IV Systemic Therapy in Queensland

Infocus – access and flows

2011 – 2015

cancer alliance queensland

the Partnership queensland cancer control safety and quality partnership

qccat queensland cancer control analytics team

qcr queensland cancer register

Queensland Government

IV Systemic Therapy in Queensland, Infocus access and flows 2011 – 2015 has been developed under the auspices of the Queensland Cancer Control Safety and Quality Partnership (The Partnership). The members of The Partnership include: Professor David E Theile AO (Chair), Professor Joanne Aitken, Dr Marie-Frances Burke, Aniko Cooper, Professor Kwun Fong, Adjunct Professor Liz Kenny, Professor Keith McNeil, Shoni Philpot, Professor Mark Smithers, Professor Euan Walpole, and Associate Professor David Wyld.

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Message from the Chair

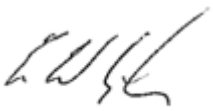
As the Chair of the Systemic Therapy Sub-committee of the Queensland Cancer Control Safety and Quality Partnership (The Partnership), I am privileged to introduce the **IV Systemic Therapy in Queensland In-focus – access and flows 2011-2015** report, a population based report outlining IV Systemic therapy (IVST) utilisation for Queenslanders diagnosed with cancer.

The opening pages outline IVST utilisation across the major age groups (children, adolescents and young adults and adults) by cancer type, with the remainder of the report including all cancer patients. The report describes IVST by: cancer type; where patients live and get treated; public and private treatment services. The final pages of the report focus on specific cancer types: breast, colorectal, lung, upper GI and haematological.

The IV systemic therapy utilisation rates have been compared with those proposed in the *Estimation of an Optimal Chemotherapy Utilisation Rate for Cancer: Setting an Evidence-based benchmark for Quality Cancer* by S.A. Jacob, W.L. Ng et al (2014)[1]. The optimal IV systemic therapy utilisation rate for all cancers is 49%, the Queensland IV systemic therapy utilisation rate is 30% (for persons with cancer diagnosed between 2011 and 2015). It is important to note that the focus of this report is IV systemic therapy, as oral systemic therapy data is not yet available.

Other factors that may contribute to the variation of IV systemic therapy utilisation rates are, changes to clinical practice, patient suitability, patient preference, access to services and referral by service providers. Further analysis is required to determine if these factors impact on the IV systemic therapy utilisation rates in Queensland and if patient outcomes such as overall survival are affected.

Clinicians are the strongest advocates for service improvement, and we encourage you to develop strategies for continued improvement. We invite your feedback on the value and benefits of this report and hope that this information can make a positive contribution to the future of IV systemic therapy for cancer treatment across Queensland.



Professor Euan Walpole
Chair, Systemic Therapy sub-committee
Queensland Cancer Control Safety and Quality Partnership

What is the IV systemic therapy in Queensland report?

The Systemic Therapy in Queensland: In-focus – access and flows 2011-2015 report has been developed for public and private cancer services. It is an initiative of the Queensland Systemic Therapy Sub-committee, part of the Cancer Alliance Queensland which brings together the Cancer Control Safety and Quality Partnership (The Partnership), Queensland Cancer Control Analysis Team (QCCAT) and the Queensland Cancer Register (QCR) (https://canceralliancegld.health.qld.gov.au).

The Cancer Alliance Queensland supports The Partnership, a clinician-led, safety and quality program for cancer services across Queensland. The Partnership was gazetted as a quality assurance committee under Part 6, Division 1 of the Hospital and Health Boards Act 2011 in 2004. A key role of the Partnership is to provide cancer clinicians, Hospital and Health Services (HHS), hospitals, treatment facilities and Queensland Health with cancer information and tools to support best patient care.

The IV Systemic Therapy in Queensland: In-focus – access and flows 2011-2015 report is the first population wide profile for Queenslanders receiving IV systemic therapy for cancer. Preparing this report is an important first step in providing a baseline overview of Queensland's systemic therapy patterns of care over five years from 2011 to 2015. Oral systemic therapy agents are not included in this report. The authors acknowledge the role of oral ST agents in the treatment of cancer and the subsequent under reporting of systemic therapy utilization in Queensland.

Where has the data come from?

Key to QCCAT's program of work is the ability to match and link population based cancer information on an individual patient basis. This matched and linked data is housed in the Queensland Oncology Repository (QOR), a resource managed by QCCAT. This centralised repository compiles and collates data from a range of source systems including the QCR, hospital admissions data, death data, treatment systems, public and private pathology, hospital clinical data systems and QOOL. QOR contains approximately 53 million records between 1982 and 2018. Our matching and linking processes provide approximately 132, 000 matched and linked records of cancer patients between 2011 and 2015, which provide the data for this report.

Linking IV systemic therapy to a person with cancer

Each invasive cancer diagnosed in a calendar year was matched and linked to the earliest IV systemic therapy record created from systemic therapy treatment systems and admitted patient data. The IV systemic therapy record is linked to the diagnosis record if the IV systemic therapy record start date is 30 days prior to diagnosis or any time after diagnosis. This IV systemic therapy flag determines the IV systemic therapy rate (utilisation rate) and includes treatment anytime (curative and palliative) during the disease. Of the 131, 868 QCR invasive diagnosis records between 2011 – 2015, 30% (39, 686) were matched with an IV systemic therapy record.

Key Findings

- 30% of Queenslanders diagnosed with cancer received IV systemic therapy between 2011 and 2015.
- Optimal and actual rates of IVST are favourable for gynaecological, hepatobiliary and haematological cancers[1].
- Utilisation rates are lower than optimal rates for breast, colorectal, lung and upper gastrointestinal cancers[1]. As noted, oral systemic therapy is not included in this report.
- IV systemic therapy treatment rates vary across HHS of residence from 25% in South West HHS to 39% in North West HHS.
- Access to IV systemic therapy for regional and remote residents is similar to people living in metropolitan areas.
- The IV systemic therapy rate for Indigenous people (36%) is higher than non-indigenous people (30%).
- The overall trend in IV systemic therapy utilisation over five years has remained stable at approximately 30%, whilst cancer incidence has increased by 10%. Further investigation is required to assess if adequate provision of IV systemic is being provided to Queenslanders.
- 56% of IV systemic therapy is provided by public service with cancers such as lung (up to 78%), head and neck (up to 84%) and gynaecological cancers (up to 80%) much more likely to be treated in public services. More common cancers such as prostate and breast are distributed equally between public and private services.
- Cancer patients reviewed by a multidisciplinary team (MDT) are almost twice as likely to receive IV systemic therapy (47% compared with 25%). Currently state-wide coverage of MDT data does not exist and therefore this rate is likely to be underestimated. MDT data included in this report is sourced from 67 teams who use QOOL across Queensland.

1| IV Systemic Therapy rate for Queenslanders diagnosed with cancer

1.1 | IV Systemic Therapy rate by patient demographics

YEAR OF DIAGNOSIS 2011 – 2015

	Cancer		IV systemic therapy	
	N	Qld %	n	%
Queensland	131,868	**100%**	39,686	**30%**
Gender				
Male	74,132	56%	19,428	26%
Female	57,736	44%	20,258	35%
Age Group				
0-14	761	1%	569	75%
15-24	1,148	1%	434	38%
25-34	3,268	2%	1,068	33%
35-44	7,207	5%	2,911	40%
45-54	16,392	12%	6,494	40%
55-64	29,566	22%	10,249	35%
65-74	37,136	28%	11,694	31%
75-84	25,385	19%	5,518	22%
85+	11,005	8%	749	7%
Indigenous status				
Indigenous	3,568	3%	1,271	36%
Other than Indigenous	128,300	97%	38,415	30%
Socioeconomic status				
Affluent	19,082	14%	5,832	31%
Middle	85,041	64%	25,842	30%
Disadvantaged	27,705	21%	8,003	29%
Remoteness				
Metropolitan	84,088	64%	25,500	30%
Inner Regional	30,945	23%	9,311	30%
Outer Regional	14,186	11%	4,096	29%
Remote & Very Remote	2,649	2%	779	29%
MDT[§]				
MDT Review	30,718	23%	14,305	47%
No MDT Review	101,150	77%	25,381	25%
Comorbidities				
0-1 Comorbidities	114,207	87%	34,723	30%
2+ Comorbidities	17,661	13%	4,963	28%

MDT rate is limited to facilities that use QOOL to capture MDT review.

1.2 | IV Systemic Therapy rate by cancer site, all age groups

YEAR OF DIAGNOSIS 2011 – 2015

Cancer group	Cancer	Diagnosis		IV systemic therapy		Optimal rate* (IV & oral ST)
		N	Qld %	n	%	%
Bone and soft tissue	Bone	222	0%	94	42%	
	Soft Tissue	900	1%	284	32%	
Breast	Breast	16,001	12%	7,784	49%	67%
CNS and Brain	Brain	1,616	1%	394	24%	72%
	Central Nervous System	60	0%	10	17%	
Colorectal	Anus (not incl Anal Canal)	53	0%	25	47%	
	Colon	9,606	7%	3,118	32%	55%
	Rectal	4,411	3%	1,982	45%	64%
	Other colorectal	1,263	1%	471	37%	
Endocrine	Adrenal/Pituitary/Thymus Glands	170	0%	71	42%	
	Thyroid Gland	2,709	2%	113	4%	13%
Gynaecological	Cervix	970	1%	415	43%	52%
	Ovary	1,353	1%	958	71%	84%
	Uterus	2,377	2%	611	26%	21%
	Vagina	68	0%	34	50%	
	Vulva	345	0%	76	22%	
	Other Gynaecological	250	0%	164	66%	
Haematological	Hodgkin Lymphoma	594	0%	535	90%	85%
	Leukaemia (acute)	1,363	1%	1,041	76%	86%
	Leukaemia (chronic)	2,076	2%	637	31%	86%
	Myelodysplastic syndrome (MDS)	346	0%	85	25%	86%
	Myeloma	1721	1%	1185	69%	94%
	Non-Hodgkin Lymphoma	4,854	4%	3,335	69%	85%
	Other Haematological	2,578	2%	391	15%	
Head and neck	Larynx	592	0%	157	27%	43%
	Nasal Cavity and Paranasal Sinuses	153	0%	49	32%	38%
	Oral Cavity	1,074	1%	246	23%	40%
	Pharynx	1,579	1%	1,098	70%	70%
	Salivary Glands	309	0%	26	8%	48%
Hepatobiliary	Biliary Tract	505	0%	185	37%	
	Gallbladder	310	0%	100	32%	80%
	Liver	1,614	1%	370	23%	52%
	Pancreas	2,765	2%	1,216	44%	36%
Lung	NSCLC	9,153	7%	3,790	41%	73%
	SCLC	1,196	1%	920	77%	93%
	Other Lung	1,056	1%	43	4%	
Melanoma	Melanoma	17,997	14%	1,349	7%	19%
Mesothelioma	Mesothelioma	775	1%	361	47%	
Ophthalmic	Other Ophthalmic	360	0%	64	18%	
Prostate	Prostate	20,350	15%	1,628	8%	15%
Upper GI	Oesophagus	1,388	1%	654	47%	73%
	Small intestine	627	0%	139	22%	
	Stomach	1,852	1%	788	43%	83%
Urological	Bladder	2,512	2%	1,029	41%	73%
	Kidney	3,316	3%	296	9%	33%
	Testis	791	1%	471	60%	70%
	Other Urological	665	1%	191	29%	
Other	Other invasive cancers	5,023	4%	703	14%	50%
All cancers		131,868	**100%**	39,686	**30%**	
Cancers with optimal rates					**30%**	**49%**

See appendix 2 for cancer descriptions.

** Jacob S.A, Ng W.L. et al. Estimation of an Optimal Chemotherapy Utilisation rate for Cancer: Setting an Evidence-based benchmark for Quality Cancer Care. Clinical Oncology 2014; 27: 77-82.*

1.2.1| IV Systemic Therapy rate by cancer site, Childhood (0-14 years)

YEARS DIAGNOSIS 2011 – 2015

Cancer group	Cancer	Diagnosis		IV systemic therapy	
		N	Qld %	n	%
Bone and soft tissue	Bone	41	5.4%	38	93%
	Soft Tissue	55	7.2%	43	78%
CNS and Brain	Brain	94	12.4%	51	54%
	Central Nervous System	15	2.0%	10	67%
Colorectal	Other colorectal	33	4.3%	0	0%
Endocrine	Adrenal/Pituitary/Thymus Glands	29	3.8%	24	83%
	Thyroid Gland	10	1.3%	0	0%
Gynaecological	Ovary	9	1.2%	4	44%
	Vagina	1	0.1%	1	100%
Haematological	Hodgkin Lymphoma	24	3.2%	20	83%
	Leukaemia (acute)	237	31.1%	234	99%
	Leukaemia (chronic)	5	0.7%	2	40%
	Non-Hodgkin Lymphoma	52	6.8%	48	92%
	Other Haematological	41	5.4%	13	32%
Head and neck	Nasal Cavity and Paranasal Sinuses	3	0.4%	3	100%
	Oral Cavity	1	0.1%	0	0%
	Pharynx	4	0.5%	4	100%
	Salivary Glands	4	0.5%	0	0%
Hepatobiliary	Liver	15	2.0%	15	100%
Lung	NSCLC*	1	0.1%	0	0%
	Other Lung	1	0.1%	1	100%
Melanoma	Melanoma	10	1.3%	0	0%
Ophthalmic	Other Ophthalmic	20	2.6%	13	65%
Upper GI	Small intestine	1	0.1%	0	0%
	Stomach	1	0.1%	0	0%
Urological	Bladder	3	0.4%	3	100%
	Kidney	37	4.9%	35	95%
	Testis	5	0.7%	3	60%
Other	Other invasive cancers	9	1.2%	4	44%
All cancers		761	**100.0%**	569	**75%**

See appendix 2 for cancer descriptions.

