

# BOWEL CANCER QUALITY PERFORMANCE INDICATOR SPECIFICATIONS

## Updated specifications

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# VERSION RECORD

## 2022 Update

This document was updated to coincide with the release of the *Bowel Cancer Quality Improvement Monitoring Report Update: Updated using 2017–2019 data*.

The following QPIs have been updated:

- BCQPI 7 – Post-operative mortality
- BCQI 16 – Rectal cancer treatment (name change only).

The following QPI has been discontinued:

- BCQPI 21 – Stoma Free Survival.

The following QPI has been added:

- BCQPI 21\_a – Abdominoperineal resection.





# INTRODUCTION

From 2017-2019 the Ministry of Health and the National Bowel Cancer Working Group (NBCWG) worked together to identify a set of 22 quality performance indicators (QPIs) for bowel cancer. Of the 22, seven are currently measurable.

The QPIs that were able to be calculated using the Ministry of Health's national collections are presented in the associated Bowel Cancer Quality Improvement Monitoring Reports (the monitoring reports).

With the release of the second monitoring report, Te Aho o Te Kahu, the Cancer Control Agency (Te Aho o Te Kahu), has updated the technical specifications. This information is provided 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 as outlined in the table below.

BCQPI 5, Length of stay after surgery is not included in this document. This is a descriptive indicator reported only on a national level without specialised analysis and therefore no technical specification is required. Further information on this indicator, and others, can be found in the *Bowel Cancer Quality Performance Indicators: Descriptions* (2022) document.



Indicator	Measure	Measure abbreviation	Measure type
<b>BCQI 1. Route to Diagnosis</b>	Proportion of people with cancer who are diagnosed following a referral to a clinic, screening or, presentation to an emergency department (with or without surgery)	a) Screening b) Emergency c) Referral	Quality improvement Also a benefits realisation indicator for the National Bowel Screening Programme
<b>BCQI 7. Post-operative mortality</b>	Proportion of people with colorectal cancer who died within 30 days of surgery (discontinued)	death30 death30es	Quality improvement
	Proportion of people with colorectal cancer who died within 90 days of surgery	death90 death90es	Quality improvement
<b>BCQI 10. Lymph node yield</b>	Proportion of people with colon cancer who undergo surgical resection where 12 or more lymph nodes are pathologically examined	lymph12	Quality improvement
<b>BCQI 16. Rectal cancer treatment</b>	Proportion of people with rectal cancer with: <sup>1</sup> a) no radiotherapy (surgery alone) b) short course radiotherapy (SCRT) pre-operative c) long course radiotherapy (LCRT) pre-operative	a) noradio b) preopscrt c) preoplcrt	Quality improvement
<b>BCQI 19. Emergency surgery</b>	Proportion of people with bowel cancer who undergo major surgical resection performed as an emergency	emergsurg	Quality improvement
<b>BCQI 21. Stoma free survival (discontinued)</b>	Proportion of people with rectal cancer who had major surgery and are free of a stoma at 18 months	Stomafree	Quality improvement
<b>BCQI 21_a. Abdominoperineal resection</b>	Proportion of people with rectal cancer who had major surgery and an abdominoperineal resection	APR	Quality improvement

<sup>1</sup> This indicator includes:

- people with metastatic disease
- people having short course radiotherapy and chemotherapy.





# BCQI 1. ROUTE TO DIAGNOSIS

Proportion of people with cancer who are diagnosed following a referral to a clinic, screening or, presentation to an emergency department (with or without surgery).

## Sources of data for indicator

- New Zealand Cancer Registry (NZCR) – a population-based register of all primary malignant diseases diagnosed in New Zealand, excluding squamous and basal cell skin cancers
- National Minimum Dataset (NMDS) – 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
- Bowel Screening Data Warehouse (BSDW) – national repository for information relating to publicly funded bowel screening



# Data items

Dataset	Data item	Description
NZCR	Site	Primary organ of origin of the cancer
NZCR	Sex	Sex of patient
NZCR	Age at diagnosis	Age of patient at diagnosis
NZCR	Morphology	Microscopic or cellular anatomy of the cancer
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Date of initial diagnosis	Date person first diagnosed with bowel cancer
NZCR	Basis	Basis of diagnosis
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
NZCR	DHB name	DHB of domicile for patient
NMDS	Health speciality	Type of inpatient admission
NMDS	LOS	Length of stay
NMDS	Event end date	Date of admission
NNPAC	Purchase code	Type of outpatient attendance
NNPAC	Date time of service	Date and time of service
BSDW	Screening date	Date of screening for bowel cancer
BSDW	Histology	Bowel screening participant's histology



