

Queensland Cancer Quality Index

Indicators of safe, quality cancer care

Cancer care in public and private hospitals

2005-2014



 **cancer alliance**
queensland

the
Partnership
Queensland cancer control safety
and quality partnership

qccat
Queensland cancer control
and research centre

qcr
Queensland cancer
register



Queensland
Government

Acknowledgements

The Authors acknowledge and appreciate the work of the staff of the Cancer Council Queensland who operate and maintain the Queensland Cancer Registry (QCR) and the Queensland Cancer Control Analysis Team (QCCAT) who contribute to and participate in the maintenance of the Queensland Oncology Repository, QCR and other tools which support the collection, analysis and interpretation of cancer data in Queensland.

The Queensland Cancer Quality Index has been developed under the auspices of the Queensland Cancer Control Safety and Quality Partnership (The Partnership). The members of The Partnership include: Professor David E Theile AO (Chair), Professor Joanne Aitken, Dr Marie-France Burke, Aniko Cooper, Professor Kwun Fong, Adjunct Professor Liz Kenny AO, Shoni Philpot, Professor Mark Smithers, Associate Professor Euan Walpole and Associate Professor David Wyld.

The report was prepared by Neal Rawson, Shoni Philpot, Nathan Dunn, Nancy Tran and the Queensland Cancer Control Analysis Team.

We wish to thank Professor David E Theile AO and members of The Partnership for their valuable comments on previous drafts of the Queensland Cancer Quality Index.

Queensland Cancer Quality Index: Indicators of safe, quality cancer care. Cancer care in Public and Private Hospitals 2005-2014.

Suggested citation:

Queensland Government. Queensland Cancer Quality Index: Indicators of safe, quality cancer care. Cancer care in Public and Private Hospitals 2005-2014. Queensland Health, Brisbane, 2017

Copyright protects this publication. However, the Queensland Government has no objection to this material being reproduced with acknowledgement, except for commercial purposes.

Permission to reproduce for commercial purposes should be sought from:

The Manager

Queensland Cancer Control Analysis Team

Burke Street Centre, Princess Alexandra Hospital

B2, 2 Burke Street, Woolloongabba, Queensland, 4102

Tel: (+61) (07) 3176 4400

Email: qccat@health.qld.gov.au

<https://qccat.health.qld.gov.au>

ISBN: 978-0-6481487-0-8

Endorsed by:



Cancer Council Queensland is a community-based organisation dedicated to serving the community in cancer control.



Queensland State Committee of The Royal Australasian College of Surgeons (RACS), formed in 1927, is a non-profit organisation training surgeons and maintaining surgical standards in Australia and New Zealand.



Founded in 1935, The Royal Australian and New Zealand College of Radiologists (RANZCR) is a not-for-profit professional organisation for clinical radiologists and radiation oncologists in Australia.

Queensland Cancer Quality Index

Indicators of safe, quality cancer care

Cancer care in public and private hospitals
2005-2014

Table of contents

What is the Queensland Cancer Quality Index (The Cancer Index)?	1
Why develop The Cancer Index?	2
Where has the data come from?	2
How to interpret this report	3
Looking to the future	3
What does The Cancer Index tell us about Queensland?	4
1. Effective	5
1.1 Survival	6
1.2 Queenslanders receiving Multidisciplinary Team review	7
1.3 Queenslanders receiving cancer surgery.....	8
1.4 Queenslanders receiving radiation therapy.....	9
1.5 Queenslanders receiving systemic therapy.....	10
2. Efficient	11
2.1 Hospital Stay	12
3. Safe	13
3.1 In-Hospital mortality.....	14
3.2 30 day mortality	15
3.3 90 day mortality	16
3.4 1 year survival	17
3.5 2 year survival	18
4. Accessible	19
4.1 Timeliness	20
4.2 Remoteness	21
5. Equitable	23
5.1 Over 75 years	24
5.2 Indigenous	25
5.3 Socio-economically disadvantaged	26
Appendix	28

What is the Queensland Cancer Quality Index (The Cancer Index)?

The Cancer Index has been developed for public and private cancer services. It is an initiative of the Cancer Alliance Queensland which brings together the Cancer Control Safety and Quality Partnership (The Partnership), Queensland Cancer Control Analysis Team (QCCAT) and the Queensland Cancer Register (QCR) (<https://qccat.health.qld.gov.au>). It tracks Queensland's progress delivering safe, quality cancer care. It is a public report which is available to the Queensland cancer community. The Cancer Index highlights areas where cancer services are performing well and identifies the areas for improvement. The Cancer Index has five dimensions and 16 indicators. Additional dimensions and indicators will be added in response to clinician, hospital, HHS, Queensland Health and community feedback.

Quality Dimension

Effective	Achieving the best outcomes for Queenslanders with cancer. Providing services based on scientific knowledge to all who could benefit.
Efficient	Optimally using resources to achieve desired outcomes.
Accessible	Making health services available in the most suitable setting in a reasonable time.
Safe	Avoiding and preventing adverse outcomes or injuries by healthcare management.
Equitable	Providing care and ensuring health status does not vary in quality because of personal characteristics (age, indigenous status or socioeconomic status).

