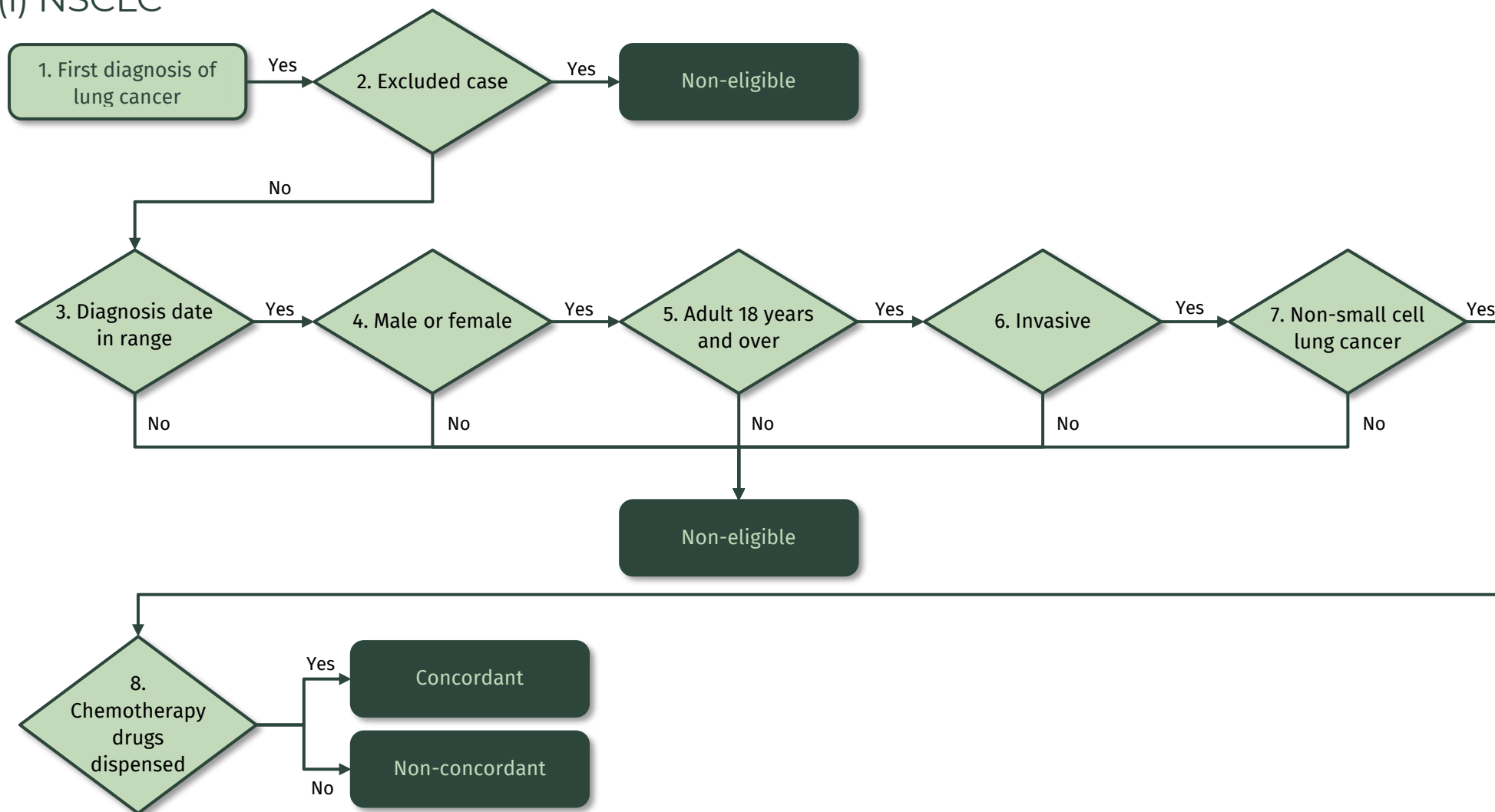


Chemotherapy drug codes and names

Chemical ID	Chemical name
3826	Cisplatin
3825	Carboplatin
2433	Etoposide
3847	Etoposide phosphate
3811	Irinotecan hydrochloride
3815	Paclitaxel
3834	Docetaxel
3842	Gemcitabine hydrochloride
3816	Vinorelbine
4088	Pemetrexed
3966	Gefitinib
3916	Erlotinib hydrochloride
1369	Cyclophosphamide
3813	Doxorubicin
2319	Vinblastine sulphate
2320	Vincristine sulphate