# Case eligibility criteria (denominator)

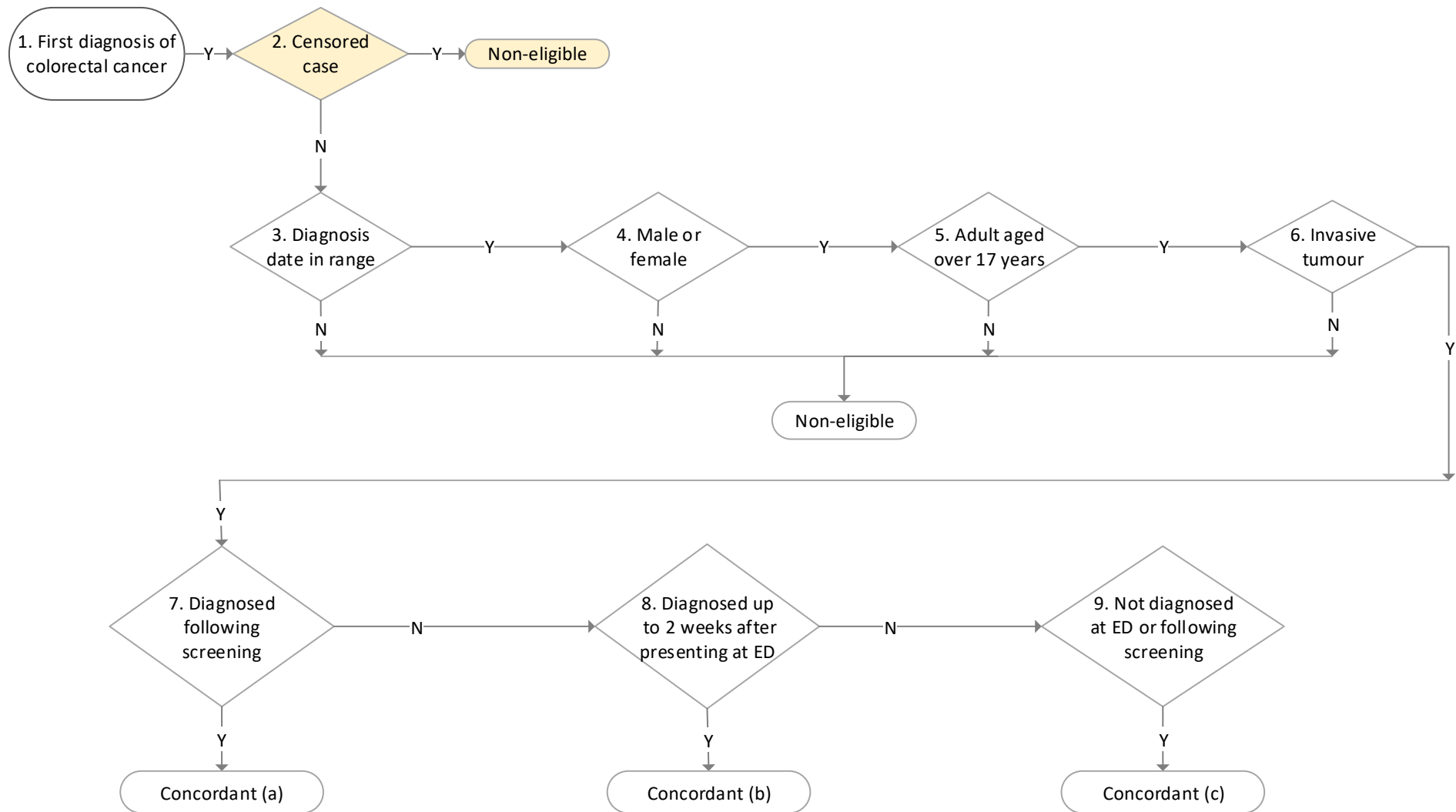
Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of bowel cancer (colon C18–C19 or rectum C20)
2	Exclude manually censored case	Exclusion	<p>People with appendiceal carcinomas C18.1 site code</p> <p>Patients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomas</p> <p>Morphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936</p> <p>Registration codes not R_C or R_R</p> <p>Non-incident cancer (exclude people with multiple tumour flags = yes)</p> <p>Patients diagnosed following death certificate only (basis = 0)</p> <p>Patient domiciled outside of New Zealand (DHB_code = 999)</p>
3	Diagnosis date	Date of initial diagnosis	2013–16 and 2017–19
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: a) Number of people with bowel cancer who were diagnosed following screening	Screening	<p>Include all screening participants with a histology. Includes only adenocarcinomas. Excludes non-cancerous histology (adenoma, serrated polyp, etc) and incidental findings (squamous cell, lymphoma, etc). If described as 'cancer' only, we take that to mean adenocarcinoma.</p> <p>Ideally this numerator would restrict to patients screened within 2 weeks prior to diagnosis. This restriction was not applied within the current report as the NZCR only records definitive diagnosis following surgery.</p>
8	Numerator: b) Number of people with bowel cancer who were diagnosed following presentation to an emergency department	Emergency	<p>Inpatient (NMDS)</p> <p>Health speciality = M05 (Emergency Medicine) and length of inpatient stay is between 0 and 1 days</p> <p>Outpatient (NNPAC)</p> <p>Outpatient attendance (purchase code) of ED</p>
9	Numerator: c) Number of people with bowel cancer who were diagnosed following referral to a clinic	Referral	<p>People not diagnosed at death, through emergency department or screening.</p>





# BCQI 7. POST-OPERATIVE MORTALITY

Proportion of people with bowel cancer who died within 30 or 90 days of surgery.<sup>2</sup>

## Sources of data for indicator

- Mortality Collection (MORT) – classifies the underlying cause of death for all deaths registered in New Zealand
- New Zealand Cancer Registry (NZCR) – a population-based register of all primary malignant diseases diagnosed in New Zealand, excluding squamous and basal cell skin cancers
- National Minimum Dataset (NMDS) – a collection of public and private hospital discharge information, including coded clinical data for inpatients and day patients

<sup>2</sup> 30-day post-operative mortality has been discontinued, however the specification is outlined here in the event it is required to compare to previous reporting.



# Data items

Dataset	Data item	Description
NZCR	Site	Primary organ of origin of the cancer
NZCR	Sex	Sex of patient
NZCR	Age at diagnosis	Age of patient at diagnosis
NZCR	Morphology	Microscopic or cellular anatomy of the cancer
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Date of initial diagnosis	Date person first diagnosed with bowel cancer
NZCR	Basis	Basis of diagnosis
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
NMDS	DHB name	DHB of service for patient
NMDS	Date of most definitive surgical resection	Date of most definitive surgical procedure of the primary site
NMDS	Surgical procedure	Surgical procedure of primary site
NMDS	Admission type	Type of inpatient admission
NMDS	Event end date	Date of admission
NMDS	Date of surgery	Date of most definitive surgical procedure of the primary site
MORT	Date of death	Date of death



# Case eligibility criteria (denominator)

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of bowel cancer (colon C18–C19 or rectum C20)
2	Exclude manually censored case	Exclusion	<p>People with appendiceal carcinomas C18.1 site code</p> <p>Patients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomas</p> <p>Morphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936</p> <p>Registration codes not R_C or R_R</p> <p>No incident cancer (exclude people with multiple tumour flags = yes)</p> <p>Patients diagnosed following death certificate only (basis = 0)</p> <p>Patient domiciled outside of New Zealand (DHB_code = 999)</p>
3	Diagnosis date	Date of initial diagnosis	2013–16 and 2017–19
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	Surgical procedure	Surgical procedure of the primary site	<p>Includes only procedures between 50 days prior and 365 days after diagnosis of rectum cancer or 183 days for colon cancer.</p> <p>For a full list of surgical procedures included, see the appendices.</p>

