

12

Chapter

Surgery for Prostate Cancer

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

Queensland Health

Queensland Cancer Control
Safety and Quality Partnership

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Cancer Surgery in Queensland: Infocus - access and flows for public & private patients 2002-2011

Chapter 12: Prostate Cancer

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Prostate cancer clinical lead
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Introduction

In 2014 an estimated 4,650 new cases of invasive prostate cancer will be diagnosed among Queensland residents¹. With the ageing population, the number of new cases is expected to reach 5,865 by 2021¹.

Prostate cancer is a 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 prostate 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 prostate 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 prostate cancer surgery in Queensland and the HHSs is described including the characteristics of prostate cancer patients who receive surgery. Importantly, it provides information on the number and demographic characteristics of prostate 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 prostate 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 prostate 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 prostate cancer diagnosis and those that do not have a surgical procedure?
3. What types of surgery are performed for patients who are diagnosed with prostate cancer?
4. What number of surgeries is performed by HHSs for Queenslanders newly diagnosed with prostate cancer?
5. Where do patients receive their surgery?

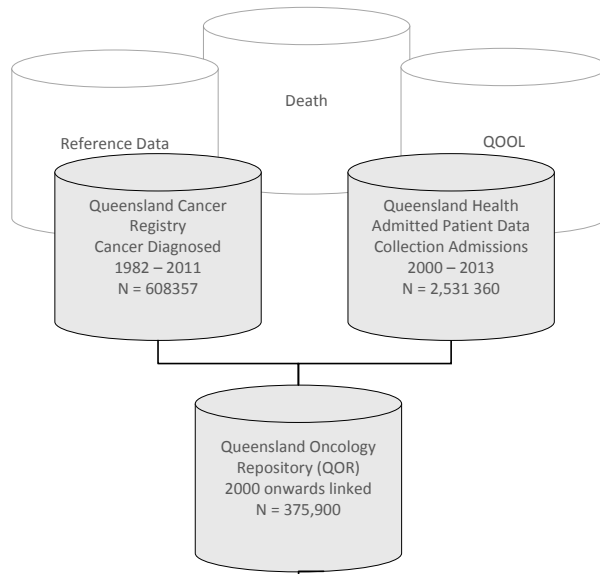
Data sources and methods

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; Prostate Cancer Cohort; Prostate Surgery Cohort** and the **No Surgery Cohort**.

¹ Queensland Health. *Oncology Analysis System (OASys)*. Queensland Cancer Control Analysis Team: Brisbane; 2014. <https://qccat.health.qld.gov.au/OASys>. Accessed 01/08/2014

How the cohorts were identified

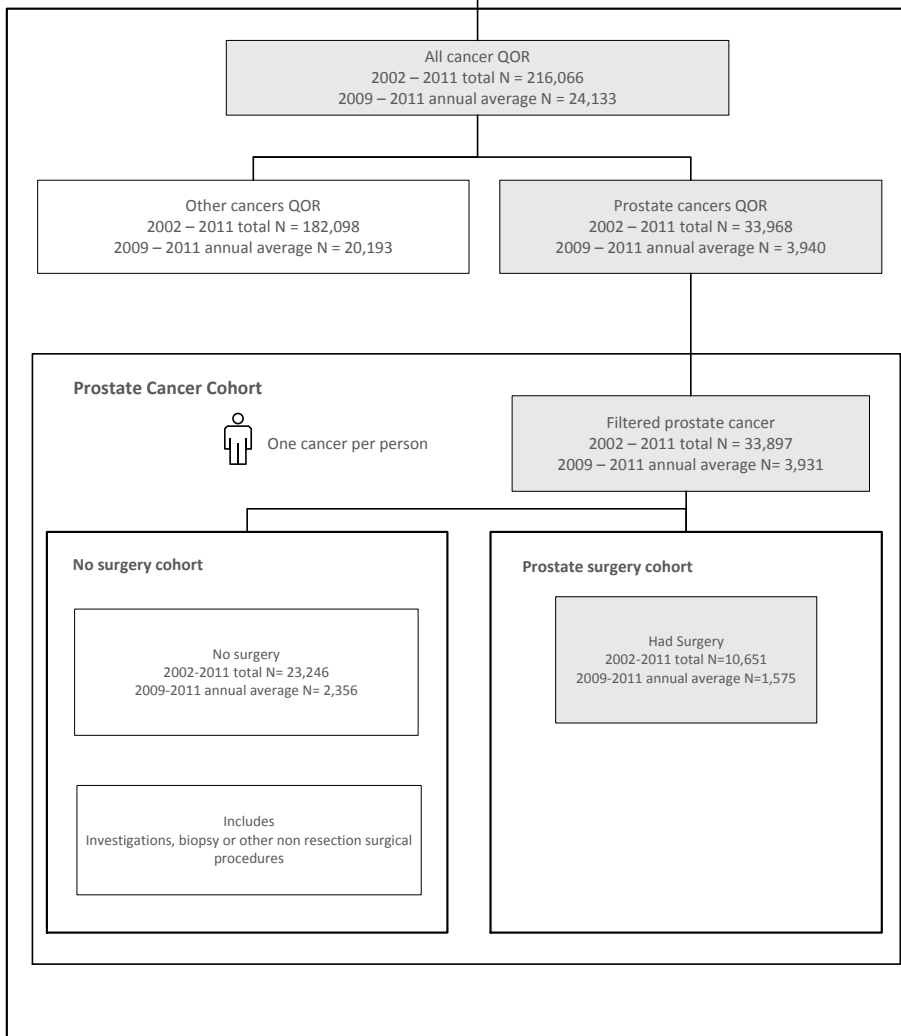
2002 – 2011 AND 2009 – 2011 ANNUAL AVERAGE
PUBLIC & PRIVATE HOSPITAL PATIENTS



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



Queensland Cancer Cohort
Includes: Queensland Invasive Cancer incidence
Discharged patients from public or private hospitals
Queensland residents
All ages

Prostate surgery cohort
Filtered cases
Potential duplicate records
If 2 or more diagnosis of same cancer earliest retained

- 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 prostate cancer who did not undergo surgery in the surgical cohort time period, as defined by the procedures on page 43.