(i) NSCLC



LCQI 8: RADIATION THERAPY

Descriptions:

- (i) Proportion of people with lung cancer receiving radiation treatment, by intent and type of lung cancer (NSCLC/SCLC)
- (ii) Proportion of people with primary lung cancer receiving SABR, by intent and type of lung cancer (NSCLC/SCLC)
- (iii) Proportion of people with lung cancer receiving concurrent chemoradiation, by intent and type of lung cancer (NSCLC/SCLC)

Measure items

Data set	Data item	Description
NZCR	NHI	Patient identifier
NZCR	Cancer event ID	Cancer registration identifier
NZCR	Date of initial diagnosis	Date person first diagnosed with lung cancer
NZCR	Diagnosis year	Calendar year of first diagnosis
NZCR	Site	Primary organ of origin of the cancer (ICD-10-AM Eighth Edition code)
NZCR	Morphology code	4-digit code (ICD-O-3) for microscopic or cellular anatomy of the cancer
NZCR	Basis	Basis of diagnosis
NZCR	DHB of domicile	DHB code for domicile of patient at diagnosis
NZCR	DHB	DHB name based on domicile of patient at diagnosis
NZCR	Age at diagnosis	Age of patient at diagnosis in years
NZCR	Prioritised ethnicity	Ethnic group derived from patient's ethnicity
NZCR	Sex	Sex of patient
NZCR	Deprivation quintile	NZDep2013 index of social deprivation quintile based on patient's domicile
NZCR	Date of death	Date patient died
NZCR	TNM_T	Stage at diagnosis – tumour
NZCR	TNM_N	Stage at diagnosis – node
NZCR	TNM_M	Stage at diagnosis – metastases
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour



Data set	Data item	Description
NZCR	Registration status code	Status of registration processing
ROC	Start date	Date of treatment start
ROC	End date	Date of treatment end
ROC	Treatment occurrence	Treatment occurrence
ROC	Intent of treatment	Intent of treatment indicator
ROC	Fractionation	Planned fractions
ROC	Dose	Dosage used
ROC	Facility	Facility of service
PHARMS	Date of dispensing	Date of dispensing of chemotherapy drugs
PHARMS	Chemical ID	Identifier for drug
PHARMS	Chemical name	Name of chemotherapy drug

Case eligibility criteria (denominator)

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of lung cancer (trachea C33 or bronchus C34)
2	Exclude manually censored case	Exclusion	<p>Registration codes not R_C (registered complete) or R_R (registered)</p> <p>No incident cancer (exclude people with multiple tumour flags = yes)</p> <p>People diagnosed following death certificate only (basis = 0)</p> <p>People domiciled outside of New Zealand (DHB_code = 999)</p> <p>Cancer morphologies of melanoma, sarcoma and other unusual morphologies (codes 8333, 8720, 8772, 8800, 8801, 8803, 8805, 8815, 8890, 9040, 9041, 9133)</p>
3	Diagnosis date	Date of initial diagnosis	<p>Period one: 2015–2018</p> <p>Period two: 2019–2022</p>
4	Male or female	Sex	M or F



Diagram reference	Assessment	Item	Codes
5	Adult patient 18 years and older at diagnosis	Age at diagnosis	18 years and older
6	Invasive tumours	Behaviour code	3
7	Cancer type	Morphology code	<p>Non-small cell lung cancer:</p> <ul style="list-style-type: none"> All morphology codes except codes for SCLC (8041, 8042, 8043, 8044 and 8054) and other/unspecified lung cancers (8000, 8010, 8020, 8240, 8244, 8249) <p>Small cell lung cancer:</p> <ul style="list-style-type: none"> Morphology codes 8041, 8042, 8043, 8044 and 8054

Numerator criteria

Diagram reference	Assessment	Item	Codes
8i	Proportion of people with lung cancer receiving radiation treatment	Radiotherapy	<p>From ROC data set, include patients with:</p> <ol style="list-style-type: none"> treatment_occurrence = 'First Treatment' clinical_code_icd10_am8 like ('C33%', 'C34%') Treatment start date between -30 and 275 days from diagnosis date
8ii	Proportion of people with lung cancer receiving stereotactic ablative radiotherapy	SABR	<p>From ROC data set, include patients with:</p> <ol style="list-style-type: none"> treatment_occurrence = 'First Treatment' clinical_code_icd10_am8 like ('C33%', 'C34%') Treatment intent = 1 (curative) Dose between 48 GY and 60 GY Fractionation between 3# and 8# Treatment start date between -30 and 275 days from diagnosis date