The Cancer Index provides for the first time, population wide information on the main treatments received by patients with cancer. The focus is on surgery, radiation therapy and intravenous systemic therapy for breast, colorectal, gynaecological, hepatobiliary, lung, upper gastrointestinal and urological cancers.

The Cancer Index has been expanded to include multidisciplinary team review, a corner stone of cancer management and other dimensions of care.

The Cancer Index reports on the most recent ten years of data from 2005-2014 however there may have been changes more recently that are not captured by the time periods reported. Regardless, The Cancer Index provides an important baseline for monitoring current investments in cancer care such as the establishment of regional cancer centres, the introduction of anti-cancer medicines to the Pharmaceutical Benefits Scheme and changes in clinical practice. It also enables us to reflect on past surgery improvement programs, the Cancer Care Statewide Health Service Strategy, 2014¹ and identify where a renewed effort or new approach may be required.

¹Cancer Care Statewide Health Service Strategy, 2014

Why develop The Cancer Index?

Performance indicators linked to clinical outcomes that align with national benchmarking is a key service action in the Cancer Care Statewide Health Service Strategy, 2014².

The Cancer Index has been developed by the Cancer Alliance Queensland which brings together the Cancer Control Safety and Quality Partnership (The Partnership), Queensland Cancer Control Analysis Team (QCCAT) and the Queensland Cancer Register (QCR). The Cancer Alliance Queensland supports a clinician-led, safety and quality program for cancer across Queensland. The Partnership was gazetted as a quality assurance committee under Part 6, Division 1 of the Hospital and Health Boards Act 2011 in 2004. A key role of the Partnership is to provide cancer clinicians, Hospital and Health Services (HHSs), Hospitals and Queensland Health with cancer information and tools to deliver the best patient care.

The Cancer Index is a tool for reviewing, comparing and sharing with the public, information on the safety and quality of cancer treatments and outcomes. The Partnership has prepared The Cancer Index to assist cancer clinicians and administrators to improve patient care. In some cases it may prompt a change in the delivery and organisation of cancer services to improve health outcomes and performance. The Cancer Index includes public and private cancer care services.

Where has the data come from?

Since 2004 QCCAT have compiled and analysed a vast amount of information about cancer incidence, morbidity, mortality, survival, cancer treatments and outcomes.

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. 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. 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.

For further information on data sources and methods refer to The Cancer Index Technical Appendix.

²Service Direction 4, Signs of Success, Cancer Care Statewide Health Service Strategy, 2014

How to interpret this report

The Cancer Index should be interpreted in the context of other publications by The Partnership. These publications provide information on cancer incidence, mortality and survival, surgery, radiation therapy, and intravenous systemic therapy rates and patient flows which is important information for understanding the indicators reported in The Cancer Index.

Many of the indicators have been statistically adjusted for age and sex. This is done to account for any changes in who is being diagnosed with cancer. For example, the introduction or expansion of a screening program may increase the number of cancers being diagnosed in some age groups within the population.

Rather than focus on differences in rates, it would be of more benefit to focus on changes over time and variations in outcomes between different sectors of the population and determine whether these are in line with clinician, patient or community expectations.

Descriptions of all terms and definitions can be found in the glossary and appendix section.

Further information is available via Queensland's web-based Oncology Analysis System (OASys) at <https://qccat.health.qld.gov.au>






Moving forward

The Cancer Index provides baseline measurements for the on-going monitoring of the quality of cancer care in Queensland. The Partnership intends to report on The Cancer Index every year. Rather than wait for perfect data, The Partnership have chosen to report on a subset of the indicators needed to provide a complete picture of the safety and quality of cancer care in Queensland. This suite of indicators will be expanded on as more data becomes available.

The Partnership will continue to seek feedback from cancer services, Queensland Health and the community on The Cancer Index. They will lead the development and reporting of quality indicators for other aspects of cancer management and outcomes which will be included in future versions.

What does The Cancer Index tell us about cancer care in Queensland?

This second release reports on data spanning 10 years of cancer care and highlights where the health system has performed well and where improvements are possible.

1 Effective		<p>Cancer survival compares favourably with the rest of Australia.</p> <p>Most patients receive treatment for their cancer.</p>
2 Efficient		<p>There is little difference in the length of hospital stay between public and private patients receiving cancer surgery.</p> <p>These lengths of stay compare well to international literature.</p>
3 Safe		<p>Compared to other countries, Queensland has low mortality rates after cancer surgery.</p>
4 Accessible		<p>Public patients waited longer for their first cancer treatment than private patients.</p> <p>More rural and remote people waited longer for breast and colorectal cancer treatment than people living in city areas.</p>
5 Equitable		<p>Age is not a barrier to receiving first cancer treatment within 30 days.</p> <p>The percentage of socio-economically disadvantaged patients are waiting longer for breast and colon cancer treatment.</p> <p>There is little difference in the time to treatment within 30 days between Indigenous patients and Non-Indigenous patients treated in public hospitals.</p>



Excellent



Very good



Good



Fair



Poor

1 | Effective

Achieving the best outcomes for Queenslanders with cancer.



1.1 | Survival

What percentage of people with cancer are living 5 years after their diagnosis?

