10

Chapter

Surgery for Bladder Cancer

Infocus – access and flows for public & private patients 2002-2011

Queensland Health

Queensland Cancer Control
Safety and Quality Partnership

the Partnership
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 for public & private patients 2002-2011
Chapter 10 Bladder Cancer

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Surgery for Bladder Cancer

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Bladder cancer surgery clinical lead
Geoff Coughlin

Cancer Surgery in Queensland: Infocus – access and flows for public & private patients 2002-2011 Chapter 10 Bladder Cancer has been prepared by Michael Blake, Danica Cossio, Nathan Dunn, Tania Eden, Tracey Guan, Julie Moore, Shoni Philpot and Nancy Tran, the Queensland Cancer Control Analysis Team.

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Introduction

In 2014 an estimated 570 new cases of invasive bladder cancer will be diagnosed among Queensland residents[1]. With the ageing population, the number of new cases is expected to reach 745 by 2021[1].

Bladder cancer is one chapter in the ***Cancer Surgery in Queensland: Infocus - access and flows for public & private patients 2002-2011*** series and should be read in conjunction with the background document, available at https://qccat.health.qld.gov.au.

Surgery is a critical component of the curative treatment of bladder cancer. This chapter is focused on two dimensions of access to cancer care services – surgery rates and patient flows. It provides population wide information on rates of surgery provision and flows based on patient Hospital and Health Service (HHS) of residence. The chapter contains information on bladder cancer surgery in Queensland from 2002 – 2011 and reflections on the trends in the data observed over the most recent three year time period 2009 – 2011.

For the first time, a population profile for bladder cancer surgery in Queensland and the HHSs is described including the characteristics of bladder cancer patients who receive surgery. Importantly, it provides information on the number and demographic characteristics of bladder cancer patients who do not receive surgery and where they live according to HHS of residence.

The baseline information provided in this chapter will inform the planning and funding of cancer services, provide HHSs with locally meaningful information and contribute to our understanding of variation in bladder cancer surgery across Queensland. This information enables Queensland to compare themselves with other Australian states and territories, internationally and published literature.

This chapter is framed around five important questions relevant to cancer surgery in Queensland.

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

2. What are the characteristics of Queenslanders who have a surgical procedure as a result of their bladder cancer diagnosis and those that do not have a surgical procedure?

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

4. What number of surgeries is performed by HHSs for Queenslanders newly diagnosed with bladder cancer?

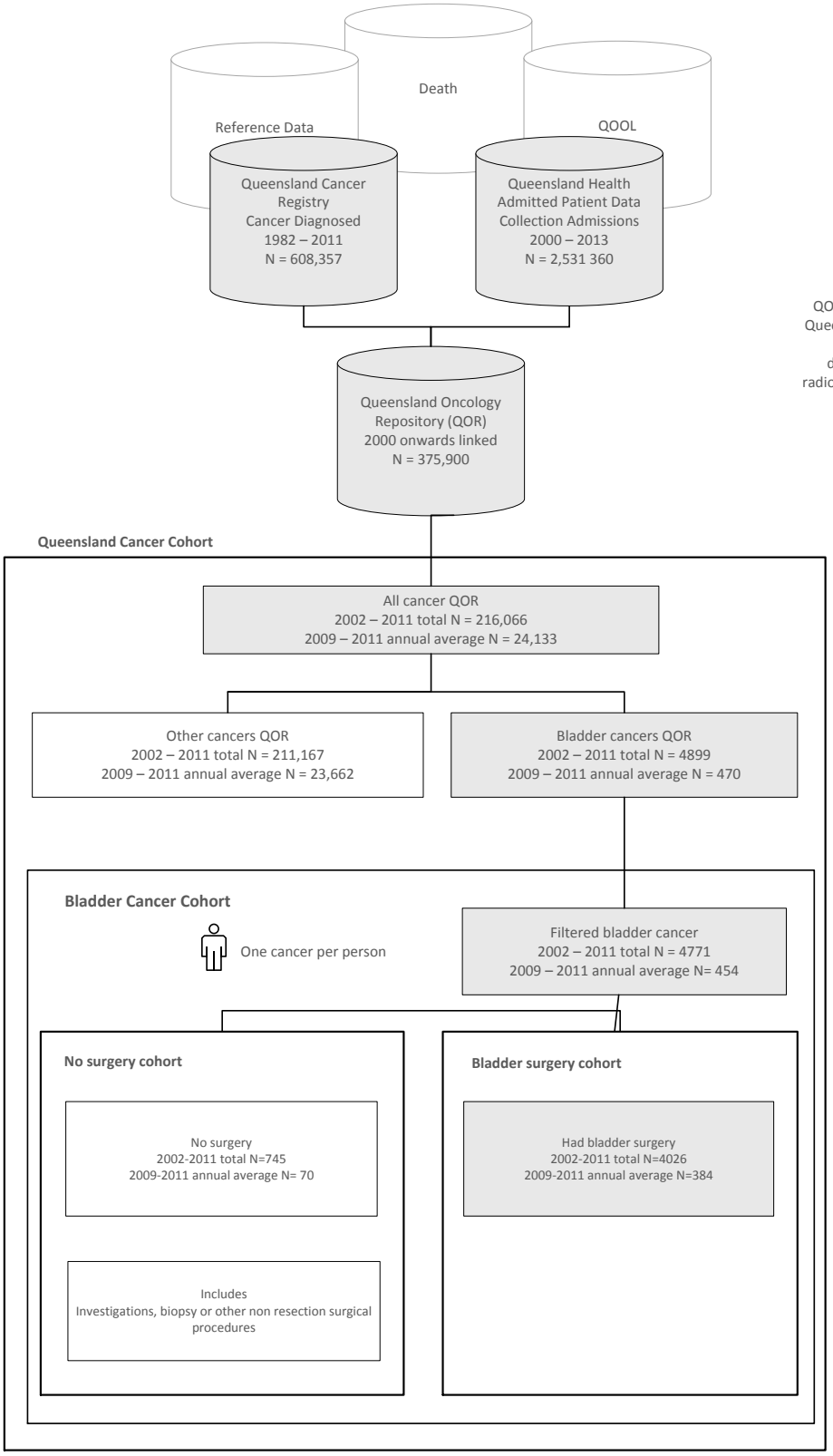
5. Where do patients receive their surgery?

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 375 900 matched and linked records of cancer patients between 2000 - 2011, which are the starting point for this analysis. This chapter is structured around four cohorts of patients: **Queensland Cancer Cohort; Bladder Cancer Cohort; Bladder Surgery Cohort** and the **No Surgery Cohort**.

How the cohorts were identified

2002 – 2011 AND 2009 – 2011 ANNUAL AVERAGE PUBLIC & PRIVATE HOSPITAL PATIENTS



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
Discharged patients from public or private hospitals
Queensland residents
All ages

Bladder surgery cohort
Filtered cases
Potential duplicate records

Rules
1. If the surgery happened > 1 month before the date of diagnosis then the surgery is excluded
2. If two of the same types of surgery happened on the same day count the surgery once

No surgery cohort
Includes Qld residents of all ages diagnosed with bladder cancer who did not undergo bladder surgery in the surgical cohort time period, as defined by the procedures on pages 4 and 5.

Time periods

Time period - 01 December 2001 to 31 December 2013, Diagnosis year - 01 January 2002 to 31 December 2011

Cancer definitions - the site and morphology of the cancers have been coded according to the International Classification of Diseases for Oncology, 3rd edition (ICD-O-3).

Site	ICD-0-3	Morphology
Malignant neoplasm of bladder	**C67**	**All**
Trigone of bladder	C67.0	
Dome of bladder	C67.1	
Lateral wall of bladder	C67.2	
Anterior wall of bladder	C67.3	
Posterior wall of bladder	C67.4	
Bladder neck	C67.5	
Ureteric orifice	C67.6	
Urachus	C67.7	
Overlapping lesion of bladder	C67.8	
Bladder, unspecified	C67.9	

Exclusions

The following exclusions apply:

- Non Queensland residents
- People who were not admitted to a Queensland hospital for a procedure for invasive bladder cancer
- Other conditions that patients may have had similar surgery

Identification and categorisation of cancer related procedures

Surgical procedures relevant to bladder cancer performed one month prior to or any time following diagnosis were included. The following process was used to assign surgical procedures to patients with cancer:

- Potential cancer related procedures were identified for bladder cancer from the Australian Classification of Health Interventions (ACHI) International Classification of Diseases (ICD-10-AM) 7th Edition, 2010
- Identified procedures were reviewed by expert clinicians for completeness and accuracy.
- The following procedures were selected and categorised into groups referred to as major resections, number of surgeries, other surgery, ever had surgery, definitive surgery and last major resection (see Definitions for further explanation)

Number of Bladder cancer ICD-10-AM 7th edition coded procedures

The following table outlines the relevant bladder procedures included in this report for Queensland residents (both public & private) diagnosed with invasive bladder cancer:

ICD-10-AM	PROCEDURE/GROUPING	NUMBER OF PROCEDURES		
		2002 – 2011	Annual Average 2009 – 2011	2011
	EXCISION	9526	896	924
36840-03	Endo. destruction of a single bladder lesion ≤ 2 cm or tissue of bladder	1903	142	132
36845-06	Endoscopic destruction of a single lesion of bladder > 2 cm in diameter	683	29	21
36845-07	Endoscopic destruction of multiple lesions of bladder	1496	104	94
36840-02	Endo. resection of a single bladder lesion ≤ 2cm or tissue of bladder	2441	255	274
36845-04	Endoscopic resection of a single lesion of bladder > 2 cm in diameter	1307	155	180
36845-05	Endoscopic resection of multiple lesions of bladder	1696	211	223
	SEGMENTAL CYSTECTOMY	65	7	4
37000-00	Laparoscopic partial excision of bladder	4	0	0
37000-01	Partial excision of bladder	61	7	4
	RADICAL CYSTECTOMY	743	85	90
37014-00	Total excision of bladder	743	85	90
	URINARY DIVERSION	764	90	96
36606-00	Formation of continent intestinal urinary reservoir	33	3	2
36606-03	Formation of continent intestinal urinary reservoir with attachment of reservoir to urethra	25	1	3
36600-02	Formation of incontinent intestinal urinary reservoir	706	86	91
	LYMPH NODE EXCISION	407	49	56
30329-00	Excision of lymph node of groin	12	1	1
30329-01	Regional excision of lymph nodes of groin	2	0	0
30330-00	Radical excision of lymph nodes of groin	7	0	0
90282-00	Excision of lymph node of other site	43	3	3
90282-01	Regional excision of lymph nodes of other site	49	6	4
37607-00	Radical excision of retroperitoneal lymph nodes	5	1	2
37610-00	Radical excision of retroperitoneal lymph nodes, subsequent	3	1	1
90282-02	Radical excision of lymph nodes of other site	286	37	45

Surgery rate for bladder cancer

ANNUAL AVERAGE YEAR OF DIAGNOSIS 2009 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD MUTUALLY EXCLUSIVE

Characteristic	Annual Average Urinary bladder cancer cohort	(Qld %)	Had Surgery n	(row %)	No Surgery n	(row %)
Queensland	454	(100%)	384	(85%)	70	(15%)
Gender						
Male	339	(75%)	289	(85%)	50	(15%)
Female	115	(25%)	95	(83%)	20	(17%)
Age Group						
< 65	90	(20%)	84	(93%)	8	(9%)
65-74	124	(27%)	111	(89%)	13	(11%)
75-84	160	(35%)	132	(83%)	28	(17%)
85+	81	(18%)	59	(73%)	22	(27%)
Indigenous Status						
Indigenous	4	(1%)	4	(85%)	1	(23%)
Non-Indigenous	419	(92%)	354	(84%)	66	(16%)
Not Stated/Unknown	31	(7%)	27	(88%)	4	(12%)
Socioeconomic Status						
Affluent	62	(14%)	54	(88%)	7	(12%)
Middle	303	(67%)	259	(86%)	44	(14%)
Disadvantaged	86	(19%)	70	(81%)	16	(19%)
Unknown	4	(1%)	1	(27%)	3	(82%)
Remoteness						
Major City	291	(64%)	249	(86%)	42	(14%)
Inner Regional	98	(22%)	83	(84%)	15	(16%)
Outer Regional	56	(12%)	47	(84%)	9	(16%)
Remote & Very Remote	5	(1%)	4	(87%)	1	(20%)
Qld Unknown	4	(1%)	1	(27%)	3	(82%)
Diagnosis Basis						
Histology	391	(86%)	370	(95%)	21	(5%)
Cytology	11	(2%)	1	(9%)	10	(91%)
Clinical	45	(10%)	13	(28%)	32	(72%)
Other	7	(2%)	1	(14%)	6	(90%)
Comorbidity						
0	297	(65%)	260	(87%)	37	(13%)
1	107	(23%)	87	(81%)	20	(19%)
2+	51	(11%)	38	(75%)	13	(25%)

In the interest of completeness, annual average numbers have been included with fewer than 16 cases. Numbers < 16 should be interpreted with caution due to poor reliability of calculations based on small numbers. Annual average numbers have been rounded up to the nearest whole number for those with less than one, therefore the totals may not add up.

Surgery rate for bladder cancer by patient residence

ANNUAL AVERAGE YEAR OF DIAGNOSIS 2009 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD MUTUALLY EXCLUSIVE

			Had Surgery		No Surgery	
	Urinary bladder cancer cohort	**(Qld %)**	**n**	**(row %)**	**n**	**(row %)**
Queensland	454	(100%)	384	(85%)	70	(15%)
HHS (patient residence)						
Metro South	104	(23%)	89	(86%)	15	(14%)
Metro North	87	(19%)	74	(85%)	13	(15%)
Gold Coast	56	(12%)	49	(87%)	7	(13%)
Sunshine Coast	44	(10%)	36	(82%)	8	(18%)
Wide Bay	29	(6%)	25	(86%)	4	(14%)
Darling Downs	26	(6%)	22	(85%)	4	(15%)
Central Queensland	25	(5%)	21	(85%)	4	(15%)
Townsville	24	(5%)	21	(89%)	3	(11%)
Mackay	17	(4%)	13	(80%)	3	(20%)
Cairns and Hinterland	16	(4%)	13	(80%)	3	(20%)
West Moreton	16	(4%)	14	(88%)	2	(12%)
South West	3	(1%)	3	(89%)	1	(33%)
North West	2	(0%)	1	(67%)	1	(50%)
Central West	1	(0%)	1	(100%)	1	(100%)
Torres Strait & Cape York	1	(0%)	1	(100%)		
Qld Unknown	4	(1%)	1	(27%)	3	(82%)

In the interest of completeness, annual average numbers have been included with fewer than 16 cases. Numbers < 16 should be interpreted with caution due to the poor reliability of calculations based on small numbers. Annual average numbers have been rounded up to the nearest whole number for those with less than one. For example if a HHS performed one surgery from 2009 - 2011 the annual average will be rounded up to one to reflect that this HHS is performing surgery. Therefore the totals may not add up.

DEFINITIVE SURGERY MUTUALLY EXCLUSIVE

Type of definitive surgery for bladder cancer

ANNUAL AVERAGE YEAR OF DIAGNOSIS 2009 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

			Had Surgery		Excision		Radical Cystectomy				Segmental Cystectomy			
							With Lymph Node Dissection		Without Lymph Node Dissection		With Lymph Node Dissection		Without Lymph Node Dissection	
Characteristic	**Urinary bladder cancer cohort**	**(Qld %)**	**n**	**(col %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**
Queensland	454	(100%)	384	(85%)	293	(76%)	7	(2%)	77	(20%)	2	(0%)	5	(1%)
Gender														
Male	339	(75%)	289	(75%)	222	(77%)	5	(2%)	57	(20%)	1	(0%)	4	(1%)
Female	115	(25%)	95	(25%)	71	(74%)	2	(2%)	20	(21%)	1	(1%)	2	(2%)
Age Group														
<65	90	(20%)	84	(22%)	46	(55%)	4	(4%)	32	(38%)	3	(4%)	3	(4%)
65-74	124	(27%)	111	(29%)	76	(69%)	2	(2%)	31	(28%)	1	(1%)	1	(1%)
75-84	160	(35%)	132	(34%)	114	(86%)	2	(1%)	15	(11%)			2	(1%)
85+	81	(18%)	59	(15%)	58	(98%)			1	(2%)			1	(2%)
Indigenous Status														
Indigenous	4	(1%)	4	(1%)	3	(91%)			1	(27%)				
Non-Indigenous	419	(92%)	354	(92%)	269	(76%)	7	(2%)	71	(20%)	2	(0%)	5	(1%)
Not Stated/Unknown	31	(7%)	27	(7%)	21	(78%)			6	(21%)			1	(4%)
Socioeconomic Status														
Affluent	62	(14%)	54	(14%)	43	(79%)	1	(2%)	10	(19%)			1	(2%)
Middle	303	(67%)	259	(67%)	198	(76%)	5	(2%)	50	(19%)	1	(1%)	4	(2%)
Disadvantaged	86	(19%)	70	(18%)	51	(73%)	1	(1%)	17	(24%)	1	(1%)	1	(1%)
Unknown	4	(1%)	1	(0%)	1	(100%)	1	(100%)						
Remoteness														
Major City	291	(64%)	249	(65%)	192	(77%)	4	(2%)	49	(20%)	1	(1%)	3	(1%)
Inner Regional	98	(22%)	83	(22%)	64	(77%)	1	(2%)	16	(19%)	1	(1%)	2	(2%)
Outer Regional	56	(12%)	47	(12%)	34	(71%)	1	(2%)	12	(25%)			1	(2%)
Remote & Very Remote	5	(1%)	4	(1%)	3	(69%)	1	(23%)	1	(23%)				
Qld Unknown	4	(1%)	1	(0%)	1	(100%)	1	(100%)						
Comorbidity														
0	297	(65%)	260	(68%)	206	(79%)	4	(2%)	45	(17%)	1	(1%)	3	(1%)
1	107	(23%)	87	(23%)	55	(64%)	3	(3%)	27	(31%)			2	(2%)
2+	51	(11%)	38	(10%)	31	(82%)	1	(3%)	5	(14%)	1	(3%)	1	(3%)

In the interest of completeness, annual average numbers have been included with fewer than 16 cases. Numbers < 16 should be interpreted with caution due to poor reliability of calculations based on small numbers. Annual average numbers have been rounded up to the nearest whole number for those with less than one, therefore the totals may not add up.