**Pathology report states:" By the old classification this tumour would be in keeping with mucinous bronchioloalveolar carcinoma, meant to describe in situ tumours. However, this is best diagnosed under the new terminology as mucinous adenocarcinoma, as most of such mucinous tumours had invasion somewhere".*

1.2.2| IV Systemic Therapy rate by cancer site, Adolescents and Young Adults (15-24 years)

YEARS DIAGNOSIS 2011 – 2015

Cancer group	Cancer	Diagnosis		IV systemic therapy	
		N	Qld %	n	%
Bone and soft tissue	Bone	36	3.1%	27	75%
	Soft Tissue	35	3.0%	15	43%
Breast	Breast	10	0.9%	8	80%
CNS and Brain	Brain	42	3.7%	15	36%
	Central Nervous System	4	0.3%	0	0%
Colorectal	Colon	16	1.4%	9	56%
	Rectal	4	0.3%	3	75%
	Other colorectal	99	8.6%	2	2%
Endocrine	Adrenal/Pituitary/Thymus Glands	8	0.7%	5	63%
	Thyroid Gland	101	8.8%	1	1%
Gynaecological	Cervix	19	1.7%	6	32%
	Ovary	25	2.2%	17	68%
	Uterus	1	0.1%	0	0%
	Vulva	2	0.2%	0	0%
	Other Gynaecological	1	0.1%	1	100%
Haematological	Hodgkin Lymphoma	123	10.7%	115	93%
	Leukaemia (acute)	59	5.1%	58	98%
	Leukaemia (chronic)	8	0.7%	1	13%
	Non-Hodgkin Lymphoma	61	5.3%	53	87%
	Other Haematological	31	2.7%	8	26%
Head and neck	Nasal Cavity and Paranasal Sinuses	3	0.3%	2	67%
	Oral Cavity	7	0.6%	0	0%
	Pharynx	1	0.1%	1	100%
	Salivary Glands	6	0.5%	1	17%
Hepatobiliary	Pancreas	1	0.1%	0	0%
Lung	NSCLC	2	0.2%	0	0%
	SCLC	1	0.1%	1	100%
	Other Lung	5	0.4%	0	0%
Melanoma	Melanoma	277	24.1%	9	3%
Ophthalmic	Other Ophthalmic	1	0.1%	0	0%
Prostate	Prostate	1	0.1%	1	100%
Upper GI	Small intestine	1	0.1%	0	0%
	Stomach	7	0.6%	1	14%
Urological	Bladder	1	0.1%	0	0%
	Kidney	14	1.2%	2	14%
	Testis	115	10.0%	71	62%
	Other Urological	2	0.2%	0	0%
Other	Other invasive cancers	18	1.6%	1	6%
All cancers		1,148	**100.0%**	434	**38%**

See appendix 2 for cancer descriptions.

1.2.3| IV Systemic Therapy rate by cancer site, Adults (25 years and older)

YEAR OF DIAGNOSIS 2011 – 2015

Cancer group	Cancer	Diagnosis		IV systemic therapy	
		N	Qld %	n	%
Bone and soft tissue	Bone	145	0.1%	29	20%
	Soft Tissue	810	0.6%	226	28%
Breast	Breast	15,991	12.3%	7,776	49%
CNS and Brain	Brain	1,480	1.1%	328	22%
	Central Nervous System	41	0.0%	0	0%
Colorectal	Anus (not incl Anal Canal)	53	0.0%	25	47%
	Colon	9,590	7.4%	3,109	32%
	Rectal	4,407	3.4%	1,979	45%
	Other colorectal	1,131	0.9%	469	41%
Endocrine	Adrenal/Pituitary/Thymus Glands	133	0.1%	42	32%
	Thyroid Gland	2,598	2.0%	112	4%
Gynaecological	Cervix	951	0.7%	409	43%
	Ovary	1,319	1.0%	937	71%
	Uterus	2,376	1.8%	611	26%
	Vagina	67	0.1%	33	49%
	Vulva	343	0.3%	76	22%
	Other Gynaecological	249	0.2%	163	65%
Haematological	Hodgkin Lymphoma	447	0.3%	400	89%
	Leukaemia (acute)	1,067	0.8%	749	70%
	Leukaemia (chronic)	2,063	1.6%	634	31%
	Myelodysplastic syndrome (MDS)	346	0.3%	85	25%
	Myeloma	1721	1.3%	1185	69%
	Non-Hodgkin Lymphoma	4,741	3.6%	3,234	68%
	Other Haematological	2,506	1.9%	370	15%
Head and neck	Larynx	592	0.5%	157	27%
	Nasal Cavity and Paranasal Sinuses	147	0.1%	44	30%
	Oral Cavity	1,066	0.8%	246	23%
	Pharynx	1,574	1.2%	1,093	69%
	Salivary Glands	299	0.2%	25	8%
Hepatobiliary	Biliary Tract	505	0.4%	185	37%
	Gallbladder	310	0.2%	100	32%
	Liver	1,599	1.2%	355	22%
	Pancreas	2,764	2.1%	1,216	44%
Lung	NSCLC	9,150	7.0%	3,790	41%
	SCLC	1,195	0.9%	919	77%
	Other Lung	1,050	0.8%	42	4%
Melanoma	Melanoma	17,710	13.6%	1,340	8%
Mesothelioma	Mesothelioma	775	0.6%	361	47%
Ophthalmic	Other Ophthalmic	339	0.3%	51	15%
Prostate	Prostate	20,349	15.7%	1,627	8%
Upper GI	Oesophagus	1,388	1.1%	654	47%
	Small intestine	625	0.5%	139	22%
	Stomach	1,844	1.4%	787	43%
Urological	Bladder	2,508	1.9%	1,026	41%
	Kidney	3,265	2.5%	259	8%
	Testis	671	0.5%	397	59%
	Other Urological	663	0.5%	191	29%
Other	Other invasive cancers	4,996	3.8%	698	14%
All cancers		**129,959**	**100.0%**	**38,683**	**30%**

See appendix 2 for cancer descriptions.

1.3| Where do people receiving IV systemic therapy get treated?

YEAR OF DIAGNOSIS 2011 – 2015

Cancer group	Cancer	Diagnosis		IV systemic therapy					
				All		Public facility		Private facility	
		N	Qld %	n	%	n	%	n	%
Bone and soft tissue		***1,122***	***0.9%***	***378***	***34%***	***226***	***60%***	***152***	***40%***
	Bone	222	0.2%	94	42%	74	79%	20	21%
	Soft Tissue	900	0.7%	284	32%	152	54%	132	46%
Breast		***16,001***	***12.1%***	***7,784***	***49%***	***4,029***	***52%***	***3,755***	***48%***
CNS and Brain		***1,676***	***1.3%***	***404***	***24%***	***213***	***53%***	***191***	***47%***
	Brain	1,616	1.2%	394	24%	203	52%	191	48%
	Central Nervous System	60	0.0%	10	17%	10	100%	0	0%
Colorectal		***15,333***	***11.6%***	***5,596***	***36%***	***3,017***	***54%***	***2,579***	***46%***
	Anus (not incl Anal Canal)	53	0.0%	25	47%	15	60%	10	40%
	Colon	9,606	7.3%	3,118	32%	1,645	53%	1,473	47%
	Rectal	4,411	3.3%	1,982	45%	1,077	54%	905	46%
	Other colorectal	1,263	1.0%	471	37%	280	59%	191	41%
Endocrine		***2,879***	***2.2%***	***184***	***6%***	***123***	***67%***	***61***	***33%***
	Adrenal/Pituitary/Thymus Glands	170	0.1%	71	42%	58	82%	13	18%
	Thyroid Gland	2,709	2.1%	113	4%	65	58%	48	42%
Gynaecological		***5,363***	***4.1%***	***2,258***	***42%***	***1,303***	***58%***	***955***	***42%***
	Cervix	970	0.7%	415	43%	334	80%	81	20%
	Ovary	1,353	1.0%	958	71%	468	49%	490	51%
	Uterus	2,377	1.8%	611	26%	343	56%	268	44%
	Vagina	68	0.1%	34	50%	22	65%	12	35%
	Vulva	345	0.3%	76	22%	58	76%	18	24%
	Other Gynaecological	250	0.2%	164	66%	78	48%	86	52%
Haematological		***13,532***	***10.3%***	***7,209***	***53%***	***4,043***	***56%***	***3,166***	***44%***
	Hodgkin Lymphoma	594	0.5%	535	90%	334	62%	201	38%
	Leukaemia (acute)	1,363	1.0%	1,041	76%	782	75%	259	25%
	Leukaemia (chronic)	2,076	1.6%	637	31%	334	52%	303	48%
	Myelodysplastic syndrome (MDS)	346	0.3%	85	25%	40	47%	45	53%
	Myeloma	1721	1.3%	1185	69%	598	50%	587	50%
	Non-Hodgkin Lymphoma	4,854	3.7%	3,335	69%	1,722	52%	1,613	48%
	Other Haematological	2,578	2.0%	391	15%	233	60%	158	40%

1.3| Where do people receiving IV systemic therapy get treated? (continued)

Cancer group	Cancer	Diagnosis		IV systemic therapy					
				All		Public facility		Private facility	
		N	Qld %	n	%	n	%	n	%
Head and neck		***3,707***	***2.8%***	***1,576***	***43%***	***1,359***	***86%***	***217***	***14%***
	Larynx	592	0.4%	157	27%	132	84%	25	16%
	Nasal Cavity and Paranasal Sinuses	153	0.1%	49	32%	39	80%	10	20%
	Oral Cavity	1,074	0.8%	246	23%	218	89%	28	11%
	Pharynx	1,579	1.2%	1,098	70%	952	87%	146	13%
	Salivary Glands	309	0.2%	26	8%	18	69%	8	31%
Hepatobiliary		***5,194***	***3.9%***	***1,871***	***36%***	***894***	***48%***	***977***	***52%***
	Biliary Tract	505	0.4%	185	37%	87	47%	98	53%
	Gallbladder	310	0.2%	100	32%	43	43%	57	57%
	Liver	1,614	1.2%	370	23%	232	63%	138	37%
	Pancreas	2,765	2.1%	1,216	44%	532	44%	684	56%
Lung		***11,405***	***8.6%***	***4,753***	***42%***	***3,153***	***66%***	***1,600***	***34%***
	NSCLC	9,153	6.9%	3,790	41%	2,411	64%	1,379	36%
	SCLC	1,196	0.9%	920	77%	722	78%	198	22%
	Other Lung	1,056	0.8%	43	4%	20	47%	23	53%
Melanoma		***17,997***	***13.6%***	***1,349***	***7%***	***675***	***50%***	***674***	***50%***
Mesothelioma		***775***	***0.6%***	***361***	***47%***	***170***	***47%***	***191***	***53%***
Ophthalmic		***360***	***0.3%***	***64***	***18%***	***35***	***55%***	***29***	***45%***
Prostate		***20,350***	***15.4%***	***1,628***	***8%***	***791***	***49%***	***837***	***51%***
Upper GI		***3,867***	***2.9%***	***1,581***	***41%***	***896***	***57%***	***685***	***43%***
	Oesophagus	1,388	1.1%	654	47%	383	59%	271	41%
	Small intestine	627	0.5%	139	22%	62	45%	77	55%
	Stomach	1,852	1.4%	788	43%	451	57%	337	43%
Urological		***7,284***	***5.5%***	***1,987***	***27%***	***1,047***	***53%***	***940***	***47%***
	Bladder	2,512	1.9%	1,029	41%	517	50%	512	50%
	Kidney	3,316	2.5%	296	9%	155	52%	141	48%
	Testis	791	0.6%	471	60%	286	61%	185	39%
	Other Urological	665	0.5%	191	29%	89	47%	102	53%
Other	***Other invasive cancers***	***5,023***	***3.8%***	***703***	***14%***	***396***	***56%***	***307***	***44%***
All cancers		**131,868**	**100.0%**	**39,686**	**30%**	**22,370**	**56%**	**17,316**	**44%**

See appendix 2 for cancer descriptions.