Relative Survival		Queensland		Australia ¹
<i>(% of people who would have survived if cancer was the only cause of death)</i>				
Cancer group	Cancer	2005-2009 5 Year Survival	2010-2014 5 Year Survival ⁻	2007-2011 5 Year Survival
Breast	Breast	89%	91%	90%
Colorectal	Colorectal	67%	70%	67% [^]
	Colon	67%	69%	**
	Rectal	68%	71%	**
Gynaecological	Cervical	76%	74%	72%
	Ovarian	46%	48%	43%
	Uterine	82%	84%	83% [*]
	Vulva	72%	78%	**
Hepatobiliary	Biliary tract	27%	24%	**
	Pancreatic	6%	8%	6%
	Small intestine (including duodenum)	61%	67%	**
Lung	Lung	14%	17%	14%
	Non-small cell lung	14%	17%	**
Upper GI	Gastric	30%	29%	27%
	Oesophagus	18%	26%	18%
Urological	Bladder	55%	53%	53%
	Testicular	98%	98%	98%

⁻ Censoring will occur for patients diagnosed in later years

^{*} Includes uterus, part unspecified (C55)

[^] Includes bowel cancer (C18-C20,C218)

^{**} National comparative data not available

¹ Australian Institute of Health and Welfare & Australasian Association of Cancer Registries 2014. Cancer in Australia: an overview, 2014 (Supplementary tables). Cancer services no. 90. Cat. no. CAN 88. Canberra: AIHW.

Overall Queensland cancer survival compares favourably with the rest of Australia.

1.2 | Queenslanders receiving Multidisciplinary Team review

How many Queenslanders with cancer receive multidisciplinary team (MDT) review?

MDT Review		Queensland	
<i>(Number of patients who had MDT review after diagnosis)</i>			
Cancer group	Cancer	2005-2009 MDT number (rate*)	2010-2014 MDT number (rate*)
Breast	Breast	853 (7%)	5,679 (37%)
Colorectal	Colon	345 (4%)	2,550 (26%)
	Rectal	243 (6%)	1,602 (34%)
Gynaecological	Cervical	15 (2%)	220 (23%)
	Ovarian	15 (1%)	223 (17%)
	Uterine	23 (1%)	429 (19%)
	Vulva	8 (3%)	82 (25%)
Hepatobiliary	Pancreatic, biliary tract & duodenal	72 (3%)	566 (18%)
Lung	Non-small cell lung	2,498 (32%)	3,969 (45%)
Upper GI	Oesophagogastric	210 (7%)	1,291 (41%)
Urological	Bladder	24 (1%)	188 (8%)
	Testicular	11 (2%)	90 (12%)

*Percentage of cancer patients receiving MDT review.

Multidisciplinary team review is an important part of determining a patient's cancer diagnosis and treatment plan.

Multidisciplinary cancer care occurs in public and private hospitals across Queensland. This report is limited to the hospitals that use QOOL™ to capture Multidisciplinary team reviews.

1.3 | Queenslanders receiving cancer surgery

How many Queenslanders with cancer receive surgery?

Surgery number			Queensland	
<i>(Number of cancer patients receiving surgery)</i>				
Cancer group	Cancer	Surgery type	2005-2009 Surgery number (rate*)	2010-2014 Surgery number (rate*)
Breast	Breast	Breast cancer surgery	11,798 (91%)	14,074 (91%)
Colorectal	Colon	Major resection	7,367 (81%)	7,768 (79%)
	Rectal	Major resection	3,185 (72%)	3,231 (69%)
Gynaecological	Cervical	Major resection	298 (37%)	344 (37%)
	Ovarian	Major resection	722 (64%)	868 (67%)
	Uterine	Major resection	1,593 (86%)	2,032 (89%)
	Vulva	Major resection	180 (79%)	256 (77%)
Hepatobiliary	Pancreatic, biliary tract & duodenal	Pancreaticoduodenectomy	341 (13%)	443 (14%)
Lung	Non-small cell lung	Major resection	1,368 (17%)	1,662 (19%)
Upper GI	Oesophagogastric	Major resection	910 (32%)	854 (27%)
Urological	Bladder	Cystectomy	416 (18%)	481 (21%)
	Testicular	Orchidectomy	659 (95%)	731 (96%)

Rates have been adjusted for age and sex.

**Percentage of cancer patients receiving cancer surgery.*

Major resection surgery is a critical component of the curative treatment for cancers.

1.4 | Queenslanders receiving radiation therapy

How many Queenslanders with cancer receive radiation therapy?

Radiation therapy		Queensland	
<i>(Number of cancer patients receiving radiation therapy)</i>			
Cancer group	Cancer	2005-2009	2010-2014
		Radiation therapy number (rate*)	Radiation therapy number (rate*)
Breast	Breast	7,951 (61%)	9,829 (64%)
Colorectal	Colon	389 (4%)	327 (3%)
	Rectal	1,232 (28%)	1,516 (32%)
Gynaecological	Cervical	380 (47%)	443 (48%)
	Ovarian	74 (7%)	55 (4%)
	Uterine	321 (17%)	421 (19%)
	Vulva	66 (29%)	97 (29%)
Hepatobiliary	Pancreatic, biliary tract & duodenal	159 (6%)	244 (8%)
Lung	Non-small cell lung	3,358 (42%)	3,816 (44%)
Upper GI	Oesophagogastric	750 (27%)	945 (30%)
Urological	Bladder	526 (24%)	525 (22%)
	Testicular	97 (14%)	12 (2%)

*Rates have been adjusted for age and sex.
Percentage of cancer patients receiving radiation therapy.