Type of definitive surgery for bladder cancer by patient residence

AVERAGE YEAR OF DIAGNOSIS 2009 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

DEFINITIVE SURGERY MUTUALLY EXCLUSIVE

			Had Surgery		Excision		Radical Cystectomy				Segmental Cystectomy			
							With Lymph Node Dissection		Without Lymph Node Dissection		With Lymph Node Dissection		Without Lymph Node Dissection	
	Urinary bladder cancer cohort	**(Qld %)**	**n**	**(col %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**
Queensland	454	(100%)	384	(85%)	293	(76%)	7	(2%)	77	(20%)	2	(0%)	5	(1%)
HHS (patient residence)														
Metro South	104	(23%)	89	(23%)	68	(76%)	1	(1%)	18	(21%)	1	(1%)	1	(1%)
Metro North	87	(19%)	74	(19%)	63	(85%)	1	(1%)	9	(13%)	1	(1%)	1	(1%)
Gold Coast	56	(12%)	49	(13%)	34	(69%)	1	(3%)	13	(26%)			1	(2%)
Sunshine Coast	44	(10%)	36	(9%)	26	(73%)	1	(3%)	8	(23%)	1	(3%)		
Wide Bay	29	(6%)	25	(7%)	18	(72%)	1	(4%)	6	(24%)			1	(4%)
Darling Downs	26	(6%)	22	(6%)	17	(76%)	1	(4%)	4	(18%)			1	(4%)
Central Queensland	25	(5%)	21	(5%)	17	(81%)			4	(19%)				
Townsville	24	(5%)	21	(5%)	15	(71%)	1	(5%)	4	(21%)			1	(5%)
Mackay	17	(4%)	13	(3%)	10	(75%)	1	(8%)	2	(18%)			1	(8%)
Cairns and Hinterland	16	(4%)	13	(3%)	10	(77%)			3	(23%)				
West Moreton	16	(4%)	14	(4%)	11	(77%)			3	(23%)				
South West	3	(1%)	3	(1%)	2	(63%)			1	(38%)				
North West	2	(0%)	1	(0%)	1	(75%)	1	(75%)	1	(75%)				
Central West	1	(0%)	1	(0%)	1	(100%)			1	(100%)				
Torres Strait and Cape York	1	(0%)	1	(0%)	1	(100%)								
Qld Unknown	4	(1%)	1	(0%)	1	(100%)	1	(100%)						

In the interest of completeness, annual average numbers have been included with fewer than 16 cases. Numbers < 16 should be interpreted with caution due to the poor reliability of calculations based on small numbers. Annual average numbers have been rounded up to the nearest whole number for those with less than one. For example if a HHS performed one surgery from 2009 - 2011 the annual average will be rounded up to one to reflect that this HHS is performing surgery. Therefore the totals may not add up.

Type of definitive surgery for bladder cancer by HHS performing surgery

AVERAGE YEAR OF DIAGNOSIS 2009 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

DEFINITIVE SURGERY MUTUALLY EXCLUSIVE

	Annual Average		Excision		Radical Cystectomy				Segmental Cystectomy			
					With Lymph Node Dissection		Without Lymph Node Dissection		With Lymph Node Dissection		Without Lymph Node Dissection	
	Had Surgery	**(col %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**
Queensland	384	(100%)	293	(76%)	7	(2%)	77	(20%)	2	(0%)	5	(1%)
HHS (performing surgery)												
Metro South	130	(34%)	88	(68%)	3	(3%)	36	(28%)	1	(1%)	2	(1%)
Metro North	85	(22%)	67	(79%)	1	(1%)	16	(19%)	1	(1%)	1	(1%)
Gold Coast	47	(12%)	33	(70%)	1	(2%)	12	(26%)			1	(2%)
Sunshine Coast	30	(8%)	24	(81%)	1	(3%)	5	(16%)	1	(3%)		
Townsville	26	(7%)	18	(71%)	1	(5%)	5	(21%)			1	(4%)
Wide Bay	15	(4%)	14	(98%)							1	(7%)
West Moreton	15	(4%)	12	(80%)			3	(20%)				
Central Queensland	15	(4%)	15	(100%)								
Darling Downs	10	(3%)	9	(90%)			1	(10%)			1	(10%)
Mackay	7	(2%)	7	(100%)								
Cairns and Hinterland	5	(1%)	5	(100%)								
Children's Health Queensland	1	(0%)	1	(100%)								

*The South West, North West, Central West, Torres Strait & Cape York and Qld Unknown HHSs did not perform bladder cancer surgery.

In the interest of completeness, annual average numbers have been included with fewer than 16 cases. Numbers < 16 should be interpreted with caution due to the poor reliability of calculations based on small numbers. Annual average numbers have been rounded up to the nearest whole number for those with less than one. For example if a HHS performed one surgery from 2009 - 2011 the annual average will be rounded up to one to reflect that this HHS is performing surgery. Therefore the totals may not add up.

Type of surgery for bladder cancer

ANNUAL AVERAGE YEAR OF DIAGNOSIS 2009 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD
NOT MUTUALLY
EXCLUSIVE

Characteristic	Annual Average Urinary bladder cancer cohort	(Qld %)	Had Surgery n	(col %)	Excision n	(row %)	Radical Cystectomy With Lymph Node Dissection n	(row %)	Radical Cystectomy Without Lymph Node Dissection n	(row %)	Segmental Cystectomy With Lymph Node Dissection n	(row %)	Segmental Cystectomy Without Lymph Node Dissection n	(row %)
Queensland	454	(100%)	384	(85%)	377	(98%)	7	(2%)	77	(20%)	2	(0%)	6	(1%)
Gender														
Male	339	(75%)	289	(75%)	285	(99%)	5	(2%)	57	(20%)	1	(0%)	4	(1%)
Female	115	(25%)	95	(25%)	92	(97%)	2	(2%)	20	(21%)	1	(1%)	2	(2%)
Age Group														
< 65	90	(20%)	84	(22%)	80	(96%)	4	(4%)	32	(38%)	3	(4%)	4	(4%)
65-74	124	(27%)	111	(29%)	108	(98%)	2	(2%)	31	(28%)	1	(1%)	1	(1%)
75-84	160	(35%)	132	(34%)	132	(100%)	2	(1%)	15	(11%)			2	(1%)
85+	81	(18%)	59	(15%)	58	(99%)			1	(2%)			1	(2%)
Indigenous Status														
Indigenous	4	(1%)	4	(1%)	4	(100%)			1	(27%)				
Non-Indigenous	419	(92%)	354	(92%)	347	(98%)	7	(2%)	71	(20%)	2	(0%)	5	(2%)
Not Stated/Unknown	31	(7%)	27	(7%)	27	(99%)			6	(21%)			1	(4%)
Socioeconomic Status														
Affluent	62	(14%)	54	(14%)	54	(99%)	1	(2%)	10	(19%)			1	(2%)
Middle	303	(67%)	259	(67%)	254	(98%)	5	(2%)	50	(19%)	1	(1%)	4	(2%)
Disadvantaged	86	(19%)	70	(18%)	68	(98%)	1	(1%)	17	(24%)	1	(1%)	1	(1%)
Unknown	4	(1%)	1	(0%)	1	(100%)	1	(100%)						
Remoteness														
Major City	291	(64%)	249	(65%)	246	(99%)	4	(2%)	49	(20%)	1	(1%)	3	(1%)
Inner Regional	98	(22%)	83	(22%)	81	(97%)	1	(2%)	16	(19%)	1	(1%)	2	(2%)
Outer Regional	56	(12%)	47	(12%)	46	(98%)	1	(2%)	12	(25%)			1	(2%)
Remote & Very Remote	5	(1%)	4	(1%)	4	(85%)	1	(23%)	1	(23%)				
Qld Unknown	4	(1%)	1	(0%)	1	(100%)	1	(100%)						
Comorbidity														
0	297	(65%)	260	(68%)	255	(98%)	4	(2%)	45	(17%)	1	(1%)	3	(1%)
1	107	(23%)	87	(23%)	84	(97%)	3	(3%)	27	(31%)			2	(2%)
2+	51	(11%)	38	(10%)	37	(98%)	1	(3%)	5	(14%)	1	(3%)	1	(3%)

In the interest of completeness, annual average numbers have been included with fewer than 16 cases. Numbers < 16 should be interpreted with caution due to poor reliability of calculations based on small numbers. Annual average numbers have been rounded up to the nearest whole number for those with less than one, therefore the totals may not add up.

EVER HAD NOT MUTUALLY EXCLUSIVE

Type of surgery for bladder cancer by patient residence

ANNUAL AVERAGE YEAR OF DIAGNOSIS 2009 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

			Had Surgery		Excision		Radical Cystectomy				Segmental Cystectomy			
							With Lymph Node Dissection		Without Lymph Node Dissection		With Lymph Node Dissection		Without Lymph Node Dissection	
	Urinary bladder cancer cohort	**(Qld %)**	**n**	**(col %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**
Queensland	454	(100%)	384	(85%)	377	(98%)	7	(2%)	77	(20%)	2	(0%)	6	(1%)
HHS (patient residence)														
Metro South	104	(23%)	89	(23%)	88	(98%)	1	(1%)	18	(21%)	1	(1%)	1	(1%)
Metro North	87	(19%)	74	(19%)	73	(100%)	1	(1%)	9	(13%)	1	(1%)	1	(1%)
Gold Coast	56	(12%)	49	(13%)	48	(98%)	1	(3%)	13	(26%)			1	(2%)
Sunshine Coast	44	(10%)	36	(9%)	36	(100%)	1	(3%)	8	(23%)	1	(3%)		
Darling Downs	29	(6%)	25	(7%)	25	(99%)	1	(4%)	6	(24%)			1	(4%)
Wide Bay	26	(6%)	22	(6%)	22	(97%)	1	(4%)	4	(18%)			1	(4%)
Cairns and Hinterland	25	(5%)	21	(5%)	20	(95%)			4	(19%)				
West Moreton	24	(5%)	21	(5%)	21	(98%)	1	(5%)	4	(21%)			1	(5%)
Mackay	17	(4%)	13	(3%)	13	(100%)	1	(8%)	2	(18%)			1	(8%)
Central Queensland	16	(4%)	13	(3%)	12	(95%)			3	(23%)				
Townsville	16	(4%)	14	(4%)	14	(95%)			3	(23%)				
South West	3	(1%)	3	(1%)	3	(100%)			1	(38%)				
North West	2	(0%)	1	(0%)	1	(75%)	1	(75%)	1	(75%)				
Central West	1	(0%)	1	(0%)	1	(100%)			1	(100%)				
Torres Strait and Cape York	1	(0%)	1	(0%)	1	(100%)								
Qld Unknown	4	(1%)	1	(0%)	1	(100%)	1	(100%)						

In the interest of completeness, annual average numbers have been included with fewer than 16 cases. Numbers < 16 should be interpreted with caution due to poor reliability of calculations based on small numbers. Annual average numbers have been rounded up to the nearest whole number for those with less than one, therefore the totals may not add up.