Time periods

Time period – 01 December 2001 to 31 December 2012

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 prostate	C61	All

Exclusions

The following exclusions apply:

- Non Queensland residents
- People not admitted to a hospital in Queensland for invasive prostate cancer

Identification and categorisation of cancer related procedures

A prostate surgery performed up to one month following a cancer diagnosis was included. The following process was used to assign a prostate surgery to patients with cancer

- Potential cancer related procedures were identified for prostate 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

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

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

ICD-10-AM	PROCEDURE/GROUPING	NUMBER OF PROCEDURES		
		2002-2011	Annual average 2009 -2011	2011
	OPEN PROSTATECTOMY	8165	819	768
37211-00	Radical prostatectomy with bladder neck reconstruction and pelvic lymphadenopathy	2610	261	237
37210-00	Radical prostatectomy with bladder neck reconstruction	2335	250	269
37209-00	Radical prostatectomy	3220	308	262
	LAPAROSCOPIC PROSTATECTOMY	2505	758	865
37210-01	Laparoscopic radical prostatectomy with bladder neck reconstruction	1546	474	556
37209-01	Laparoscopic radical prostatectomy	543	158	111
37211-01	Laparoscopic radical prostatectomy with bladder neck reconstruction and pelvic lymphadenectomy	416	126	198

Surgery rate for prostate cancer

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

DEFINITIVE
SURGERY
MUTUALLY
EXCLUSIVE

Characteristic	Annual Average		Had Surgery		No Surgery	
	Prostate cancer cohort	(Qld %)	n	(row %)	n	(row %)
Queensland	3931	(100%)	1575	(40%)	2357	(60%)
Age Group						
< 45	27	(1%)	23	(85%)	4	(15%)
45-49	93	(2%)	77	(82%)	17	(18%)
50-54	238	(6%)	174	(73%)	64	(27%)
55-59	503	(13%)	344	(69%)	158	(31%)
60-64	786	(20%)	446	(57%)	340	(43%)
65-69	830	(21%)	372	(45%)	458	(55%)
70-74	598	(15%)	124	(21%)	475	(79%)
75-79	432	(11%)	12	(3%)	420	(97%)
80-84	243	(6%)	2	(1%)	241	(99%)
85+	181	(5%)	1	(1%)	180	(100%)
Indigenous Status						
Indigenous	27	(1%)	11	(42%)	16	(58%)
Non-Indigenous	3235	(82%)	1410	(44%)	1825	(56%)
Not Stated/Unknown	669	(17%)	153	(23%)	516	(77%)
Socioeconomic Status						
Affluent	589	(15%)	281	(48%)	308	(52%)
Middle	2631	(67%)	1045	(40%)	1587	(60%)
Disadvantaged	686	(17%)	248	(36%)	438	(64%)
Unknown	25	(1%)	1	(4%)	24	(96%)
Remoteness						
Major City	2424	(62%)	1016	(42%)	1408	(58%)
Inner Regional	911	(23%)	375	(41%)	536	(59%)
Outer Regional	524	(13%)	166	(32%)	358	(68%)
Remote & Very Remote	47	(1%)	16	(35%)	30	(65%)
Qld Unknown	25	(1%)	1	(4%)	24	(96%)
Diagnosis Basis						
Histology	3740	(95%)	1573	(42%)	2167	(58%)
Cytology	3	(0%)			3	(100%)
Clinical	158	(4%)	1	(1%)	157	(99%)
Other	30	(1%)	1	(3%)	30	(99%)
Comorbidity						
0	3566	(91%)	1493	(42%)	2073	(58%)
1	281	(7%)	74	(26%)	207	(74%)
2+	84	(2%)	8	(9%)	76	(91%)

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 prostate cancer by patient residence

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

DEFINITIVE
SURGERY
MUTUALLY
EXCLUSIVE

	Annual Average		Had Surgery		No Surgery	
	Prostate cancer cohort	(Qld %)	n	(row %)	n	(row %)
Queensland	3931	(100%)	1575	(40%)	2357	(60%)
HHS (patient residence)						
Metro North	756	(19%)	326	(43%)	430	(57%)
Metro South	715	(18%)	285	(40%)	430	(60%)
Gold Coast	465	(12%)	179	(38%)	287	(62%)
Sunshine Coast	428	(11%)	190	(44%)	238	(56%)
Wide Bay	313	(8%)	133	(43%)	180	(57%)
Darling Downs	251	(6%)	89	(36%)	162	(64%)
Townsville	203	(5%)	58	(29%)	145	(71%)
West Moreton	202	(5%)	96	(48%)	106	(52%)
Central Queensland	188	(5%)	80	(42%)	108	(58%)
Cairns and Hinterland	170	(4%)	52	(31%)	118	(69%)
Mackay	162	(4%)	65	(40%)	97	(60%)
South West	24	(1%)	9	(39%)	14	(61%)
North West	16	(0%)	5	(34%)	10	(66%)
Central West	10	(0%)	4	(38%)	6	(62%)
Torres Strait and Cape York	4	(0%)	2	(42%)	2	(58%)
Qld Unknown	25	(1%)	1	(4%)	24	(96%)