Radiation therapy plays a key role in the management of many cancers.

Changes in radiation therapy rates over time reflect changing clinical practice.

1.5 | Queenslanders receiving intravenous systemic therapy

How many Queenslanders with cancer receive intravenous systemic therapy?

Systemic therapy		Queensland	
<i>(Number of cancer patients receiving systemic therapy)</i>			
Cancer group	Cancer	2005-2009 Systemic therapy number (rate*)	2010-2014 Systemic therapy number (rate*)
Breast	Breast	5,730 (44%)	7,277 (48%)
Colorectal	Colon	2,399 (27%)	2,790 (28%)
	Rectal	1,459 (33%)	1,710 (36%)
Gynaecological	Cervical	240 (30%)	377 (40%)
	Ovarian	689 (61%)	863 (67%)
	Uterine	261 (14%)	418 (18%)
	Vulva	19 (8%)	47 (14%)
Hepatobiliary	Pancreatic, biliary tract & duodenal	891 (34%)	1,221 (38%)
Lung	Non-small cell lung	2,727 (34%)	3,437 (39%)
Upper GI	Oesophagogastric	945 (34%)	1,245 (40%)
Urological	Bladder	703 (31%)	830 (35%)
	Testicular	355 (51%)	452 (60%)

Rates have been adjusted for age and sex.

**Percentage of cancer patients receiving intravenous systemic therapy.*

Systemic therapy, or anti-cancer medicine is a major component of care for many cancer types.

A large number of people get systemic therapy as part of their treatment.

Systemic therapy may be given before, during or after other cancer treatments.

2 | Efficient

Optimally using resources to achieve desired outcomes.



2.1 | Hospital stay

How long do people receiving cancer surgery stay in hospital?

Length of stay			Queensland					
<i>(Median time in days between the admission and discharge date of cancer surgery)</i>								
Cancer group	Cancer	Surgery Type	2005-2009			2010-2014		
			All	Public	Private	All	Public	Private
Breast	Breast	Breast cancer surgery	2	2	2	2	1	2
Colorectal	Colon	Major resection	8	9	8	7	8	7
	Rectal	Major resection	11	13	11	12	12	10
Gynaecological	Cervical	Major resection	5	5	5	3	3	3
	Ovarian	Major resection	8	7	8	7	6	7
	Uterine	Major resection	4	5	4	2	2	3
	Vulva	Major resection	7	8	6	6	7	5
Hepatobiliary	Pancreatic, biliary tract & duodenal	Pancreaticoduodenectomy	17	14	19	17	17	15
Upper GI	Oesophagogastric	Gastrectomy	19	21	13	14	16	14
		Oesophagectomy	15	17	15	15	15	15
Lung	Non-small cell lung	Major resection	8	8	8	7	7	7
Urological	Bladder	Cystectomy	13	13	12	13	13	13
	Testicular	Orchidectomy	1	1	1	1	1	1

Patients receiving various types of cancer surgery have different lengths of hospital stay.

Generally, better surgical management results in shorter hospital stays.

There is little variation in the length of stay between public and private hospitals.

3 | Safe

Avoiding and preventing adverse outcomes or injuries caused by healthcare management.



3.1 | In-Hospital mortality

What percentage of patients die in hospital after cancer surgery?

In-Hospital mortality			Queensland	
<i>(% patients who die in hospital following cancer surgery)</i>				
Cancer group	Cancer	Surgery Type	2005-2009 In-Hospital mortality	2010-2014 In-Hospital mortality
Breast	Breast	Breast cancer surgery	0.0%	0.0%
Colorectal	Colon	Major resection	2.8%	2.0%
	Rectal	Major resection	2.0%	1.2%
Gynaecological	Cervical	Major resection	0.0%	0.0%
	Ovarian	Major resection	0.7%	0.0%
	Uterine	Major resection	0.2%	0.2%
	Vulva	Major resection	0.6%	0.0%
Hepatobiliary	Pancreatic, biliary tract & duodenal	Pancreaticoduodenectomy	2.3%	3.4%
Lung	Non-small cell lung	Major resection	1.5%	0.8%
Upper GI	Oesophagogastric	Gastrectomy	3.7%	4.2%
		Oesophagectomy	1.5%	1.0%
Urological	Bladder	Cystectomy	1.0%	0.6%
	Testicular	Orchidectomy	0.2%	0.1%

Rates have been adjusted for age and sex.

Mortality is an important measure of safe surgery.

Queensland has low mortality rates after cancer surgery.

In-hospital mortality after cancer surgery is decreasing.

3.2 | 30 day mortality

What percentage of patients die within 30 days of their cancer surgery?