1.4 | IV Systemic Therapy rate by treatment facility

YEAR OF DIAGNOSIS 2011 – 2015

	IV systemic therapy	
AIHW Peer Group	**N**	**%**
Principal referral facilities	12,374	31%
Group A facilities	14,689	37%
Group B facilities	2,317	6%
Other facilities	10,306	26%
Queensland	**39,686**	**100%**

See appendix 4 for AIHW Peer Group description

1.5| Characteristics of cancer patients receiving IV Systemic Therapy by HHS of residence

YEAR OF DIAGNOSIS 2011 – 2015

HHS of residence	IV systemic therapy patients		Median age at diagnosis (yrs)	Male		Age 75+		Disadvantaged		Rural#		Indigenous		1+ Comorbidities		Private hospital	
	N	%		n	%	n	%	n	%	n	%	n	%	n	%	n	%
Cairns and Hinterland	1,963	5%	61	998	51%	216	11%	609	31%	1,963	100%	149	8%	527	27%	372	19%
Central Queensland	1,809	5%	62	963	53%	289	16%	276	15%	1,809	100%	76	4%	610	34%	837	46%
Central West	95	0%	60	53	56%	9	9%	25	26%	95	100%	6	6%	31	33%	39	41%
Darling Downs	2,512	6%	64	1,247	50%	440	18%	859	34%	2,512	100%	104	4%	1,020	41%	1,359	54%
Gold Coast	5,432	14%	64	2,584	48%	1,046	19%	240	4%	45	1%	76	1%	1,624	30%	2,819	52%
Mackay	1,311	3%	60	650	50%	126	10%	126	10%	1,311	100%	60	5%	415	32%	363	28%
Metro North	7,532	19%	63	3,680	49%	1,312	17%	780	10%	491	7%	142	2%	2,414	32%	3,758	50%
Metro South	8,174	21%	62	3,794	46%	1,120	14%	1,213	15%	427	5%	183	2%	2,524	31%	3,757	46%
North West	193	0%	55	110	57%	9	5%	56	29%	193	100%	49	25%	71	37%	24	12%
South West	180	0%	61	76	42%	15	8%	26	14%	180	100%	23	13%	73	41%	88	49%
Sunshine Coast	3,837	10%	65	1,891	49%	674	18%	383	10%	1,280	33%	72	2%	1,279	33%	1,571	41%
Torres and Cape	131	0%	58	63	48%	8	6%	110	84%	131	100%	75	57%	47	36%	12	9%
Townsville	1,906	5%	61	959	50%	240	13%	425	22%	452	24%	106	6%	629	33%	680	36%
West Moreton	2,088	5%	62	1,034	50%	281	13%	881	42%	774	37%	68	3%	718	34%	804	39%
Wide Bay	2,523	6%	66	1,326	53%	482	19%	1,994	79%	2,523	100%	82	3%	976	39%	833	33%
Queensland	**39,686**	100%	**63**	**19,428**	**49%**	**6,267**	**16%**	**8,003**	**20%**	**14,186**	**36%**	**1,271**	**3%**	**12,958**	**33%**	**17,316**	**44%**

#*Rural includes inner regional, outer regional, remote and very remote areas, see glossary for definition*

1.6| Characteristics of cancer patients receiving IV Systemic Therapy by AIHW peer group

YEAR OF DIAGNOSIS 2011 – 2015

	IV systemic therapy															
AIHW Peer Group	**IV systemic therapy patients**		**Median age at diagnosis (yrs)**	**Male**		**Age 75+**		**Disadvantaged**		**Rural[#]**		**Indigenous**		**1+ Comorbidities**		**Private hospital**	
	N	**%**		**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Principal referral hospitals	12,374	31%	61	6,852	55%	1,521	12%	2,610	21%	2,819	23%	473	4%	4,374	35%	0	0%
Group A hospitals	14,689	37%	64	6,766	46%	2,577	18%	3,393	23%	6,432	44%	552	4%	4,752	32%	5,805	40%
Group B hospitals	2,317	6%	66	1,172	51%	465	20%	721	31%	2,042	88%	73	3%	972	42%	1,854	80%
Other hospitals	10,306	26%	63	4,638	45%	1,704	17%	1,279	12%	2,893	28%	7	0%	2,860	28%	9,657	94%
Queensland	39,686	**100%**	63	19,428	**49%**	6,267	**16%**	8,003	**20%**	14,186	**36%**	1,105	**3%**	12,958	**33%**	17,316	**44%**

[#]Rural includes inner regional, outer regional, remote and very remote areas, see glossary for definition

See appendix 4 for AIHW Peer Group description

2| IV Systemic Therapy rates by year

2.1| IV Systemic Therapy rate by year and cancer site

YEAR OF DIAGNOSIS 2011 – 2015

Cancer group	Cancer	Diagnosis year					
		2011 n (N)	2012 n (N)	2013 n (N)	2014 n (N)	2015 n (N)	Total n (N)
Bone and soft tissue	Bone	38% 20 (52)	50% 17 (34)	34% 15 (44)	39% 14 (36)	50% 28 (56)	42% 94 (222)
	Soft Tissue	32% 59 (185)	32% 58 (183)	29% 51 (176)	29% 59 (205)	38% 57 (151)	32% 284 (900)
Breast	Breast	48% 1,408 (2,919)	49% 1,540 (3,139)	49% 1,608 (3,295)	48% 1,611 (3,346)	49% 1,617 (3,302)	49% 7,784 (16,001)
CNS and Brain	Brain	24% 78 (327)	21% 65 (306)	25% 72 (289)	23% 77 (329)	28% 102 (365)	24% 394 (1,616)
	Central Nervous System	7% 1 (14)	29% 2 (7)	10% 1 (10)	12% 2 (17)	33% 4 (12)	17% 10 (60)
Colorectal	Anus (not incl Anal Canal)	63% 5 (8)	33% 2 (6)	53% 8 (15)	33% 4 (12)	50% 6 (12)	47% 25 (53)
	Colon	30% 576 (1,922)	33% 621 (1,909)	33% 608 (1,816)	33% 653 (1,957)	33% 660 (2,002)	32% 3,118 (9,606)
	Rectal	44% 370 (845)	46% 406 (884)	47% 408 (872)	47% 408 (877)	42% 390 (933)	45% 1,982 (4,411)
	Other colorectal	34% 82 (240)	37% 87 (234)	35% 88 (251)	37% 103 (275)	42% 111 (263)	37% 471 (1,263)
Endocrine	Adrenal/Pituitary/Thymus Glands	52% 12 (23)	30% 9 (30)	59% 20 (34)	44% 17 (39)	30% 13 (44)	42% 71 (170)
	Thyroid Gland	6% 28 (480)	4% 17 (483)	2% 13 (569)	4% 27 (608)	5% 28 (569)	4% 113 (2,709)
Gynaecological	Cervix	37% 64 (173)	42% 86 (206)	39% 73 (187)	53% 109 (205)	42% 83 (199)	43% 415 (970)
	Ovary	72% 185 (256)	73% 203 (278)	68% 179 (265)	70% 197 (280)	71% 194 (274)	71% 958 (1,353)
	Uterine	27% 114 (426)	25% 120 (474)	25% 126 (505)	25% 112 (448)	27% 139 (524)	26% 611 (2,377)
	Vagina	40% 4 (10)	33% 4 (12)	36% 4 (11)	77% 10 (13)	55% 12 (22)	50% 34 (68)
	Vulva	21% 12 (57)	18% 14 (76)	14% 9 (63)	23% 19 (82)	33% 22 (67)	22% 76 (345)
	Other Gynaecological	64% 28 (44)	46% 16 (35)	56% 28 (50)	76% 39 (51)	76% 53 (70)	66% 164 (250)
Haematological	Hodgkin Lymphoma	87% 104 (120)	88% 99 (112)	91% 104 (114)	91% 106 (116)	92% 122 (132)	90% 535 (594)
	Leukaemia (acute)	72% 202 (282)	78% 211 (270)	79% 206 (261)	75% 206 (276)	79% 216 (274)	76% 1,041 (1,363)
	Leukaemia (chronic)	36% 141 (393)	30% 122 (409)	33% 126 (387)	32% 137 (431)	24% 111 (456)	31% 637 (2,076)
	Myelodysplastic syndrome (MDS)	27% 22 (82)	19% 13 (67)	22% 14 (65)	30% 19 (63)	25% 17 (69)	25% 85 (346)
	Non-Hodgkin Lymphoma	71% 187 (263)	74% 238 (322)	70% 230 (327)	66% 263 (397)	65% 267 (412)	69% 1,185 (1,721)
	Myeloma	70% 640 (909)	69% 690 (1,000)	70% 715 (1,020)	68% 678 (1,002)	66% 612 (923)	69% 3,335 (4,854)
	Other Haematological	14% 64 (467)	17% 90 (521)	15% 80 (519)	14% 76 (556)	16% 81 (515)	15% 391 (2,578)

2.1| IV Systemic Therapy rate by year and cancer site (continued)

Cancer group	Cancer	Diagnosis year					
		2011 n (N)	2012 n (N)	2013 n (N)	2014 n (N)	2015 n (N)	Total n (N)
Head and neck	Larynx	32% 35 (108)	23% 28 (123)	32% 38 (119)	25% 27 (107)	21% 29 (135)	27% 157 (592)
	Nasal Cavity and Paranasal Sinuses	33% 9 (27)	31% 9 (29)	25% 7 (28)	29% 8 (28)	39% 16 (41)	32% 49 (153)
	Oral Cavity	23% 50 (213)	24% 47 (200)	24% 54 (224)	22% 48 (219)	22% 47 (218)	23% 246 (1,074)
	Pharynx	56% 145 (258)	71% 208 (293)	72% 210 (292)	75% 263 (353)	71% 272 (383)	70% 1,098 (1,579)
	Salivary Glands	12% 8 (68)	10% 5 (48)	11% 8 (71)	3% 2 (68)	6% 3 (54)	8% 26 (309)
Hepatobiliary	Biliary Tract	35% 28 (81)	35% 34 (97)	45% 40 (89)	30% 35 (116)	39% 48 (122)	37% 185 (505)
	Gallbladder	29% 15 (52)	27% 17 (63)	32% 21 (65)	39% 25 (64)	33% 22 (66)	32% 100 (310)
	Liver	22% 56 (259)	26% 79 (309)	23% 79 (348)	22% 81 (367)	23% 75 (331)	23% 370 (1,614)
	Pancreas	42% 218 (516)	45% 242 (538)	42% 214 (513)	42% 233 (554)	48% 309 (644)	44% 1,216 (2,765)
Lung	NSCLC	40% 679 (1,710)	41% 727 (1,792)	41% 767 (1,868)	43% 787 (1,827)	42% 830 (1,956)	41% 3,790 (9,153)
	SCLC	74% 165 (224)	71% 152 (215)	78% 182 (232)	79% 212 (269)	82% 209 (256)	77% 920 (1,196)
	Other Lung	4% 7 (188)	7% 13 (200)	5% 10 (206)	4% 9 (230)	2% 4 (232)	4% 43 (1,056)
Melanoma	Melanoma	8% 264 (3,331)	7% 259 (3,465)	7% 267 (3,725)	8% 288 (3,728)	7% 271 (3,748)	7% 1,349 (17,997)
Mesothelioma	Mesothelioma	44% 63 (143)	44% 77 (174)	48% 66 (138)	46% 79 (170)	51% 76 (150)	47% 361 (775)
Ophthalmic	Other Ophthalmic	20% 11 (54)	14% 8 (59)	15% 12 (81)	19% 17 (88)	21% 16 (78)	18% 64 (360)
Prostate	Prostate	8% 341 (4,078)	8% 351 (4,189)	8% 350 (4,163)	8% 302 (3,933)	7% 284 (3,987)	8% 1,628 (20,350)
Upper GI	Oesophagus	44% 124 (282)	51% 149 (295)	45% 112 (248)	46% 132 (284)	49% 137 (279)	47% 654 (1,388)
	Small intestine	23% 26 (114)	23% 30 (129)	24% 33 (135)	22% 31 (139)	17% 19 (110)	22% 139 (627)
	Stomach	42% 141 (335)	42% 155 (373)	43% 151 (352)	42% 164 (388)	44% 177 (404)	43% 788 (1,852)
Urological	Bladder	39% 184 (466)	40% 191 (475)	40% 199 (496)	41% 217 (530)	44% 238 (545)	41% 1,029 (2,512)
	Kidney	10% 59 (612)	9% 58 (673)	9% 57 (668)	9% 65 (702)	9% 57 (661)	9% 296 (3,316)
	Testis	53% 82 (155)	62% 91 (146)	62% 94 (151)	59% 100 (170)	62% 104 (169)	60% 471 (791)
	Other Urological	25% 33 (132)	26% 37 (142)	32% 39 (121)	32% 42 (130)	29% 40 (140)	29% 191 (665)
Other	Other invasive cancers	12% 116 (929)	14% 135 (961)	13% 146 (1,097)	14% 141 (995)	16% 165 (1,041)	14% 703 (5,023)
All cancers		**29%** **7,265 (24,832)**	**30%** **7,832 (25,985)**	**30%** **7,942 (26,575)**	**30%** **8,254 (27,080)**	**31%** **8,393 (27,396)**	**30%** **39,686 (131,868)**

See appendix 2 for cancer descriptions.

