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** |
| --- | --- | --- | --- |
| [BCQI 1. Route to Diagnosis](#_BCQI_1._ROUTE) | 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) Screeningb) Emergencyc) Referral | Quality improvementAlso a benefits realisation indicator for the National Bowel Screening Programme |
| [BCQI 7. Post-operative mortality](#_BCQI_7._Post-operative) | Proportion of people with colorectal cancer who died within 30 days of surgery (discontinued) | death30death30es | Quality improvement |
| Proportion of people with colorectal cancer who died within 90 days of surgery | death90death90es | Quality improvement |
| [BCQI 10. Lymph node yield](#_BCQI_10._Lymph_1) | Proportion of people with colon cancer who undergo surgical resection where 12 or more lymph nodes are pathologically examined | lymph12 | Quality improvement |
| [BCQI 16. Rectal](#_BCQI_16._Rectal) cancer treatment | Proportion of people with rectal cancer with:[[1]](#footnote-1)a) no radiotherapy (surgery alone)b) short course radiotherapy (SCRT) pre‑operativec) long course radiotherapy (LCRT) pre‑operative | a) noradiob) preopscrtc) preoplcrt | Quality improvement |
| [BCQI 19. Emergency surgery](#_BCQI_19._Emergency_1) | Proportion of people with bowel cancer who undergo major surgical resection performed as an emergency | emergsurg | Quality improvement |
| [BCQI 21. Stoma free survival (discontinued)](#_BCQI_21._Stoma_1) | Proportion of people with rectal cancer who had major surgery and are free of a stoma at 18 months | Stomafree | Quality improvement |
| [BCQI 21\_a. Abdominoperineal resection](#_BCQI_21_a._Abdominoperineal_1) | Proportion of people with rectal cancer who had major surgery and an abdominoperineal resection | APR | Quality improvement |

# 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 (colonC18–C19 or rectum C20) |
| 2 | Exclude manually censored case | Exclusion | People with appendiceal carcinomas C18.1 site codePatients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomasMorphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936Registration codes not R\_C or R\_RNon-incident cancer (exclude people with multiple tumour flags = yes)Patients diagnosed following death certificate only (basis = 0)Patient domiciled outside of New Zealand (DHB\_code = 999) |
| 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 | 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.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. |
| 8 | Numerator: b) Number of people with bowel cancer who were diagnosed following presentation to an emergency department | Emergency | Inpatient (NMDS)Health speciality = M05 (Emergency Medicine) and length of inpatient stay is between 0 and 1 daysOutpatient (NNPAC)Outpatient attendance (purchase code) of ED |
| 9 | Numerator: c) Number of people with bowel cancer who were diagnosed following referral to a clinic | Referral | People not diagnosed at death, through emergency department or screening. |



#

# BCQI 7. Post-operative mortality

Proportion of people with bowel cancer who died within 30 or 90 days of surgery.[[2]](#footnote-2)

## 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 | 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 (colonC18–C19 or rectum C20) |
| 2 | Exclude manually censored case | Exclusion | People with appendiceal carcinomas C18.1 site codePatients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomasMorphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936Registration codes not R\_C or R\_RNo incident cancer (exclude people with multiple tumour flags = yes)Patients diagnosed following death certificate only (basis = 0)Patient domiciled outside of New Zealand (DHB\_code = 999) |
| 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 | Includes only procedures between 50 days prior and 365 days after diagnosis of rectum cancer or 183 days for colon cancer.For a full list of surgical procedures included, see the appendices. |

## Numerator criteria

|  |  |  |  |
| --- | --- | --- | --- |
| **Diagram reference** | **Assessment** | **Item** | **Codes** |
| 8 | Number of patients with bowel cancer who die within 30 days of surgery. | a) death30b) death30es | Patient died within 30 days of elective or emergency surgeryPatient 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) death90b) death90es | Patient died within 90 days of elective or emergency surgeryPatient 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 ≥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 (colonC18–C19 or rectum C20) |
| 2 | Exclude manually censored case | Exclusion | People with appendiceal carcinomas C18.1 site codePatients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomasMorphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936Registration codes not R\_C or R\_RNon-incident cancer (exclude people with multiple tumour flags = yes)Patients diagnosed following death certificate only (basis = 0)Patient domiciled outside of New Zealand (DHB\_code = 999) |
| 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 | Includes only procedures between 50 days prior to and 122 days after diagnosisFor a full list of surgical procedures included, see the appendices |
| 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 ≥12 lymph nodes are pathologically examined. | lymph12 | Nodes sample number ≥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 | Patients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomasMorphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936Patients diagnosed following death certificate only (basis = 0)Registration codes not R\_C or R\_RNon-incident cancer (exclude people with multiple tumour flags = yes)Patient domiciled outside of New Zealand (DHB\_code = 999) |
| 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 | Includes only procedures between 50 days prior to and 365 days after diagnosisFor a full list of surgical procedures included, see the appendices |