30 day mortality			Queensland	
<i>(% patients who die ≤ 30 days following cancer surgery)</i>				
Cancer group	Cancer	Surgery Type	2005-2009 30 day mortality	2010-2014 30 day mortality
Breast	Breast	Breast cancer surgery	0.1%	0.1%
Colorectal	Colon	Major resection	3.1%	2.4%
	Rectal	Major resection	2.2%	1.3%
Gynaecological	Cervical	Major resection	0.0%	0.0%
	Ovarian	Major resection	0.7%	0.2%
	Uterine	Major resection	0.3%	0.2%
	Vulva	Major resection	0.5%	0.4%
Hepatobiliary	Pancreatic, biliary tract & duodenal	Pancreaticoduodenectomy	2.6%	2.7%
Lung	Non-small cell lung	Major resection	1.7%	0.9%
Upper GI	Oesophagogastric	Gastrectomy	3.6%	4.9%
		Oesophagectomy	0.6%	1.2%
Urological	Bladder	Cystectomy	1.5%	0.4%
	Testicular	Orchidectomy	0.2%	0.1%

Rates have been adjusted for age and sex.



3.3 | 90 day mortality

What percentage of patients die within 90 days of their cancer surgery?

90 day mortality			Queensland	
<i>(% patients who die ≤ 90 days following cancer surgery)</i>				
Cancer group	Cancer	Surgery Type	2005-2009 90 day mortality	2010-2014 90 day mortality
Breast	Breast	Breast cancer surgery	0.2%	0.2%
Colorectal	Colon	Major resection	5.7%	4.2%
	Rectal	Major resection	4.0%	2.8%
Gynaecological	Cervical	Major resection	0.0%	0.3%
	Ovarian	Major resection	2.0%	1.4%
	Uterine	Major resection	1.2%	0.7%
	Vulva	Major resection	1.6%	1.2%
Hepatobiliary	Pancreatic, biliary tract & duodenal	Pancreaticoduodenectomy	4.1%	3.8%
Lung	Non-small cell lung	Major resection	3.5%	2.3%
Upper GI	Oesophagogastric	Gastrectomy	6.3%	6.1%
		Oesophagectomy	2.7%	2.8%
Urological	Bladder	Cystectomy	5.8%	1.7%
	Testicular	Orchidectomy	0.5%	0.1%

Rates have been adjusted for age and sex.

Overall there has been a decrease in mortality after cancer surgery.

3.4 | 1 year surgical survival

What percentage of patients are alive one year after cancer surgery?

1 year surgical survival			Queensland	
<i>(% patients still alive 1 year after cancer surgery)</i>				
Cancer group	Cancer	Surgery Type	2005-2009	2010-2014
			1 yr survival	1 yr survival
Breast	Breast	Breast cancer surgery	99%	99%
Colorectal	Colon	Major resection	86%	89%
	Rectal	Major resection	89%	93%
Gynaecological	Cervical	Major resection	99%	97%
	Ovarian	Major resection	91%	92%
	Uterine	Major resection	96%	96%
	Vulva	Major resection	90%	91%
Hepatobiliary	Pancreatic, biliary tract & duodenal	Pancreaticoduodenectomy	79%	80%
Lung	Non-small cell lung	Major resection	87%	91%
Upper GI	Oesophagogastric	Gastrectomy	77%	79%
		Oesophagectomy	83%	82%
Urological	Bladder	Cystectomy	80%	83%
	Testicular	Orchidectomy	99%	99%

Rates have been adjusted for age and sex.

One-year surgical survival in patients receiving surgery has improved. Improvements in one-year survival reflect the skilful selection of the right patients for complex, high risk surgeries by cancer teams. Mortality rates and survival will continue to be monitored to keep surgery safe for Queenslanders.

3.5 | 2 year surgical survival

What percentage of patients are alive two years after cancer surgery?

2 year surgical survival			Queensland	
<i>(% patients still alive 2 years after cancer surgery)</i>				
Cancer group	Cancer	Surgery Type	2005-2009 2 yr survival	2010-2014 2 yr survival
Breast	Breast	Breast cancer surgery	96%	97%
Colorectal	Colon	Major resection	77%	81%
	Rectal	Major resection	80%	87%
Gynaecological	Cervical	Major resection	96%	95%
	Ovarian	Major resection	80%	83%
	Uterine	Major resection	91%	92%
	Vulva	Major resection	84%	86%
Hepatobiliary	Pancreatic, biliary tract & duodenal	Pancreaticoduodenectomy	54%	63%
Lung	Non-small cell lung	Major resection	74%	82%
Upper GI	Oesophagogastric	Gastrectomy	59%	66%
		Oesophagectomy	70%	67%
Urological	Bladder	Cystectomy	67%	72%
	Testicular	Orchidectomy	98%	98%

Rates have been adjusted for age and sex.

Improvements in two-year survival demonstrate skilful selection of the right patients and improvements in cancer treatments.

4 | Accessible

Making health services available in the most suitable setting in a reasonable time.



4.1 | Timeliness

What percentage of public compared to private patients received their first cancer treatment within 30 days of diagnosis?