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 prostate cancer

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

DEFINITIVE
SURGERY
MUTUALLY
EXCLUSIVE

Characteristic	Annual Average		Had Surgery		Open Prostatectomy		Laparoscopic Prostatectomy	
	Prostate cancer cohort	(Qld %)	n	(col %)	n	(row %)	n	(row %)
Queensland	3931	(100%)	1575	(40%)	816	(52%)	758	(48%)
Age Group								
< 45	27	(1%)	23	(1%)	6	(28%)	17	(72%)
45-49	93	(2%)	77	(5%)	39	(51%)	37	(49%)
50-54	238	(6%)	174	(11%)	91	(52%)	83	(48%)
55-59	503	(13%)	344	(22%)	163	(47%)	181	(53%)
60-64	786	(20%)	446	(28%)	232	(52%)	214	(48%)
65-69	830	(21%)	372	(24%)	208	(56%)	164	(44%)
70-74	598	(15%)	124	(8%)	65	(52%)	59	(48%)
75-79	432	(11%)	12	(1%)	9	(76%)	3	(24%)
80-84	243	(6%)	2	(0%)	2	(100%)		
85+	181	(5%)	1	(0%)	1	(100%)		
Indigenous Status								
Indigenous	27	(1%)	11	(1%)	9	(76%)	3	(24%)
Non-Indigenous	3235	(82%)	1410	(90%)	689	(49%)	721	(51%)
Not Stated/Unknown	669	(17%)	153	(10%)	118	(77%)	35	(23%)
Socioeconomic Status								
Affluent	589	(15%)	281	(18%)	101	(36%)	179	(64%)
Middle	2631	(67%)	1045	(66%)	562	(54%)	482	(46%)
Disadvantaged	686	(17%)	248	(16%)	152	(61%)	96	(39%)
Unknown	25	(1%)	1	(0%)	1	(100%)	1	(100%)
Remoteness								
Major City	2424	(62%)	1016	(65%)	500	(49%)	517	(51%)
Inner Regional	911	(23%)	375	(24%)	204	(54%)	171	(46%)
Outer Regional	524	(13%)	166	(11%)	103	(62%)	63	(38%)
Remote & Very Remote	47	(1%)	16	(1%)	9	(55%)	7	(45%)
Qld Unknown	25	(1%)	1	(0%)	1	(100%)	1	(100%)
Comorbidity								
0	3566	(91%)	1493	(95%)	761	(51%)	732	(49%)
1	281	(7%)	74	(5%)	49	(67%)	25	(33%)
2+	84	(2%)	8	(0%)	6	(83%)	1	(17%)

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.

DEFINITIVE
SURGERY
MUTUALLY
EXCLUSIVE

Type of definitive surgery for prostate cancer by patient residence

AVERAGE YEAR OF DIAGNOSIS 2009 – 2011

PUBLIC & PRIVATE HOSPITAL PATIENTS

	Annual Average		Had Surgery		Open Prostatectomy		Laparoscopic Prostatectomy	
	Prostate cancer cohort	(Qld %)	n	(col %)	n	(row %)	n	(row %)
Queensland	3931	(100%)	1575	(40%)	816	(52%)	758	(48%)
HHS (patient residence)								
Metro North	756	(19%)	326	(21%)	140	(43%)	186	(57%)
Metro South	715	(18%)	285	(18%)	132	(46%)	152	(54%)
Gold Coast	465	(12%)	179	(11%)	113	(63%)	66	(37%)
Sunshine Coast	428	(11%)	190	(12%)	104	(55%)	86	(45%)
Wide Bay	313	(8%)	133	(8%)	82	(62%)	51	(38%)
Darling Downs	251	(6%)	89	(6%)	46	(51%)	44	(49%)
Townsville	203	(5%)	58	(4%)	48	(82%)	10	(18%)
West Moreton	202	(5%)	96	(6%)	50	(52%)	46	(48%)
Central Queensland	188	(5%)	80	(5%)	21	(26%)	59	(74%)
Cairns and Hinterland	170	(4%)	52	(3%)	29	(56%)	23	(44%)
Mackay	162	(4%)	65	(4%)	42	(64%)	23	(36%)
South West	24	(1%)	9	(1%)	3	(29%)	7	(71%)
North West	16	(0%)	5	(0%)	4	(69%)	2	(31%)
Central West	10	(0%)	4	(0%)	2	(45%)	2	(55%)
Torres Strait and Cape York	4	(0%)	2	(0%)	1	(80%)	1	(60%)
Qld Unknown	25	(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 prostate cancer by HHS performing surgery

AVERAGE YEAR OF DIAGNOSIS 2009 – 2011

PUBLIC & PRIVATE HOSPITAL PATIENTS

DEFINITIVE
SURGERY
MUTUALLY
EXCLUSIVE

	Annual Average		Open Prostatectomy		Laparoscopic Prostatectomy	
	Had Surgery	(col %)	n	(row %)	n	(row %)
Queensland	1575	(100%)	816	(52%)	758	(48%)
HHS (performing surgery)						
Metro South	613	(39%)	229	(28%)	385	(51%)
Metro North	515	(33%)	203	(25%)	312	(41%)
Gold Coast	149	(9%)	116	(14%)	33	(4%)
Sunshine Coast	84	(5%)	83	(10%)	1	(0%)
West Moreton	68	(4%)	46	(6%)	22	(3%)
Wide Bay	60	(4%)	58	(7%)	2	(0%)
Townsville	57	(4%)	56	(7%)	1	(0%)
Darling Downs	23	(1%)	20	(2%)	3	(0%)
Mackay	3	(0%)	3	(0%)		
Central Queensland	2	(0%)	2	(0%)		

*The Cairns and Hinterland, South West, North West, Central West, Torres Strait & Cape York and Qld Unknown HHSs did not perform prostate 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.