## Numerator criteria

|  |  |  |  |
| --- | --- | --- | --- |
| **Diagram reference** | **Assessment** | **Item** | **Codes** |
| 9a | Numerator a): Number of people who receive no radiotherapy treatment | noradio | ROC datasetInclude when there is no record of a first curative treatment for bowel cancer prior to surgery for the patient1NNPAC data (identifies if patient’s treatment was publicly funded)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 |
| 9b | Numerator b): Number of people who receive preoperative short course radiotherapy treatment | preopscrt | ROC datasetInclude patients with first curative treatment for bowel cancer1 AND 5 sessions of radiotherapy AND radiotherapy treatment was received up to 140 days before definitive surgery for rectal cancerNNPAC data (identifies if patient’s treatment was publicly funded)Include patients with:* PU code – M50025 Oncology – Radiotherapy, External Beam Megavoltage (linac) with 5 treatments (exclude patients who have more than 6 treatments)
* treated up to 20 weeks before first definitive surgery date to account for post-radiotherapy wait for surgery
 |
| 9c | Numerator c): Number of people who receive preoperative long course radiotherapy treatment | preoplcrt | ROC datasetInclude patients with first curative treatment for bowel cancer1 AND 20 or more sessions of radiotherapy AND radiotherapy was received up to 140 days before definitive surgery for rectal cancerNNPAC data (identifies if patient’s treatment was publicly funded)Include patients with:* PU code – M50025 Oncology – Radiotherapy, External Beam Megavoltage (linac) with 20 or more treatments
* treated up to 20 weeks before first definitive surgery date to account for post-radiotherapy wait for surgery
 |

1 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 | People with appendiceal carcinomas C18.1 site codePatients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomasMorphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936Registration codes not R\_C or R\_RNo incident cancer (exclude people with multiple tumour flags = yes)Patients diagnosed following death certificate only (basis = 0)Patient domiciled outside of New Zealand (DHB\_code = 999) |
| 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 dateIf 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 | Patients who died within 18 months of diagnosisPatients diagnosed following death certificate only (basis = 0)Patients domiciled outside of New Zealand (DHB\_code = 999)People with appendiceal carcinomas C18.1 site codePatients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomasMorphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936Registration codes not R\_C or R\_RNon-incident cancer (exclude people with multiple tumour flags = yes)Exclude patients who had their initial surgery 2 months prior to initial diagnosis or 6 months after their initial diagnosis |
| 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 | 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).For a full list of surgical procedures included, see the appendices. |

## Numerator criteria

|  |  |  |  |
| --- | --- | --- | --- |
| **Diagram reference** | **Assessment** | **Item** | **Codes** |
| 9 | Numerator: Number of people with bowel cancer who do **not** have a stoma at 18 months after surgery | stomafree | **9a** Includes people who never had an operation leading to a stoma within six months of rectal cancer diagnosis**9b** Excludes people who had an APER**9c** Includes people who had a stoma procedure (non APER) within six months of diagnosis and had a stoma reversal operation within 18 months of surgeryStoma-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 reversedSee procedure codes in the appendix |



#

# 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)[[3]](#footnote-3) – 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 |

## 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 | Patients diagnosed following death certificate only (basis = 0)Patients domiciled outside of New Zealand (DHB\_code = 999)People with appendiceal carcinomas C18.1 site codePatients with NETs, gastrointestinal stromal sarcoma (GISTs), lymphomas, squamous cell carcinomas, neuroendocrine carcinomas and melanomas.Morphology codes 8240, 8249, 8246, 8070, 8720, 8013, 8041, 8244 and 8936.Registration codes not R\_C or R\_RNon-incident cancer (exclude people with multiple tumour flags = yes)Exclude patients who had their initial surgery 2 months prior to initial diagnosis or 6 months after their initial diagnosis |
| 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 | 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).For a full list of surgical procedures included, see the appendices. |

## Numerator criteria

|  |  |  |  |
| --- | --- | --- | --- |
| **Diagram reference** | **Assessment** | **Item** | **Codes** |
| 9 | Numerator: Number of people with bowel cancer who had an abdomoperineal resection | APR | **9** 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 |
| 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 |

1. This indicator includes:

	* people with metastatic disease
	* people having short course radiotherapy and chemotherapy. [↑](#footnote-ref-1)
2. 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. [↑](#footnote-ref-2)
3. 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. [↑](#footnote-ref-3)