Time to first cancer treatment		Queensland					
<i>(% patients whose time from diagnosis to first cancer treatment is ≤30 days)</i>		2005-2009			2010-2014		
Cancer group	Cancer	Time to first cancer treatment			Time to first cancer treatment		
		All	Public	Private	All	Public	Private
Breast	Breast	73%	55%	87%	65%	45%	81%
Colorectal	Colon	77%	70%	83%	72%	62%	82%
	Rectal	58%	45%	70%	54%	38%	70%
Gynaecological	Cervical	39%	32%	53%	30%	21%	50%
	Ovarian	84%	77%	89%	83%	79%	87%
	Uterine	62%	33%	88%	58%	31%	84%
	Vulva	44%	28%	62%	39%	22%	63%
Hepatobiliary	Pancreatic, biliary tract & duodenal	64%	51%	75%	62%	49%	73%
Lung	Non-small cell lung	52%	44%	68%	46%	37%	60%
Upper GI	Oesophagogastric	48%	36%	63%	44%	32%	60%
Urological	Bladder	41%	36%	45%	39%	34%	44%
	Testicular	98%	98%	97%	97%	97%	98%

Rates have been adjusted for age and sex.

Cancer treatment requires careful planning.

The time between diagnosis and first cancer treatment is influenced by the number and complexity of tests required to develop the treatment plan.

4.1 | Remoteness

4.2.1 | Cancer treatment by remoteness

What percentage of rural and remote patients received cancer treatment?

Rural and remote cancer treatment		Queensland					
<i>(% of patients receiving cancer treatment)</i>		2005-2009 Cancer treatment			2010-2014 Cancer treatment		
Cancer group	Cancer	Rural & Remote	Regional	Metro-politan	Rural & Remote	Regional	Metro-politan
Breast	Breast	93%	94%	95%	93%	96%	95%
Colorectal	Colon	90%	93%	93%	89%	91%	92%
	Rectal	96%	96%	96%	95%	96%	95%
Gynaecological	Cervical	89%	86%	93%	92%	94%	94%
	Ovarian	77%	75%	80%	81%	77%	84%
	Uterine	93%	93%	95%	91%	95%	93%
	Vulva	83%	91%	88%	83%	91%	89%
Hepatobiliary	Pancreatic, biliary tract & duodenal	37%	42%	44%	43%	47%	49%
Lung	Non-small cell lung	56%	63%	66%	64%	67%	70%
Upper GI	Oesophagogastric	54%	64%	65%	60%	65%	64%
Urological	Bladder	86%	87%	89%	90%	89%	87%
	Testicular	96%	96%	98%	100%	99%	98%

Rates have been adjusted for age and sex.



4.2.2 | Time to first treatment ≤ 30 days

What percentage of rural and remote patients received their first cancer treatment within 30 days of diagnosis?

Rural and remote time to first cancer treatment		Queensland					
		2005-2009			2010-2014		
		Time to first cancer treatment			Time to first cancer treatment		
Cancer group	Cancer	Rural & Remote	Regional	Metropolitan	Rural & Remote	Regional	Metropolitan
Breast	Breast	69%	70%	75%	59%	59%	69%
Colorectal	Colon	79%	77%	77%	69%	71%	74%
	Rectal	58%	58%	59%	49%	51%	57%
Gynaecological	Cervical	36%	37%	41%	31%	30%	30%
	Ovarian	83%	84%	84%	82%	82%	84%
	Uterine	55%	58%	65%	55%	59%	59%
	Vulva	37%	40%	47%	41%	32%	41%
Hepatobiliary	Pancreatic, biliary tract & duodenal	57%	62%	66%	64%	60%	63%
Lung	Non-small cell lung	55%	53%	51%	53%	47%	43%
Upper GI	Oesophagogastric	39%	47%	51%	41%	40%	46%
Urological	Bladder	45%	38%	41%	36%	42%	38%
	Testicular	97%	98%	98%	96%	99%	97%

Rates have been adjusted for age and sex.

Some cancers require specialised management in metropolitan areas.

There is little difference in the time to first cancer treatment between patients living in rural and remote, regional and metropolitan areas.

5 | Equitable

Providing care and ensuring health status does not vary in quality because of personal characteristics (age, indigenous status or socioeconomic status).



5.1 | Over 75 years

What percentage of patients aged ≥ 75 years received first cancer treatment within 30 days of diagnosis?

Time to first cancer treatment		Queensland			
		2005-2009		2010-2014	
		Time to first cancer treatment			
Cancer group	Cancer	2005-2009		2010-2014	
		Age < 75	Age ≥ 75	Age < 75	Age ≥ 75
Breast	Breast	73%	73%	66%	62%
Colorectal	Colon	75%	80%	70%	75%
	Rectal	56%	65%	52%	60%
Gynaecological	Cervical	39%	50%	30%	29%
	Ovarian	85%	79%	85%	76%
	Uterine	62%	59%	58%	61%
	Vulva	33%	64%	35%	48%
Hepatobiliary	Pancreatic, biliary tract & duodenal	64%	64%	63%	60%
Lung	Non-small cell lung	54%	47%	47%	42%
Upper GI	Oesophagogastric	47%	50%	43%	47%
Urological	Bladder	38%	44%	37%	41%
	Testicular	98%	100%	97%	100%

Rates have been adjusted for age and sex.

Overall people over 75 years with cancer do not wait longer for cancer treatment.