2.2| IV Systemic Therapy rate by year and HHS of residence

YEAR OF DIAGNOSIS 2011 – 2015

HHS of residence	Diagnosis Year					
	2011 n (N)	2012 n (N)	2013 n (N)	2014 n (N)	2015 n (N)	Total n (N)
Cairns and Hinterland	30% 392 (1,286)	30% 408 (1,341)	27% 374 (1,378)	28% 396 (1,430)	26% 393 (1,508)	28% 1,963 (6,943)
Central Queensland	29% 330 (1,137)	32% 355 (1,103)	31% 350 (1,130)	32% 369 (1,148)	35% 405 (1,166)	32% 1,809 (5,684)
Central West	29% 18 (62)	24% 18 (74)	25% 17 (68)	26% 17 (66)	26% 25 (98)	26% 95 (368)
Darling Downs	29% 467 (1,634)	30% 522 (1,729)	29% 488 (1,709)	29% 500 (1,748)	30% 535 (1,809)	29% 2,512 (8,629)
Gold Coast	34% 1,056 (3,084)	33% 1,114 (3,337)	32% 1,064 (3,355)	31% 1,089 (3,473)	32% 1,109 (3,437)	33% 5,432 (16,686)
Mackay	25% 207 (812)	31% 262 (843)	31% 277 (881)	33% 294 (893)	31% 271 (875)	30% 1,311 (4,304)
Metro North	26% 1,316 (4,979)	29% 1,458 (5,096)	29% 1,502 (5,119)	31% 1,624 (5,272)	30% 1,632 (5,367)	29% 7,532 (25,833)
Metro South	31% 1,566 (5,035)	31% 1,611 (5,274)	31% 1,664 (5,403)	31% 1,653 (5,419)	31% 1,680 (5,459)	31% 8,174 (26,590)
North West	35% 33 (93)	43% 39 (90)	41% 43 (105)	37% 40 (108)	40% 38 (95)	39% 193 (491)
South West	27% 37 (137)	24% 37 (155)	25% 35 (140)	26% 40 (156)	24% 31 (129)	25% 180 (717)
Sunshine Coast	29% 740 (2,528)	28% 726 (2,595)	28% 764 (2,685)	28% 793 (2,792)	29% 814 (2,821)	29% 3,837 (13,421)
Torres and Cape	24% 17 (70)	34% 28 (83)	22% 19 (85)	36% 30 (84)	39% 37 (95)	31% 131 (417)
Townsville	22% 257 (1,166)	29% 381 (1,315)	30% 427 (1,415)	29% 389 (1,323)	33% 452 (1,352)	29% 1,906 (6,571)
West Moreton	31% 371 (1,213)	31% 398 (1,288)	32% 425 (1,330)	33% 464 (1,399)	31% 430 (1,397)	32% 2,088 (6,627)
Wide Bay	29% 458 (1,596)	29% 475 (1,662)	28% 493 (1,772)	31% 556 (1,769)	30% 541 (1,788)	29% 2,523 (8,587)
Queensland	29% 7,265 (24,832)	30% 7,832 (25,985)	30% 7,942 (26,575)	30% 8,254 (27,080)	31% 8,393 (27,396)	30% 39,686 (131,868)

2.3| IV Systemic Therapy rate by year, HHS of residence and treatment facility type

YEAR OF DIAGNOSIS 2011 – 2015

HHS of residence	Facility type	Diagnosis Year											
		2011		2012		2013		2014		2015		Total	
		%	n (N)	%	n (N)	%	n (N)	%	n (N)	%	n (N)	%	n (N)
Cairns and Hinterland	Private	21%	81 (392)	25%	100 (408)	19%	72 (374)	16%	63 (396)	14%	56 (393)	19%	372 (1,963)
	Public	79%	311 (392)	75%	308 (408)	81%	302 (374)	84%	333 (396)	86%	337 (393)	81%	1,591 (1,963)
Central Queensland	Private	50%	166 (330)	46%	162 (355)	46%	160 (350)	48%	176 (369)	43%	173 (405)	46%	837 (1,809)
	Public	50%	164 (330)	54%	193 (355)	54%	190 (350)	52%	193 (369)	57%	232 (405)	54%	972 (1,809)
Central West	Private	39%	7 (18)	56%	10 (18)	35%	6 (17)	41%	7 (17)	36%	9 (25)	41%	39 (95)
	Public	61%	11 (18)	44%	8 (18)	65%	11 (17)	59%	10 (17)	64%	16 (25)	59%	56 (95)
Darling Downs	Private	58%	273 (467)	54%	282 (522)	57%	278 (488)	54%	272 (500)	47%	254 (535)	54%	1,359 (2,512)
	Public	42%	194 (467)	46%	240 (522)	43%	210 (488)	46%	228 (500)	53%	281 (535)	46%	1,153 (2,512)
Gold Coast	Private	55%	582 (1,056)	54%	599 (1,114)	52%	551 (1,064)	51%	552 (1,089)	48%	535 (1,109)	52%	2,819 (5,432)
	Public	45%	474 (1,056)	46%	515 (1,114)	48%	513 (1,064)	49%	537 (1,089)	52%	574 (1,109)	48%	2,613 (5,432)
Mackay	Private	28%	57 (207)	27%	72 (262)	31%	86 (277)	25%	73 (294)	28%	75 (271)	28%	363 (1,311)
	Public	72%	150 (207)	73%	190 (262)	69%	191 (277)	75%	221 (294)	72%	196 (271)	72%	948 (1,311)
Metro North	Private	56%	735 (1,316)	51%	738 (1,458)	49%	736 (1,502)	49%	790 (1,624)	47%	759 (1,632)	50%	3,758 (7,532)
	Public	44%	581 (1,316)	49%	720 (1,458)	51%	766 (1,502)	51%	834 (1,624)	53%	873 (1,632)	50%	3,774 (7,532)
Metro South	Private	45%	706 (1,566)	48%	778 (1,611)	47%	782 (1,664)	46%	756 (1,653)	44%	735 (1,680)	46%	3,757 (8,174)
	Public	55%	860 (1,566)	52%	833 (1,611)	53%	882 (1,664)	54%	897 (1,653)	56%	945 (1,680)	54%	4,417 (8,174)
North West	Private	12%	4 (33)	10%	4 (39)	12%	5 (43)	13%	5 (40)	16%	6 (38)	12%	24 (193)
	Public	88%	29 (33)	90%	35 (39)	88%	38 (43)	88%	35 (40)	84%	32 (38)	88%	169 (193)
South West	Private	49%	18 (37)	54%	20 (37)	51%	18 (35)	43%	17 (40)	48%	15 (31)	49%	88 (180)
	Public	51%	19 (37)	46%	17 (37)	49%	17 (35)	58%	23 (40)	52%	16 (31)	51%	92 (180)
Sunshine Coast	Private	45%	335 (740)	39%	281 (726)	41%	316 (764)	39%	309 (793)	41%	330 (814)	41%	1,571 (3,837)
	Public	55%	405 (740)	61%	445 (726)	59%	448 (764)	61%	484 (793)	59%	484 (814)	59%	2,266 (3,837)
Torres and Cape	Private	12%	2 (17)	18%	5 (28)	5%	1 (19)	10%	3 (30)	3%	1 (37)	9%	12 (131)
	Public	88%	15 (17)	82%	23 (28)	95%	18 (19)	90%	27 (30)	97%	36 (37)	91%	119 (131)
Townsville	Private	48%	124 (257)	36%	137 (381)	35%	151 (427)	35%	137 (389)	29%	131 (452)	36%	680 (1,906)
	Public	52%	133 (257)	64%	244 (381)	65%	276 (427)	65%	252 (389)	71%	321 (452)	64%	1,226 (1,906)
West Moreton	Private	42%	155 (371)	39%	154 (398)	40%	172 (425)	36%	167 (464)	36%	156 (430)	39%	804 (2,088)
	Public	58%	216 (371)	61%	244 (398)	60%	253 (425)	64%	297 (464)	64%	274 (430)	61%	1,284 (2,088)
Wide Bay	Private	36%	163 (458)	34%	163 (475)	36%	178 (493)	30%	166 (556)	30%	163 (541)	33%	833 (2,523)
	Public	64%	295 (458)	66%	312 (475)	64%	315 (493)	70%	390 (556)	70%	378 (541)	67%	1,690 (2,523)
Queensland	**Private**	**47%**	**3,408 (7,265)**	**45%**	**3,505 (7,832)**	**44%**	**3,512 (7,942)**	**42%**	**3,493 (8,254)**	**40%**	**3,398 (8,393)**	**44%**	**17,316 (39,686)**
	Public	**53%**	**3,857 (7,265)**	**55%**	**4,327 (7,832)**	**56%**	**4,430 (7,942)**	**58%**	**4,761 (8,254)**	**60%**	**4,995 (8,393)**	**56%**	**22,370 (39,686)**

2.4| IV Systemic Therapy rate by year and location of residence

DIAGNOSIS YEAR 2011 – 2015

Locality	Diagnosis Year					
	2011	**2012**	**2013**	**2014**	**2015**	**Total**
	n (N)	**n (N)**	**n (N)**	**n (N)**	**n (N)**	**n (N)**
Metropolitan	29%	30%	30%	31%	31%	30%
	4,651 (15,825)	5,019 (16,609)	5,157 (16,962)	5,294 (17,279)	5,379 (17,413)	25,500 (84,088)
Inner Regional	29%	30%	30%	30%	31%	30%
	1,691 (5,817)	1,797 (5,999)	1,855 (6,257)	1,942 (6,371)	2,026 (6,501)	9,311 (30,945)
Outer Regional	29%	30%	28%	30%	28%	29%
	782 (2,684)	847 (2,835)	780 (2,825)	857 (2,896)	830 (2,946)	4,096 (14,186)
Remote & Very Remote	28%	31%	28%	30%	29%	29%
	141 (506)	169 (542)	150 (531)	161 (534)	158 (536)	779 (2,649)
Queensland	**29%**	**30%**	**30%**	**30%**	**31%**	**30%**
	7,265 (24,832)	**7,832 (25,985)**	**7,942 (26,575)**	**8,254 (27,080)**	**8,393 (27,396)**	**39,686 (131,868)**

3| Patient flows for IV Systemic Therapy

YEAR OF DIAGNOSIS 2011 – 2015

HHS of residence	HHS of IV systemic therapy															
	Cairns and Hinterland	Central Queensland	Central West	Children's Health Queensland	Darling Downs	Gold Coast	Mackay	Metro North	Metro South	North West	South West	Sunshine Coast	Townsville	West Moreton	Wide Bay	Queensland
Cairns and Hinterland	1,556 (79% 92%)	1 (0% 0%)		33 (2% 6%)	1 (0% 0%)	11 (1% 0%)		118 (6% 1%)	99 (5% 1%)			7 (0% 0%)	136 (7% 6%)		1 (0% 0%)	1,963 (5%)
Central Queensland	1 (0% 0%)	1,096 (61% 96%)		29 (2% 5%)	20 (1% 1%)	8 (0% 0%)	9 (0% 1%)	495 (27% 5%)	132 (7% 1%)			3 (0% 0%)	9 (0% 0%)	3 (0% 1%)	4 (0% 0%)	1,809 (5%)
Central West	2 (2% 0%)	17 (18% 1%)	1 (1% 100%)		10 (11% 0%)	1 (1% 0%)	1 (1% 0%)	30 (32% 0%)	8 (8% 0%)	1 (1% 2%)		2 (2% 0%)	22 (23% 1%)			95 (0%)
Darling Downs	1 (0% 0%)	1 (0% 0%)		36 (1% 6%)	1,869 (74% 84%)	12 (0% 0%)		245 (10% 2%)	299 (12% 3%)			34 (1% 1%)	3 (0% 0%)	4 (0% 1%)	6 (0% 0%)	2,512 (6%)
Gold Coast	2 (0% 0%)	1 (0% 0%)		58 (1% 10%)		4,865 (90% 96%)		102 (2% 1%)	392 (7% 4%)			4 (0% 0%)	3 (0% 0%)	2 (0% 0%)	2 (0% 0%)	5,432 (14%)
Mackay	3 (0% 0%)	4 (0% 0%)		24 (2% 4%)	3 (0% 0%)	7 (1% 0%)	773 (59% 97%)	128 (10% 1%)	60 (5% 1%)			5 (0% 0%)	299 (23% 12%)		5 (0% 0%)	1,311 (3%)
Metro North	5 (0% 0%)	2 (0% 0%)		104 (1% 18%)	6 (0% 0%)	13 (0% 0%)	1 (0% 0%)	6,699 (89% 63%)	628 (8% 6%)			50 (1% 2%)	15 (0% 1%)	3 (0% 1%)	6 (0% 0%)	7,532 (19%)
Metro South				157 (2% 27%)	8 (0% 0%)	116 (1% 2%)	3 (0% 0%)	968 (12% 9%)	6,880 (84% 69%)			8 (0% 0%)	4 (0% 0%)	25 (0% 5%)	3 (0% 0%)	8,174 (21%)
North West	5 (3% 0%)			4 (2% 1%)	1 (1% 0%)	5 (3% 0%)		20 (10% 0%)	5 (3% 0%)	57 (30% 90%)			96 (50% 4%)			193 (0%)
South West	1 (1% 0%)			3 (2% 1%)	109 (61% 5%)	1 (1% 0%)		27 (15% 0%)	34 (19% 0%)		1 (1% 100%)	3 (2% 0%)	1 (1% 0%)			180 (0%)
Sunshine Coast	4 (0% 0%)	1 (0% 0%)		47 (1% 8%)	10 (0% 0%)	14 (0% 0%)	1 (0% 0%)	503 (13% 5%)	149 (4% 2%)			3,095 (81% 94%)	2 (0% 0%)		6 (0% 0%)	3,837 (10%)
Torres and Cape	100 (76% 6%)			2 (2% 0%)		1 (1% 0%)		8 (6% 0%)	6 (5% 0%)				13 (10% 1%)		1 (1% 0%)	131 (0%)
Townsville	8 (0% 0%)	1 (0% 0%)		27 (1% 5%)	2 (0% 0%)	3 (0% 0%)	2 (0% 0%)	30 (2% 0%)	32 (2% 0%)	4 (0% 6%)		1 (0% 0%)	1,791 (94% 75%)		4 (0% 0%)	1,906 (5%)
West Moreton		1 (0% 0%)		41 (2% 7%)	185 (9% 8%)	7 (0% 0%)	1 (0% 0%)	379 (18% 4%)	1,040 (50% 10%)	1 (0% 2%)		3 (0% 0%)	1 (0% 0%)	427 (20% 92%)	1 (0% 0%)	2,088 (5%)
Wide Bay	1 (0% 0%)	19 (1% 2%)		27 (1% 5%)	4 (0% 0%)	12 (0% 0%)	2 (0% 0%)	913 (36% 9%)	162 (6% 2%)			61 (2% 2%)	4 (0% 0%)	1 (0% 0%)	1,317 (52% 97%)	2,523 (6%)
Queensland	1,689 **4%**	1,144 **3%**	1 **0%**	592 **1%**	2,228 **6%**	5,076 **13%**	793 **2%**	10,665 **27%**	9,926 **25%**	63 **0%**	1 **0%**	3,276 **8%**	2,399 **6%**	465 **1%**	1,356 **3%**	39,686

1,556 (79% 92%)

There were **1,556** Cairns and Hinterland residents treated by facilities within the Cairns and Hinterland HHS.