Type of surgery for bladder cancer by HHS performing surgery

ANNUAL AVERAGE YEAR OF DIAGNOSIS 2009 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD
NOT MUTUALLY
EXCLUSIVE

	Annual Average		Excision		Radical Cystectomy				Segmental Cystectomy			
					With Lymph Node Dissection		Without Lymph Node Dissection		With Lymph Node Dissection		Without Lymph Node Dissection	
	Had Surgery	**(col %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**
Queensland	384	(100%)	377	(98%)	7	(2%)	77	(20%)	2	(0%)	6	(1%)
HHS (performing surgery)												
Metro South	130	(34%)	126	(97%)	3	(3%)	36	(28%)	2	(2%)	2	(2%)
Metro North	85	(22%)	84	(98%)	1	(1%)	16	(19%)	1	(1%)	1	(1%)
Gold Coast	47	(12%)	46	(98%)	1	(2%)	12	(26%)	1	(2%)	1	(2%)
Sunshine Coast	30	(8%)	30	(100%)	1	(3%)	5	(16%)				
Townsville	26	(7%)	25	(97%)	1	(5%)	5	(21%)	1	(4%)	1	(4%)
Wide Bay	15	(4%)	15	(100%)					1	(7%)	1	(7%)
West Moreton	15	(4%)	15	(100%)			3	(20%)				
Central Queensland	15	(4%)	15	(100%)								
Darling Downs	10	(3%)	10	(100%)			1	(10%)	1	(10%)	1	(10%)
Mackay	7	(2%)	7	(100%)								
Cairns and Hinterland	5	(1%)	5	(100%)								
Children's Health Queensland	1	(0%)	1	(100%)								

*The South West, North West, Central West, Torres Strait & Cape York and Qld Unknown HHSs did not perform bladder cancer surgery.

In the interest of completeness, annual average numbers have been included with fewer than 16 cases. Numbers < 16 should be interpreted with caution due to poor reliability of calculations based on small numbers. Annual average numbers have been rounded up to the nearest whole number for those with less than one, therefore the totals may not add up.

Characteristics of patients receiving surgery by patient residence

ANNUAL AVERAGE YEAR OF DIAGNOSIS 2009 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

DEFINITIVE SURGERY MUTUALLY EXCLUSIVE

	Had Surgery		Characteristic: Male		Median Age at Diagnosis	Disadvantaged		Indigenous		One or more comorbidities		Private	
	n	**(Qld %)**	**n**	**(row %)**	**yrs**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**	**n**	**(row %)**
Queensland	384	(85%)	289	(75%)	74	70	(18%)	4	(1%)	125	(32%)	196	(51%)
HHS (patient residence)													
Metro South	89	(23%)	68	(76%)	75	14	(15%)	1	(1%)	27	(30%)	43	(49%)
Metro North	74	(19%)	53	(72%)	74	7	(10%)	1	(1%)	27	(37%)	36	(48%)
Gold Coast	49	(13%)	37	(76%)	73					10	(21%)	29	(59%)
Sunshine Coast	36	(9%)	26	(72%)	76	5	(13%)			11	(31%)	23	(63%)
Wide Bay	25	(7%)	19	(77%)	77	22	(89%)			10	(39%)	13	(51%)
Darling Downs	22	(6%)	17	(76%)	73	6	(27%)	1	(4%)	10	(45%)	13	(57%)
Central Queensland	21	(5%)	16	(78%)	72	1	(5%)			8	(37%)	11	(52%)
Townsville	21	(5%)	15	(71%)	67	4	(19%)	1	(5%)	6	(27%)	8	(40%)
Mackay	13	(3%)	10	(75%)	75	2	(18%)			5	(40%)	7	(50%)
Cairns and Hinterland	13	(3%)	10	(74%)	68	6	(46%)	1	(8%)	4	(28%)	6	(46%)
West Moreton	14	(4%)	13	(88%)	74	3	(19%)			5	(33%)	5	(33%)
South West	3	(1%)	2	(88%)	67					2	(63%)	2	(75%)
North West	1	(0%)	1	(75%)	43	1	(75%)	1	(75%)	1	(75%)	1	(75%)
Central West	1	(0%)	1	(100%)	68							1	(100%)
Torres Strait and Cape York	1	(0%)	1	(100%)	68	1	(100%)	1	(100%)				
Qld Unknown	1	(0%)	1	(100%)	66							1	(100%)

In the interest of completeness, annual average numbers have been included with fewer than 16 cases. Numbers < 16 should be interpreted with caution due to the poor reliability of calculations based on small numbers. Annual average numbers have been rounded up to the nearest whole number for those with less than one. For example if a HHS performed one surgery from 2009 - 2011 the annual average will be rounded up to one to reflect that this HHS is performing surgery. Therefore the totals may not add up.

Patient flows

10 year bladder cancer patient flows for excision

YEAR OF DIAGNOSIS 2002 – 2011 (COL% ROW %)

PUBLIC & PRIVATE HOSPITAL PATIENTS

	HHS of surgery					
	Metro South	Metro North	Gold Coast	Sunshine Coast	Wide Bay	Darling Downs
Hospitals performing surgery*	7	10	5	6	6	6
HHS (patient residence)						
Metro South	781~ (63% 90%)	66 (7% 8%)	9 (2% 1%)		1 (1% 0%)	
Metro North	125 (10% 15%)	685 (73% 84%)	3 (1% 0%)	2 (1% 0%)	1 (1% 0%)	1 (1% 0%)
Gold Coast	17 (1% 3%)	5 (1% 1%)	472 (97% 95%)	2 (1% 0%)	1 (1% 0%)	
Sunshine Coast	30 (2% 8%)	42 (4% 11%)	2 (0% 1%)	304 (92% 79%)	1 (1% 0%)	3 (2% 1%)
Wide Bay	28 (2% 10%)	64 (7% 24%)		19 (6% 7%)	148 (94% 55%)	3 (2% 1%)
Darling Downs	79 (6% 33%)	22 (2% 9%)			3 (2% 1%)	123 (87% 52%)
Central Queensland	41 (3% 21%)	25 (3% 13%)		1 (0% 1%)		1 (1% 1%)
Townsville	8 (1% 4%)	2 (0% 1%)	1 (0% 1%)			1 (1% 1%)
Mackay	24 (2% 19%)	4 (0% 3%)		1 (0% 1%)		
Cairns and Hinterland	59 (5% 39%)	10 (1% 7%)				
West Moreton	22 (2% 13%)	7 (1% 4%)		1 (0% 1%)	1 (1% 1%)	5 (4% 3%)
South West	10 (1% 56%)	3 (0% 17%)				3 (2% 17%)
North West	1 (0% 9%)					
Central West		4 (0% 67%)				
Torres Strait and Cape York	3 (0% 38%)	1 (0% 13%)				
Qld Unknown	2 (0% 25%)	2 (0% 25%)	1 (0% 13%)	1 (0% 13%)	1 (1% 13%)	1 (1% 13%)
Queensland	1230~	942	488	331	157	141
Qld (%)	*(31%)*	*(24%)*	*(12%)*	*(8%)*	*(4%)*	*(4%)*
Annual Average	123	94	49	33	16	14

*the number of hospitals within a HHS performing bladder surgery

~Using Metro South as an example:

863 – Total number of patients who lived in Metro South.

1,230 – Total number of excisions that Metro South performed.

781 – Number of patients who had an excision in Metro South and lived in Metro South.

63% – Of the 1,230 patients who had an excision in Metro South 781 also lived in Metro South (781/1230 = 63%) .

90% – Of the 863 patients who lived in Metro South 781 had an excision in Metro South (781/863 = 90%).