Characteristics of patients receiving prostate surgery by patient residence

ANNUAL AVERAGE YEAR OF DIAGNOSIS 2009 – 2011

PUBLIC & PRIVATE HOSPITAL PATIENTS

DEFINITIVE
SURGERY
MUTUALLY
EXCLUSIVE

	Had Surgery		Median Age at Diagnosis yrs	Disadvantaged		Indigenous		One or more comorbidities		Private	
	n	(Qld %)		n	(row %)	n	(row %)	n	(row %)	n	(row %)
Queensland	1575	(40%)	62 yrs	248	(16%)	11	(1%)	82	(5%)	1190	(76%)
HHS (patient residence)											
Metro North	326	(21%)	61 yrs	23	(7%)	1	(0%)	15	(5%)	245	(75%)
Metro South	285	(18%)	61 yrs	27	(9%)	1	(0%)	13	(4%)	226	(79%)
Sunshine Coast	190	(12%)	62 yrs	22	(12%)	1	(1%)	10	(5%)	121	(63%)
Gold Coast	179	(11%)	62 yrs	1	(1%)			7	(4%)	145	(81%)
Wide Bay	133	(8%)	63 yrs	114	(86%)	2	(1%)	8	(6%)	88	(66%)
West Moreton	96	(6%)	62 yrs	9	(9%)	1	(1%)	6	(7%)	80	(83%)
Darling Downs	89	(6%)	61 yrs	21	(24%)	1	(1%)	5	(6%)	78	(88%)
Central Queensland	80	(5%)	61 yrs	1	(1%)	1	(1%)	6	(8%)	72	(90%)
Mackay	65	(4%)	59 yrs	4	(6%)	1	(2%)	3	(4%)	44	(68%)
Townsville	58	(4%)	61 yrs	5	(9%)			4	(6%)	39	(68%)
Cairns and Hinterland	52	(3%)	61 yrs	18	(34%)	1	(3%)	3	(5%)	36	(69%)
South West	9	(1%)	59 yrs	1	(11%)	1	(14%)	1	(14%)	7	(79%)
North West	5	(0%)	60 yrs			1	(19%)	1	(19%)	3	(63%)
Central West	4	(0%)	59 yrs	1	(36%)			1	(27%)	3	(82%)
Torres Strait and Cape York	2	(0%)	69 yrs	1	(80%)					1	(60%)
Qld Unknown	1	(0%)	62 yrs					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.

Patient flows



10 year prostate cancer patient flows for open prostatectomy

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

PUBLIC & PRIVATE HOSPITAL PATIENTS

Hospitals performing surgery* HHS (patient residence)	HHS of surgery				
	Metro North 5	Metro South 7	Gold Coast 4	Sunshine Coast 4	Wide Bay 5
Metro North	1313~ (49% 82%)	271 (10% 17%)	4 (0% 0%)	6 (1% 0%)	
Metro South	252 (9% 17%)	1159 (44% 79%)	23 (2% 2%)	1 (0% 0%)	
Gold Coast	43 (2% 4%)	78 (3% 8%)	918 (95% 88%)		
Sunshine Coast	306 (11% 33%)	199 (8% 22%)	4 (0% 0%)	404 (91% 44%)	
Wide Bay	304 (11% 47%)	123 (5% 19%)	4 (0% 1%)	25 (6% 4%)	185 (99% 29%)
Darling Downs	66 (2% 12%)	274 (10% 50%)	5 (1% 1%)	5 (1% 1%)	
Townsville	17 (1% 4%)	16 (1% 4%)	2 (0% 1%)		
West Moreton	36 (1% 6%)	58 (2% 10%)	2 (0% 0%)		1 (1% 0%)
Central Queensland	110 (4% 40%)	154 (6% 55%)	1 (0% 0%)	1 (0% 0%)	1 (1% 0%)
Cairns and Hinterland	154 (6% 51%)	133 (5% 44%)	2 (0% 1%)		
Mackay	70 (3% 24%)	116 (4% 40%)	1 (0% 0%)	2 (0% 1%)	
South West	11 (0% 28%)	15 (1% 38%)	3 (0% 8%)	1 (0% 3%)	
North West	8 (0% 30%)	2 (0% 7%)			
Central West	3 (0% 19%)	7 (0% 44%)			
Torres Strait and Cape York	5 (0% 50%)	4 (0% 40%)	1 (0% 10%)		
Qld Unknown					
Queensland	2698~	2610	971	445	187
Qld (%)	(33%)	(32%)	(12%)	(5%)	(2%)
Annual Average	270	261	97	45	19

*the number of hospitals within a HHS performing prostate surgery

~Using Metro South as an example:

1,600 – Total number of patients who lived in Metro South.

2,698 – Total number of open prostatectomies that Metro South performed.

1,313 – Number of patients who had an open prostatectomy in Metro South and lived in Metro South.

49% – Of the 2,698 patients who had an open prostatectomy in Metro South 1,313 also lived in Metro South (1313/2698 = 49%).

82% – Of the 1,600 patients who lived in Metro South 1,313 had an open prostatectomy in Metro South (1313/1600 = 82%).

10 year prostate cancer patient flows for open prostatectomy

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

DEFINITIVE
SURGERY
MUTUALLY
EXCLUSIVE

HHS of surgery					Qld	
Darling Downs 3	Townsville 2	West Moreton 2	Central Queensland 2	Mackay 2	n	%
2 (1% 0%)		4 (1% 0%)			1600~	(20%)
		23 (4% 2%)			1458	(18%)
1 (1% 0%)					1040	(13%)
		2 (0% 0%)			915	(11%)
1 (1% 0%)		3 (1% 0%)			645	(8%)
167 (87% 30%)	1 (0% 0%)	34 (6% 6%)			552	(7%)
	363 (77% 91%)			1 (4% 0%)	399	(5%)
12 (6% 2%)		471 (88% 81%)			580	(7%)
1 (1% 0%)	2 (0% 1%)		8 (100% 3%)		278	(3%)
	11 (2% 4%)				300	(4%)
	74 (16% 26%)			24 (96% 8%)	287	(4%)
8 (4% 21%)		1 (0% 3%)			39	(0%)
1 (1% 4%)	16 (3% 59%)				27	(0%)
	6 (1% 38%)				16	(0%)
					10	(0%)
					2	(0%)
193 (2%)	473 (6%)	538 (7%)	8 (0%)	25 (0%)	8148	(100%)
19	47	54	1	3		