In total, there were 1,689 patients treated by facilities within the Cairns and Hinterland HHS, meaning that **92%** (or 1,556 of 1,689) of all patients treated within Cairns and Hinterland HHS were local residents.

There were 1,963 Cairns and Hinterland HHS residents who received IV systemic therapy, meaning that **79%** (or 1,556 of 1,963) were treated within Cairns and Hinterland HHS.

4| Death 0-30 days post IV systemic therapy

YEAR OF DIAGNOSIS 2011 – 2015

Cancer group	Cancer	IV Systemic Therapy (IVST)		Died 0-30 days from received IVST		Male		Age 70+		Disadvantaged		Rural#		1+ Comorbidities		Private hospital	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Bone and soft tissue	Bone	94	42%	2	2%	2	100%	0	0%	0	0%	1	50%	0	0%	1	50%
	Soft Tissue	284	32%	25	9%	10	40%	4	16%	2	8%	10	40%	11	44%	15	60%
Breast	Breast	7,784	49%	157	2%	0	0%	31	20%	28	18%	60	38%	41	26%	79	50%
CNS and Brain	Brain	394	24%	57	14%	39	68%	5	9%	5	9%	14	25%	28	49%	49	86%
	Central Nervous System	10	17%	1	10%	1	100%	0	0%	0	0%	1	100%	1	100%	0	0%
Colorectal	Anus (not incl Anal Canal)	25	47%	3	12%	2	67%	1	33%	0	0%	1	33%	1	33%	1	33%
	Colon	3,118	32%	354	11%	199	56%	144	41%	54	15%	127	36%	150	42%	201	57%
	Rectal	1,982	45%	147	7%	96	65%	48	33%	21	14%	46	31%	58	39%	93	63%
	Other colorectal	471	37%	19	4%	8	42%	2	11%	6	32%	8	42%	6	32%	13	68%
Endocrine	Adrenal/Pituitary/Thymus Glands	71	42%	3	4%	1	33%	0	0%	1	33%	1	33%	2	67%	0	0%
	Thyroid Gland	113	4%	7	6%	3	43%	2	29%	1	14%	2	29%	2	29%	4	57%
Gynaecological	Cervix	415	43%	12	3%	0	0%	1	8%	3	25%	4	33%	5	42%	3	25%
	Ovary	958	71%	90	9%	0	0%	35	39%	22	24%	34	38%	29	32%	55	61%
	Uterus	611	26%	37	6%	0	0%	7	19%	6	16%	17	46%	20	54%	19	51%
	Vagina	34	50%	1	3%	0	0%	0	0%	0	0%	1	100%	0	0%	1	100%
	Vulva	76	22%	2	3%	0	0%	0	0%	1	50%	2	100%	1	50%	0	0%
	Other Gynaecological	164	66%	11	7%	0	0%	4	36%	3	27%	4	36%	3	27%	8	73%
Haematological	Hodgkin Lymphoma	535	90%	9	2%	6	67%	2	22%	6	67%	4	44%	5	56%	4	44%
	Leukaemia (acute)	1,041	76%	149	14%	76	51%	60	40%	29	19%	63	42%	83	56%	55	37%
	Leukaemia (chronic)	637	31%	35	5%	28	80%	18	51%	8	23%	17	49%	14	40%	19	54%
	Myelodysplastic syndrome (MDS)	85	25%	18	21%	12	67%	13	72%	4	22%	5	28%	8	44%	9	50%
	Myeloma	1185	69%	143	12%	86	60%	86	60%	31	22%	53	37%	84	59%	88	62%
	Non-Hodgkin Lymphoma	3,335	69%	202	6%	148	73%	121	60%	39	19%	69	34%	130	64%	88	44%
	Other Haematological	391	15%	54	14%	28	52%	26	48%	13	24%	21	39%	31	57%	18	33%

4| Death 0-30 days post IV systemic therapy (continued)

Cancer group	Cancer	IV Systemic Therapy (IVST)		Died 0-30 days from received IVST		Male		Age 70+		Disadvantaged		Rural[#]		1+ Comorbidities		Private hospital	
		n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Head and neck	Larynx	157	27%	12	8%	12	100%	4	33%	3	25%	7	58%	9	75%	4	33%
	Nasal Cavity and Paranasal Sinuses	49	32%	8	16%	5	63%	1	13%	2	25%	5	63%	2	25%	2	25%
	Oral Cavity	246	23%	18	7%	14	78%	2	11%	3	17%	5	28%	10	56%	4	22%
	Pharynx	1,098	70%	29	3%	22	76%	5	17%	7	24%	8	28%	8	28%	10	34%
	Salivary Glands	26	8%	4	15%	4	100%	2	50%	1	25%	2	50%	1	25%	2	50%
Hepatobiliary	Biliary Tract	185	37%	24	13%	14	58%	6	25%	3	13%	7	29%	15	63%	16	67%
	Gallbladder	100	32%	17	17%	6	35%	7	41%	3	18%	5	29%	9	53%	12	71%
	Liver	370	23%	35	9%	20	57%	11	31%	8	23%	9	26%	25	71%	20	57%
	Pancreas	1,216	44%	240	20%	155	65%	105	44%	43	18%	68	28%	136	57%	161	67%
Lung	NSCLC	3,790	41%	643	17%	436	68%	206	32%	149	23%	261	41%	304	47%	269	42%
	SCLC	920	77%	146	16%	90	62%	64	44%	33	23%	54	37%	74	51%	37	25%
	Other Lung	43	4%	3	7%	0	0%	1	33%	1	33%	2	67%	2	67%	1	33%
Melanoma	Melanoma	1,349	7%	176	13%	124	70%	58	33%	38	22%	74	42%	63	36%	85	48%
Mesothelioma	Mesothelioma	361	47%	39	11%	33	85%	16	41%	4	10%	12	31%	14	36%	27	69%
Ophthalmic	Other Ophthalmic	64	18%	12	19%	7	58%	4	33%	0	0%	3	25%	2	17%	11	92%
Prostate	Prostate	1,628	8%	147	9%	147	100%	73	50%	20	14%	44	30%	43	29%	87	59%
Upper GI	Oesophagus	654	47%	74	11%	58	78%	22	30%	15	20%	26	35%	27	36%	37	50%
	Small intestine	139	22%	17	12%	11	65%	6	35%	1	6%	8	47%	8	47%	10	59%
	Stomach	788	43%	102	13%	78	76%	29	28%	28	27%	41	40%	48	47%	48	47%
Urological	Bladder	1,029	41%	38	4%	29	76%	17	45%	10	26%	11	29%	26	68%	24	63%
	Kidney	296	9%	32	11%	25	78%	11	34%	6	19%	11	34%	12	38%	15	47%
	Testis	471	60%	5	1%	5	100%	0	0%	0	0%	0	0%	3	60%	2	40%
	Other Urological	191	29%	19	10%	15	79%	10	53%	9	47%	13	68%	8	42%	15	79%
Other	Other invasive cancers	703	14%	122	17%	70	57%	49	40%	27	22%	55	45%	53	43%	63	52%
All cancers		**39,686**	**30%**	**3,500**	**9%**	**2,125**	**61%**	**1,319**	**38%**	**697**	**20%**	**1,296**	**37%**	**1,615**	**46%**	**1,785**	**51%**

See appendix 2 for cancer descriptions.

[#]Rural includes inner regional, outer regional, remote and very remote areas, see glossary for definition

5| Spotlight on common cancers treated with IV systemic therapy

Breast, Colorectal, Lung, Upper GI and Haematology cancers

5.1| Invasive breast cancer

5.1.1 Characteristics of invasive breast cancer patients receiving IV systemic therapy

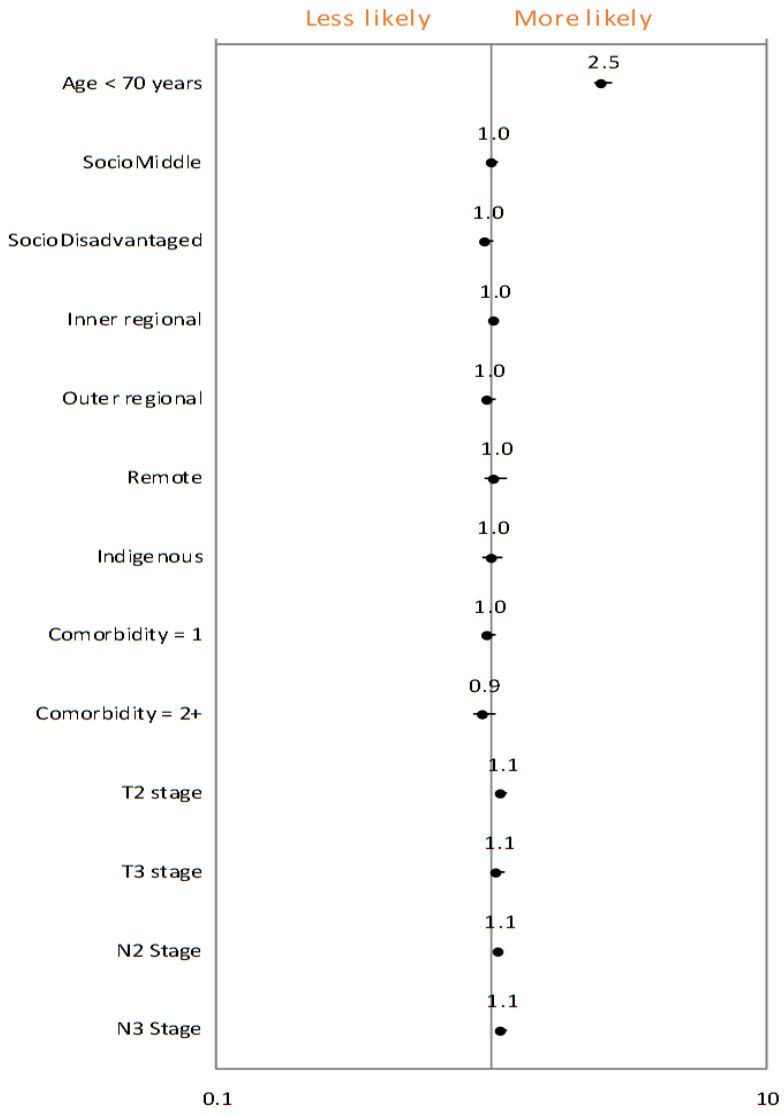
YEAR OF DIAGNOSIS 2011 – 2015

	Diagnosis		IV systemic therapy	
	N	Qld %	n	%
Age Group				
0-49	3,568	22%	2,638	74%
50-69	8,188	51%	4,266	52%
70+	4,245	27%	880	21%
Indigenous status				
Indigenous	408	3%	231	57%
Other than Indigenous	15,593	97%	7,553	48%
Socioeconomic status				
Affluent	2,717	17%	1,345	50%
Middle	10,341	65%	5,047	49%
Disadvantaged	2,936	18%	1,390	47%
Remoteness				
Metropolitan	10,657	67%	5,139	48%
Inner Regional	3,443	22%	1,704	49%
Outer Regional	1,635	10%	801	49%
Remote & very remote	266	2%	140	53%
MDT[§]				
MDT Review	6,046	38%	3,160	52%
No MDT Review	9,955	62%	4,624	46%
Comorbidities				
0-1 Comorbidities	15,161	95%	7,464	49%
2+ Comorbidities	840	5%	320	38%
HHS of residence				
Cairns and Hinterland	853	5%	389	46%
Central Queensland	612	4%	322	53%
Central West	40	0%	16	40%
Darling Downs	948	6%	488	51%
Gold Coast	2,134	13%	1,089	51%
Mackay	530	3%	278	52%
Metro North	3,283	21%	1,489	45%
Metro South	3,471	22%	1,713	49%
North West	53	0%	30	57%
South West	83	1%	42	51%
Sunshine Coast	1,637	10%	691	42%
Torres and Cape	35	0%	22	63%
Townsville	707	4%	409	58%
West Moreton	769	5%	397	52%
Wide Bay	846	5%	409	48%
Queensland	**16,001**	**100%**	**7,784**	**49%**

§Includes MDT's that use QOOL™ and therefore numbers are under reported.

