

# Queensland Cancer Quality Index

2005-2014

Technical Appendix



 **cancer alliance**  
queensland

the  
**Partnership**  
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queensland cancer  
register



# Queensland Cancer Quality Index

Technical Appendix

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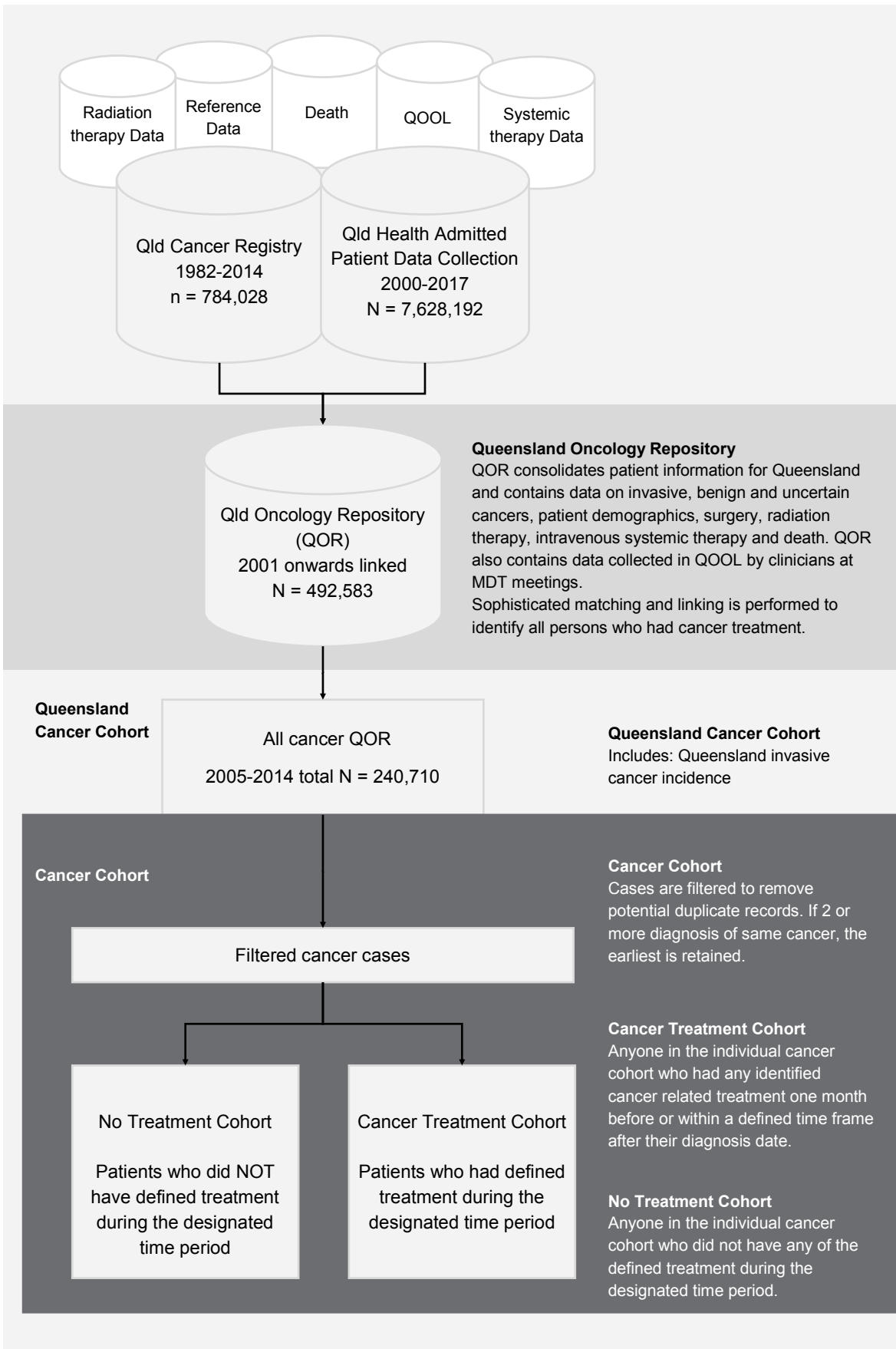
# The Cancer Index Indicators

