Cancer Surgery in Queensland

Infocus – access and flows 2013

Background

Queensland Health

Queensland Cancer Control
Safety and Quality Partnership

qccat
queensland cancer control analysis team

Queensland Government

Queensland Cancer Control Analysis Team

For more information:
Queensland Cancer Control Analysis Team
Queensland Health
Radiation Oncology Mater Centre
31 Raymond Tce
South Brisbane Queensland 4001 Australia
Tel: (61+) (07) 3840 3200
Email: qccat@health.qld.gov.au
https://qccat.health.qld.gov.au

Cancer Surgery in Queensland: Infocus - access and flows 2013

Suggested citation:
Queensland Government. Cancer Surgery in Queensland: Infocus - access and flows 2013. Queensland Health, Brisbane 2013

ISBN: 978-1-876532-06-2
Published by Queensland Health
August 2013

Acknowledgements

The authors acknowledge and appreciate the work of the staff of the Cancer Council Queensland who operate and maintain the Queensland Cancer Registry and the Queensland Health staff who contribute to and participate in the maintenance of the Queensland Cancer Registry, the Admitted Patient Data Collection, the online Oncology Analysis System (OASys), Queensland Oncology Online (QOOL) and other tools which support the collection, analysis and interpretation of cancer data in Queensland.

We acknowledge the Cancer Control Safety and Quality Partnership (The Partnership) subcommittees and clinical leads who have contributed to and participated in the creation of this report.

The current members (July 2011 – 2014) of The Partnership are:

Chair: Dr Euan Walpole, Clinical Stream Leader Cancer Services, Metro South Hospital and Health Service
Professor Joanne Aitken, Director Cancer Registries and Scientific Consultant, Epidemiology, Cancer Council Queensland
Dr Roger Allison, Radiation Oncologist, Royal Brisbane and Women's Hospital
Dr Andrew Johnson, Executive Director Medical Services, Townsville Hospital and Health Service
Dr Liz Kenny, Medical Director, Central Integrated Regional Cancer Service (CIRCS)
Associate Professor of Surgery Mark Smithers, Chairman Upper GI and Soft Tissue Unit, Princess Alexandra Hospital

Further information about The Partnership and previous publications are available at https://qccat.health.qld.gov.au

Cancer Surgery in Queensland: Infocus - access and flows 2013 has been prepared by Michael Blake, Shoni Colquist, Danica Cossio, Tracey Guan, Hazel Harden, Julie Moore and Dannie Zarate, the Queensland Cancer Control Analysis Team.

Contents

Queensland Cancer Control Safety and Quality Partnership

Driving clinician led service improvement

The Queensland Cancer Control Safety and Quality Partnership (The Partnership) was established in 2004 with a single goal; *clinician-led service improvement*. The Partnership aims to achieve this by providing the cancer community with the systems and tools to routinely review share and compare data on cancer treatment and outcomes. Involving cancer clinicians in deciding how to achieve the best possible cancer outcomes is our priority. The Partnership is a gazetted quality assurance committee under Part 6, Division 1 of the Hospital and Health Boards Act 2011. This legislation allows The Partnership to access identifiable information and use it to better understand the safety and quality of the cancer care services delivered across Queensland. Compiling the data has been an important part of our work since 2004. The Partnership is supported by the Queensland Cancer Control Analysis Team (QCCAT).

About QCCAT

Queensland's resource for informing cancer care

QCCAT undertakes the analysis and interpretation of data and advises on the best use of cancer data for service improvement. QCCAT's program of work brings the best and the brightest talent together. Many of the clinicians involved are not only internationally recognised leaders in their fields, but are also practising clinicians who understand the grassroots of health care delivery, making our analysis services clinically focused and useful in changing practices. Other team members have statistical training, epidemiological backgrounds, software development, project management, health services research and leadership and clinician engagement expertise. The variety of skill sets and educational backgrounds ensure a multidisciplinary approach to cancer care dilemmas and creates a real world mosaic of perspectives that is vital to shaping Queensland's future cancer care. QCCAT collaborates with experts from a diverse network of hospitals, institutions, universities, non-government agencies, professional organisations and patient groups to ensure clinical, educational and policy relevance.

What we know about patterns of cancer surgery in Queensland

In 2006 The Partnership published the results of a statewide patterns of care study: *Treating cancer in Queensland Public Hospitals: service improvement starts here*. The aim of this study was to identify specific areas for improvement in cancer services in Queensland public hospitals. This report builds on the 2006 patterns of care study by providing population information on surgery rates for more cancers. However, since cancer surgery was a key component of the analysis it also provides important historical data on surgery rates for breast and colorectal cancers. For example, in 2006 surgery rates were similar for urban and rural public patients and the combined rate of cancer surgery for breast, colon, rectal, prostate and head and neck cancers was 70%[1]. Now that QCCAT are able to routinely match and link patient data it has been possible to update and broaden this initial study and provide a fresh look at current patterns of cancer surgery in Queensland.