5.1.2 Factors associated with receiving IV systemic therapy for breast cancer

YEAR OF DIAGNOSIS 2011 – 2015



The above graph (forest plot) is a graphical display of the hazard ratios for each covariate in the analysis. The dot represents the estimate of the hazard ratio with the confidence interval of the estimate represented by a horizontal line. The central vertical line represents no effect, if the confidence intervals for an estimate cross this central vertical line then the effect is considered not to be statistically significant. Hazard ratios for those from Middle and Disadvantaged socioeconomic areas are obtained by comparing to those from Affluent areas. Inner and Outer Regional, Remote areas are compared with Major Cities. Patients with comorbidities are compared to those with no comorbidities

5.1.3 Invasive breast cancer patients < 70 years of age with positive axillary lymph node (ALN) receiving IV systemic therapy

YEAR OF DIAGNOSIS 2011 – 2015

	Year of diagnosis					
	2011	**2012**	**2013**	**2014**	**2015**	**Total**
Number of invasive breast cancer patients aged < 70 years	2,147	2,334	2,446	2,427	2,402	11,756
With positive axillary nodes	728	789	745	727	664	3,653
Received IV systemic therapy	618	699	687	640	588	3,232
Percent of invasive breast cancer patients aged < 70 years with positive axillary nodes that received IV systemic therapy	85%	89%	92%	88%	89%	88%

5.1.4 Invasive breast cancer patients older than 70 years of age with positive axillary node receiving IV systemic therapy

YEAR OF DIAGNOSIS 2011 – 2015

	Year of diagnosis					
	2011	**2012**	**2013**	**2014**	**2015**	**Total**
Number of invasive breast cancer patients aged > 70 years	772	805	849	919	900	4,245
With positive axillary nodes	173	208	184	210	204	979
Received IV systemic therapy	76	76	68	88	98	406
Percent of invasive breast cancer patients aged >70 years with positive axillary nodes that received IV systemic therapy	44%	37%	37%	42%	48%	41%

5.1.5 Where do invasive breast cancer patients < 70 years of age with positive axillary lymph node receive IV systemic therapy?

YEAR OF DIAGNOSIS 2011 – 2015

AIHW Peer Group	Year of diagnosis											
	2011		2012		2013		2014		2015		Total	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Principal referral hospitals	102	17%	148	21%	152	22%	132	21%	121	21%	655	20%
Group A hospitals	265	43%	242	35%	299	44%	311	49%	278	47%	1,395	43%
Group B hospitals	32	5%	40	6%	39	6%	40	6%	44	7%	195	6%
Other hospitals	219	35%	269	38%	197	29%	157	25%	145	25%	987	31%
Queensland	**618**	**100%**	**699**	**100%**	**687**	**100%**	**640**	**100%**	**588**	**100%**	**3,232**	**100%**

See appendix 4 for AIHW Peer Group description.

5.2|Colorectal cancer

5.2.1 Characteristics of colorectal cancer patients receiving IV systemic therapy

YEAR OF DIAGNOSIS 2011 – 2015

	Diagnosis		IV systemic therapy	
	N	Qld %	n	%
Gender				
Male	8,351	54%	3,231	39%
Female	6,982	46%	2,365	34%
Age Group				
0-49	1,529	10%	776	51%
50-69	5,994	39%	3,008	50%
70+	7,810	51%	1,812	23%
Indigenous status				
Indigenous	387	3%	156	40%
Other than Indigenous	14,946	97%	5,440	36%
Socioeconomic status				
Affluent	2,014	13%	777	39%
Middle	9,974	65%	3,694	37%
Disadvantaged	3,341	22%	1,125	34%
Remoteness				
Metropolitan	9,575	62%	3,535	37%
Inner Regional	3,716	24%	1,330	36%
Outer Regional	1,745	11%	613	35%
Remote & very remote	297	2%	118	40%
MDT[§]				
MDT Review	4,796	31%	2,107	44%
No MDT Review	10,537	69%	3,489	33%
Comorbidities				
0-1 Comorbidities	12,855	84%	4,958	39%
2+ Comorbidities	2,478	16%	638	26%
HHS of residence				
Cairns and Hinterland	842	5%	282	33%
Central Queensland	681	4%	281	41%
Central West	41	0%	14	34%
Darling Downs	1,112	7%	396	36%
Gold Coast	1,939	13%	809	42%
Mackay	519	3%	190	37%
Metro North	2,944	19%	996	34%
Metro South	2,997	20%	1,066	36%
North West	63	0%	32	51%
South West	91	1%	30	33%
Sunshine Coast	1,573	10%	572	36%
Torres and Cape	34	0%	15	44%
Townsville	688	4%	245	36%
West Moreton	758	5%	312	41%
Wide Bay	1,051	7%	356	34%
Queensland	**15,333**	**100%**	**5,596**	**36%**

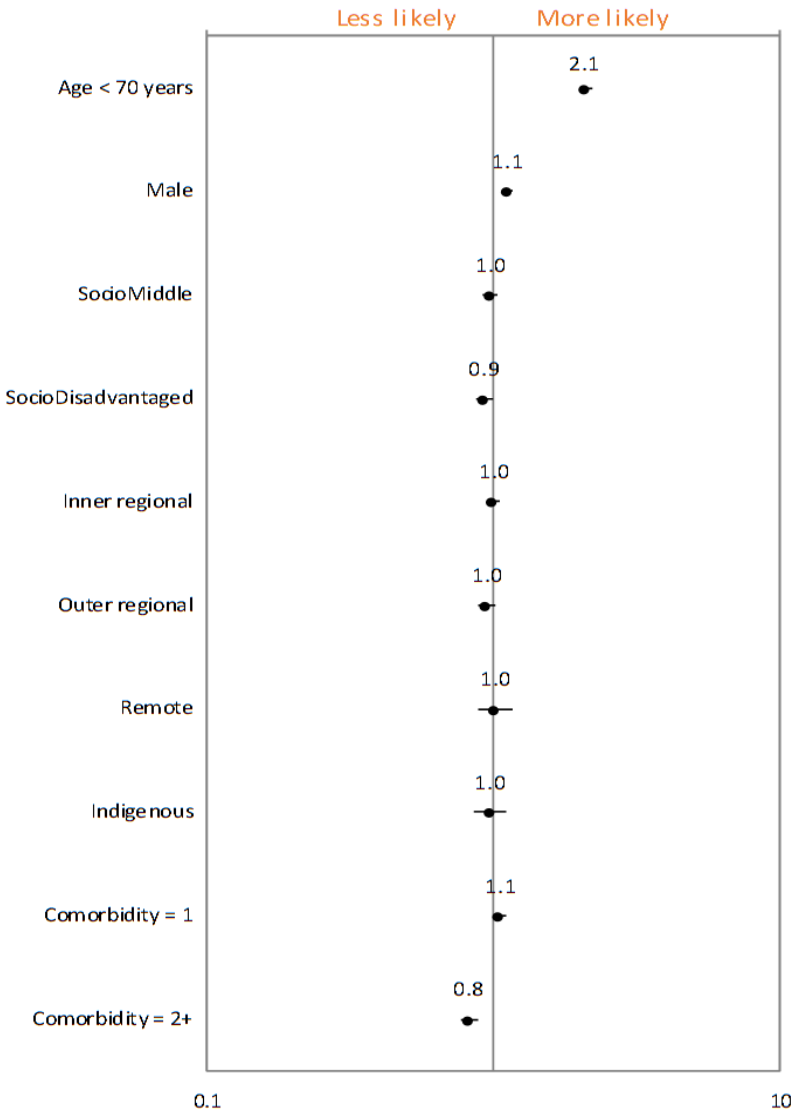
§Includes MDT's that use QOOL™ and therefore numbers are under reported.

** For completeness in reporting, patients with neuroendocrine and carcinoid tumours have been included in this report. This contrasts with the Queensland Colorectal Cancer Quality Index 2005-2014 report, in which these patients were removed from the final analysis.*

*** Oral Capecitabine not included in analysis*

5. 2.2 Factors associated with receiving IV systemic therapy for colorectal cancer

YEAR OF DIAGNOSIS 2011 – 2015



The above graph (forest plot) is a graphical display of the hazard ratios for each covariate in the analysis. The dot represents the estimate of the hazard ratio with the confidence interval of the estimate represented by a horizontal line. The central vertical line represents no effect, if the confidence intervals for an estimate cross this central vertical line then the effect is considered not to be statistically significant. Hazard ratios for those from Middle and Disadvantaged socioeconomic areas are obtained by comparing to those from Affluent areas. Inner and Outer Regional, Remote areas are compared with Major Cities. Patients with comorbidities are compared to those with no comorbidities.

5.2.3 Stage III colorectal cancer patients receiving adjuvant IV systemic therapy

YEAR OF DIAGNOSIS 2011 – 2015

		Year of diagnosis					
		2011	**2012**	**2013**	**2014**	**2015**	**Total**
Colon	Patients diagnosed with stage III colon cancer aged < 70 years	321	413	289	453	418	1,894
	Received adjuvant IV systemic therapy	136	206	154	267	242	1,005
	Percent of patients diagnosed with stage III colon cancer aged < 70 years that received adjuvant IV systemic therapy	42%	50%	53%	59%	58%	53%
Rectal	Patients diagnosed with stage III rectal cancer < 70 years of age	164	202	194	202	227	989
	Received adjuvant IV systemic therapy	84	124	113	110	124	555
	Percent of patients diagnosed with stage III rectal cancer aged < 70 years that received adjuvant IV systemic therapy	51%	61%	58%	54%	55%	56%

5.2.4 Where do stage III colorectal cancer patients receive adjuvant IV systemic therapy?

YEAR OF DIAGNOSIS 2011 – 2015

AIHW Peer Group	Year of diagnosis											
	2011		2012		2013		2014		2015		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Principal referral hospitals	33	15%	79	24%	70	26%	93	24%	85	23%	360	23%
Group A hospitals	86	39%	115	35%	99	36%	139	37%	140	38%	579	37%
Group B hospitals	17	8%	29	9%	6	2%	28	7%	32	9%	112	7%
Other hospitals	85	38%	107	32%	97	36%	120	32%	109	30%	518	33%
Queensland	221	**100%**	330	**100%**	272	**100%**	380	**100%**	366	**100%**	1,569	**100%**

See appendix 4 for AIHW Peer Group description.

5.3|Lung cancer

5.3.1 Characteristics of lung cancer patients receiving IV systemic therapy

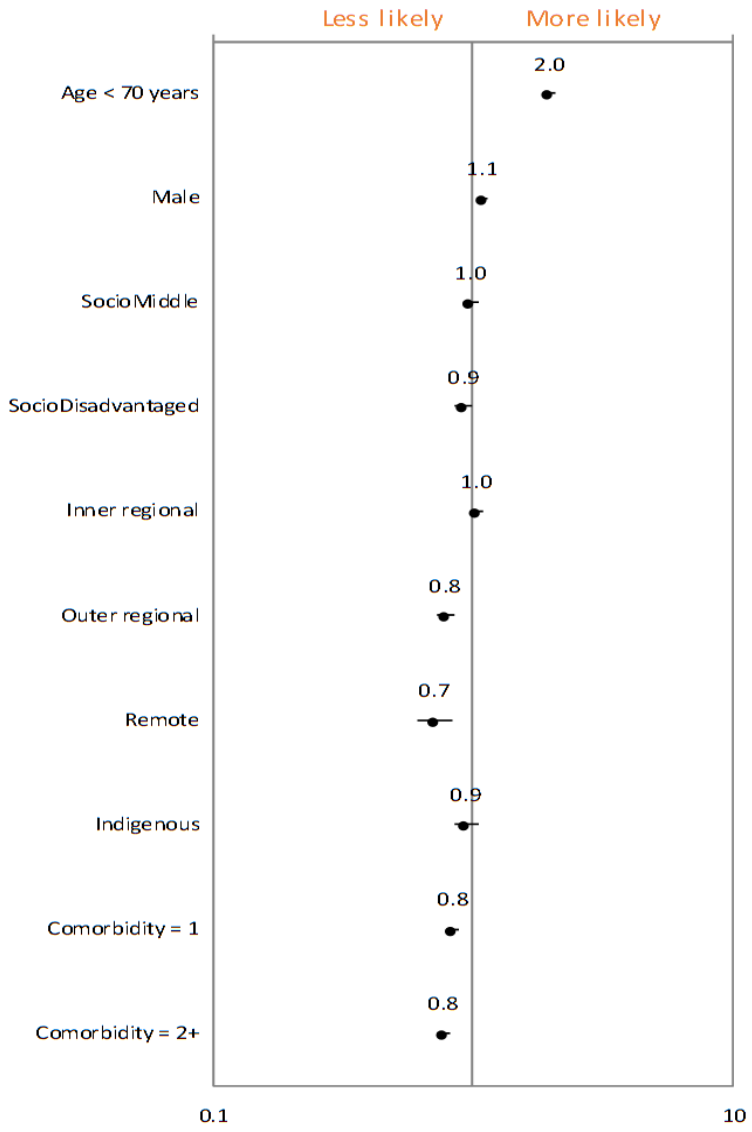
YEAR OF DIAGNOSIS 2011 – 2015

	Diagnosis		IV systemic therapy	
	N	Qld %	n	%
Gender				
Male	6,873	60%	2,885	42%
Female	4,532	40%	1,868	41%
Age Group				
0-49	432	4%	272	63%
50-69	4,971	44%	2,789	56%
70+	6,002	53%	1,692	28%
Indigenous status				
Indigenous	491	4%	208	42%
Other than Indigenous	10,914	96%	4,545	42%
Socioeconomic status				
Affluent	1,189	10%	529	44%
Middle	7,241	63%	3,067	42%
Disadvantaged	2,974	26%	1,157	39%
Remoteness				
Metropolitan	7,024	62%	2,996	43%
Inner Regional	2,759	24%	1,202	44%
Outer Regional	1,311	11%	456	35%
Remote & very remote	311	3%	99	32%
MDT[§]				
MDT Review	5,819	51%	2,794	48%
No MDT Review	5,586	49%	1,959	35%
Comorbidities				
0-1 Comorbidities	8,670	76%	3,860	45%
2+ Comorbidities	2,735	24%	893	33%
HHS of residence				
Cairns and Hinterland	626	5%	190	30%
Central Queensland	535	5%	227	42%
Central West	44	0%	8	18%
Darling Downs	662	6%	263	40%
Gold Coast	1,436	13%	651	45%
Mackay	362	3%	143	40%
Metro North	2,120	19%	890	42%
Metro South	2,255	20%	961	43%
North West	56	0%	28	50%
South West	73	1%	15	21%
Sunshine Coast	1,113	10%	454	41%
Torres and Cape	60	1%	16	27%
Townsville	574	5%	228	40%
West Moreton	584	5%	269	46%
Wide Bay	905	8%	410	45%
Queensland	**11,405**	**100%**	**4,753**	**42%**

§Includes MDT's that use QOOLTM and therefore numbers are under reported.