Quality Dimension	Indicator	Description	Calculation
1 Effective	1.1 Survival	What percentage of people with cancer are living 5 years after their diagnosis?	Percentage of people who would have survived if cancer was the only cause of death
	1.2 Queenslanders receiving multidisciplinary teams re-view	How many Queenslanders with cancer receive multidisciplinary team (MDT) review?	Percentage of cancer patients receiving MDT review
	1.3 Queenslanders receiving cancer surgery	How many Queenslanders with cancer receive surgery?	Percentage of cancer patients receiving surgery
	1.4 Queenslanders receiving radiation therapy	How many Queenslanders with cancer receive radiation therapy?	Percentage of cancer patients receiving radiation therapy
	1.5 Queenslanders receiving systemic therapy	How many Queenslanders with cancer receive intravenous systemic therapy?	Percentage of cancer patients receiving intravenous systemic therapy
2 Efficient	2.1 Hospital stay	How long do people receiving cancer surgery stay in hospital?	Median time in days between the admission and discharge date of cancer surgery
3 Safe	3.1 In-Hospital mortality	What percentage of patients die in-hospital after cancer surgery?	Percentage of patients who die in-hospital following cancer surgery
	3.2 30 day mortality	What percentage of patients die within 30 days of their cancer surgery?	Percentage of patients who die $\leq$ 30 days following cancer surgery
	3.3 90 day mortality	What percentage of patients die within 90 days of their cancer surgery?	Percentage of patients who die $\leq$ 90 days following cancer surgery
	3.4 1 year survival	What percentage of patients are alive one year after cancer surgery?	Percentage of patients still alive 1 year after cancer surgery
	3.5 2 year survival	What percentage of patients are alive two years after cancer surgery?	Percentage of patients still alive 2 years after cancer surgery
4 Accessible	4.1 Timeliness	What percentage of public compared to private patients received their first cancer treatment within 30 days of diagnosis?	Percentage of patients whose time from diagnosis to first cancer treatment is $\leq$ 30 days
	4.2 Remoteness	What percentage of rural and remote patients received their cancer treatment within 30 days of diagnosis?	Percentage of rural and remote patients whose time from diagnosis to cancer treatment is $\leq$ 30 days
5 Equitable	5.1 Over 75 years	What percentage of patients aged $\geq$ 75 years received first cancer treatment within 30 days of diagnosis?	Percentage of older patients whose time from diagnosis to first cancer treatment is $\leq$ 30 days
	5.2 Indigenous	What percentage of indigenous patients received first cancer treatment within 30 days of diagnosis?	Percentage of indigenous patients whose time from diagnosis to first cancer treatment is $\leq$ 30 days
	5.3 Socio-economically disadvantaged	What percentage of socioeconomically disadvantaged patients received first cancer treatment within 30 days of diagnosis?	Percentage of socio-economically disadvantaged patients whose time from diagnosis to first cancer treatment is $\leq$ 30 days)

# Data sources and methods

Key to QCCAT's program of work is the ability to match and link population based cancer information on an individual patient basis. This matched and linked data is housed in the Queensland Oncology Repository (QOR), a resource managed by QCCAT. QOR consolidates cancer patient information for the state and contains data on cancer diagnoses from the Queensland Cancer Register (QCR) and deaths, Queensland Hospital Admissions Data Collection (QHAPDC), surgery, radiation therapy and intravenous systemic therapy. QOR also includes data collected in QOOL™ by clinicians at multidisciplinary team (MDT) meetings across the state. QOR contains approximately 32 million records between 1982 – 2014. Our matching and linking processes provide the 492,583 matched and linked records of cancer patients between 2005 – 2014 which provide the data for The Cancer Index.