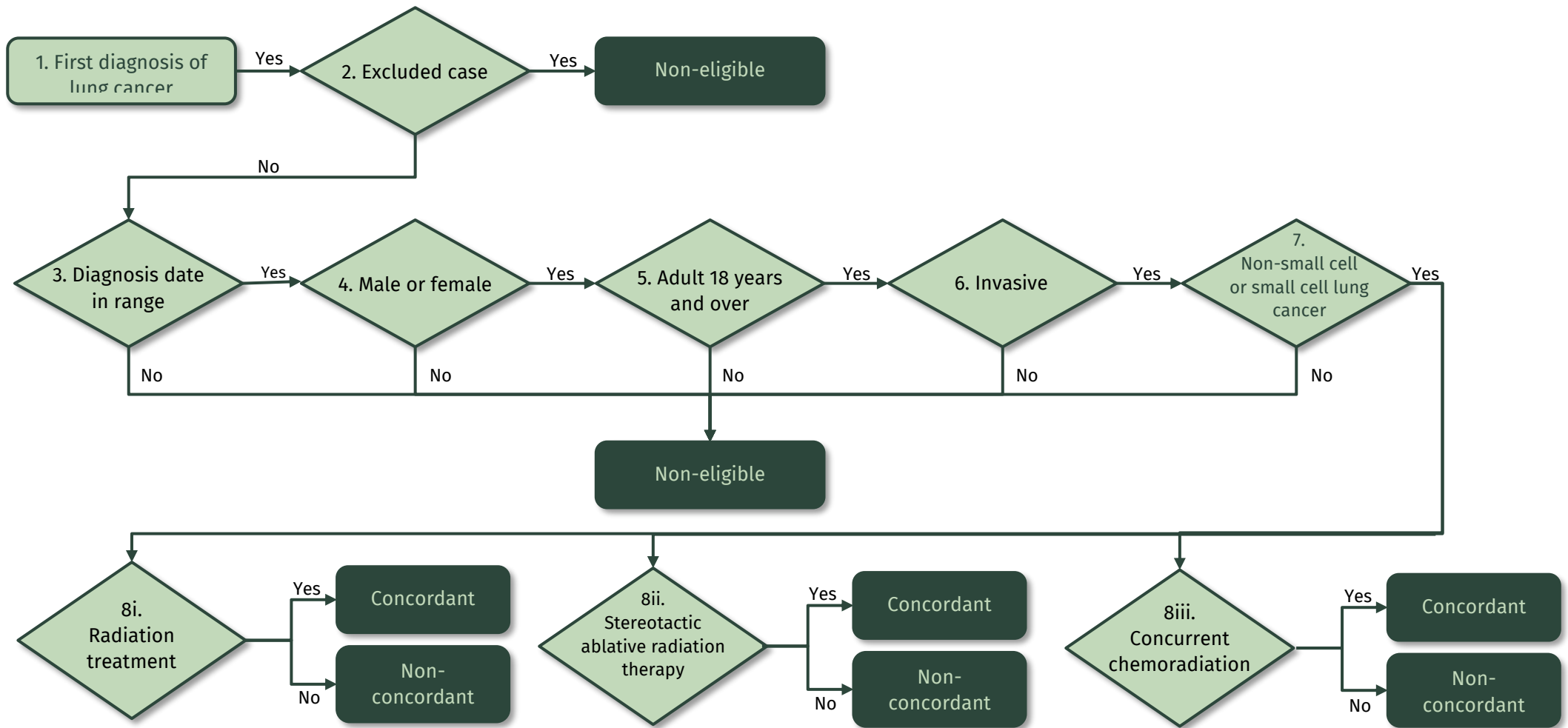


8iii	Proportion of people with lung cancer receiving concurrent chemo-radiation	Chemoradiation	<p>From ROC data set, include patients with:</p> <ul style="list-style-type: none"> a. treatment_occurrence = 'First Treatment' b. clinical_code_icd10_am8 like ('C33%', 'C34%') c. Treatment start date between -30 and 275 days from diagnosis date <p>AND</p> <p>From PHARMS data set, include patients with:</p> <ul style="list-style-type: none"> d. Drugs with chemical ID 3826, 3825, 2433, 3847, 3811, 3815, 3834, 3842, 3816, 4088, 3966, 3916, 1369, 3813, 2319, 2320 <p>AND</p> <ul style="list-style-type: none"> e. PHARMS date of dispensing between ROC start date and ROC end date
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Chemotherapy drug codes and names