10 year bladder cancer patient flows for excision

YEAR OF DIAGNOSIS 2002 – 2011 (COL% ROW %)

PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD 1 SURGERY: 1 PATIENT

HHS of surgery

Central Queensland	Townsville	Mackay	Cairns and Hinterland	West Moreton	South West	Children's Health Queensland	Qld	
5	3	2	4	3	2	1	60	
							n	%
				6 (4% 1%)			863~	*(22%)*
	1 (0% 0%)			1 (1% 0%)		1 (100% 0%)	820	*(21%)*
				1 (1% 0%)			498	*(13%)*
				2 (1% 1%)			384	*(10%)*
3 (2% 1%)		1 (2% 0%)		1 (1% 0%)			267	*(7%)*
				10 (6% 4%)			237	*(6%)*
129 (95% 65%)	1 (0% 1%)	1 (2% 1%)					199	*(5%)*
	174 (75% 93%)		1 (1% 1%)	1 (1% 1%)			188	*(5%)*
2 (1% 2%)	38 (16% 31%)	55 (96% 44%)					124	*(3%)*
	7 (3% 5%)		77 (95% 50%)				153	*(4%)*
				134 (86% 79%)			170	*(4%)*
					2 (100% 11%)		18	*(0%)*
	10 (4% 91%)						11	*(0%)*
2 (1% 33%)							6	*(0%)*
	1 (0% 13%)		3 (4% 38%)				8	*(0%)*
							8	*(0%)*
136 *(3%)* 14	232 *(6%)* 23	57 *(1%)* 6	81 *(2%)* 8	156 *(4%)* 16	2 *(0%)* 0	1 *(0%)* 0	3954	*(100%)*

10 year bladder cancer patient flows for radical cystectomy

YEAR OF DIAGNOSIS 2002 – 2011 (COL% ROW %)

PUBLIC & PRIVATE HOSPITAL PATIENTS

	HHS of surgery			
	Metro South	Metro North	Gold Coast	Sunshine Coast
Hospitals performing surgery*	6	6	4	3
HHS (patient residence)				
Metro South	128~ (42% 90%)	13 (7% 9%)		
Metro North	18 (6% 16%)	95 (53% 83%)	1 (1% 1%)	
Gold Coast	8 (3% 6%)	1 (1% 1%)	119 (98% 93%)	
Sunshine Coast	27 (9% 33%)	18 (10% 22%)		37 (86% 45%)
Wide Bay	15 (5% 34%)	24 (13% 55%)		4 (9% 9%)
Darling Downs	19 (6% 45%)	7 (4% 17%)		
Central Queensland	32 (10% 74%)	10 (6% 23%)		1 (2% 2%)
Townsville	3 (1% 9%)	1 (1% 3%)		
Mackay	16 (5% 62%)	1 (1% 4%)		
Cairns and Hinterland	25 (8% 76%)	6 (3% 18%)		
West Moreton	11 (4% 30%)			1 (2% 3%)
South West	3 (1% 100%)			
North West	1 (0% 20%)			
Central West		1 (1% 50%)	1 (1% 50%)	
Torres Strait and Cape York		1 (1% 100%)		
Qld Unknown		1 (1% 50%)		
Queensland	308~	178	121	43
Qld (%)	*(42%)*	*(24%)*	*(16%)*	*(6%)*
Annual Average	31	18	12	4

*the number of hospitals within a HHS performing bladder surgery

~Using Metro South as an example:

143 – Total number of patients who lived in Metro South.

308 – Total number of radical cystectomies that Metro South performed.

128 – Number of patients who had a radical cystectomy in Metro South and lived in Metro South.

42% – Of the 308 patients who had a radical cystectomy in Metro South 128 also lived in Metro South (128/308 = 42%) .

90% – Of the 143 patients who lived in Metro South 128 had a radical cystectomy in Metro South (128/143 = 90%).

10 year bladder cancer patient flows for radical cystectomy

YEAR OF DIAGNOSIS 2002 – 2011 (COL% ROW %)
PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD
1 SURGERY:
1 PATIENT

HHS of surgery				
Darling Downs	Townsville	West Moreton	Qld	
2	2	2	25	
			n	%
		2 (6% 1%)	143~	*(19%)*
			114	*(15%)*
			128	*(17%)*
		1 (3% 1%)	83	*(11%)*
1 (8% 2%)			44	*(6%)*
12 (92% 29%)		4 (13% 10%)	42	*(6%)*
			43	*(6%)*
	29 (66% 88%)		33	*(4%)*
	9 (20% 35%)		26	*(4%)*
	2 (5% 6%)		33	*(4%)*
		25 (78% 68%)	37	*(5%)*
			3	*(0%)*
	4 (9% 80%)		5	*(1%)*
			2	*(0%)*
			1	*(0%)*
			2	*(6%)*
13 *(2%)* 1	44 *(6%)* 4	32 *(4%)* 3	739	*(100%)*

10 year bladder cancer patient flows for segmental cystectomy

YEAR OF DIAGNOSIS 2002 – 2011 (COL% ROW %)

PUBLIC & PRIVATE HOSPITAL PATIENTS

	HHS of surgery			
	Metro South	Metro North	Gold Coast	Sunshine Coast
Hospitals performing surgery*	5	5	4	1
HHS (patient residence)				
Metro South	13~ (54% 76%)	4 (27% 24%)		
Metro North	2 (8% 18%)	9 (60% 82%)		
Gold Coast			9 (100% 90%)	
Sunshine Coast	3 (13% 75%)			1 (100% 25%)
Wide Bay	1 (4% 20%)	2 (13% 40%)		
Darling Downs	1 (4% 17%)			
Central Queensland				
Townsville				
Mackay	1 (4% 100%)			
Cairns and Hinterland				
West Moreton	2 (8% 67%)			
South West				
North West				
Central West				
Torres Strait and Cape York	1 (4% 100%)			
Qld Unknown				
Queensland	24~	15	9	1
Qld (%)	*(39%)*	*(25%)*	*(15%)*	*(2%)*
Annual Average	2	2	1	0

*the number of hospitals within a HHS performing bladder surgery

~Using Metro South as an example:

17 – Total number of patients who lived in Metro South.

24 – Total number of segmental cystectomies that Metro South performed.

13 – Number of patients who had a segmental cystectomy in Metro South and lived in Metro South.

54% – Of the 24 patients who had a segmental cystectomy in Metro South 13 also lived in Metro South (13/24 = 54%) .

76% – Of the 17 patients who lived in Metro South 13 had a segmental cystectomy in Metro South (13/17 = 76%).

10 year bladder cancer patient flows for segmental cystectomy

YEAR OF DIAGNOSIS 2002 – 2011 (COL% ROW %)
PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD
1 SURGERY:
1 PATIENT

HHS of surgery

Wide Bay 2	Darling Downs 1	Townsville 2	Cairns and Hinterland 1	Children's Health Queensland 1	Qld 22	
					n	%
					17~	*(28%)*
					11	*(18%)*
				1 (100% 10%)	10	*(16%)*
					4	*(7%)*
2 (100% 40%)					5	*(8%)*
	5 (83% 83%)				6	*(10%)*
		2 (100% 100%)			2	*(3%)*
					1	*(2%)*
			1 (0% 100%)		1	*(2%)*
	1 (17% 33%)				3	*(5%)*
					1	*(2%)*
2 *(3%)* 0	6 *(10%)* 1	2 *(3%)* 0	1 *(2%)* 0	1 *(2%)* 0	61	*(100%)*

2011 bladder patient flows for excision

YEAR OF DIAGNOSIS 2011 (COL%. ROW%)
PUBLIC & PRIVATE HOSPITAL PATIENTS

	HHS of surgery				
	Metro South	Metro North	Gold Coast	Sunshine Coast	Wide Bay
Hospitals performing surgery*	7	6	4	4	6
HHS (patient residence)					
Metro South	80~ (66% 92%)	6 (7% 7%)			
Metro North	9 (7% 12%)	66 (78% 88%)			
Gold Coast	4 (3% 7%)		53 (100% 93%)		
Sunshine Coast	4 (3% 10%)	6 (7% 15%)		29 (91% 74%)	
Wide Bay	2 (2% 7%)	5 (6% 18%)		3 (9% 11%)	17 (100% 61%)
Darling Downs	9 (7% 45%)	1 (1% 5%)			
Central Queensland	3 (2% 16%)				
Townsville	1 (1% 4%)				
Mackay	2 (2% 15%)	1 (1% 8%)			
Cairns and Hinterland	5 (4% 42%)				
West Moreton	1 (1% 10%)				
South West					
North West					
Central West					
Torres Strait and Cape York	1 (1% 100%)				
Qld Unknown					
Queensland	121~	85	53	32	17
Qld (%)	*(31%)*	*(22%)*	*(14%)*	*(8%)*	*(4%)*

*the number of hospitals within a HHS performing bladder surgery

~Using Metro South as an example:

87 – Total number of patients who lived in Metro South.

121 – Total number of excisions that Metro South performed.

80 – Number of patients who had an excision in Metro South and lived in Metro South.

66% – Of the 121 patients who had an excision in Metro South 80 also lived in Metro South (80/121 = 66%) .

92% – Of the 87 patients who lived in Metro South 80 had an excision in Metro South (80/87 = 92%).