Why do we need Cancer Surgery in Queensland: Infocus - access and flows 2013?

In 2013 an estimated 27,165 new cases of invasive cancer will be diagnosed among Queensland residents[2]. Cancer is the leading cause of burden of disease and injury in Queensland[3], and will claim 9,210 lives in 2013[2]. With the ageing population, the number of new cases is expected to reach 35,055 by 2021[2].

---

[1] *Queensland Health. Treating cancer in Queensland public hospitals: service improvement starts here… Queensland Cancer Control Analysis Team: Brisbane; 2006.*

[2] *Queensland Health. Oncology analysis system (OASys). Queensland Cancer Control Analysis Team: Brisbane; 2012. https://qool.health.qld.gov.au/OASys. Accessed 18/07/2013*

[3] *Queensland Health. The health of Queenslanders 2012: advancing good health. Fourth report of the Chief Health Officer Queensland. Brisbane 2012.*

This first release of ***Cancer Surgery in Queensland: Infocus - access and flows 2013*** includes chapters on breast, colon and rectal, lung and upper gastrointestinal cancers. Future chapters will provide information on prostate, bladder, pancreas, hepatobiliary and gynaecological cancers.

The Queensland Government has a strong commitment to empowering local communities and the healthcare workforce to make decisions about local healthcare needs.

In 2013 the Queensland government launched its *Blue print for better health care for Queensland* [4], which has four principal themes:

1. Health services focused on patients and people.

2. Empowering the community and our health workforce.

3. Providing Queenslanders with value in health services.

4. Investing, innovating and planning for the future.

Access to high quality cancer care is a key priority for Queensland's health policy agenda.

Surgery is a critical component of the curative treatment of most cancers with many cancers diagnosed and treated surgically. This first release of ***Cancer Surgery in Queensland: Infocus - access and flows 2013*** is focused on two dimensions of access to cancer care services – surgery rates and flows. The chapters provide population wide information on rates of surgery provision and patient flows based on patient Hospital and Health Service (HHS) of residence. The chapters contain information on cancer surgery in Queensland from 2001-2010 and reflections on the trends in the data observed over the most recent three year time period 2008 – 2010.

Cancer Surgery in Queensland: Infocus - access and flows 2013 provides, for the first time, a population profile for cancer surgery in Queensland and the HHSs. It also describes the characteristics of cancer patients who receive surgery. Importantly, it provides information on the number and demographic characteristics of cancer patients who do not receive surgery and where they live according to HHS of residence.

The baseline information provided in these chapters will be vital when it comes to measuring the success of the Blueprint, both next year and in the longer term. In addition it informs the planning and funding of cancer services, provides HHSs with locally meaningful information and contributes to our understanding of variation in cancer surgery across Queensland. Important differences in the management of different cancer types prohibit the development of a single target surgery rate for all cancer surgeries. The prognosis of cancer is dependent upon cancer stage and numerous other factors and it is difficult to know the natural rate of spread from local to distal sites for most cancers. Even so, several standards have been discussed for individual cancer surgery rates and Queensland is now able to compare with other Australian states and territories, internationally and published literature.

Cancer Surgery in Queensland: Infocus - access and flows 2013 is framed around five important questions relevant to cancer surgery in Queensland.

How many Queenslanders who are newly diagnosed with cancer have a surgical procedure as a result of their diagnosis?

What are the characteristics of Queenslanders who have a surgical procedure as a result of their cancer diagnosis and Queenslanders newly diagnosed with cancer that do not have a surgical procedure?

What types of surgery are performed for patients who are diagnosed with cancer?

What volume of surgery is performed by Hospital and Health Services for Queenslanders newly diagnosed with cancer?

Where do patients receive their surgery?

This document is the background paper for the individual chapters in the ***Cancer Surgery in Queensland: Infocus - access and flows 2013*** series available at https://qccat.health.qld.gov.au

---

[4]Queensland Government. Blueprint for better healthcare in Queensland. Published by the State of Queensland (Queensland Health), February, 2013

Choosing what to include

The chapters contain a series of data sheets describing surgery rates and patient flows for cancer surgery for breast, colon and rectal, lung and upper gastrointestinal cancers. The cancers we have selected represent a range of common and less common cancers requiring surgery. For example, although lung cancer is a major cause of morbidity and mortality in Queensland, only a minority of lung cancer patients undergo potentially curative surgery. Conversely in breast, colon and rectal cancer the majority of patients undergo potentially curative surgery.