Chemical ID	Chemical name
3826	Cisplatin
3825	Carboplatin
2433	Etoposide
3847	Etoposide phosphate
3811	Irinotecan hydrochloride
3815	Paclitaxel
3834	Docetaxel
3842	Gemcitabine hydrochloride
3816	Vinorelbine
4088	Pemetrexed
3966	Gefitinib
3916	Erlotinib hydrochloride
1369	Cyclophosphamide
3813	Doxorubicin
2319	Vinblastine sulphate
2320	Vincristine sulphate





LCQI 9: TREATMENT MORTALITY

Description: Proportion of people with lung cancer who died within 30 or 90 days of treatment with curative intent (surgery, SABR, concurrent chemoradiation), by type (NSCLC/SCLC)

Measure items

Data set	Data item	Description
NZCR	NHI	Patient identifier
NZCR	Cancer event ID	Cancer registration identifier
NZCR	Date of initial diagnosis	Date person first diagnosed with lung cancer
NZCR	Diagnosis year	Calendar year of first diagnosis
NZCR	Site	Primary organ of origin of the cancer (ICD-10-AM Eighth Edition code)
NZCR	Morphology code	4-digit code (ICD-O-3) for microscopic or cellular anatomy of the cancer
NZCR	Basis	Basis of diagnosis
NZCR	DHB of domicile	DHB code for domicile of patient at diagnosis
NZCR	DHB	DHB name based on domicile of patient at diagnosis
NZCR	Age at diagnosis	Age of patient at diagnosis in years
NZCR	Prioritised ethnicity	Ethnic group derived from patient's ethnicity
NZCR	Sex	Sex of patient
NZCR	Deprivation quintile	NZDep2013 index of social deprivation quintile based on patient's domicile
NZCR	Date of death	Date patient died
NZCR	TNM_T	Stage at diagnosis – tumour
NZCR	TNM_N	Stage at diagnosis – node
NZCR	TNM_M	Stage at diagnosis – metastases
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing



Data set	Data item	Description
NMDS	Surgical procedure code	ICD-10 procedure code
NMDS	Surgical procedure	Description of surgical procedure
NMDS	Date of curative surgery	Date of procedure considered as curative treatment of the primary site
NMDS	DHB of service	DHB of service for patient
ROC	Start date	Date of treatment start
ROC	End date	Date of treatment end
ROC	Treatment occurrence	Treatment occurrence
ROC	Intent of treatment	Intent of treatment indicator
ROC	Fractionation	Planned fractions
ROC	Dose	Dosage used
ROC	Facility	Facility of service
PHARMS	Date of dispensing	Date of dispensing of chemotherapy drugs
PHARMS	Chemical ID	Identifier for drug
PHARMS	Chemical name	Name of chemotherapy drug



Case eligibility criteria (denominator)

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of lung cancer (trachea C33 or bronchus C34)
2	Exclude manually censored case	Exclusion	<p>Registration codes not R_C (registered complete) or R_R (registered)</p> <p>No incident cancer (exclude people with multiple tumour flags = yes)</p> <p>People diagnosed following death certificate only (basis = 0)</p> <p>People domiciled outside of New Zealand (DHB_code = 999)</p> <p>Cancer morphologies of melanoma, sarcoma and other unusual morphologies (codes 8333, 8720, 8772, 8800, 8801, 8803, 8805, 8815, 8890, 9040, 9041, 9133)</p>
3	Diagnosis date	Date of initial diagnosis	<p>Period one: 2015–2018</p> <p>Period two: 2019–2022</p>
4	Male or female	Sex	M or F
5	Adult patient 18 years and older at diagnosis	Age at diagnosis	18 years and older
6	Invasive tumours	Behaviour code	3
7	Radical treatment	Treatment	<p>7.1 Surgery as treatment</p> <p>a. IncludeACHI (8th edition) procedure codes: 3844000, 3844001, 3843800, 9016900, 3843801, 3844100, 3844101, 3843802</p> <p>AND</p> <p>b. surgery date between -30 and 183 days from diagnosis date</p> <p>7.2 SABR as treatment</p> <p>From ROC data set, include patients with:</p>