2011 bladder patient flows for excision

YEAR OF DIAGNOSIS 2011 (COL%. ROW%)
PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD
1 SURGERY:
1 PATIENT

HHS of surgery

Darling Downs 4	Central Queensland 4	Townsville 3	Mackay 2	Cairns and Hinterland 2	West Moreton 3	Qld 45	
						n	%
					1 (8% 1%)	87~	*(22%)*
						75	*(19%)*
						57	*(15%)*
						39	*(10%)*
	1 (6% 4%)					28	*(7%)*
8 (100% 40%)					2 (17% 10%)	20	*(5%)*
	15 (94% 79%)		1 (17% 5%)			19	*(5%)*
		25 (74% 96%)				26	*(7%)*
		5 (15% 38%)	5 (83% 38%)			13	*(3%)*
		2 (6% 17%)		5 (100% 42%)		12	*(3%)*
					9 (75% 90%)	10	*(3%)*
		2 (6% 100%)				2	*(1%)*
						1	*(0%)*
8 *(2%)*	16 *(4%)*	34 *(9%)*	6 *(2%)*	5 *(1%)*	12 *(3%)*	389	*(100%)*

2011 bladder cancer patient flows for radical cystectomy

YEAR OF DIAGNOSIS 2011 (COL%. ROW%)

PUBLIC & PRIVATE HOSPITAL PATIENTS

	HHS of surgery			
	Metro South	Metro North	Gold Coast	Sunshine Coast
Hospitals performing surgery*	6	3	3	1
HHS (patient residence)				
Metro South	16~ (42% 89%)	2 (8% 11%)		
Metro North	2 (5% 13%)	14 (58% 88%)		
Gold Coast	1 (3% 9%)		10 (91% 91%)	
Sunshine Coast	4 (11% 33%)	4 (17% 33%)		4 (80% 33%)
Wide Bay	2 (5% 29%)	4 (17% 57%)		1 (20% 14%)
Darling Downs	3 (8% 100%)			
Central Queensland	3 (8% 100%)			
Townsville	1 (3% 11%)			
Mackay	2 (5% 67%)			
Cairns and Hinterland	2 (5% 67%)			
West Moreton	2 (5% 67%)			
South West				
North West				
Central West			1 (9% 100%)	
Torres Strait and Cape York				
Qld Unknown				
Queensland	38~	24	11	5
Qld (%)	*(42%)*	*(27%)*	*(12%)*	*(6%)*

*the number of hospitals within a HHS performing bladder surgery

~Using Metro South as an example:

18 – Total number of patients who lived in Metro South.

38 – Total number of radical cystectomies that Metro South performed.

16 – Number of patients who had a radical cystectomy in Metro South and lived in Metro South.

42% – Of the 38 patients who had a radical cystectomy in Metro South 16 also lived in Metro South (16/38 = 42%) .

89% – Of the 18 patients who lived in Metro South 16 had a radical cystectomy in Metro South (16/18 = 89%).

2011 bladder cancer patient flows for radical cystectomy

YEAR OF DIAGNOSIS 2011 (COL%. ROW%)
PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD
1 SURGERY:
1 PATIENT

HHS of surgery			
Townsville	West Moreton	Qld	
2	1	16	
		n	%
		18~	*(20%)*
		16	*(18%)*
		11	*(12%)*
		12	*(13%)*
		7	*(8%)*
		3	*(3%)*
		3	*(3%)*
8 (73% 89%)		9	*(10%)*
1 (9% 33%)		3	*(3%)*
1 (9% 33%)		3	*(3%)*
	1 (100% 33%)	3	*(3%)*
1 (9% 100%)		1	*(1%)*
		1	*(1%)*
11 *(12%)*	1 *(1%)*	90	*(100%)*

2011 bladder cancer patient flows for segmental cystectomy

YEAR OF DIAGNOSIS 2011 (COL%. ROW%)

PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD 1 SURGERY: 1 PATIENT

Hospitals performing surgery*	Metro South 1	Gold Coast 1	Darling Downs 1	Townsville 1	Qld 4	
HHS (patient residence)					n	%
Metro South						
Metro North	1~ (100% 100%)				1~	*(25%)*
Gold Coast		1 (4% 100%)			1	*(25%)*
Sunshine Coast						
Wide Bay						
Darling Downs			1 (9% 100%)		1	*(25%)*
Central Queensland						
Townsville				1 (20% 100%)	1	*(25%)*
Mackay						
Cairns and Hinterland						
West Moreton						
South West						
North West						
Central West						
Torres Strait and Cape York						
Qld Unknown						
Queensland	1~	1	1	1	4	
Qld (%)	*(1%)*	*(1%)*	*(1%)*	*(1%)*		*(100%)*

*the number of hospitals within a HHS performing bladder surgery

~Using Metro North as an example:

1 – Total number of patients who lived in Metro North.

1 – Total number of radical cystectomies that Metro North performed.

1 – Number of patients who had a segmental cystectomy in Metro North and lived in Metro North.

100% – The 1 patient who had a segmental cystectomy in Metro North also lived in Metro North (1/1 = 100%) .

100% – The 1 patient who lived in Metro South also had a segmental cystectomy in Metro South (1/1 = 100%).

Surgery rates

10 year surgery rates for excision by patient residence

YEAR OF DIAGNOSIS 2002 – 2011

PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD 1 SURGERY: 1 PATIENT

					Year of Diagnosis																	
	Bladder cancer cohort		Had Excision		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
	N	(col %)	n	(row %)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Queensland	4771	(100%)	3954	(83%)	434	(84%)	408	(81%)	433	(84%)	404	(82%)	445	(84%)	343	(82%)	356	(83%)	365	(82%)	377	(82%)	389	(85%)
HHS (patient residence)																						
Metro South	1023	(21%)	863	(84%)	104	(83%)	93	(85%)	86	(83%)	83	(82%)	99	(90%)	72	(81%)	63	(88%)	97	(87%)	79	(81%)	87	(84%)
Metro North	956	(20%)	820	(86%)	105	(87%)	71	(85%)	97	(88%)	89	(92%)	82	(81%)	76	(84%)	80	(87%)	73	(85%)	72	(85%)	75	(84%)
Gold Coast	604	(13%)	498	(82%)	46	(85%)	51	(80%)	49	(89%)	58	(82%)	61	(84%)	45	(82%)	44	(70%)	41	(76%)	46	(84%)	57	(95%)
Sunshine Coast	462	(10%)	384	(83%)	43	(86%)	42	(78%)	37	(86%)	33	(85%)	47	(82%)	33	(79%)	41	(91%)	32	(80%)	37	(80%)	39	(85%)
Wide Bay	322	(7%)	267	(83%)	24	(80%)	23	(74%)	25	(74%)	29	(85%)	34	(81%)	27	(90%)	31	(91%)	23	(82%)	23	(88%)	28	(85%)
Darling Downs	279	(6%)	237	(85%)	22	(88%)	26	(84%)	31	(91%)	26	(87%)	32	(86%)	21	(84%)	14	(78%)	22	(85%)	23	(77%)	20	(87%)
Central Queensland	238	(5%)	199	(84%)	16	(80%)	25	(89%)	25	(86%)	16	(73%)	26	(84%)	10	(91%)	21	(91%)	19	(73%)	22	(79%)	19	(95%)
Townsville	215	(5%)	188	(87%)	17	(89%)	20	(87%)	19	(90%)	22	(92%)	13	(87%)	11	(73%)	24	(89%)	15	(94%)	21	(81%)	26	(90%)
Cairns and Hinterland	204	(4%)	153	(75%)	22	(85%)	19	(76%)	21	(81%)	11	(58%)	14	(78%)	13	(68%)	16	(73%)	9	(69%)	16	(80%)	12	(75%)
West Moreton	204	(4%)	170	(83%)	19	(76%)	24	(89%)	22	(76%)	16	(84%)	19	(86%)	18	(86%)	11	(92%)	14	(93%)	17	(81%)	10	(77%)
Mackay	154	(3%)	124	(81%)	13	(81%)	9	(56%)	15	(94%)	16	(80%)	11	(85%)	13	(87%)	7	(88%)	13	(76%)	14	(88%)	13	(76%)
North West	21	(0%)	11	(52%)	1	(100%)			1	(20%)	1	(50%)	4	(100%)	1	(50%)			1	(50%)			2	(100%)
South West	21	(0%)	18	(86%)	1	(100%)	1	(50%)	2	(100%)	2	(67%)	1	(100%)	1	(100%)	2	(100%)	4	(100%)	4	(100%)		
Torres and Cape	12	(0%)	8	(67%)	1	(50%)	1	(50%)	1	(100%)	1	(50%)			1	(100%)	1	(50%)			1	(100%)	1	(100%)
Central West	9	(0%)	6	(67%)			1	(50%)	1	(100%)	1	(50%)	1	(100%)							2	(100%)		
Qld Unknown	47	(1%)	8	(17%)			2	(29%)	1	(14%)			1	(17%)	1	(50%)	1	(17%)	2	(33%)				

Note: %'s for each year are used to show the percentage of patients who had surgery out of the total number of incidences for that year of bladder cancer. For example in Queensland in 2002 there were 434 patients who had an excision which is 84% of the total incidences of bladder cancer in 2002.