# How the cohorts were identified



# Time periods

## DIAGNOSIS YEAR

Cancer Site	ICD-O-3; Morphology	Time Period
<i>The site and morphology of all cancers has been coded according to the International Classification of Diseases for Oncology, 3rd Edition (ICD-O-3)</i>		
Bladder	C67	01 January 2005 to 31 December 2014
Breast	C50	01 January 2005 to 31 December 2014
Cervical	C53	01 January 2005 to 31 December 2014
Colon	C18	01 January 2005 to 31 December 2014
Non-Small Cell Lung	C34; NSCLC	01 January 2005 to 31 December 2014
Oesophago-gastric	C15, C16	01 January 2005 to 31 December 2014
Ovarian	C56	01 January 2005 to 31 December 2014
Pancreatic, biliary tract & small intestine (including duodenum)	C17, C24, C25	01 January 2005 to 31 December 2014
Rectal	C19, C20, C218	01 January 2005 to 31 December 2014
Testicular	C62	01 January 2005 to 31 December 2014
Uterine	C54	01 January 2005 to 31 December 2014
Vulva	C51	01 January 2005 to 31 December 2014

## CANCER TREATMENT YEAR

Cancer Site	Time Period
Bladder	01 January 2000 to 31 March 2017
Breast	01 January 2000 to 31 March 2017
Cervical	01 January 2000 to 31 March 2017
Colon	01 January 2000 to 31 March 2017
Non-Small Cell Lung	01 January 2000 to 31 March 2017
Oesophago-gastric	01 January 2000 to 31 March 2017
Ovarian	01 January 2000 to 31 March 2017
Pancreatic, biliary tract & small intestine (including duodenum)	01 January 2000 to 31 March 2017
Rectal	01 January 2000 to 31 March 2017
Testicular	01 January 2000 to 31 March 2017
Uterine	01 January 2000 to 31 March 2017
Vulva	01 January 2000 to 31 March 2017

# Exclusions

The following exclusions apply:

- Non Queensland residents
- Other conditions that patients may have had similar surgery for, e.g. gastrectomy for gastric ulcer

# Identifying cancer patients

The number of new cases of cancers is generally higher than the number of persons with cancer. This is because one person can have two or more cancers and may be counted under two or more different cancer groups. Only primary invasive cancers are included in The Cancer Index. A primary cancer is one that occurs for the first time in a site or tissue (called the primary site) and is therefore not an extension, a recurrence or a metastasis of a pre-existing tumour.

The following examples illustrate the rules for identifying and counting cancer patients for this report:

- If a person has cancers in two different sites, then that person counts as 2 cases. For example if a woman was diagnosed with cancers in both the breast and rectum then she counts as 2 cases of cancer and will be included in both the breast and rectal cancer groups.
- If a person was diagnosed on two or more occasions with cancers in the same site, then that person counts as only one cancer case and the date of diagnosis will be based on the earliest diagnosis.

# Identification and categorisation of cancer surgeries

Potential cancer related procedures were identified from the Australian Classification of Health Interventions (ACHI) International Classification of Diseases (ICD-10-AM) 9th Edition, 2015. The identified procedures were reviewed by expert clinicians for completeness and accuracy and then categorised into cancer surgery groups. See page 6 for more information.

# Linking cancer treatment to a person

Each cancer diagnosed in a calendar year was matched and linked to one or many surgery records. This produces a list of all the surgeries performed for each cancer diagnosis. The surgeries are then categorised according to clinically developed rules which are specific to each indicator. Therefore a single cancer incidence and subsequent surgeries may be counted in a number of ways. For example a person diagnosed with colon cancer in 2006, had a colectomy in 2006 and an anterior resection in 2007. The colectomy would be used in the Accessible dimension and the anterior resection would be used in the Safe dimension.

Radiation therapy treatment is generated when a diagnosis primary site ICD code is matched to a cancer treatment primary site ICD code. The time period for an eligible match is occurrence from 30 days prior to the diagnosis to any time after. Where a primary site code is not recorded against treatment a match is generated where treatment occurs from 30 days prior to diagnosis to 365 days after diagnosis.

Intravenous systemic therapy treatment is generated when a diagnosis primary site ICD code is matched to a cancer treatment primary site ICD code. The time period for an eligible match is occurrence from 30 days prior to the diagnosis to any time after. Where a primary site code is not recorded against treatment a match is generated where treatment occurs from 30 days prior to diagnosis to 365 days after diagnosis.