Diagram reference	Assessment	Item	Codes
			<ul style="list-style-type: none"> a. treatment_occurrence = 'First Treatment' b. clinical_code_icd10_am8 like ('C33%', 'C34%') c. Treatment intent = 1 (curative) d. Dose between 48 GY and 60 GY e. Fractionation between 3# and 8# f. Treatment start date between -30 and 275 days from diagnosis date
		7.3	<p>Concurrent chemoradiation</p> <p>From ROC data set, include patients with:</p> <ul style="list-style-type: none"> a. treatment_occurrence = 'First Treatment' b. clinical_code_icd10_am8 like ('C33%', 'C34%') c. Treatment start date between -30 and 275 days from diagnosis date <p>AND</p> <p>From PHARMS data set, include patients with:</p> <ul style="list-style-type: none"> d. Drugs with chemical ID 3826, 3825, 2433, 3847, 3811, 3815, 3834, 3842, 3816, 4088, 3966, 3916, 1369, 3813, 2319, 2320 <p>AND</p> <ul style="list-style-type: none"> e. PHARMS date of dispensing between ROC start date and ROC end date



Numerator criteria

Diagram reference	Assessment	Item	Codes
8	Number of people with lung cancer who died within 30 days of treatment with curative intent (surgery, SABR, concurrent chemoradiation)	death_30	Patient died within 30 days of treatment. If more than 1 treatment, date of first treatment is used
	Number of people with lung cancer who died within 90 days of treatment with curative intent (surgery, SABR, concurrent chemoradiation)	death_90	Patient died within 90 days of treatment. If more than 1 treatment, date of first treatment is used

Curative resection ACHI procedure codes

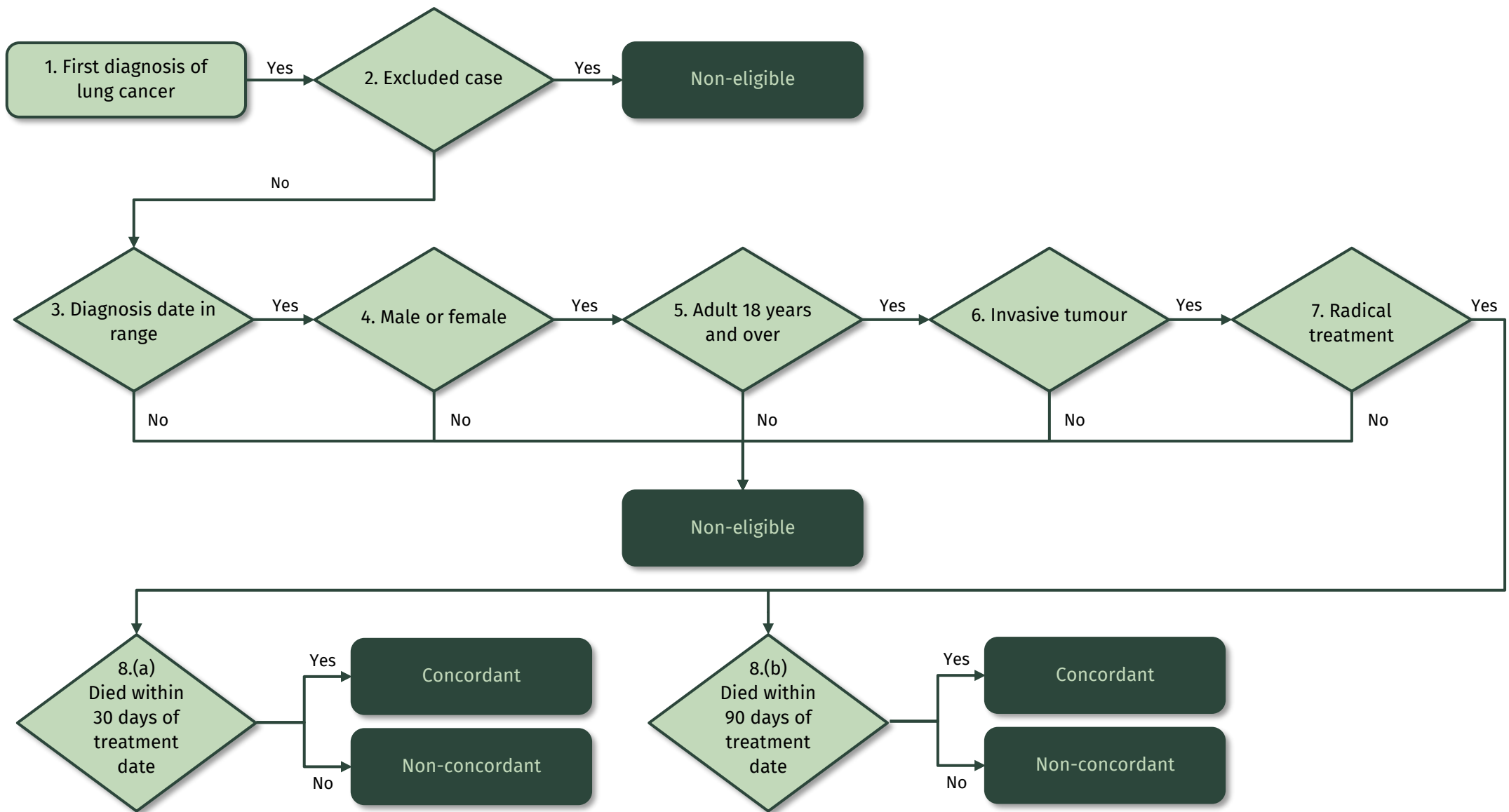
Clinical code	Clinical code description	Block description
3844000	Wedge resection of lung	Partial resection of lung
3844001	Radical wedge resection of lung	Partial resection of lung
3843800	Segmental resection of lung	Partial resection of lung
9016900	Endoscopic wedge resection of lung	Partial resection of lung
3843801	Lobectomy of lung	Lobectomy of lung
3844100	Radical lobectomy	Lobectomy of lung
3844101	Radical pneumonectomy	Pneumonectomy
3843802	Pneumonectomy	Pneumonectomy