10 year surgery rates for excision by HHS performing surgery

YEAR OF DIAGNOSIS 2002 – 2011

PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD
1 SURGERY:
1 PATIENT

	Had Excision		Year of Diagnosis																	
			2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
	n	(row %)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Queensland	3954	(100%)	434	(84%)	408	(81%)	433	(84%)	404	(82%)	445	(84%)	343	(82%)	356	(83%)	365	(82%)	377	(82%)	389	(85%)
HHS (performing surgery)																				
Metro South	1230	(31%)	135	(31%)	116	(28%)	117	(27%)	118	(29%)	152	(34%)	115	(34%)	100	(28%)	135	(37%)	121	(32%)	121	(31%)
Metro North	942	(24%)	111	(26%)	83	(20%)	114	(26%)	107	(26%)	93	(21%)	88	(26%)	94	(26%)	84	(23%)	83	(22%)	85	(22%)
Gold Coast	488	(12%)	46	(11%)	53	(13%)	47	(11%)	57	(14%)	60	(13%)	45	(13%)	43	(12%)	41	(11%)	43	(11%)	53	(14%)
Sunshine Coast	331	(8%)	39	(9%)	35	(9%)	33	(8%)	29	(7%)	37	(8%)	30	(9%)	39	(11%)	26	(7%)	31	(8%)	32	(8%)
Townsville	232	(6%)	22	(5%)	24	(6%)	27	(6%)	25	(6%)	21	(5%)	14	(4%)	24	(7%)	18	(5%)	23	(6%)	34	(9%)
Wide Bay	157	(4%)	17	(4%)	18	(4%)	16	(4%)	12	(3%)	16	(4%)	16	(5%)	18	(5%)	14	(4%)	13	(3%)	17	(4%)
West Moreton	156	(4%)	18	(4%)	24	(6%)	19	(4%)	14	(3%)	18	(4%)	12	(3%)	7	(2%)	16	(4%)	16	(4%)	12	(3%)
Darling Downs	141	(4%)	18	(4%)	16	(4%)	19	(4%)	15	(4%)	21	(5%)	13	(4%)	8	(2%)	10	(3%)	13	(3%)	8	(2%)
Central Queensland	136	(3%)	5	(1%)	19	(5%)	21	(5%)	12	(3%)	14	(3%)	5	(1%)	16	(4%)	10	(3%)	18	(5%)	16	(4%)
Cairns and Hinterland	81	(2%)	17	(4%)	17	(4%)	12	(3%)	7	(2%)	7	(2%)	1	(0%)	5	(1%)	4	(1%)	6	(2%)	5	(1%)
Mackay	57	(1%)	5	(1%)	3	(1%)	8	(2%)	8	(2%)	6	(1%)	4	(1%)	1	(0%)	7	(2%)	9	(2%)	6	(2%)
South West	2	(0%)	1	(0%)											1	(0%)						
Children's Health Queensland	1	(0%)																	1	(0%)		

*The North West, Central West, Torres Strait & Cape York and Qld Unknown HHSs did not perform excision cancer surgery.

Note: %'s for each year are used to show the percentage of patients who had an excision surgery out of the total number of excision surgeries for that year for bladder cancer. For example in Queensland in 2002 Metro South performed 31% of the total excision cancer surgeries for bladder cancer.

10 year surgery rates for radical cystectomy by patient residence

YEAR OF DIAGNOSIS 2002 – 2011

PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD 1 SURGERY: 1 PATIENT

	Bladder cancer cohort		Had Radical Cystectomy		Year of Diagnosis																	
					2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
	N	(col %)	n	(row %)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Queensland	4771	(100%)	739	(15%)	70	(14%)	65	(13%)	61	(12%)	59	(12%)	81	(15%)	80	(19%)	70	(16%)	77	(17%)	86	(19%)	90	(20%)
HHS (patient residence)																						
Metro South	1023	(21%)	143	(14%)	15	(12%)	15	(14%)	12	(12%)	12	(12%)	6	(5%)	14	(16%)	10	(14%)	22	(20%)	19	(19%)	18	(17%)
Metro North	956	(20%)	114	(12%)	21	(17%)	12	(14%)	8	(7%)	10	(10%)	10	(10%)	13	(14%)	10	(11%)	5	(6%)	9	(11%)	16	(18%)
Gold Coast	604	(13%)	128	(21%)	6	(11%)	10	(16%)	12	(22%)	11	(15%)	19	(26%)	12	(22%)	16	(25%)	16	(30%)	15	(27%)	11	(18%)
Sunshine Coast	462	(10%)	83	(18%)	6	(12%)	6	(11%)	7	(16%)	7	(18%)	15	(26%)	6	(14%)	9	(20%)	6	(15%)	9	(20%)	12	(26%)
Wide Bay	322	(7%)	44	(14%)	3	(10%)	5	(16%)	4	(12%)	4	(12%)	4	(10%)	3	(10%)	2	(6%)	4	(14%)	8	(31%)	7	(21%)
Darling Downs	279	(6%)	42	(15%)	4	(16%)	2	(6%)	3	(9%)	6	(20%)	7	(19%)	3	(12%)	4	(22%)	7	(27%)	3	(10%)	3	(13%)
Central Queensland	238	(5%)	43	(18%)	3	(15%)	5	(18%)	2	(7%)	4	(18%)	10	(32%)	5	(45%)	2	(9%)	4	(15%)	5	(18%)	3	(15%)
Townsville	215	(5%)	33	(15%)	2	(11%)	1	(4%)	3	(14%)	1	(4%)	1	(7%)	2	(13%)	7	(26%)	3	(19%)	4	(15%)	9	(31%)
Cairns and Hinterland	204	(4%)	33	(16%)	4	(15%)	3	(12%)	1	(4%)	1	(5%)			10	(53%)	5	(23%)	2	(15%)	4	(20%)	3	(19%)
West Moreton	204	(4%)	37	(18%)	5	(20%)	4	(15%)	5	(17%)	2	(11%)	3	(14%)	7	(33%)	1	(8%)	2	(13%)	5	(24%)	3	(23%)
Mackay	154	(3%)	26	(17%)	1	(6%)	1	(6%)	2	(13%)	1	(5%)	5	(38%)	3	(20%)	4	(50%)	3	(18%)	3	(19%)	3	(18%)
North West	21	(0%)	5	(24%)					1	(20%)			1	(25%)	1	(50%)					1	(50%)	1	(50%)
South West	21	(0%)	3	(14%)															2	(50%)	1	(25%)		
Torres and Cape	12	(0%)	1	(8%)											1	(100%)								
Central West	9	(0%)	2	(22%)			1	(50%)															1	(100%)
Qld Unknown	47	(1%)	2	(4%)					1	(14%)									1	(17%)				

Note: %'s for each year are used to show the percentage of patients who had surgery out of the total number of incidences for that year of bladder cancer. For example in Queensland in 2002 there were 70 patients who had a radical cystectomy which is 14% of the total incidences of bladder cancer in 2002.

10 year surgery rates for radical cystectomy by HHS performing surgery

YEAR OF DIAGNOSIS 2002 – 2011

PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD
1 SURGERY:
1 PATIENT

	Had Radical Cystectomy		Year of Diagnosis																	
			2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
	n	(row %)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Queensland	739	(100%)	70	(14%)	65	(13%)	61	(12%)	59	(12%)	81	(15%)	80	(19%)	70	(16%)	77	(17%)	86	(19%)	90	(20%)
HHS (performing surgery)																						
Metro South	308	(42%)	22	(31%)	24	(37%)	21	(34%)	27	(46%)	30	(37%)	38	(48%)	28	(40%)	37	(48%)	43	(50%)	38	(42%)
Metro North	178	(24%)	32	(46%)	20	(31%)	13	(21%)	17	(29%)	14	(17%)	17	(21%)	15	(21%)	11	(14%)	15	(17%)	24	(27%)
Gold Coast	121	(16%)	5	(7%)	11	(17%)	12	(20%)	11	(19%)	17	(21%)	12	(15%)	14	(20%)	15	(19%)	13	(15%)	11	(12%)
Townsville	44	(6%)	3	(4%)	2	(3%)	5	(8%)	1	(2%)	4	(5%)	3	(4%)	6	(9%)	4	(5%)	5	(6%)	11	(12%)
Sunshine Coast	43	(6%)	2	(3%)	3	(5%)	4	(7%)	2	(3%)	7	(9%)	3	(4%)	6	(9%)	6	(8%)	5	(6%)	5	(6%)
West Moreton	32	(4%)	3	(4%)	4	(6%)	5	(8%)	1	(2%)	4	(5%)	5	(6%)	1	(1%)	3	(4%)	5	(6%)	1	(1%)
Darling Downs	13	(2%)	3	(4%)	1	(2%)	1	(2%)			5	(6%)	2	(3%)			1	(1%)				

*The Wide Bay, Central Queensland, Cairns and Hinterland, Mackay, South West, North West, Central West, Torres Strait & Cape York and Qld Unknown HHSs did not perform radical cystectomy cancer surgery.

Note: %'s for each year are used to show the percentage of patients who had radical cystectomy surgery out of the total number of radical cystectomy surgeries for that year for bladder cancer. For example in Queensland in 2002 Metro South performed 31% of the total radical cystectomy cancer surgeries for bladder cancer.

10 year surgery rates for segmental cystectomy by patient residence

YEAR OF DIAGNOSIS 2002 – 2011

PUBLIC & PRIVATE HOSPITAL PATIENTS

EVER HAD
1 SURGERY:
1 PATIENT

					Year of Diagnosis																	
	Bladder cancer cohort		Had Segmental Cystectomy		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
	N	(col %)	n	(row %)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Queensland	4771	(100%)	61	(1%)	3	(1%)	7	(1%)	1	(0%)	8	(2%)	9	(2%)	5	(1%)	6	(1%)	9	(2%)	9	(2%)	4	(1%)
HHS (patient residence)																								
Metro South	1023	(21%)	17	(2%)	1	(1%)	2	(2%)			4	(4%)	2	(2%)	2	(2%)	1	(1%)	2	(2%)	3	(3%)		
Metro North	956	(20%)	11	(1%)			2	(2%)			1	(1%)			1	(1%)	3	(3%)	1	(1%)	2	(2%)	1	(1%)
Gold Coast	604	(13%)	10	(2%)	2	(4%)	2	(3%)			1	(1%)	1	(1%)			1	(2%)	1	(2%)	1	(2%)	1	(2%)
Sunshine Coast	462	(10%)	4	(1%)			1	(2%)					1	(2%)					2	(5%)				
Wide Bay	322	(7%)	5	(2%)									3	(7%)					1	(4%)	1	(4%)		
Darling Downs	279	(6%)	6	(2%)							1	(3%)	1	(3%)	1	(4%)			1	(4%)	1	(3%)	1	(4%)
Central Queensland	238	(5%)												(0%)										
Townsville	215	(5%)	2	(1%)																	1	(4%)	1	(3%)
Cairns and Hinterland	204	(4%)	1	(0%)					1	(4%)														
West Moreton	204	(4%)	3	(1%)									1	(5%)	1	(5%)	1	(8%)						
Mackay	154	(3%)	1	(1%)															1	(6%)				
North West	21	(0%)																						
South West	21	(0%)																						
Torres and Cape	12	(0%)	1	(8%)							1	(50%)												
Central West	9	(0%)																						
Qld Unknown	47	(1%)																						

Note: %'s for each year are used to show the percentage of patients who had surgery out of the total number of incidences for that year of bladder cancer. For example in Queensland in 2002 there were 3 patients who had a segmental cystectomy which is 1% of the total incidences of bladder cancer in 2002.