5.3.2 Factors associated with receiving IV systemic therapy for lung cancer

YEAR OF DIAGNOSIS 2011 – 2015



The above graph (forest plot) is a graphical display of the hazard ratios for each covariate in the analysis. The dot represents the estimate of the hazard ratio with the confidence interval of the estimate represented by a horizontal line. The central vertical line represents no effect, if the confidence intervals for an estimate cross this central vertical line then the effect is considered not to be statistically significant. Hazard ratios for those from Middle and Disadvantaged socioeconomic areas are obtained by comparing to those from Affluent areas. Inner and Outer Regional, Remote areas are compared with Major Cities. Patients with comorbidities are compared to those with no comorbidities.

5.4| Upper GI

5.4.1 Characteristics of upper GI* cancer patients receiving IV systemic therapy

YEAR OF DIAGNOSIS 2011 – 2015

	Diagnosis		Had IV systemic therapy only		Concurrent IVST and XRT^		Total IV systemic therapy	
	N	Qld %	n	%	n	%	n	IVST %
Gender								
Male	2,634	68%	767	63%	441	37%	1,208	46%
Female	1,233	32%	255	68%	118	32%	373	30%
Age Group								
0-49	295	8%	119	77%	36	23%	155	53%
50-69	1,643	42%	593	64%	334	36%	927	56%
70+	1,929	50%	310	62%	189	38%	499	26%
Indigenous status								
Indigenous	146	4%	22	41%	32	59%	54	37%
Other than Indigenous	3,721	96%	537	35%	990	65%	1,527	41%
Socioeconomic status								
Affluent	526	14%	159	67%	80	33%	239	45%
Middle	2,442	63%	652	65%	356	35%	1,008	41%
Disadvantaged	898	23%	211	63%	123	37%	334	37%
Remoteness								
Metropolitan	2,413	62%	639	65%	350	35%	989	41%
Inner Regional	939	24%	256	65%	139	35%	395	42%
Outer Regional	428	11%	101	64%	57	36%	158	37%
Remote & very remote	87	2%	26	67%	13	33%	39	45%
MDT[§]								
MDT Review	1,587	41%	495	61%	317	39%	812	51%
No MDT Review	2,280	59%	527	69%	242	31%	769	34%
Comorbidities								
0-1 Comorbidities	3,080	80%	870	65%	469	35%	1,339	43%
2+ Comorbidities	787	20%	152	63%	90	37%	242	31%
Cancer type								
Oesophagus	1,388	36%	277	42%	377	58%	654	47%
Adenocarcinomas	*705*	*18%*	*187*	*53%*	*169*	*47%*	*356*	*50%*
Squamous Carcinomas	*559*	*14%*	*68*	*25%*	*199*	*75%*	*267*	*48%*
Other	*124*	*3%*	*22*	*71%*	*9*	*29%*	*31*	*25%*
Small intestine	627	16%	131	94%	8	6%	139	22%
Stomach	1,852	48%	614	78%	174	22%	788	43%
HHS of residence								
Cairns and Hinterland	218	6%	43	56%	34	44%	77	35%
Central Queensland	158	4%	40	60%	27	40%	67	42%
Central West	8	0%	5	100%	0	0%	5	63%
Darling Downs	277	7%	79	73%	29	27%	108	39%
Gold Coast	444	11%	134	61%	85	39%	219	49%
Mackay	115	3%	34	67%	17	33%	51	44%
Metro North	720	19%	216	69%	97	31%	313	43%
Metro South	825	21%	197	66%	103	34%	300	36%
North West	17	0%	8	80%	2	20%	10	59%
South West	17	0%	3	75%	1	25%	4	24%
Sunshine Coast	388	10%	101	63%	60	37%	161	41%
Torres and Cape	23	1%	6	55%	5	45%	11	48%
Townsville	205	5%	39	59%	27	41%	66	32%
West Moreton	188	5%	51	65%	27	35%	78	41%
Wide Bay	264	7%	66	59%	45	41%	111	42%
Queensland	**3,867**	**100%**	**1,022**	**65%**	**559**	**35%**	**1,581**	**41%**

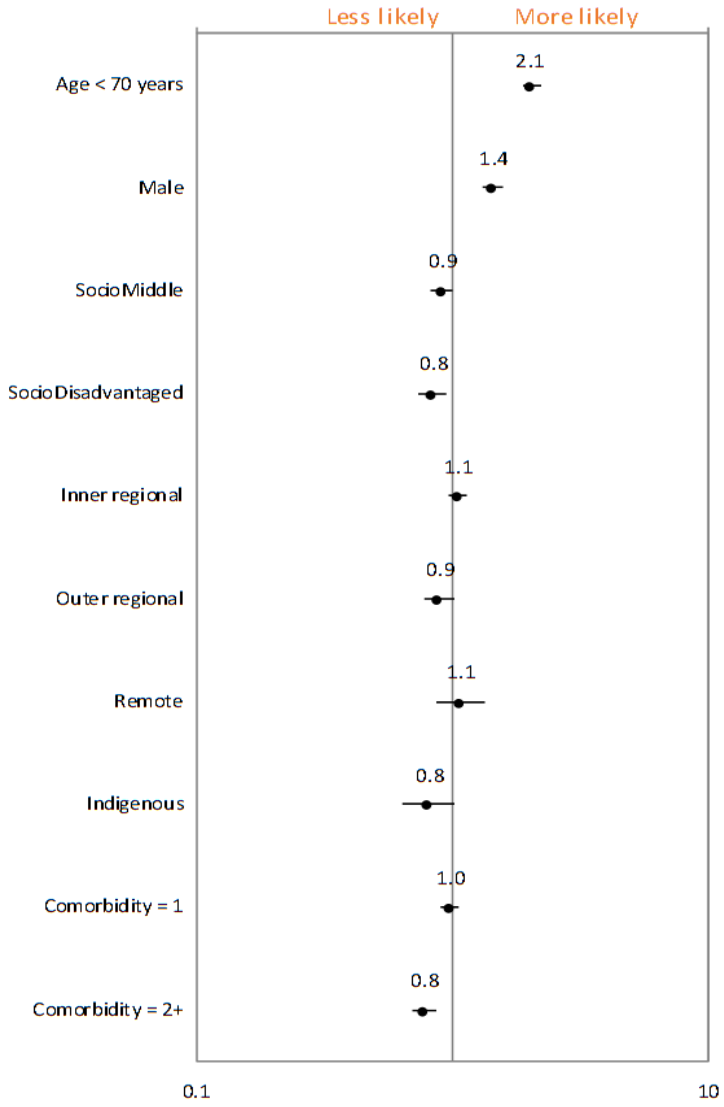
**UGI includes cancer sites oesophageal, stomach and small intestine*

§Includes MDT's that use QOOLTM and therefore numbers are under reported.

^Concurrent: treatments of IV systemic therapy and radiation therapy are overlapping.

5.4.2 Factors associated with receiving IV systemic therapy for upper GI cancer

YEAR OF DIAGNOSIS 2011 – 2015



The above graph (forest plot) is a graphical display of the hazard ratios for each covariate in the analysis. The dot represents the estimate of the hazard ratio with the confidence interval of the estimate represented by a horizontal line. The central vertical line represents no effect, if the confidence intervals for an estimate cross this central vertical line then the effect is considered not to be statistically significant. Hazard ratios for those from Middle and Disadvantaged socioeconomic areas are obtained by comparing to those from Affluent areas. Inner and Outer Regional, Remote areas are compared with Major Cities. Patients with comorbidities are compared to those with no comorbidities.

5.5|Haematological

5.5.1 Characteristics of haematological cancer patients receiving IV systemic therapy and bone marrow transplant

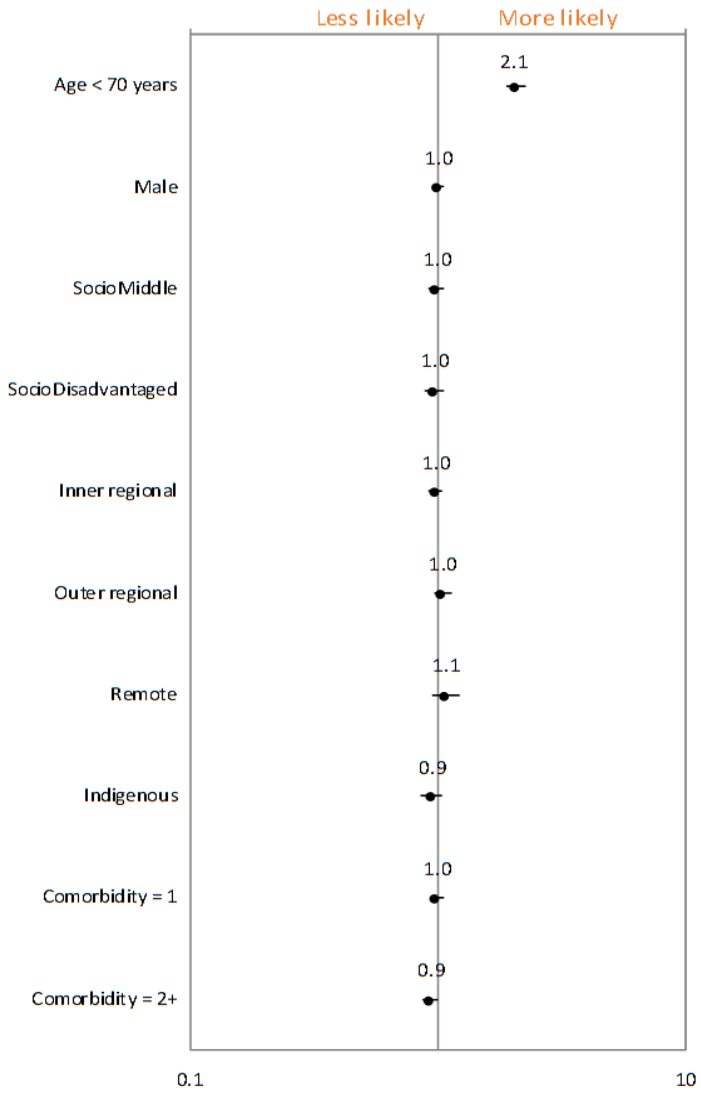
YEAR OF DIAGNOSIS 2011-2015

	Diagnosis		IV systemic therapy		Had transplant	
	N	Qld %	n	IVST%	n	%
Gender						
Male	7,941	59%	4,282	54%	759	10%
Female	5,591	41%	2,927	52%	437	8%
Age Group						
0-49	2,227	16%	1,597	72%	386	17%
50-69	5,048	37%	3,044	60%	749	15%
70+	6,257	46%	2,568	41%	61	1%
Indigenous status						
Indigenous	385	3%	226	59%	41	11%
Other than Indigenous	13,147	97%	6,983	53%	1,155	9%
Socioeconomic status						
Affluent	2,031	15%	1,094	54%	185	9%
Middle	8,715	64%	4,660	53%	790	9%
Disadvantaged	2,782	21%	1,453	52%	220	8%
Remoteness						
Metropolitan	8,761	65%	4,656	53%	778	9%
Inner Regional	3,148	23%	1,683	53%	266	8%
Outer Regional	1,384	10%	732	53%	125	9%
Remote & very remote	239	2%	138	58%	27	11%
Comorbidities						
0-1 Comorbidities	11,162	82%	6,037	54%	1,052	9%
2+ Comorbidities	2,370	18%	1,172	49%	144	6%
Cancer type						
Hodgkin Lymphoma	594	4%	535	90%	51	9%
Leukaemia (acute)	1,363	10%	1,041	76%	256	19%
Leukaemia (chronic)	2,076	15%	637	31%	28	1%
Myelodysplastic syndrome (MDS)	346	3%	85	25%	10	3%
Myeloma	1,721	13%	1,185	69%	489	28%
Non-Hodgkin Lymphoma	4,854	36%	3,335	69%	287	6%
Other Haematological	2,578	19%	391	15%	75	3%
HHS of residence						
Cairns and Hinterland	665	5%	362	54%	58	9%
Central Queensland	542	4%	310	57%	43	8%
Central West	38	0%	21	55%	4	11%
Darling Downs	891	7%	470	53%	70	8%
Gold Coast	1,696	13%	947	56%	160	9%
Mackay	410	3%	211	51%	47	11%
Metro North	2,712	20%	1,377	51%	218	8%
Metro South	2,778	21%	1,515	55%	255	9%
North West	36	0%	22	61%	6	17%
South West	50	0%	27	54%	3	6%
Sunshine Coast	1,466	11%	774	53%	124	8%
Torres and Cape	46	0%	26	57%	5	11%
Townsville	690	5%	334	48%	56	8%
West Moreton	653	5%	376	58%	74	11%
Wide Bay	859	6%	437	51%	73	8%
Queensland	**13,532**	**100%**	**7,209**	**53%**	**1,196**	**9%**

§Includes MDT's that use QOOLTM and therefore numbers are under reported.