Chemotherapy drug codes and names

Chemical ID	Chemical name
3826	Cisplatin
3825	Carboplatin
2433	Etoposide
3847	Etoposide phosphate
3811	Irinotecan hydrochloride
3815	Paclitaxel
3834	Docetaxel
3842	Gemcitabine hydrochloride
3816	Vinorelbine
4088	Pemetrexed
3966	Gefitinib
3916	Erlotinib hydrochloride
1369	Cyclophosphamide
3813	Doxorubicin
2319	Vinblastine sulphate
2320	Vincristine sulphate





LCQI 10: OVERALL SURVIVAL

Description: Proportion of people with lung cancer who are alive at 1, 2 and 3 years from diagnosis, by type (NSCLC/SCLC)

Measure items

Data set	Data item	Description
NZCR	NHI	Patient identifier
NZCR	Cancer event ID	Cancer registration identifier
NZCR	Date of initial diagnosis	Date person first diagnosed with lung cancer
NZCR	Diagnosis year	Calendar year of first diagnosis
NZCR	Site	Primary organ of origin of the cancer (ICD-10-AM Eighth Edition code)
NZCR	Morphology code	4-digit code (ICD-O-3) for microscopic or cellular anatomy of the cancer
NZCR	Basis	Basis of diagnosis
NZCR	DHB of domicile	DHB code for domicile of patient at diagnosis
NZCR	DHB	DHB name based on domicile of patient at diagnosis
NZCR	Age at diagnosis	Age of patient at diagnosis in years
NZCR	Prioritised ethnicity	Ethnic group derived from patient's ethnicity
NZCR	Sex	Sex of patient
NZCR	Deprivation quintile	NZDep2013 index of social deprivation quintile based on patient's domicile
NZCR	TNM_T	Stage at diagnosis – tumour
NZCR	TNM_N	Stage at diagnosis – node
NZCR	TNM_M	Stage at diagnosis – metastases
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
MORT	Date of death	Date patient died



Case eligibility criteria (denominator)