10 year surgery rates for segmental cystectomy by HHS performing surgery

YEAR OF DIAGNOSIS 2002 – 2011

PUBLIC & PRIVATE HOSPITAL PATIENTS

	Had Segmental Cystectomy		Year of Diagnosis																	
			2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
	n	(row %)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Queensland	61	(8%)	3	(1%)	7	(1%)	1	(0%)	8	(2%)	9	(2%)	5	(1%)	6	(1%)	9	(2%)	9	(2%)	4	(1%)
HHS (performing surgery)																						
Metro South	24	(39%)	1	(33%)	2	(29%)			4	(50%)	3	(33%)	3	(60%)	3	(50%)	4	(5%)	3	(33%)	1	(25%)
Metro North	17	(28%)			3	(43%)	1	(100%)	2	(25%)	3	(33%)	1	(20%)	2	(33%)	2	(3%)	3	(33%)		
Gold Coast	9	(15%)	2	(67%)	2	(29%)			1	(13%)					1	(17%)	1	(1%)	1	(11%)	1	(25%)
Darling Downs	6	(10%)							1	(13%)	2	(22%)	1	(20%)			1	(1%)			1	(25%)
Townsville	2	(3%)																	1	(11%)	1	(25%)
Wide Bay	1	(2%)										(0%)							1	(11%)		
Children's Health Queensland	1	(2%)									1											
Sunshine Coast	1	(2%)															1	(1%)				

*The Cairns and Hinterland, Central Queensland, West Moreton, Mackay, South West, North West, Central West, Torres Strait & Cape York and Qld Unknown HHSs did not perform segmental cystectomy cancer surgery.

Note: %'s for each year are used to show the percentage of patients who had segmental cystectomy surgery out of the total number of segmental cystectomy surgeries for that year for bladder cancer. For example in Queensland in 2002 Metro South performed 33% of the total segmental cystectomy cancer surgeries for bladder cancer.

Technical appendix

How different counting rules can be applied to a patient

Hierarchy was used to determine definitive surgery for a patient. For example if a patient had a excision, segmental cystectomy and a radical cystectomy then the patients definitive surgery will be a radical cystectomy.

Order of the bladder cancer surgery hierarchy (high to low):

1. Radical cystectomy
2. Segmental cystectomy
3. Excision – this group includes the procedures
    - Endoscopic destruction of a single lesion of bladder <= 2 cm or tissue of bladder
    - Endoscopic destruction of a single lesion of bladder > 2 cm in diameter
    - Endoscopic destruction of multiple lesions of bladder
    - Endoscopic resection of a single lesion of bladder <= 2 cm or tissue of bladder
    - Endoscopic resection of a single lesion of bladder > 2 cm in diameter
    - Endoscopic resection of multiple lesions of bladder

Ever had surgery

Patients are counted once within the surgical groups but can be across multiple groups. For example: a patient had two excisions, one segmental cystectomy and one radical cystectomy. The patient would be counted as one excision, one segmental cystectomy and one radical cystectomy.

Definitions

Annual average
Annual average refers to the sum of numbers divided by the number of years being reported. In this report annual average numbers have been rounded up to the nearest whole number for those with less than one.

Chargeable status – public and private
On admission to hospital, an eligible patient must elect to be as either a public or private patient.

A public patient is a patient who:
- Elects to be treated as a public patient, and so cannot choose the doctor who treats them, or
- Is receiving treatment in a private hospital under a contract arrangement with a public hospital or health authority.

A private patient is a patient who, by choosing the doctor who will treat them (provided the doctor has 'right of private practice' or is a general practitioner/specialist with admitting rights) has elected to be treated as a private patient.

Cohort
Queensland cancer cohort
Queenslanders who were identified in Queensland Oncology Repository as being diagnosed with cancer between 1 January 2002 and 31 December 2011.

Bladder cancer cohort
Queenslanders who were diagnosed with bladder cancer between 1 January 2002 and 31 December 2011.

Bladder cancer surgery cohort
Anyone in the bladder cancer cohort who had any of the identified cancer related procedures, one month before or any time after their diagnosis as outlined on pages 4 and 5.

No surgery cohort
Anyone in the bladder cancer cohort who did not undergo surgery as an admitted patient in the surgical cohort time period, as defined by the procedures outlined on pages 4 and 5.

Col %
Percentage of the column total.

Comorbidity
A clinical condition that has the potential to significantly affect a cancer patient's prognosis.

Comorbidity is derived from hospital admissions data following the Quan algorithm1 for classifying ICD-10 coded conditions, modified to exclude metastasis, which is represented by a separate and distinct Metastasis dimension.

Comorbidity is limited to conditions coded in any admission episode between twelve months before and twelve months after the date of cancer diagnosis.

For any given cancer diagnosis, comorbidity is restricted to conditions other than the primary cancer. E.g. A rectum cancer can be a comorbidity to a colorectal cancer diagnosis and vice versa, if they are diagnosed within twelve months of each other.

Benign tumours are not considered comorbidities.

Co-morbidity list

AIDS	Acute myocardial	Cancer
Cerebrovascular disease	Congestive heart failure	Chronic obstructive pulmonary disease
Dementia	Diabetes	Diabetes + complications
Hemiplegia or Paraplegia	Mild liver disease	Moderate/severe liver disease
Peptic ulcer	Peripheral vascular disease	Renal disease
Rheumatoid disease		

Diagnosis basis
Confirmation of cancer through clinical or histological tests

Elective status
Emergency Admission
A patient admitted to hospital at short notice because of clinical need or if alternative care is not available.

Elective Admission
A patient who is admitted into hospital for treatment from the waiting list.

Had surgery
Includes Queensland residents of all ages diagnosed with invasive bladder cancer in the surgical cohort time period who underwent surgery as defined by the procedures outlined on pages 4 and 5. If the patient had multiple surgeries on the same day that fall in the same group then the surgery is counted once. For example if a patient had two excisions on the same day the excision is counted once.

Hospital and Health Service (HHS)
For residence considerations, the Hospital and Health Service is a geographic area defined by a collection of Statistical Local Areas (SLA). For public hospitals and health service facilities, the term Hospital and Health Service is synonymous with a group of Queensland Health facilities and staff responsible for providing and delivering health resources and services to an area which may consist of one or more residential areas.

Queensland unknown residence includes addresses reported as overseas, unknown, or not fixed.

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

Median age (yrs)
The age that divides a population into two halves: one older than the median, the other younger than the median.

No surgery
Includes Queensland residents of all ages diagnosed with invasive bladder cancer who did not undergo surgery as an admitted patient in the surgical cohort time period, as defined by the procedures outlined on pages 4 and 5.

Number of procedures
Includes Queensland residents of all ages diagnosed with invasive bladder cancer who underwent a relevant bladder cancer procedure. The procedure could have occurred at any time. For example: a patient had bladder excision in 2001 for a benign disease. The same patient was later diagnosed with invasive bladder cancer in 2003. The excision would still be counted in this group because no rules have been applied.

Number of surgeries
Includes Queensland residents of all ages diagnosed with invasive bladder cancer in the surgical cohort time period who underwent an excision or other surgery.

Patient flows
Col% is used to show the distribution of residence for the total group of patients who were operated on by a single HHS. Row% is used to show the proportion of patients residing in a given HHS who also receive their surgery in the same HHS, and what proportion had their surgery in another HHS.

Qld %
Percentage of the Queensland total.

Remoteness
The relative remoteness of residence at time of diagnosis, based on the Australian Standard Geographical Classification (ASGC). This document classifies remoteness into four groups: Major City, Inner Regional, Outer Regional, and Remote/Very remote.

Row %
Percentage of the row total.

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

Socioeconomic status
Socioeconomic classification is based on the Socio-Economic Indexes for Areas (SEIFA), a census-based measure of social and economic well-being developed by the Australian Bureau of Statistics (ABS) and aggregated at the level of Statistical Local Areas (SLA).

The ABS uses SEIFA scores to rank regions into ten groups or deciles numbered 1 to 10, with 1 being the most disadvantaged group and 10 being the most affluent group. This ranking is useful at the national level, but the number of people in each decile often becomes too small for meaningful comparisons when applied to a subset of the population. For this reason, this document further aggregates SEIFA deciles into 3 socioeconomic groups:

SEIFA Group	Decile	Percentage of population (approximate)
Affluent	1-2	20%
Middle	3-8	60%
Disadvantaged	9-10	20%

The proportion of cases in each group will vary depending on the subset of the population being examined. For example, the proportion in the Disadvantaged group may be higher than 20% when the data is limited to cancers that are more common in poor compared to rich people.

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