# Cancer surgery groups

## BREAST CANCER SURGERY

### Breast Cancer Surgery

#### Excision of lesion

3153600	Complete excision of lesion without guidewire
3150000	Complete excision of lesion with guidewire

#### Mastectomy

3151800	Total mastectomy (unilateral)
3151801	Total mastectomy (bilateral)
3152400	Subcutaneous mastectomy (unilateral)
3152401	Subcutaneous mastectomy (bilateral)

## PANCREATIC, BILIARY TRACT AND SMALL INTESTINE CANCER SURGERY

### Major resections

#### Whipples

3058400	Pancreaticoduodenectomy with/without formation of stoma
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## NON-SMALL CELL LUNG CANCER SURGERY

### Major Resections

#### Partial resection

9016900	Endoscopic wedge resection of lung
3844001	Radical wedge resection of lung
3843800	Segmental wedge resection of lung
3844000	Wedge resection of lung

#### Lobectomy of lung

3843801	Lobectomy of lung
3844100	Radical lobectomy

#### Pneumonectomy

3843802	Pneumonectomy
3844101	Radical pneumonectomy

## OESOPHAGOGASTRIC CANCER SURGERY

### Major resections

#### Gastrectomy

3051800	Partial distal gastrectomy with gastroduodenal anastomosis
3051801	Partial distal gastrectomy with gastrojejunal anastomosis
3051802	Partial proximal gastrectomy with oesophago-gastric anastomosis
3052100	Total gastrectomy
3052300	Subtotal gastrectomy
3052400	Radical gastrectomy

#### Oesophagectomy

3053500	Oesophagectomy by abdominal and transthoracic mobilisation, with thoracic oesophagogastric anastomosis
3053600	Oesophagectomy by abdominal and transthoracic mobilisation, with cervical oesophagogastric anastomosis
3053601	Oesophagectomy by abdominal and transthoracic mobilisation, with cervical oesophagostomy
3054100	Trans-hiatal oesophagectomy by abdominal and cervical mobilisation, with oesophagogastric anastomosis
3054101	Trans-hiatal oesophagectomy by abdominal and cervical mobilisation, with oesophagojejunal anastomosis
3054500	Oesophagectomy by abdominal and thoracic mobilisation with thoracic anastomosis, large intestine interposition and anastomosis
3054501	Oesophagectomy by abdominal and thoracic mobilisation with thoracic anastomosis, using Roux-en-Y reconstruction
3055000	Oesophagectomy by abdominal and thoracic mobilisation with cervical anastomosis, large intestine interposition and anastomosis
3055001	Oesophagectomy by abdominal and thoracic mobilisation with cervical anastomosis, using Roux-en-Y reconstruction

**COLORECTAL CANCER SURGERY  
(CANCERS OF COLON OR RECTUM)**

**Major Resections**

***Colectomy***

3056600	Resection of small intestine with anastomosis
3200300	Limited excision of large intestine with anastomosis
3200301	Right hemicolectomy with anastomosis
3200501	Extended right hemicolectomy with anastomosis
3200600	Left hemicolectomy with anastomosis
3200500	Subtotal colectomy with anastomosis
3201200	Total colectomy with anastomosis
3056500	Resection of small intestine with formation of stoma
3200000	Limited excision of large intestine with formation of stoma
3200001	Right hemicolectomy with formation of stoma
3200401	Extended right hemicolectomy with formation of stoma
3200601	Left hemicolectomy with formation of stoma
3200400	Subtotal colectomy with formation of stoma
3200900	Total colectomy with ileostomy

***Abdominoperineal Resection***

3203900	Abdominoperineal proctectomy
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***Total Proctocolectomy***

3205100	Total proctocolectomy with ileo-anal anastomosis
3201500	Total proctocolectomy with ileostomy
3205101	Total proctocolectomy with ileo-anal anastomosis and formation of stoma

***Anterior Resection***

3202400	High anterior resection of rectum
3202500	Low anterior resection of rectum
3202600	Ultra low anterior resection of rectum
3202800	Ultra low anterior resection of rectum with hand sutured coloanal anastomosis
9220800	Anterior resection of rectum, level specified