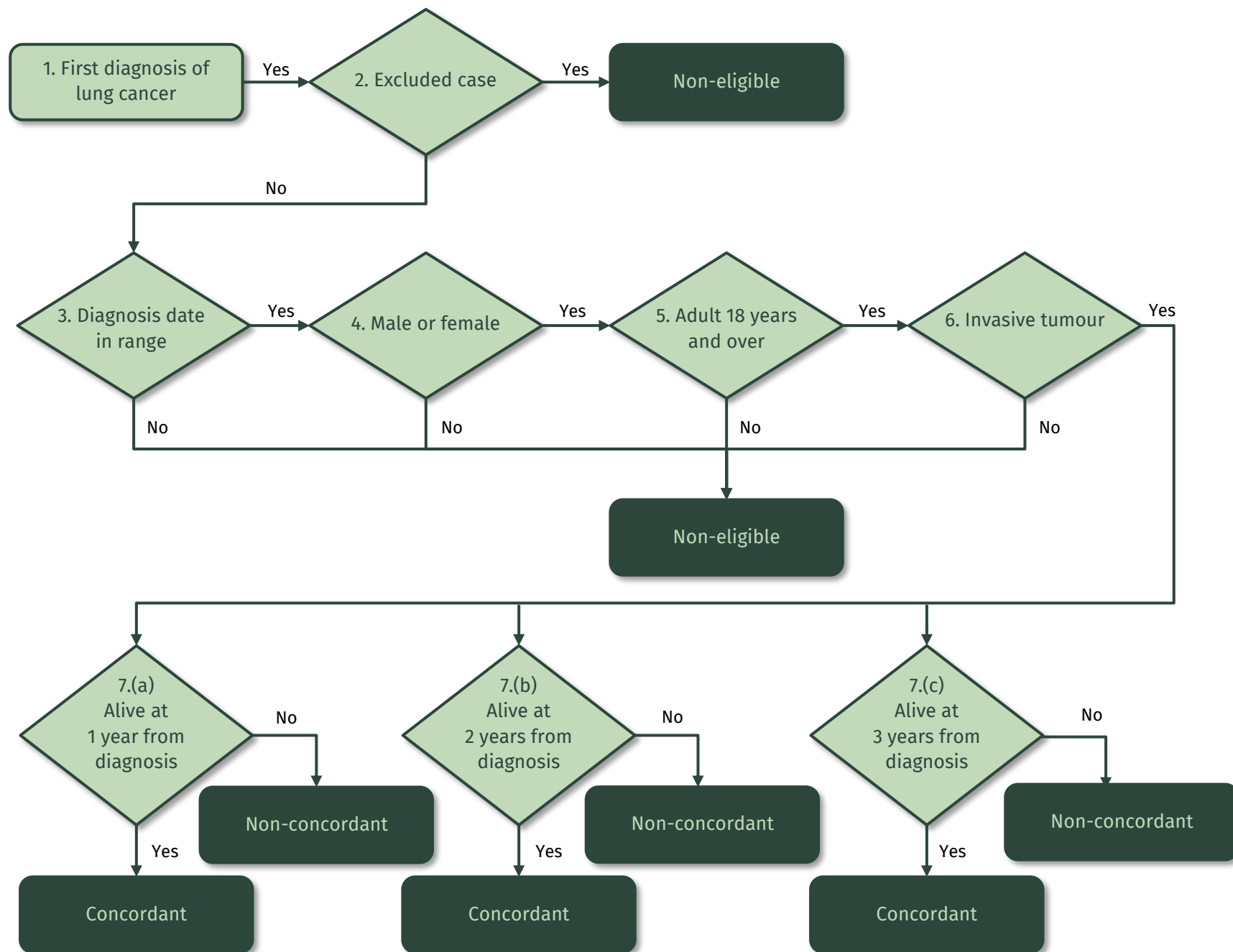
Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of lung cancer (trachea C33 or bronchus C34)
2	Exclude manually censored case	Exclusion	<p>Registration codes not R_C (registered complete) or R_R (registered)</p> <p>No incident cancer (exclude people with multiple tumour flags = yes)</p> <p>People diagnosed following death certificate only (basis = 0)</p> <p>People domiciled outside of New Zealand (DHB_code = 999)</p> <p>Cancer morphologies of melanoma, sarcoma and other unusual morphologies (codes 8333, 8720, 8772, 8800, 8801, 8803, 8805, 8815, 8890, 9040, 9041, 9133)</p>
3	Diagnosis date	Date of initial diagnosis	<p>Period one: 2015–2018 (with follow-up continuing through 31 December 2019)</p> <p>Period two: 2019–2022 (with follow-up continuing through 31 December 2023)</p>
4	Male or female	Sex	M or F
5	Adult patient 18 years and older at diagnosis	Age at diagnosis	18 years and older
6	Invasive tumours	Behaviour code	3