10 year prostate cancer patient flows for laparoscopic prostatectomy

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

PUBLIC & PRIVATE HOSPITAL PATIENTS

Hospitals performing surgery* HHS (patient residence)	HHS of surgery				
	Metro North 4	Metro South 4	Gold Coast 3	Sunshine Coast 2	Wide Bay 2
Metro North	433~ (42% 72%)	166 (13% 28%)			
Metro South	132 (13% 27%)	347 (28% 71%)	3 (2% 1%)		
Gold Coast	69 (7% 29%)	49 (4% 21%)	117 (94% 50%)		
Sunshine Coast	164 (16% 56%)	120 (10% 41%)	1 (1% 0%)	5 (100% 2%)	1 (14% 0%)
Wide Bay	123 (12% 69%)	49 (4% 27%)	1 (1% 1%)		6 (86% 3%)
Darling Downs	24 (2% 17%)	92 (7% 66%)			
Townsville	10 (1% 29%)	23 (2% 66%)			
West Moreton	11 (1% 7%)	102 (8% 65%)			
Central Queensland	7 (1% 4%)	187 (15% 96%)	1 (1% 1%)		
Cairns and Hinterland	11 (1% 15%)	63 (5% 85%)			
Mackay	26 (3% 36%)	44 (3% 60%)	1 (1% 1%)		
South West	8 (1% 40%)	10 (1% 50%)	1 (1% 5%)		
North West	4 (0% 80%)	1 (0% 20%)			
Central West	3 (0% 43%)	4 (0% 57%)			
Torres Strait and Cape York		1 (0% 100%)			
Qld Unknown	1 (0% 50%)				
Queensland	1026~	1258	125	5	7
Qld (%)	(41%)	(50%)	(5%)	(0%)	(0%)
Annual Average	103	126	13	1	1

*the number of hospitals within a HHS performing prostate surgery

~Using Metro South as an example:

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

1,026 – Total number of laparoscopic prostatectomies that Metro South performed.

433 – Number of patients who had a laparoscopic prostatectomy in Metro South and lived in Metro South.

42% – Of the 1,026 patients who had a laparoscopic prostatectomy in Metro South 433 also lived in Metro South (433/1026 = 42%) .

72% – Of the 599 patients who lived in Metro South 433 had a laparoscopic prostatectomy in Metro South (433/599 = 72%).

10 year prostate cancer patient flows for laparoscopic prostatectomy

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

DEFINITIVE
SURGERY
MUTUALLY
EXCLUSIVE

HHS of surgery			Qld 19	
Darling Downs 1	Townsville 1	West Moreton 2	n	%
			599~	(24%)
		10 (14% 2%)	492	(20%)
			235	(9%)
			291	(12%)
			179	(7%)
10 (100% 7%)		13 (19% 9%)	139	(6%)
	2 (100% 6%)		35	(1%)
		43 (61% 28%)	156	(6%)
			195	(8%)
			74	(3%)
		2 (3% 3%)	73	(3%)
		1 (1% 5%)	20	(1%)
			5	(0%)
			7	(0%)
			1	(0%)
		1 (1% 50%)	2	(0%)
10 (0%)	2 (0%)	70 (3%)	2503	(100%)
1	0	7		

2011 prostate cancer patient flows for open prostatectomy

YEAR OF DIAGNOSIS 2011 (COL%. ROW%)

PUBLIC & PRIVATE HOSPITAL PATIENTS

Hospitals performing surgery* HHS (patient residence)	HHS of surgery				
	Metro North 5	Metro South 7	Gold Coast 4	Sunshine Coast 3	Wide Bay 5
Metro North	110~ (68% 92%)	7 (3% 6%)	2 (2% 2%)	1 (1% 1%)	
Metro South	9 (6% 8%)	96 (45% 89%)	2 (2% 2%)		
Gold Coast	1 (1% 1%)	3 (1% 3%)	94 (92% 96%)		
Sunshine Coast	16 (10% 16%)	5 (2% 5%)	1 (1% 1%)	80 (91% 78%)	
Wide Bay	8 (5% 9%)	10 (5% 11%)		3 (3% 3%)	73 (100% 78%)
Darling Downs	3 (2% 9%)	13 (6% 38%)	1 (1% 3%)	4 (5% 12%)	
Townsville	1 (1% 2%)	2 (1% 4%)			
West Moreton	3 (2% 8%)	9 (4% 23%)			
Central Queensland		20 (9% 69%)			
Cairns and Hinterland	6 (4% 19%)	19 (9% 61%)	2 (2% 6%)		
Mackay	2 (1% 4%)	28 (13% 62%)			
South West	1 (1% 100%)				
North West	2 (1% 40%)				
Central West					
Torres Strait and Cape York		2 (1% 100%)			
Qld Unknown					
Queensland	162~	214	102	88	73
Qld (%)	(21%)	(28%)	(13%)	(12%)	(10%)

*the number of hospitals within a HHS performing prostate surgery

~Using Metro South as an example:

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

162 – Total number of open prostatectomies that Metro South performed.

110 – Number of patients who had an open prostatectomy in Metro South and lived in Metro South.

68% – Of the 162 patients who had an open prostatectomy in Metro South 110 also lived in Metro South (110/162 = 68%).

92% – Of the 120 patients who lived in Metro South 110 had an open prostatectomy in Metro South (110/120 = 92%).