5.2 | Indigenous

What percentage of indigenous patients received first cancer treatment within 30 days of diagnosis?

Time to first cancer treatment		Queensland					
		2005-2009			2010-2014		
Cancer group	Cancer	Time to first cancer treatment			Time to first cancer treatment		
		Indigenous All	Non-indigenous Public	Private	Indigenous All	Non-indigenous Public	Private
Breast	Breast	54%	55%	87%	47%	45%	81%
Colorectal	Colon	68%	70%	83%	60%	62%	82%
	Rectal	61%	45%	70%	49%	38%	70%
Gynaecological	Cervical	27%	33%	53%	24%	21%	51%
	Ovarian	59%	78%	89%	71%	80%	87%
	Uterine	41%	33%	88%	32%	31%	84%
	Vulva	10%	29%	62%	63%	22%	63%
Hepatobiliary	Pancreatic, biliary tract & duodenal	49%	51%	75%	68%	48%	73%
Lung	Non-small cell lung	50%	44%	68%	40%	37%	61%
Upper GI	Oesophagogastric	40%	36%	63%	38%	32%	60%
Urological	Bladder	45%	36%	45%	36%	34%	44%
	Testicular	100%	98%	97%	96%	97%	98%

Rates have been adjusted for age and sex.

There is little variation in time to treatment within 30 days between Indigenous patients and Non-Indigenous patients treated in public hospitals.

5.3 | Socio-economically Disadvantaged

5.3.1 | Socio-economically disadvantaged, 2005-2009

What percentage of socioeconomically disadvantaged patients received first cancer treatment within 30 days of diagnosis?

Time to first cancer treatment		Queensland							
		<i>(% patients whose time from diagnosis to first cancer treatment is ≤30 days)</i>							
Cancer group	Cancer	2005-2009							
		Time to first cancer treatment				Queensland			
		Disadvantaged Public	Private	Middle Public	Private	Affluent Public	Private	Public	Private
Breast	Breast	53%	85%	55%	86%	57%	89%	55%	87%
Colorectal	Colon	69%	83%	70%	82%	72%	84%	70%	83%
	Rectal	46%	72%	46%	68%	40%	74%	45%	70%
Gynaecological	Cervical	28%	60%	34%	52%	38%	54%	32%	53%
	Ovarian	78%	84%	78%	90%	74%	93%	77%	89%
	Uterine	31%	85%	35%	89%	35%	90%	33%	88%
	Vulva	21%	48%	31%	60%	23%	81%	28%	62%
Hepatobiliary	Pancreatic, biliary tract & duodenal	54%	73%	49%	74%	61%	81%	51%	75%
Lung	Non-small cell lung	42%	67%	44%	67%	47%	74%	44%	68%
Upper GI	Oesophagogastric	40%	59%	33%	62%	38%	70%	36%	63%
Urological	Bladder	36%	41%	37%	45%	33%	48%	36%	45%
	Testicular	97%	100%	98%	97%	100%	98%	98%	97%

Rates have been adjusted for age and sex.

5.3.2 | Socio-economically disadvantaged, 2010-2014

What percentage of socioeconomically disadvantaged patients received first cancer treatment within 30 days of diagnosis?

Time to first cancer treatment		Queensland							
<i>(% patients whose time from diagnosis to first cancer treatment is ≤30 days)</i>									
Cancer group	Cancer	2010-2014							
		Disadvantaged		Middle		Affluent		Queensland	
		Public	Private	Public	Private	Public	Private	Public	Private
Breast	Breast	39%	81%	46%	79%	55%	85%	45%	81%
Colorectal	Colon	61%	80%	63%	82%	63%	84%	62%	82%
	Rectal	40%	65%	37%	69%	36%	75%	38%	70%
Gynaecological	Cervical	25%	39%	19%	50%	23%	58%	21%	50%
	Ovarian	76%	81%	80%	88%	81%	89%	79%	87%
	Uterine	33%	79%	31%	83%	25%	93%	31%	84%
	Vulva	25%	63%	22%	60%	25%	77%	22%	63%
Hepatobiliary	Pancreatic, biliary tract & duodenal	46%	76%	50%	71%	55%	74%	49%	73%
Lung	Non-small cell lung	38%	60%	37%	58%	37%	72%	37%	60%
Upper GI	Oesophagogastric	32%	59%	33%	57%	31%	71%	32%	60%
Urological	Bladder	36%	48%	34%	40%	34%	51%	34%	44%
	Testicular	97%	100%	97%	98%	96%	97%	97%	98%

Rates have been adjusted for age and sex.

The percentage of socio-economically disadvantaged people waiting longer for breast and colon cancer treatment has increased.

We need a better understanding of why more socio-economically disadvantaged patients are waiting for cancer treatment.