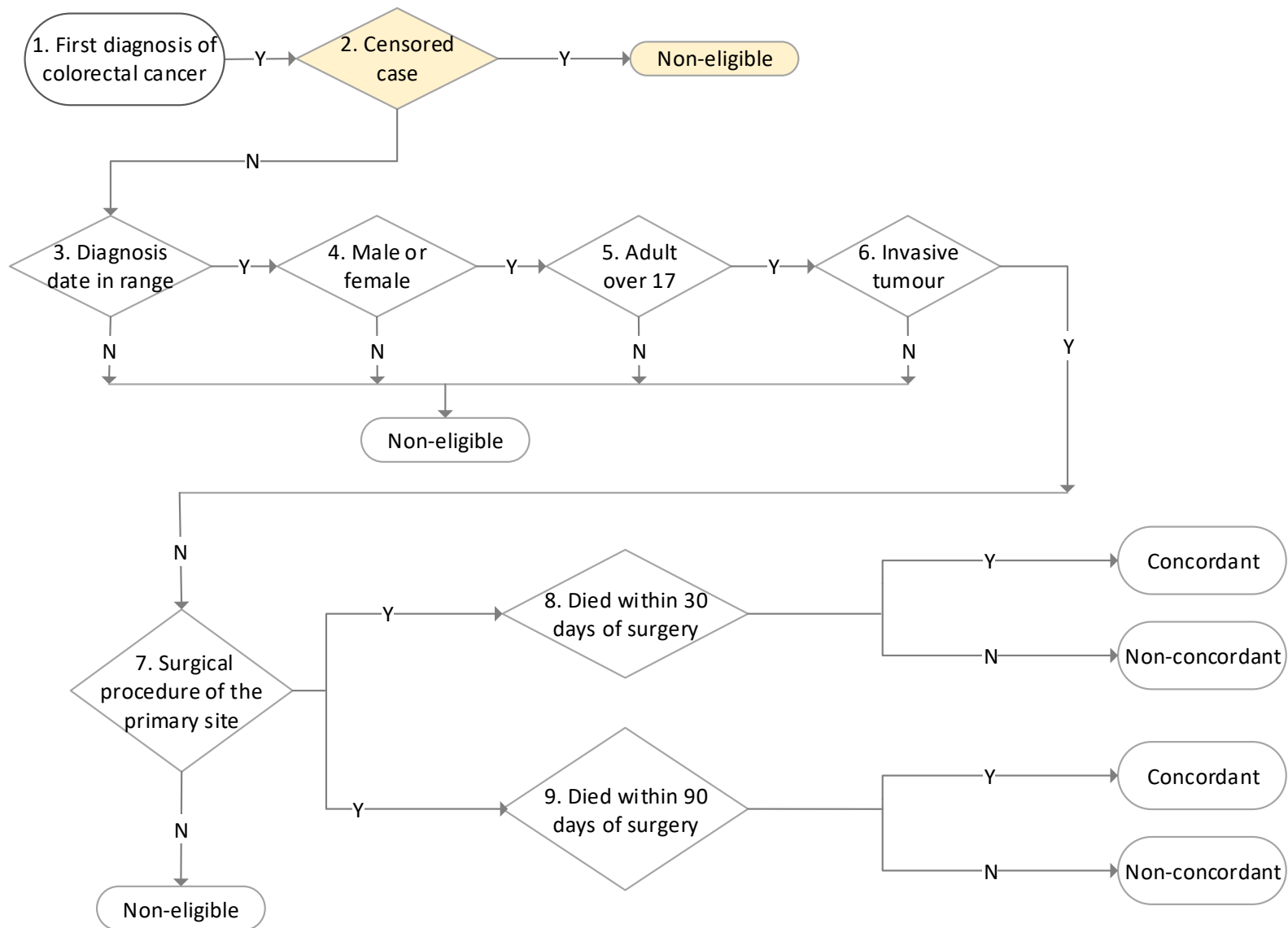




# Numerator criteria

Diagram reference	Assessment	Item	Codes
8	Number of patients with bowel cancer who die within 30 days of surgery.	a) death30 b) death30es	Patient died within 30 days of elective or emergency surgery Patient died within 30 days of elective surgery (adm_type = AC)
9	Number of patients with bowel cancer who die within 90 days of surgery.	a) death90 b) death90es	Patient died within 90 days of elective or emergency surgery Patient died within 90 days of elective surgery (adm_type = AC)





# BCQI 10. LYMPH NODE YIELD

Proportion of people with bowel cancer who undergo surgical resection where  $\geq 12$  lymph nodes are pathologically examined.

## Sources of data for indicator

- New Zealand Cancer Registry (NZCR) – a population-based register of all primary malignant diseases diagnosed in New Zealand, excluding squamous and basal cell skin cancers
- National Minimum Dataset (NMDS) – a collection of public and private hospital discharge information, including coded clinical data for inpatients and day patients

## Data items

Dataset	Data item	Description
NZCR	Site	Primary organ of origin of the cancer
NZCR	Sex	Sex of patient
NZCR	Age at diagnosis	Age of patient at diagnosis
NZCR	Morphology	Microscopic or cellular anatomy of the cancer
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Date of initial diagnosis	Date person first diagnosed with bowel cancer
NZCR	Basis	Basis of diagnosis
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
NMDS	DHB name	DHB of service for patient
NMDS	Date of most definitive surgical resection	Date of most definitive surgical procedure of the primary site
NMDS	Surgical procedure	Surgical procedure of primary site
NMDS	Health specialty	Type of inpatient admission
NMDS	Event end date	Date of admission
NMDS	Date of surgery	Date of most definitive surgical procedure of the primary site
NZCR	Nodes sample number	Number of lymph nodes sampled



# Case eligibility criteria

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of bowel cancer (colon C18–C19 or rectum C20)
2	Exclude manually censored case	Exclusion	<p>People with appendiceal carcinomas C18.1 site code</p> <p>Patients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomas</p> <p>Morphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936</p> <p>Registration codes not R_C or R_R</p> <p>Non-incident cancer (exclude people with multiple tumour flags = yes)</p> <p>Patients diagnosed following death certificate only (basis = 0)</p> <p>Patient domiciled outside of New Zealand (DHB_code = 999)</p>
3	Diagnosis date	Date of initial diagnosis	2013–16 and 2017–19
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	Surgical procedure	Surgical procedure of the primary site	<p>Includes only procedures between 50 days prior to and 122 days after diagnosis</p> <p>For a full list of surgical procedures included, see the appendices</p>
8	Procedure date	Date of first procedure of primary site	Surgical procedure date within 122 days of diagnosis date
9	Nodes sample number*	Number of lymph nodes examined	Is not blank

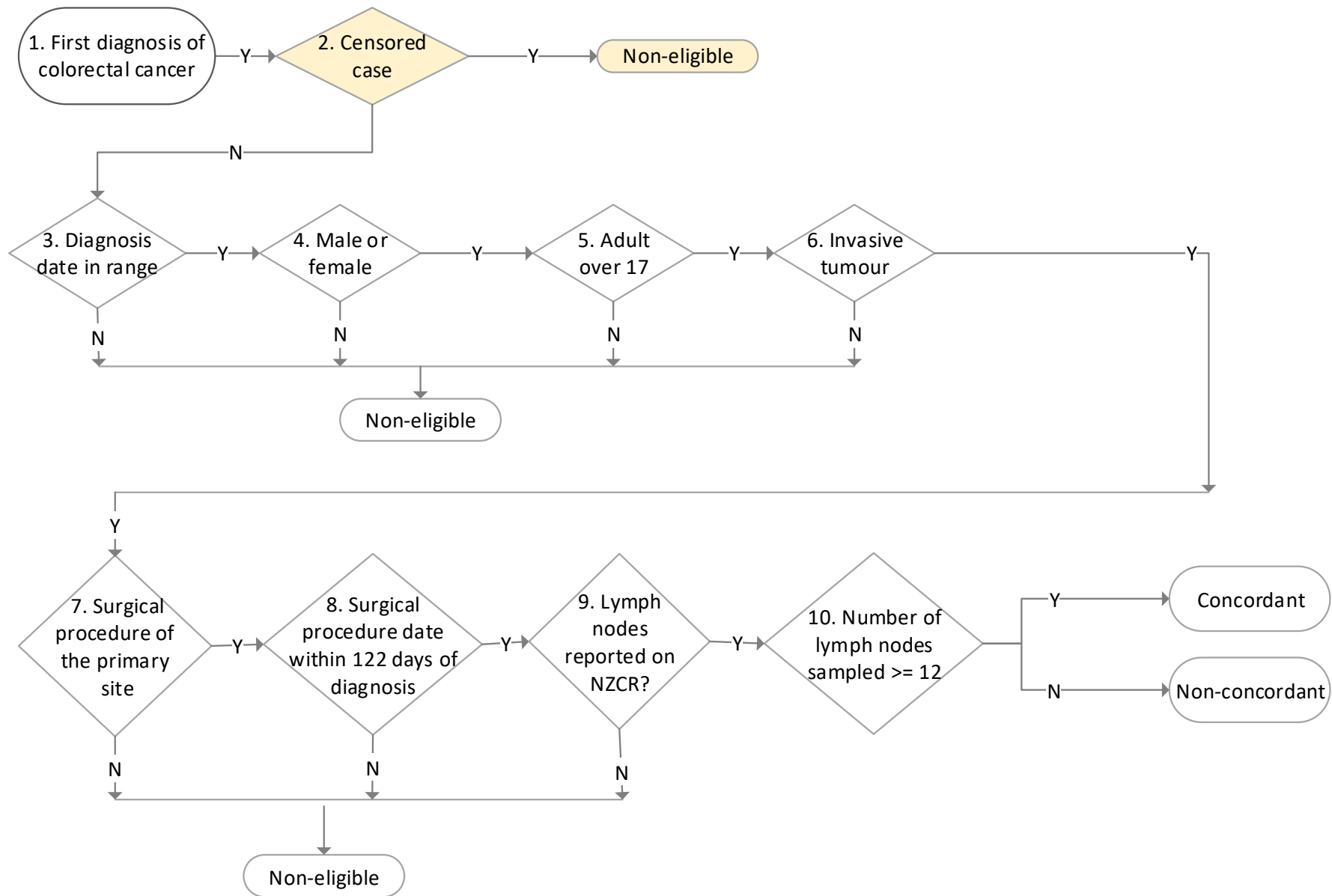
\* Field is not completed by NZCR staff for people with rectal cancer who undergo long course neo-adjuvant chemo radiotherapy or radiotherapy.