2011 prostate cancer patient flows for open prostatectomy

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

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HHS of surgery					Qld	
Darling Downs 1	Townsville 2	West Moreton 2	Central Queensland 2	Mackay 1	n	%
					120~	(16%)
		1 (3% 1%)			108	(14%)
					98	(13%)
					102	(13%)
					94	(12%)
11 (85% 32%)		2 (7% 6%)			34	(4%)
	53 (76% 93%)			1 (14% 2%)	57	(7%)
		27 (90% 69%)			39	(5%)
1 (8% 3%)	2 (3% 7%)		6 (100% 21%)		29	(4%)
	4 (6% 13%)				31	(4%)
	9 (13% 20%)			6 (86% 13%)	45	(6%)
					1	(0%)
1 (8% 20%)	2 (3% 40%)				5	(1%)
					2	(0%)
13 (2%)	70 (9%)	30 (4%)	6 (1%)	7 (1%)	765	(100%)

2011 prostate cancer patient flows for laparoscopic prostatectomy

YEAR OF DIAGNOSIS 2011 (COL%. ROW%)

PUBLIC & PRIVATE HOSPITAL PATIENTS

Hospitals performing surgery* HHS (patient residence)	HHS of surgery			
	Metro North 4	Metro South 3	Gold Coast 2	Sunshine Coast 1
Metro North	154~ (43% 71%)	63 (15% 29%)		
Metro South	63 (17% 38%)	102 (24% 61%)		
Gold Coast	34 (9% 40%)	17 (4% 20%)	34 (100% 40%)	
Sunshine Coast	40 (11% 52%)	36 (8% 47%)		1 (100% 1%)
Wide Bay	31 (9% 76%)	8 (2% 20%)		
Darling Downs	11 (3% 18%)	33 (8% 55%)		
Townsville	4 (1% 40%)	4 (1% 40%)		
West Moreton	4 (1% 6%)	44 (10% 65%)		
Central Queensland	3 (1% 4%)	72 (17% 96%)		
Cairns and Hinterland	3 (1% 13%)	21 (5% 88%)		
Mackay	7 (2% 27%)	19 (4% 73%)		
South West	2 (1% 33%)	4 (1% 67%)		
North West	3 (1% 75%)	1 (0% 25%)		
Central West	1 (0% 50%)	1 (0% 50%)		
Torres Strait and Cape York		1 (0% 100%)		
Qld Unknown	1 (0% 100%)			
Queensland	361~	426	34	1
Qld (%)	(42%)	(49%)	(4%)	(0%)

*the number of hospitals within a HHS performing prostate surgery

~Using Metro South as an example:

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

361 – Total number of laparoscopic prostatectomies that Metro South performed.

154 – Number of patients who had a laparoscopic prostatectomy in Metro South and lived in Metro South.

43% – Of the 361 patients who had a laparoscopic prostatectomy in Metro South 154 also lived in Metro South (154/361 = 43%) .

71% – Of the 217 patients who lived in Metro South 154 had a laparoscopic prostatectomy in Metro South (154/217 = 71%) .

2011 prostate cancer patient flows for laparoscopic prostatectomy

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

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MUTUALLY
EXCLUSIVE

HHS of surgery				Qld 16	
Wide Bay 2	Darling Downs 1	Townsville 1	West Moreton 2		
				n	%
				217~	(25%)
			3 (10% 2%)	168	(19%)
				85	(10%)
				77	(9%)
2 (100% 5%)				41	(5%)
	9 (100% 15%)		7 (23% 12%)	60	(7%)
		2 (100% 20%)		10	(1%)
			20 (67% 29%)	68	(8%)
				75	(9%)
				24	(3%)
				26	(3%)
				6	(1%)
				4	(0%)
				2	(0%)
				1	(0%)
				1	(0%)
2 (0%)	9 (1%)	2 (0%)	30 (3%)	865	(100%)

Surgery rates



10 year surgery rates for open prostatectomy by patient residence

YEAR OF DIAGNOSIS 2002 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

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MUTUALLY
EXCLUSIVE

	Prostate cancer cohort		Had Open Prostatectomy		Year of Diagnosis																			
					2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
					n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Queensland	33897	(100%)	8148	(24%)	353	(16%)	536	(20%)	717	(24%)	796	(26%)	999	(30%)	1162	(31%)	1136	(29%)	902	(22%)	782	(21%)	765	(19%)
HHS (patient residence)																								
Metro North	6402	(19%)	1600	(25%)	89	(21%)	115	(23%)	167	(29%)	179	(28%)	197	(33%)	207	(30%)	226	(33%)	157	(22%)	143	(19%)	120	(15%)
Metro South	6144	(18%)	1458	(24%)	64	(15%)	85	(19%)	116	(21%)	167	(30%)	195	(30%)	220	(32%)	214	(31%)	154	(21%)	135	(19%)	108	(15%)
Gold Coast	3978	(12%)	1040	(26%)	34	(12%)	76	(22%)	85	(25%)	81	(26%)	135	(34%)	152	(36%)	138	(29%)	123	(25%)	118	(26%)	98	(22%)
Sunshine Coast	3532	(10%)	915	(26%)	48	(19%)	52	(19%)	71	(22%)	87	(28%)	102	(31%)	115	(33%)	127	(30%)	114	(25%)	97	(23%)	102	(25%)
Wide Bay	2595	(8%)	645	(25%)	12	(8%)	24	(13%)	42	(22%)	41	(21%)	82	(31%)	101	(32%)	96	(27%)	77	(23%)	76	(27%)	94	(29%)
Darling Downs	2428	(7%)	552	(23%)	27	(16%)	44	(20%)	49	(22%)	63	(26%)	72	(26%)	83	(32%)	77	(27%)	58	(21%)	45	(19%)	34	(15%)
Townsville	1853	(5%)	399	(22%)	28	(21%)	40	(22%)	34	(19%)	42	(23%)	41	(24%)	39	(20%)	32	(15%)	43	(20%)	43	(23%)	57	(28%)
West Moreton	1841	(5%)	580	(32%)	22	(19%)	54	(31%)	63	(34%)	56	(36%)	75	(39%)	91	(41%)	69	(35%)	62	(31%)	49	(26%)	39	(18%)
Central Queensland	1554	(5%)	278	(18%)	11	(12%)	14	(14%)	34	(22%)	19	(15%)	40	(27%)	51	(30%)	47	(24%)	21	(13%)	12	(7%)	29	(12%)
Cairns and Hinterland	1466	(4%)	300	(20%)	8	(8%)	19	(16%)	31	(25%)	28	(24%)	25	(20%)	57	(29%)	45	(25%)	35	(21%)	21	(13%)	31	(17%)
Mackay	1342	(4%)	287	(21%)	5	(6%)	8	(8%)	18	(14%)	28	(21%)	30	(20%)	31	(22%)	42	(32%)	50	(27%)	30	(22%)	45	(28%)
South West	191	(1%)	39	(20%)	3	(30%)	3	(27%)	3	(25%)	3	(19%)	1	(5%)	7	(41%)	11	(34%)	3	(13%)	4	(18%)	1	(4%)
North West	123	(0%)	27	(22%)	2	(14%)			2	(40%)			3	(33%)	3	(21%)	6	(29%)	2	(14%)	4	(33%)	5	(24%)
Central West	99	(0%)	16	(16%)			1	(7%)	2	(25%)	2	(18%)	1	(20%)	3	(17%)	2	(29%)	2	(33%)	3	(20%)		
Torres Strait and Cape York	39	(0%)	10	(26%)			1	(25%)							2	(50%)	3	(50%)	1	(20%)	1	(50%)	2	(40%)
Qld Unknown	310	(1%)	2	(1%)													1	(2%)			1	(4%)		