***Hartmanns***

3203000	Rectosigmoidectomy with formation of stoma
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**UROLOGICAL CANCER SURGERY  
(CANCERS OF BLADDER OR TESTICULAR)**

***Cystectomy***

3700000	Laparoscopic partial excision of bladder
3700001	Partial excision of bladder
3701400	Total excision of bladder

***Orchidectomy***

3064103	Orchidectomy with insertion of testicular prosthesis, bilateral
3064102	Orchidectomy with insertion of testicular prosthesis, unilateral
3064101	Orchidectomy, bilateral
3064100	Orchidectomy, unilateral

**GYNAECOLOGICAL CANCER SURGERY**  
**(CANCERS OF CERVICAL, OVARIAN, UTERINE OR VULVA)**

**Major Resections**

**Abdominal hysterectomy**

3566100	Abdominal hysterectomy with extensive retroperitoneal dissection
3567000	Abdominal hysterectomy with radical excision of pelvic lymph nodes
3566700	Radical abdominal hysterectomy
3566400	Radical abdominal hysterectomy with radical excision of pelvic lymph nodes
3565301	Total abdominal hysterectomy
3565304	Total abdominal hysterectomy with removal of adnexa
9044801	Total laparoscopic abdominal hysterectomy
9044802	Total laparoscopic abdominal hysterectomy with removal of adnexa

**Vaginal hysterectomy**

3575000	Laparoscopically assisted vaginal hysterectomy
3575600	Laparoscopically assisted vaginal hysterectomy proceeding to abdominal hysterectomy
3575603	Laparoscopically assisted vaginal hysterectomy proceeding to abdominal hysterectomy with removal of adnexa
3575302	Laparoscopically assisted vaginal hysterectomy with removal of adnexa
3566701	Radical vaginal hysterectomy
3566401	Radical vaginal hysterectomy with radical excision of pelvic lymph nodes
3565700	Vaginal hysterectomy
3567302	Vaginal hysterectomy with removal of adnexa

**Salpingo-oophorectomy**

3563812	Laparoscopic salpingo-oophorectomy, bilateral
3563811	Laparoscopic salpingo-oophorectomy, unilateral
3571704	Salpingo-oophorectomy, bilateral
3571311	Salpingo-oophorectomy, unilateral

**Oophorectomy**

3563803	Laparoscopic oophorectomy, bilateral
3563802	Laparoscopic oophorectomy, unilateral
3563801	Laparoscopic partial oophorectomy
3563800	Laparoscopic wedge resection of ovary
3571701	Oophorectomy, bilateral
3571307	Oophorectomy, unilateral
3571306	Partial oophorectomy
3571305	Wedge resection of ovary

**Vulvectomy**

3553600	Hemivulvectomy
3554800	Radical vulvectomy
3553602	Vulvectomy, bilateral
3553601	Vulvectomy, unilateral

## Data sources explained

The Queensland Oncology Repository (QOR) is a cancer patient database developed and maintained by the Queensland Cancer Control Analysis Team (QCCAT; Queensland Health) to support Queensland's cancer control, safety, and quality assurance initiatives. QOR consolidates cancer patient information for the state and contains data on cancer diagnoses from the Queensland Cancer Register (QCR) and deaths, Queensland Hospital Admissions Data Collection (QHAPDC), surgery, radiation therapy and intravenous systemic therapy. QOR also includes data collected in QOOL™ by clinicians at multidisciplinary team (MDT) meetings across the state. For more information, visit <https://qccat.health.qld.gov.au/QOR>.

## Oncology Analysis System (OASys)

Oncology Analysis System (OASys) is a web based state-wide cancer analysis system with diagnostic, treatment and outcome data on registry notifiable invasive cancers diagnosed among Queensland residents of all ages (including children) from 1982 to 2014.

The data collection, linking and reporting of OASys data is performed under the auspices of Queensland Cancer Control Safety and Quality Partnership, The Partnership was gazetted as a quality assurance committee under Part 6, Division 1 of the Hospital and Health Boards Act 2011 in 2004.

## More on the QCCAT website

For more details on our program of work, go to <https://qccat.health.qld.gov.au>

## FOR MORE INFORMATION

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