# Numerator criteria

Diagram reference	Assessment	Item	Codes
10	Numerator: Number of people with bowel cancer who undergo surgical resection where $\geq 12$ lymph nodes are pathologically examined.	lymph12	Nodes sample number $\geq 12$





# BCQI 16. RECTAL CANCER TREATMENT

Proportion of people with rectal cancer receiving surgery alone, or preoperative short or long course radiotherapy.

## Sources of data for indicator

- New Zealand Cancer Registry (NZCR) – a population-based register of all primary malignant diseases diagnosed in New Zealand, excluding squamous and basal cell skin cancers
- National Minimum Dataset (NMDs) – 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
- Radiation Oncology Collection (ROC) – a collection of radiation oncology treatment data, including both public and private providers



# Data items

Dataset	Data item	Description
NZCR	Site	Primary organ of origin of the cancer
NZCR	Sex	Sex of patient
NZCR	Age at diagnosis	Age of patient at diagnosis
NZCR	Morphology	Microscopic or cellular anatomy of the cancer
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Date of initial diagnosis	Date person first diagnosed with bowel cancer
NZCR	Basis	Basis of diagnosis
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
NMDS	DHB name	DHB of service for patient
NMDS	Health speciality	Type of inpatient admission
NMDS	Event end date	Date of admission
NMDS	Surgical procedure	Surgical procedure of primary site
NMDS	Date of surgery	Date of most definitive surgical procedure of the primary site
ROC	Start date	Date of treatment start
ROC	Intent of treatment	Intent of treatment indicator
ROC	Treatment occurrence	Treatment occurrence
ROC	Sessions	Number of sessions of radiotherapy
NNPAC	Purchase code	Type of outpatient attendance
NNPAC	Date and time of service	Date and time of service





# Case eligibility criteria (denominator)

Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Date of diagnosis	First diagnosis of bowel cancer (C18, C19 or C20)
2	Primary site – rectum	Primary site	Rectum C20
3	Exclude manually censored case	Exclusion	<p>Patients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomas</p> <p>Morphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936</p> <p>Patients diagnosed following death certificate only (basis = 0)</p> <p>Registration codes not R_C or R_R</p> <p>Non-incident cancer (exclude people with multiple tumour flags = yes)</p> <p>Patient domiciled outside of New Zealand (DHB_code = 999)</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	Diagnosis date	Date of initial diagnosis	2013–16 and 2017–19
8	Surgical procedure	Surgical procedure of the primary site	<p>Includes only procedures between 50 days prior to and 365 days after diagnosis</p> <p>For a full list of surgical procedures included, see the appendices</p>



# Numerator criteria

Diagram reference	Assessment	Item	Codes
9a	Numerator a): Number of people who receive no radiotherapy treatment	noradio	<p>ROC dataset</p> <p>Include when there is no record of a first curative treatment for bowel cancer prior to surgery for the patient<sup>1</sup></p> <p>NNPAC data (identifies if patient's treatment was publicly funded)</p> <p>Include patients who had no record of radiotherapy treatment starting in the period 20 weeks before or 16 weeks after first date of definitive surgery</p>
9b	Numerator b): Number of people who receive preoperative short course radiotherapy treatment	preopscrt	<p>ROC dataset</p> <p>Include patients with first curative treatment for bowel cancer<sup>1</sup> AND 5 sessions of radiotherapy AND radiotherapy treatment was received up to 140 days before definitive surgery for rectal cancer</p> <p>NNPAC data (identifies if patient's treatment was publicly funded)</p> <p>Include patients with:</p> <ul style="list-style-type: none"> <li>• PU code – M50025 Oncology – Radiotherapy, External Beam Megavoltage (linac) with 5 treatments (exclude patients who have more than 6 treatments)</li> <li>• treated up to 20 weeks before first definitive surgery date to account for post-radiotherapy wait for surgery</li> </ul>
9c	Numerator c): Number of people who receive preoperative long course radiotherapy treatment	preoplcr	<p>ROC dataset</p> <p>Include patients with first curative treatment for bowel cancer<sup>1</sup> AND 20 or more sessions of radiotherapy AND radiotherapy was received up to 140 days before definitive surgery for rectal cancer</p> <p>NNPAC data (identifies if patient's treatment was publicly funded)</p> <p>Include patients with:</p> <ul style="list-style-type: none"> <li>• PU code – M50025 Oncology – Radiotherapy, External Beam Megavoltage (linac) with 20 or more treatments</li> <li>• treated up to 20 weeks before first definitive surgery date to account for post-radiotherapy wait for surgery</li> </ul>