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 prostate cancer. For example in Queensland in 2002 there were 353 patients who had an open prostatectomy which is 16% of the total incidences of prostate cancer in 2002.

10 year surgery rates for open prostatectomy by HHS performing surgery

YEAR OF DIAGNOSIS 2002 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

DEFINITIVE
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MUTUALLY
EXCLUSIVE

	Had Open Prostatectomy		Year of Diagnosis																			
			2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
			n	(row %)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Queensland	8148	(100%)	353	(100%)	536	(100%)	717	(100%)	796	(100%)	999	(100%)	1162	(100%)	1136	(100%)	902	(100%)	782	(100%)	765	(100%)
HHS (performing surgery)																						
Metro North	2698	(33%)	177	(50%)	206	(38%)	313	(44%)	296	(37%)	353	(35%)	398	(34%)	345	(30%)	244	(27%)	204	(26%)	162	(21%)
Metro South	2610	(32%)	59	(17%)	134	(25%)	181	(25%)	292	(37%)	367	(37%)	445	(38%)	446	(39%)	267	(30%)	205	(26%)	214	(28%)
Gold Coast	971	(12%)	29	(8%)	66	(12%)	76	(11%)	70	(9%)	119	(12%)	135	(12%)	128	(11%)	121	(13%)	125	(16%)	102	(13%)
West Moreton	538	(7%)	19	(5%)	48	(9%)	58	(8%)	57	(7%)	70	(7%)	80	(7%)	68	(6%)	62	(7%)	46	(6%)	30	(4%)
Townsville	473	(6%)	33	(9%)	40	(7%)	40	(6%)	51	(6%)	51	(5%)	51	(4%)	39	(3%)	47	(5%)	51	(7%)	70	(9%)
Sunshine Coast	445	(5%)	16	(5%)	12	(2%)	21	(3%)	17	(2%)	20	(2%)	35	(3%)	75	(7%)	86	(10%)	75	(10%)	88	(12%)
Darling Downs	193	(2%)	20	(6%)	29	(5%)	26	(4%)	8	(1%)	15	(2%)	13	(1%)	22	(2%)	26	(3%)	21	(3%)	13	(2%)
Wide Bay	187	(2%)										1	(0%)	11	(1%)	48	(5%)	54	(7%)	73	(10%)	
Mackay	25	(0%)			1	(0%)	2	(0%)	5	(1%)	4	(0%)	4	(0%)	1	(0%)			1	(0%)	7	(1%)
Central Queensland	8	(0%)												1	(0%)	1	(0%)			6	(1%)	

*The Cairns and Hinterland, South West, North West, Central West, Torres Strait & Cape York and Qld Unknown HHSs did not perform open prostatectomy surgery.

Note: %'s for each year are used to show the percentage of patients who had open prostatectomy surgery out of the total number of open prostatectomy surgeries for that year for prostate cancer. For example in Queensland in 2002 Metro North performed 50% of the total open prostatectomy cancer surgeries for prostate cancer.