Numerator criteria

Diagram reference	Assessment	Item	Codes
7	a. People with lung cancer alive at 1 year from diagnosis	survival_1	Patient alive 1 year from diagnosis date
7	b. People with lung cancer alive at 2 years from diagnosis	survival_2	Patient alive 2 years from diagnosis date
7	c. People with lung cancer alive at 3 years from diagnosis	survival_3	Patient alive 3 years from diagnosis date





LCQI 11: CANCER TREATMENT AT THE END OF LIFE

Description: Proportion of people with lung cancer who died (from any cause) and received SACT within 30 days prior to death

Measure items

Data set	Data item	Description
NZCR	NHI	Patient identifier
NZCR	Cancer event ID	Cancer registration identifier
NZCR	Date of initial diagnosis	Date person first diagnosed with lung cancer
NZCR	Diagnosis year	Calendar year of first diagnosis
NZCR	Site	Primary organ of origin of the cancer (ICD-10-AM Eighth Edition code)
NZCR	Morphology code	4-digit code (ICD-O-3) for microscopic or cellular anatomy of the cancer
NZCR	Basis	Basis of diagnosis
NZCR	DHB of domicile	DHB code for domicile of patient at diagnosis
NZCR	DHB	DHB name based on domicile of patient at diagnosis
NZCR	Age at diagnosis	Age of patient at diagnosis in years
NZCR	Prioritised ethnicity	Ethnic group derived from patient's ethnicity
NZCR	Sex	Sex of patient
NZCR	Deprivation quintile	NZDep2013 index of social deprivation quintile based on patient's domicile
NZCR	TNM_T	Stage at diagnosis – tumour
NZCR	TNM_N	Stage at diagnosis – node
NZCR	TNM_M	Stage at diagnosis – metastases
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
MORT	Date of death	Date patient died
PHARMS	Date of dispensing	Date of dispensing of chemotherapy drugs
PHARMS	Chemical ID	Identifier for drug



Data set	Data item	Description
PHARMS	Chemical name	Name of chemotherapy drug
PHARMS	Chemical ID	Identifier for drug

Case eligibility criteria (denominator)

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of lung cancer (trachea C33 or bronchus C34)
2	Exclude manually censored case	Exclusion	Registration codes not R_C (registered complete) or R_R (registered) No incident cancer (exclude people with multiple tumour flags = yes) People diagnosed following death certificate only (basis = 0) People domiciled outside of New Zealand (DHB_code = 999) Cancer morphologies of melanoma, sarcoma and other unusual morphologies (codes 8333, 8720, 8772, 8800, 8801, 8803, 8805, 8815, 8890, 9040, 9041, 9133)
3	Diagnosis date	Date of initial diagnosis	Period one: 2015–2018 Period two: 2019–2022
4	Male or female	Sex	M or F
5	Adult patient 18 years and older at diagnosis	Age at diagnosis	18 years and older
6	Invasive tumours	Behaviour code	3
7	Deceased	Vital status	Dead (from any cause) – date of death is not null



Numerator criteria

Diagram reference	Assessment	Item	Codes
8	Number of people with lung cancer who died (from any cause) and receive systemic anti-cancer therapy within 30 days of death	SACT_EOL	<p>From PHARMS data set, include patients with:</p> <ul style="list-style-type: none"> Drugs with chemical ID 3826, 3825, 2433, 3847, 3811, 3815, 3834, 3842, 3816, 4088, 3966, 3916, 1369, 3813, 2319, 2320 <p>AND</p> <ul style="list-style-type: none"> Dispensed date is within 30 days prior to date of death

Chemotherapy drug codes and names

Chemical ID	Chemical name
3826	Cisplatin
3825	Carboplatin
2433	Etoposide
3847	Etoposide phosphate
3811	Irinotecan hydrochloride
3815	Paclitaxel
3834	Docetaxel
3842	Gemcitabine hydrochloride
3816	Vinorelbine
4088	Pemetrexed
3966	Gefitinib
3916	Erlotinib hydrochloride
1369	Cyclophosphamide
3813	Doxorubicin
2319	Vinblastine sulphate
2320	Vincristine sulphate