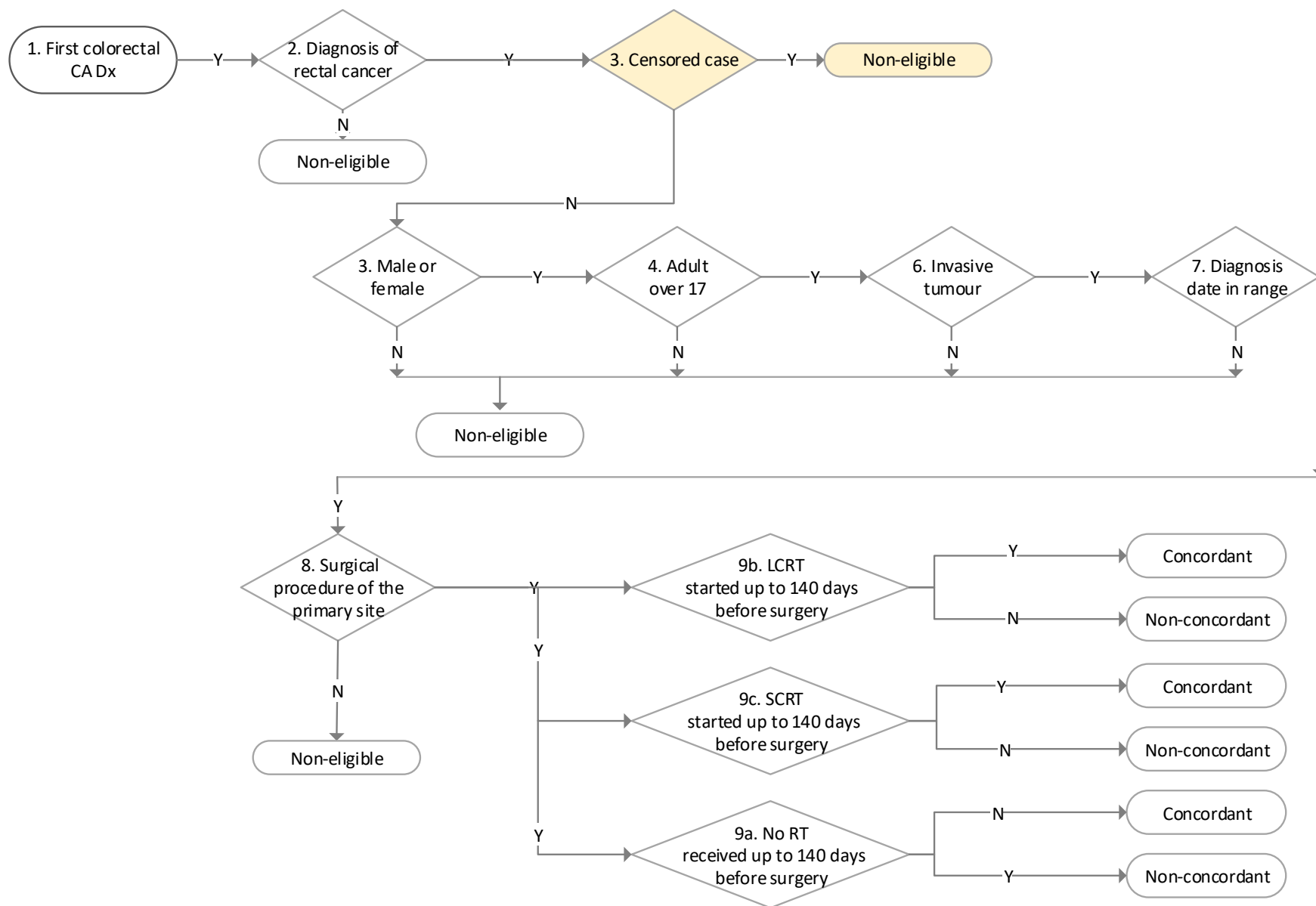
<sup>1</sup> fre.intent\_of\_treatment\_ind in ('1', 'X') and fre.treatment\_occurrence = "First Treatment" and substr(fre.clinical\_code\_icd10\_am8, 1, 3) in ("C18", "C19", "C20", "C21"). Note C18, C19 and C21 included as text in site\_of\_treatment field indicates pelvis or rectum.



# Morphology codes (ICD-O 3rd edition) for exclusion

Clinical code	Clinical code description
8013	Large cell neuroendocrine carcinoma
8041	Small cell carcinoma, not otherwise specified
8070	Squamous cell carcinoma, not otherwise specified
8240	Carcinoid tumour, not otherwise specified
8244	Mixed adenoneuroendocrine carcinoma
8246	Neuroendocrine carcinoma, not otherwise specified
8249	Atypical carcinoid tumour
8720	Malignant melanoma, not otherwise specified
8936	Gastrointestinal stromal sarcoma





# BCQI 19. EMERGENCY SURGERY

Proportion of people with bowel cancer who undergo major surgical resection performed as an emergency.

## Sources of data for indicator

- New Zealand Cancer Registry (NZCR) – a population-based register of all primary malignant diseases diagnosed in New Zealand, excluding squamous and basal cell skin cancers
- National Minimum Dataset (NMDS) – a collection of public and private hospital discharge information, including coded clinical data for inpatients and day patients

## Data items

Dataset	Data item	Description
NZCR	Site	Primary organ of origin of the cancer
NZCR	Sex	Sex of patient
NZCR	Age at diagnosis	Age of patient at diagnosis
NZCR	Morphology	Microscopic or cellular anatomy of the cancer
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Date of initial diagnosis	Date person first diagnosed with bowel cancer
NZCR	Basis	Basis of diagnosis
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
NMDS	DHB name	DHB of service for patient
NMDS	Date of most definitive surgical resection	Date of most definitive surgical procedure of the primary site
NMDS	Health speciality	Type of inpatient admission
NMDS	Admission type	Type of admission to hospital
NMDS	Event start date	Date of admission
NMDS	Procedure code	Procedure code
NMDS	Date of surgery	Date of procedure