Appendix:

Appendix 1: Cancer surgery descriptions

Cancer	Surgery type	Surgery description
Breast	◦ Breast cancer surgery	Breast conservation surgery (BCS)
		Mastectomy
Colon/Rectal	◦ Major resection	Anterior resection
		AP resection
		Colectomy
		Hartmanns
		Total proctocolectomy
Cervical	◦ Major resection	Hysterectomy
Ovarian	◦ Major resection	Hysterectomy
		Salpingo/Oophorectomy
Uterine	◦ Major resection	Hysterectomy
Vulva	◦ Major resection	Hemivulvectomy
		Radical vulvectomy
		Vulvectomy, bilateral
		Vulvectomy, unilateral
Pancreatic, biliary tract & duodenal	◦ Pancreaticoduodenectomy	Pancreaticoduodenectomy
Non-small cell lung (excluded carcinoid tumour)	◦ Major resection	Major resection
Oesophagogastric	◦ Gastrectomy	Gastrectomy
	◦ Oesophagectomy	Oesophagectomy
Bladder	◦ Cystectomy	Cystectomy
Testicular	◦ Orchiectomy	Orchiectomy

Glossary

1 year survival

All-cause crude survival: the percentage of patients still alive after 1 year from their last cancer surgery.

2 year survival

All-cause crude survival: the percentage of patients still alive after 2 years from their last cancer surgery.

30 day mortality

The percentage of patients that die within 30 days following their last cancer surgery.

90 day mortality

The percentage of patients that die within 90 days following their last cancer surgery.

Age and sex adjusted figures

Rates have been adjusted by age and sex to account for any differences in cancer populations across the two periods of interest.

Affluent

The group of patients whose socioeconomic status is affluent (refer to **Socioeconomic status** page 30).

Disadvantaged

The group of patients whose socioeconomic status is disadvantaged (refer to **Socioeconomic status** page 30).

First cancer treatment

The first treatment the patient had for their cancer – either surgery, radiation therapy or intravenous systemic therapy.

Hospital Stay

The median time in days between the admission and discharge date of a patient's cancer surgery.

Indigenous

A measure of whether a person identifies as being of Aboriginal or Torres Strait Islander origin.

In-Hospital mortality

The percentage of patients that die in hospital following their last cancer surgery.

Intravenous systemic therapy

Includes Queensland residents of all ages diagnosed with invasive cancer who had intravenous systemic therapy after diagnosis.

Length of stay

The average in number of days patients stay in hospital for their cancer surgery.

Middle

The group of patients whose socioeconomic status is middle (refer to **Socioeconomic status** page 30).

MDT Review

Cancer patients are discussed by a Multidisciplinary Team to make sure that all available treatment options are considered.

MDT number

Number of cancer patients who had MDT Review after diagnosis.

Non-Indigenous

A measure of whether a person doesn't identify themselves as Indigenous.

Over 75 years

Population into over 75 years and under 75 years, it describes Queensland's ageing population.

Private hospital

All other hospitals that are not Queensland Health hospitals.

Public hospital

Queensland Health hospitals.

Radiation therapy

Includes Queensland residents of all ages diagnosed with invasive cancer who had radiation therapy after diagnosis. For further information on radiation therapy <https://www.targetingcancer.com.au>

Remoteness

The relative remoteness of residence at time of diagnosis, based on the Australian Standard Geographical Classification (ASGC). In this report, remoteness is classified into three groups: Metropolitan, Regional and Rural & Remote.

Sex

Refers to the biological and physiological characteristics that define men and women.

Socioeconomic status (SES)

Socioeconomic status is a measure of a person or population's social and economic wellbeing. It typically combines information on education, occupation/employment and income levels. People living in disadvantaged areas may have increased risk factors for social exclusion, including limited access to health, education or transport services. The index used in this report is based on the Socio-Economic Indexes for Areas (SEIFA) measure developed by the Australian Bureau of Statistics¹.

In this report, Queenslanders are reported as being from one of three distinct SES groups. Those Queenslanders in the top 20% most disadvantaged on the SEIFA scale are reported in the **disadvantaged** group. Those in the top 20% least disadvantaged are included in the **affluent** group. The remaining 60% of the population are included in the **middle** group.

1. Australian Bureau of Statistics, 2013, *Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA)*, cat. No. 2033.0.55.001. <http://www.abs.gov.au/websitedbs/censushome.nsf/home/seifa>

Surgery/Major Resection

Refer to Appendix 1 (page 27).

Surgery number

Includes Queensland residents of all ages diagnosed with invasive cancer in the surgical cohort time period who underwent cancer surgery.

Survival

Relative survival is a net survival measure representing cancer survival in the absence of other causes of death. Relative survival is defined as the ratio of the proportion of observed survivors in a cohort of cancer patients to the proportion of expected survivors in a comparable set of cancer free individuals.

Time to first cancer treatment

Time between the patient's pathological diagnosis and their first cancer treatment.

Timeliness

A patient's time to cancer treatment from pathological diagnosis.

FOR MORE INFORMATION

Queensland Cancer Control Analysis Team

Queensland Health

Tel: (+61) (07) 3176 4400

Email: qccat@health.qld.gov.au

<https://qccat.health.qld.gov.au>

Although care has been taken to ensure the accuracy, completeness and reliability of the information provided these data are released for purposes of quality assurance and are to be used with appropriate caution. Be aware that data can be altered subsequent to original distribution and that the information is therefore subject to change without notice. Data can also quickly become out-of-date. It is recommended that careful attention be paid to the contents of any data and if required QCCAT can be contacted with any questions regarding its use. If you find any errors or omissions, please report them to qccat@health.qld.gov.au.