10 year surgery rates for laparoscopic prostatectomy by patient residence

YEAR OF DIAGNOSIS 2002 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

DEFINITIVE
SURGERY
MUTUALLY
EXCLUSIVE

	Prostate cancer cohort		Had Laparoscopic Prostatectomy		Year of Diagnosis																			
					2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
					n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Queensland	33897	(100%)	2503	(7%)	3	(0%)	4	(0%)	4	(0%)	7	(0%)	5	(0%)	17	(0%)	188	(5%)	692	(17%)	718	(19%)	865	(22%)
HHS (patient residence)																								
Metro North	6402	(19%)	599	(9%)					1	(0%)				8	(1%)	32	(5%)	145	(20%)	196	(26%)	217	(28%)	
Metro South	6144	(18%)	492	(8%)			1	(0%)			3	(0%)	1	(0%)	30	(4%)	141	(19%)	148	(21%)	168	(24%)		
Gold Coast	3978	(12%)	235	(6%)	2	(1%)	2	(1%)	1	(0%)	1	(0%)	1	(0%)	3	(1%)	28	(6%)	66	(13%)	46	(10%)	85	(19%)
Sunshine Coast	3532	(10%)	291	(8%)					1	(0%)	2	(1%)					30	(7%)	89	(19%)	92	(22%)	77	(19%)
Wide Bay	2595	(8%)	179	(7%)									1	(0%)	25	(7%)	62	(18%)	62	(18%)	50	(18%)	41	(13%)
Darling Downs	2428	(7%)	139	(6%)									1	(0%)	7	(2%)	34	(12%)	34	(12%)	37	(15%)	60	(26%)
Townsville	1853	(5%)	35	(2%)			1	(1%)									3	(1%)	6	(3%)	15	(8%)	10	(5%)
West Moreton	1841	(5%)	156	(8%)	1	(1%)				2	(1%)	1	(1%)			13	(7%)	35	(18%)	36	(19%)	68	(31%)	
Central Queensland	1554	(5%)	195	(13%)					1	(1%)	1	(1%)		2	(1%)	13	(7%)	52	(31%)	51	(32%)	75	(32%)	
Cairns and Hinterland	1466	(4%)	74	(5%)												5	(3%)	26	(16%)	19	(12%)	24	(13%)	
Mackay	1342	(4%)	73	(5%)					1	(1%)						2	(2%)	24	(13%)	20	(14%)	26	(16%)	
South West	191	(1%)	20	(10%)														9	(38%)	5	(23%)	6	(24%)	
North West	123	(0%)	5	(4%)																1	(8%)	4	(19%)	
Central West	99	(0%)	7	(7%)									1	(6%)				3	(50%)	1	(7%)	2	(25%)	
Torres Strait and Cape York	39	(0%)	1	(3%)																		1	(20%)	
Qld Unknown	310	(1%)	2	(1%)																1	(4%)	1	(5%)	

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 prostate cancer. For example in Queensland in 2002 there were 3 patients who had a laparoscopic prostatectomy which is less than 1% of the total incidences of prostate cancer in 2002.

10 year surgery rates for laparoscopic prostatectomy by HHS performing surgery

YEAR OF DIAGNOSIS 2002 – 2011
PUBLIC & PRIVATE HOSPITAL PATIENTS

DEFINITIVE
SURGERY
MUTUALLY
EXCLUSIVE

	Had Laparoscopic Prostatectomy		Year of Diagnosis																			
			2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
			n	(row %)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Queensland	2503	(100%)	3	(100%)	4	(100%)	4	(100%)	7	(100%)	5	(100%)	17	(100%)	188	(100%)	692	(100%)	718	(100%)	865	(100%)
HHS (performing surgery)																						
Metro South	1258	(50%)	2	(67%)	1	(25%)	3	(75%)	2	(29%)	2	(40%)	5	(29%)	89	(47%)	355	(51%)	373	(52%)	426	(49%)
Metro North	1026	(41%)			2	(50%)			3	(43%)	2	(40%)	10	(59%)	73	(39%)	269	(39%)	306	(43%)	361	(42%)
Gold Coast	125	(5%)	1	(33%)	1	(25%)							2	(12%)	22	(12%)	47	(7%)	18	(3%)	34	(4%)
West Moreton	70	(3%)						2	(29%)	1	(20%)			1	(1%)	18	(3%)	18	(3%)	30	(3%)	
Darling Downs	10	(0%)																1	(0%)	9	(1%)	
Wide Bay	7	(0%)				1	(25%)										2	(0%)	2	(0%)	2	(0%)
Sunshine Coast	5	(0%)												3	(2%)	1	(0%)			1	(0%)	
Townsville	2	(0%)																		2	(0%)	

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

Note: %'s for each year are used to show the percentage of patients who had laparoscopic prostatectomy surgery out of the total number of laparoscopic prostatectomy surgeries for that year for prostate cancer. For example in Queensland in 2002 Metro South performed 67% of the total laparoscopic prostatectomy cancer surgeries for prostate 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 radical prostatectomy with bladder neck reconstruction and pelvic lymphadenopathy, laparoscopic radical prostatectomy and an other open prostatectomy then the patients definitive surgery will be the radical prostatectomy with bladder neck reconstruction and pelvic lymphadenopathy.

Order of the prostate surgery hierarchy (high to low):

1. Radical prostatectomy with bladder neck reconstruction and pelvic lymphadenopathy
2. Laparoscopic radical prostatectomy with bladder neck reconstruction and pelvic lymphadenectomy
3. Radical prostatectomy with bladder neck reconstruction
4. Laparoscopic radical prostatectomy with bladder neck reconstruction
5. Radical prostatectomy
6. Laparoscopic radical prostatectomy

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 1.

Chargeable status - public and private

On admission to hospital, an eligible patient must elect to be 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.

Prostate cancer cohort

Queenslanders who were diagnosed with prostate cancer between 1 January 2002 and 31 December 2011.

Prostate cancer surgery cohort

Anyone in the prostate cancer cohort who had any of the identified cancer related procedures from one month diagnosis as outlined on page 4.

No surgery cohort

Anyone in the prostate cancer surgery cohort who did not undergo surgery as an admitted patient in the surgical cohort time period, as defined by the procedures outlined on page 4.

Col %

Percentage of the column total

Comorbidity

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

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 12 months before and 12 months after the date of cancer diagnosis.

For any given cancer diagnosis, comorbidity is restricted to conditions other than the primary cancer. For example: a breast cancer can be a comorbidity to a lung cancer diagnosis and vice versa, if they are diagnosed within 12 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		

Definitive surgery

The highest ranked surgery the patient ever had defined by the prostate cancer surgery hierarchy outline on page 26.

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 prostate cancer in the prostate cohort time period.

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

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 prostate cancer who did not undergo surgery as an admitted patient in the surgical cohort time period, as defined by the procedures outlined on page 4.

Number of procedures

Includes Queensland residents of all ages diagnosed with invasive prostate cancer who underwent a relevant prostate cancer procedure. The procedure could have occurred at any time with no counting rules applied as outlined on page 2.

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

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