# Case eligibility criteria (denominator)

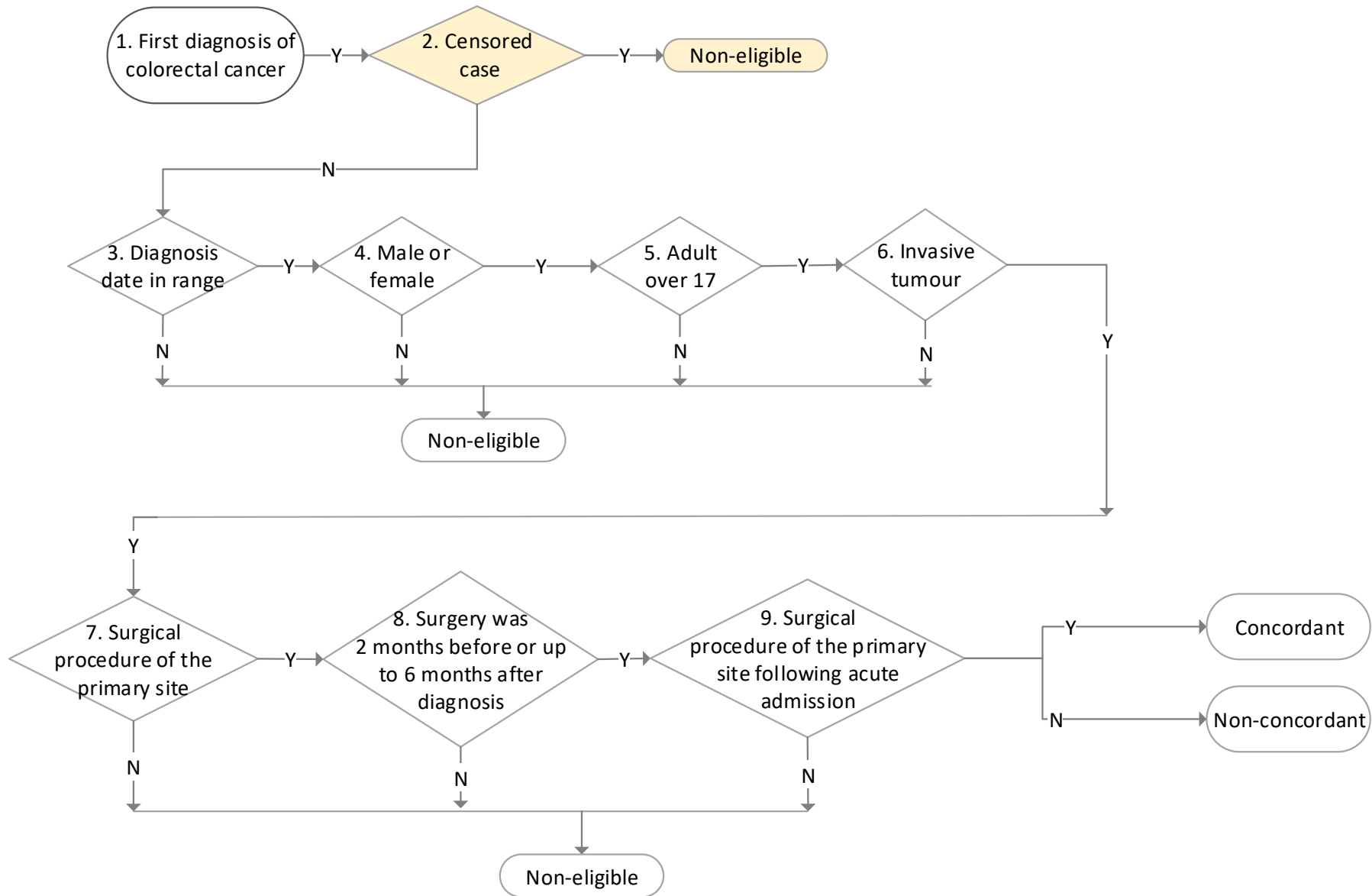
Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Primary site	First diagnosis of bowel cancer (colon C18–C19 or rectum C20)
2	Exclude manually censored case	Exclusion	<p>People with appendiceal carcinomas C18.1 site code</p> <p>Patients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomas</p> <p>Morphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936</p> <p>Registration codes not R_C or R_R</p> <p>No incident cancer (exclude people with multiple tumour flags = yes)</p> <p>Patients diagnosed following death certificate only (basis = 0)</p> <p>Patient domiciled outside of New Zealand (DHB_code = 999)</p>
3	Diagnosis date	Date of initial diagnosis	2013–16 and 2017–19
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	Surgical procedure	Surgical procedure of the primary site	For a full list of surgical procedures included, see the appendices
8	Exclusion	Surgery date	Exclude patients who had their initial surgical procedure more than 50 days before and 365 days after diagnosis of rectum cancer or 183 days for colon cancer



# Numerator criteria

Diagram reference	Assessment	Item	Codes
9	Numerator: Number of people with bowel cancer who undergo surgical resection following acute admission	emergsurg	Procedure following emergency (acute) admission where date of surgery date is greater than event start date If adm_type = AC then admission = Acute else admission = Elective







# BCQI 21. STOMA FREE SURVIVAL (DISCONTINUED)

Proportion of people with rectal cancer who had major surgery are free of a stoma at 18 months.

## Sources of data for indicator

- Mortality Collection (MORT) – classifies the underlying cause of death for all deaths registered in New Zealand
- New Zealand Cancer Registry (NZCR) – a population-based register of all primary malignant diseases diagnosed in New Zealand, excluding squamous and basal cell skin cancers
- National Minimum Dataset (NMDS) – a collection of public and private hospital discharge information, including coded clinical data for inpatients and day patients

## Data items

Dataset	Data item	Description
NZCR	Site	Primary organ of origin of the cancer
NZCR	Sex	Sex of patient
NZCR	Age at diagnosis	Age of patient at diagnosis
NZCR	Morphology	Microscopic or cellular anatomy of the cancer
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Date of initial diagnosis	Date person first diagnosed with bowel cancer
NZCR	Basis	Basis of diagnosis
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour
NZCR	Registration status code	Status of registration processing
NMDS	DHB name	DHB of service for patient
NMDS	Procedure code	Procedure code
NMDS	Procedure date	Date of procedure
MORT	Date of death	Date of death