Data sources and methods

Key to QCCAT's program of work is our ability to link population based cancer information on an individual patient basis using a master linkage key specifically developed by our team. This matched and linked data is housed in the Queensland Oncology Repository (QOR), a resource managed by QCCAT. This centralised repository, QOR, compiles and collates data from a range of source systems including Queensland Cancer Registry, hospital admissions data, death data, treatment systems, public and private pathology, hospital clinical data systems and QOOL. QOR contains approximately 32 million records between 1982 – 2013. Our matching and linking processes provide the 327, 650 matched and linked records of cancer patients between 2000 – 2010 which are the starting point for this analysis. The data has been filtered to exclude non Queenslanders, potential duplicate records and second diagnoses for the four cohorts described;

Queensland Cancer Cohort: Queenslander's who were identified in QOR as being diagnosed with cancer between 1 January 2001 and 31 December 2010.

Cancer Cohort: Queenslander's who were identified in the QOR as being diagnosed with an individual cancer between 1 January 2001 and 31 December 2010 are referred to as the cancer cohort e.g. the colon cancer cohort.

Cancer Surgery Cohort: anyone in the individual cancer cohort who had any of the identified cancer related procedures one month before or within a defined time frame after their diagnosis date.

No Surgery Cohort: anyone in the individual cancer surgery cohort who did not have any of the defined surgeries during the designated time period.

Wherever possible, information is presented according to patient characteristics such as age, sex and socioeconomic status. Data is presented by year of diagnosis and grouped by HHS of patient residence, that is, where patients lived at the time they were diagnosed with cancer.

Data sources explained

Queensland Oncology Repository (QOR)
QOR is a cancer patient database developed and maintained by QCCAT 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 and deaths, surgery, chemotherapy, and radiotherapy. QOR also includes data collected by clinicians at multidisciplinary team (MDT) meetings across the state.

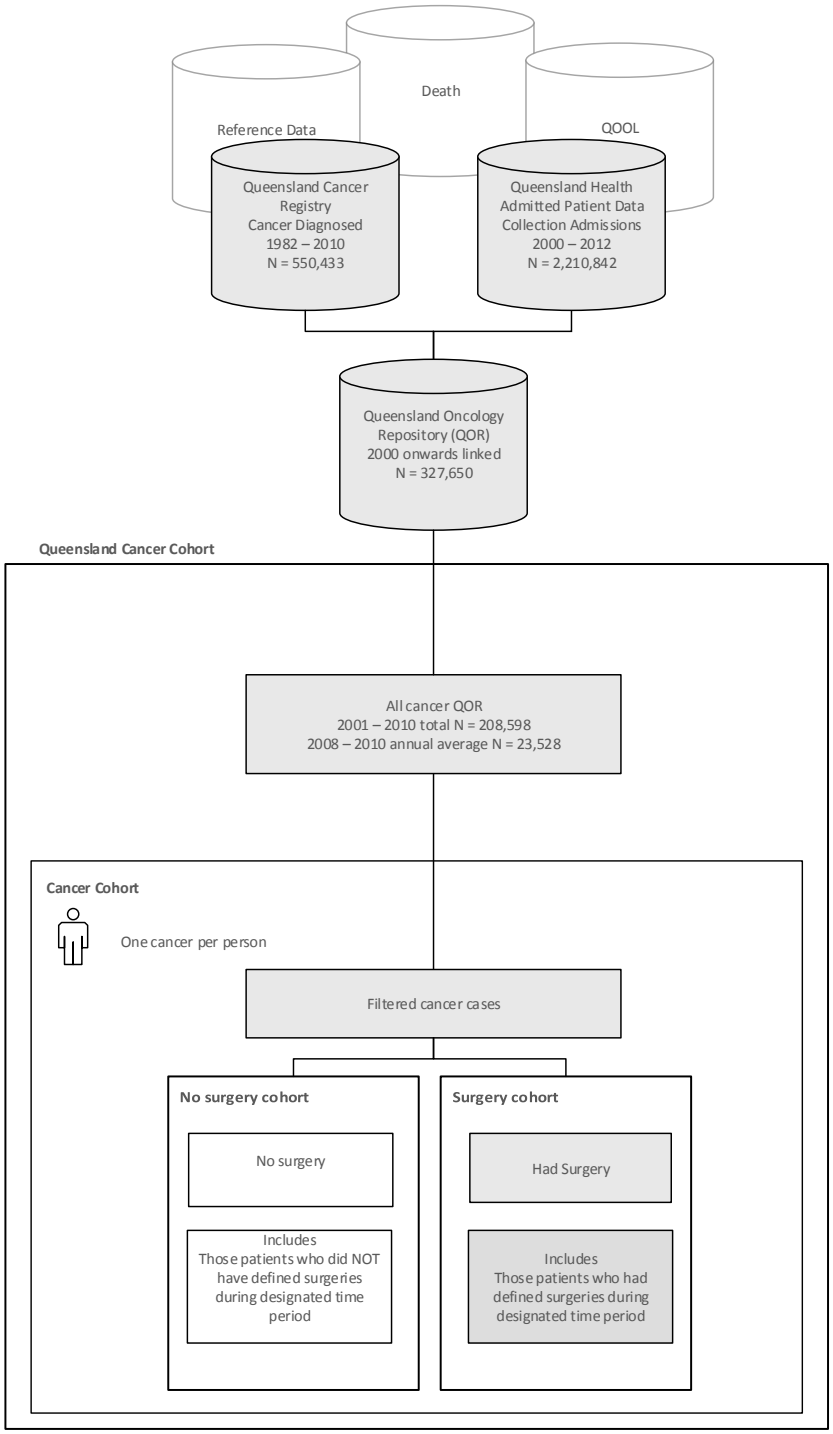
Queensland Cancer Registry (QCR)
The Queensland Cancer Registry (QCR) operates under the Public Health Act 2005 to receive information on cancer in Queensland. QCR is a population-based registry and maintains a register of all cases of cancer diagnosed in Queensland since the beginning of 1982 (excluding basal and squamous cell carcinomas). The QCR codes the site and the histology of the cancers to the International Classification of Diseases for Oncology, 3rd edition (ICD-O-3).