# Case eligibility criteria (denominator)

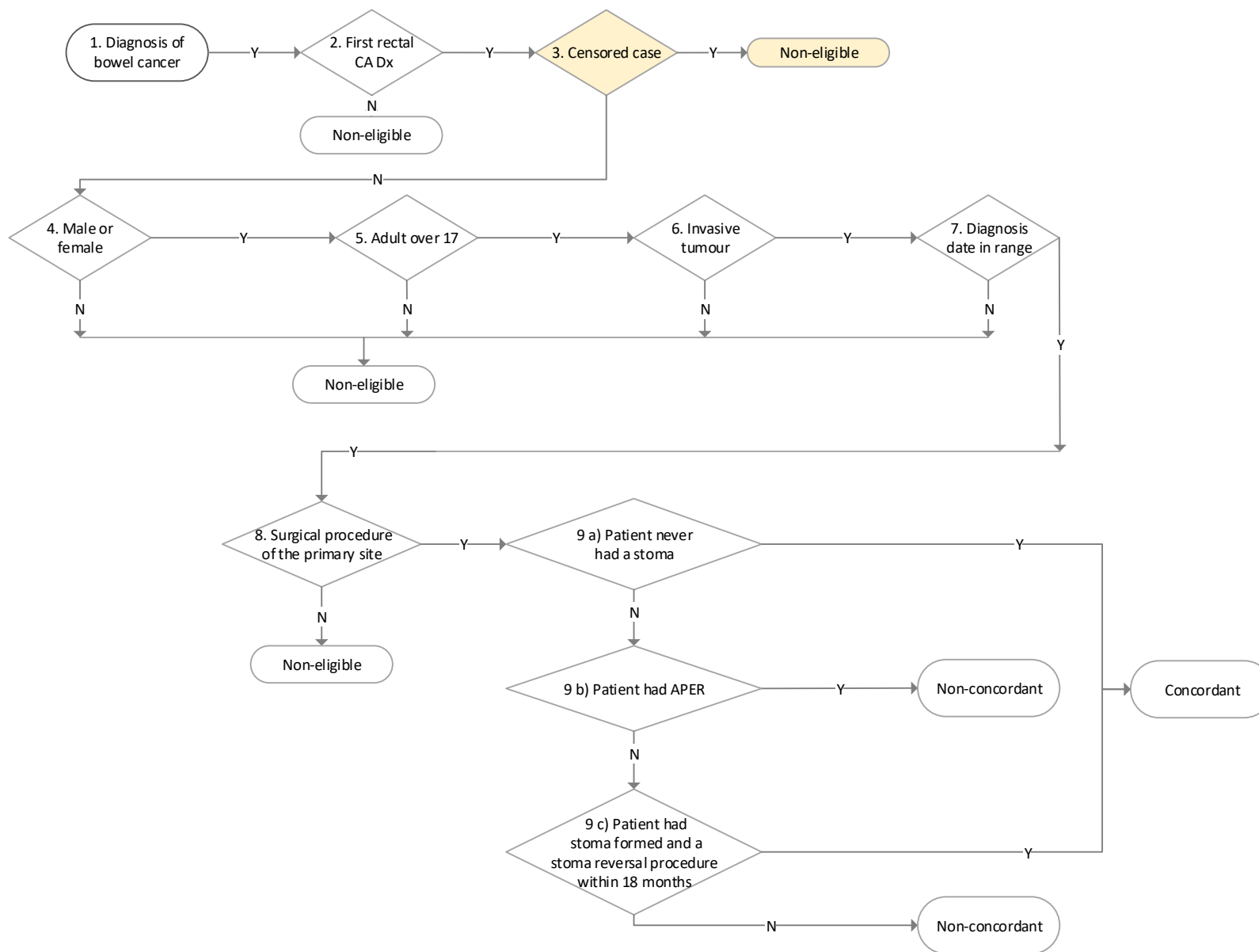
Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Site	Date of first diagnosis with bowel cancer
2	Primary site – rectum	Primary site	Rectum C20
3	Exclude manually censored case	Exclusion	<p>Patients who died within 18 months of diagnosis</p> <p>Patients diagnosed following death certificate only (basis = 0)</p> <p>Patients domiciled outside of New Zealand (DHB_code = 999)</p> <p>People with appendiceal carcinomas C18.1 site code</p> <p>Patients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomas</p> <p>Morphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936</p> <p>Registration codes not R_C or R_R</p> <p>Non-incident cancer (exclude people with multiple tumour flags = yes)</p> <p>Exclude patients who had their initial surgery 2 months prior to initial diagnosis or 6 months after their initial diagnosis</p>
4	Male or female	Sex	M or F
5	Adult patient over the age of 17 at diagnosis	Age at diagnosis	18 years and over
6	Invasive tumours	Behaviour code	3
7	Diagnosis date	Date of initial diagnosis	2013–15
8	Surgical procedure	Surgical procedure of the primary site	<p>Patients who undergo definitive surgery for rectal cancer (same procedures codes as bowel cancer) between 50 days prior and 365 days after diagnosis. This excludes patients who undergo transanal endoscopic microsurgery, transanal resection of tumour or endoscopic resection of tumour (3210300, 3210500, 3210800).</p> <p>For a full list of surgical procedures included, see the appendices.</p>



# Numerator criteria

Diagram reference	Assessment	Item	Codes
9	Numerator: Number of people with bowel cancer who do <b>not</b> have a stoma at 18 months after surgery	stomafree	<p><b>9a</b> Includes people who never had an operation leading to a stoma within six months of rectal cancer diagnosis</p> <p><b>9b</b> Excludes people who had an APER</p> <p><b>9c</b> Includes people who had a stoma procedure (non APER) within six months of diagnosis and had a stoma reversal operation within 18 months of surgery</p> <p>Stoma-free at 18 months includes people who had major surgery for rectal cancer and never had a stoma and people who had a stoma which was reversed</p> <p>See procedure codes in the appendix</p>





# BCQI 21\_A.

## ABDOMINOPERINEAL RESECTION

Proportion of people with rectal cancer who had major surgery and an abdominoperineal resection (APR).

### Sources of data for indicator

- New Zealand Cancer Registry (NZCR) – a population-based register of all primary malignant diseases diagnosed in Aotearoa New Zealand, excluding squamous and basal cell skin cancers
- National Minimum Dataset (NMDS)<sup>3</sup> – a collection of public and private hospital discharge information, including coded clinical data for inpatients and day patients

### Data items

Dataset	Data item	Description
NZCR	Site	Primary organ of origin of the cancer
NZCR	Sex	Sex of patient
NZCR	Age at diagnosis	Age of patient at diagnosis
NZCR	Morphology	Microscopic or cellular anatomy of the cancer
NZCR	Behaviour code	Neoplastic behaviour of the cancer
NZCR	Date of initial diagnosis	Date person first diagnosed with bowel cancer
NZCR	Basis	Basis of diagnosis
NZCR	Multiple tumour flags	Person diagnosed with more than one tumour

<sup>3</sup> Hospital events in 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.



# Case eligibility criteria (denominator)

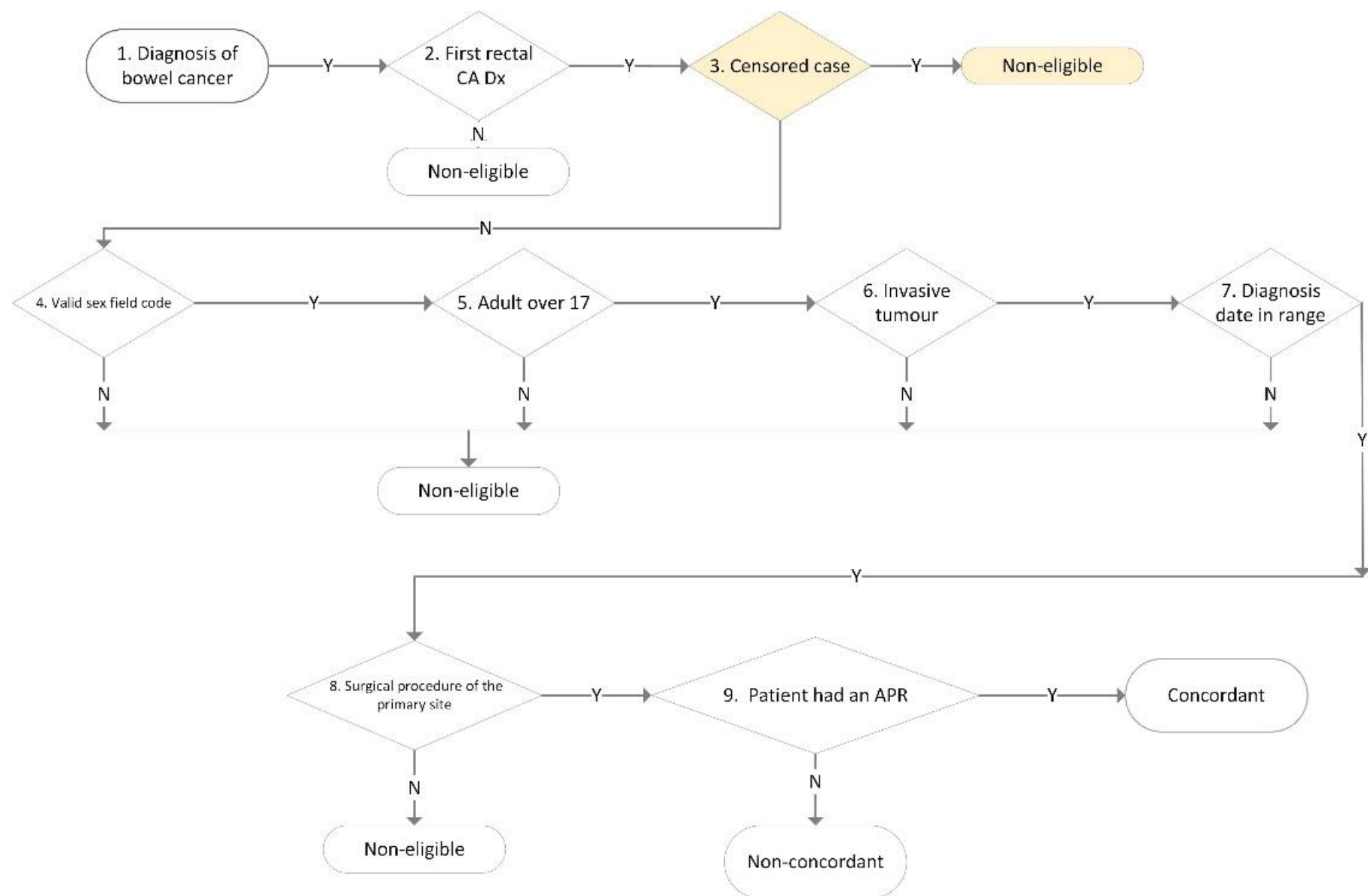
Diagram reference	Assessment	Item	Codes
1	First or only diagnosis of malignant neoplasm	Site	Date of first diagnosis with bowel cancer
2	Primary site – rectum	Primary site	Rectum C20
3	Exclude manually censored case	Exclusion	<p>Patients diagnosed following death certificate only (basis = 0)</p> <p>Patients domiciled outside of New Zealand (DHB_code = 999)</p> <p>People with appendiceal carcinomas C18.1 site code</p> <p>Patients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomas.</p> <p>Morphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936.</p> <p>Registration codes not R_C or R_R</p> <p>Non-incident cancer (exclude people with multiple tumour flags = yes)</p> <p>Exclude patients who had their initial surgery 2 months prior to initial diagnosis or 6 months after their initial diagnosis</p>
4	Male or female	Sex	M or F
5	Adult patient over the age of 17 at diagnosis	Age at diagnosis	18 years and over
6	Invasive tumours	Behaviour code	3
7	Diagnosis date	Date of initial diagnosis	2016–18
8	Surgical procedure	Surgical procedure of the primary site	<p>Patients who undergo definitive surgery for rectal cancer (same procedures codes as bowel cancer) between 50 days prior and 365 days after diagnosis. This excludes patients who undergo transanal endoscopic microsurgery, transanal resection of tumour or endoscopic resection of tumour (3210300, 3210500, 3210800).</p> <p>For a full list of surgical procedures included, see the appendices.</p>



# Numerator criteria

Diagram reference	Assessment	Item	Codes
9	Numerator: Number of people with bowel cancer who had an abdomoperineal resection	APR	<b>9</b> Includes people who had an APR (3203900) See procedure codes in the appendix







# APPENDIX

## Definitive surgery procedure codes

Clinical code	Block short description	Clinical code description
3200000	Colectomy	Limited excision of large intestine with formation of stoma
3200001	Colectomy	Right hemicolectomy with formation of stoma
3200300	Colectomy	Limited excision of large intestine with anastomosis
3200301	Colectomy	Right hemicolectomy with anastomosis
3200400	Colectomy	Subtotal colectomy with formation of stoma
3200401	Colectomy	Extended right hemicolectomy with formation of stoma
3200500	Colectomy	Subtotal colectomy with anastomosis
3200501	Colectomy	Extended right hemicolectomy with anastomosis
3200600	Colectomy	Left hemicolectomy with anastomosis
3200601	Colectomy	Left hemicolectomy with formation of stoma
3200900	Colectomy	Total colectomy with ileostomy
3201200	Colectomy	Total colectomy with ileorectal anastomosis
3201500	Total proctocolectomy	Total proctocolectomy with ileostomy
3202400	Anterior resection of rectum	High anterior resection of rectum
3202500	Anterior resection of rectum	Low anterior resection of rectum
3202600	Anterior resection of rectum	Ultra low anterior resection of rectum
3202800	Anterior resection of rectum	Ultra low anterior resection of rectum with hand sutured coloanal anastomosis
3203000	Rectosigmoidectomy or proctectomy	Rectosigmoidectomy with formation of stoma
3203900	Rectosigmoidectomy or proctectomy	Abdominoperineal proctectomy
3205100	Total proctocolectomy	Total proctocolectomy with ileo-anal anastomosis
3205101	Total proctocolectomy	Total proctocolectomy with ileo-anal anastomosis and formation of temporary ileostomy
3206000	Rectosigmoidectomy or proctectomy	Restorative proctectomy
3209900	Excision of lesion or tissue of rectum or anus	Per anal submucosal excision of lesion or tissue of rectum



Clinical code	Block short description	Clinical code description
3211200	Rectosigmoidectomy or proctectomy	Perineal rectosigmoidectomy
9220800	Anterior resection of rectum	Anterior resection of rectum, level unspecified

## Transanal resection codes

Code	Block short description	Clinical code description
3210300	Excision lesion or tissue rectum or anus	Per anal excision of lesion or tissue of rectum via stereoscopic rectoscopy
3210500	Excision lesion or tissue rectum or anus	Per anal full thickness excision of anorectal lesion or tissue
3210800	Excision lesion or tissue rectum or anus	Transsphincteric excision of lesion or tissue of rectum

## Stoma forming procedure codes

Code	Block short description	Clinical code description
3200000	Colectomy	Limited excision of large intestine with formation of stoma
3200001	Colectomy	Right hemicolectomy with formation of stoma
3200400	Colectomy	Subtotal colectomy with formation of stoma
3200401	Colectomy	Extended right hemicolectomy with formation of stoma
3200601	Colectomy	Left hemicolectomy with formation of stoma
3200900	Colectomy	Total colectomy with ileostomy
3201500	Total proctocolectomy	Total proctocolectomy with ileostomy
3202500	Anterior resection of rectum	Low anterior resection of rectum
3202600	Anterior resection of rectum	Ultra low anterior resection of rectum
3202800	Anterior resection of rectum	Ultra low anterior resection of rectum with hand sutured coloanal anastomosis
3203000	Rectosigmoidectomy or proctectomy	Rectosigmoidectomy with formation of stoma
3203900	Rectosigmoidectomy or proctectomy	Abdominoperineal proctectomy (APER)
3205100	Total proctocolectomy	Total proctocolectomy with ileo-anal anastomosis
3205101	Total proctocolectomy	Total proctocolectomy with ileo-anal anastomosis and formation of temporary ileostomy



# Stoma reversal procedure codes

Code	Block short description	Clinical code description
3056200	Closure of stoma of small intestine	Closure of loop ileostomy
3056201	Closure of stoma of small intestine	Closure of ileostomy with restoration of bowel continuity, without resection
3203300	Other repair of large intestine	Restoration of bowel continuity after Hartmann's procedure
3206000	Rectosigmoidectomy or proctectomy	Restorative proctectomy