Notification of cancer is a statutory requirement for all public and private hospitals, nursing homes and pathology services. Notifications are received for all persons with cancer separated from public and private hospitals and nursing homes. Cancer-related pathology reports are received from Queensland pathology laboratories. Mortality data with cancer identified as the underlying cause of death as well as cancer-related deaths are abstracted from the mortality files of the Registrar of Births, Deaths and Marriages.

Queensland Health Admitted Patient Data Collection (QHAPDC)
QHAPDC contains data on all patients separated (discharged, died, transferred or statistically separated) from any hospital permitted to admit patients, including public psychiatric hospitals.

QHAPDC provides population-wide surgical data for Queensland and includes: surgical procedures performed during the patient admission for both public and private facilities, admission type data such as elective/emergency status, public/private status and length of stay data about where patients receive their surgery.

How the cohorts were compiled for the analysis



Queensland Oncology Repository
QOR consolidates patient information for Queensland and contains data on invasive, benign and uncertain cancers, patient demographics, surgery, chemotherapy, radiotherapy and death. QOR also contains data collected by clinicians at MDT meetings

Sophisticated matching and linking is performed to identify all persons with cancer who had surgery

Queensland Cancer Cohort
Includes: Queensland Invasive Cancer incidence

Cancer Cohort
Cases are filtered to remove potential duplicate records
If 2 or more diagnosis of same cancer, the earliest is retained
One cancer per person

Cancer Surgery Cohort
Rules

Anyone in the individual cancer cohort who had any of the identified cancer related procedures one month before or within a defined time frame after their diagnosis date.

No Surgery Cohort
Rules

Anyone in the individual cancer cohort who did not have any of the defined surgeries during the designated time period.

The data compiled through this process is used to examine the numbers and rates of cancer surgery, as well as the location of patients' residence compared with where care was received, in Queensland. A detailed description of the methods for each cancer group is provided in each individual chapter.

Concluding remarks

The information contained within ***Cancer Surgery in Queensland: Infocus - access and flows 2013*** will be useful to clinicians, Hospital and Health Service boards, chief executives, policy makers, administrators and providers as they continue in their efforts to create a more equitable and responsive health care system in Queensland.

In 2013/14 we will expand the Infocus surgery series with the publication of information on additional cancers, other aspects of access, including waiting times, cancer outcomes and vulnerable populations such as indigenous and older persons with cancer.

We are continually thankful to those of you that give up your valuable time and enthusiastically work with us to support the goals of The Partnership.

More on the QCCAT website

For further information on The Partnership and QCCAT activities, publications, methods and data sources including QOR visit https://qccat.health.qld.gov.au.

For more information

Queensland Cancer Control Analysis Team
Queensland Health
Radiation Oncology Mater Centre
31 Raymond Tce
South Brisbane Queensland 4001 Australia
Tel: (+61) (07) 3840 3200
Email: qccat@health.qld.gov.au
https://qccat.health.qld.gov.au