5.5.2 Factors associated with receiving IV systemic therapy for acute leukaemia

YEAR OF DIAGNOSIS 2011-2015



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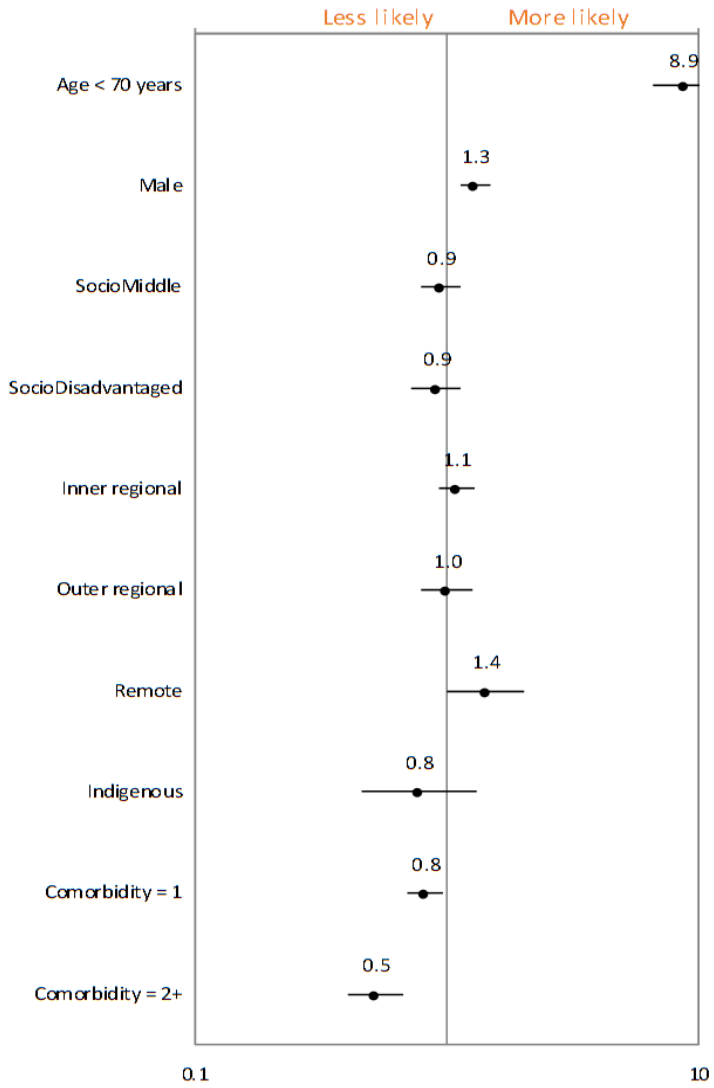
5.5.3 Factors associated with receiving autologous bone marrow transplant for myeloma

YEAR OF DIAGNOSIS 2011-2015



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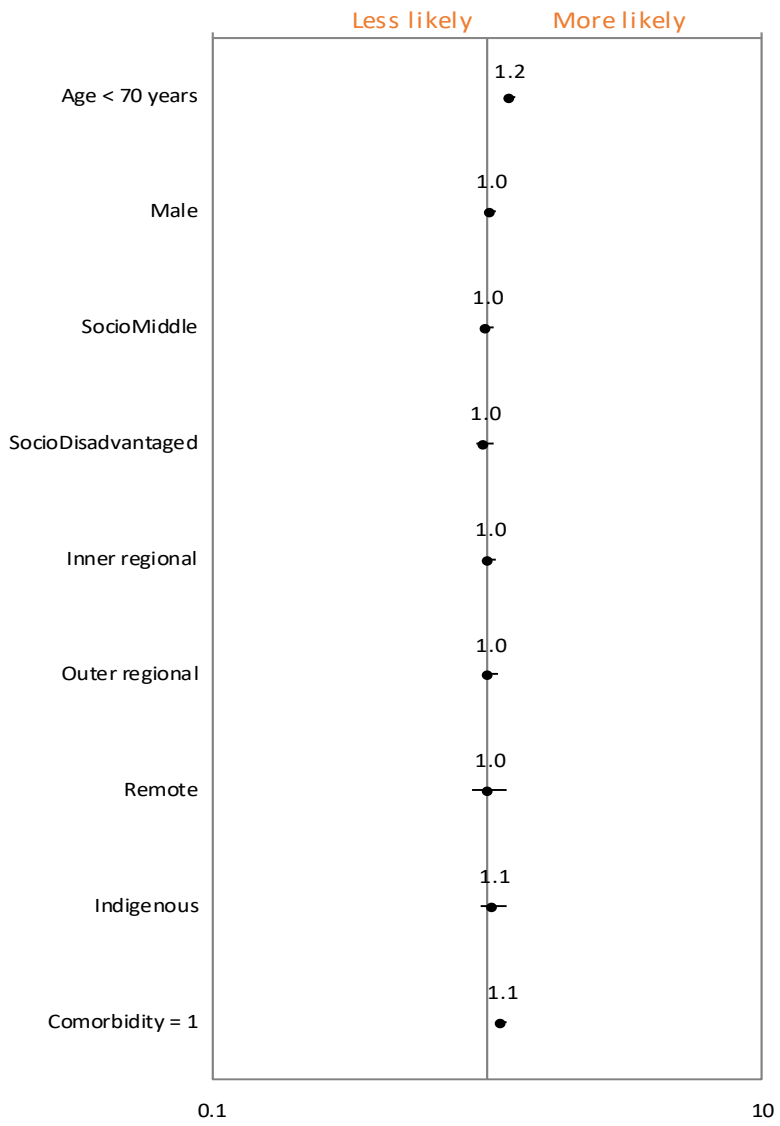
5.5.4 Factors associated with receiving IV systemic therapy for non-Hodgkin lymphoma

YEAR OF DIAGNOSIS 2011-2015



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5.5.5 Timeliness of treatment for acute leukaemia patients receiving IV systemic therapy

YEAR OF DIAGNOSIS 2011-2015

	IV systemic therapy	Days from diagnosis to first IV systemic therapy		
	N	≤ 7 days % (n)	8-15 days % (n)	> 15 days % (n)
Gender				
Male	575	71% (406)	9% (52)	20% (117)
Female	466	71% (330)	11% (52)	18% (84)
Age Group				
0-49	485	90% (436)	6% (28)	4% (21)
50-69	326	64% (209)	12% (40)	24% (77)
70+	230	40% (91)	16% (36)	45% (103)
Indigenous status				
Indigenous	53	83% (44)	9% (5)	8% (4)
Other than Indigenous	988	70% (692)	10% (99)	20% (197)
Socioeconomic status				
Affluent	166	71% (118)	10% (17)	19% (31)
Middle	672	71% (478)	10% (65)	19% (129)
Disadvantaged	203	69% (140)	11% (22)	20% (41)
Remoteness				
Metropolitan	672	75% (505)	8% (56)	17% (111)
Inner Regional	212	58% (124)	15% (31)	27% (57)
Outer Regional	127	66% (84)	11% (14)	23% (29)
Remote & very remote	30	77% (23)	10% (3)	13% (4)
MDT[§]				
MDT Review	69	81% (56)	10% (7)	9% (6)
No MDT Review	972	70% (680)	10% (97)	20% (195)
Comorbidities				
0-1 Comorbidities	870	72% (629)	9% (81)	18% (160)
2+ Comorbidities	171	63% (107)	13% (23)	24% (41)
HHS				
Cairns and Hinterland	57	68% (39)	9% (5)	23% (13)
Central Queensland	36	53% (19)	14% (5)	33% (12)
Central West	3	67% (2)	33% (1)	0% ()
Darling Downs	73	62% (45)	12% (9)	26% (19)
Gold Coast	129	74% (96)	9% (11)	17% (22)
Mackay	35	63% (22)	17% (6)	20% (7)
Metro North	191	72% (138)	7% (13)	21% (40)
Metro South	231	81% (188)	5% (12)	13% (31)
North West	5	80% (4)	0% ()	20% (1)
South West	7	71% (5)	0% ()	29% (2)
Sunshine Coast	92	61% (56)	17% (16)	22% (20)
Torres and Cape	8	75% (6)	13% (1)	13% (1)
Townsville	54	61% (33)	17% (9)	22% (12)
West Moreton	65	78% (51)	6% (4)	15% (10)
Wide Bay	55	58% (32)	22% (12)	20% (11)
Queensland	1,041	71% (736)	10% (104)	19% (201)

§Includes MDT's that use QOOLTM and therefore numbers are under reported.

5.5.6 Systemic therapy IV rate for acute leukaemia patients by > 70years of age and < 70 years of age

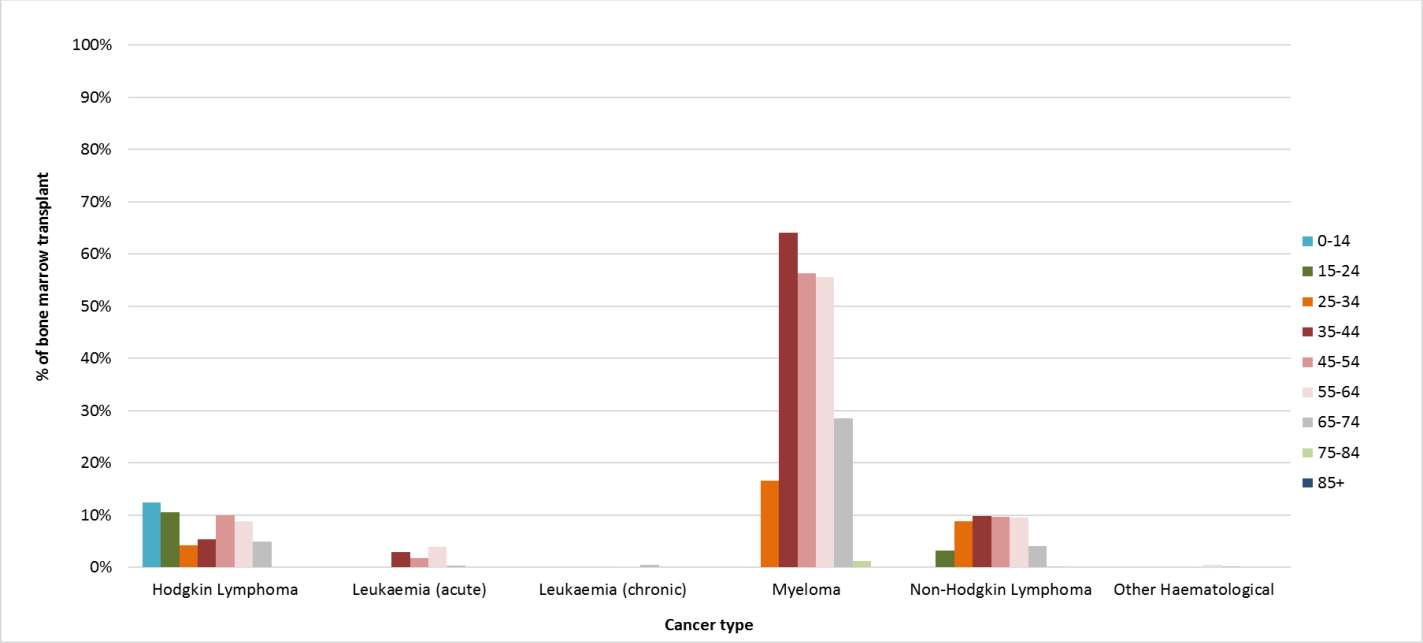
YEAR OF DIAGNOSIS 2011-2015

	Diagnosis		Aged < 70			Aged ≥ 70		
	N	Qld %	N	n	%	N	n	%
Gender								
Male	756	55%	468	439	94%	288	136	47%
Female	607	45%	388	372	96%	219	94	43%
Indigenous status								
Indigenous	64	5%	53	50	94%	11	3	27%
Other than Indigenous	1,299	95%	803	761	95%	496	227	46%
Socioeconomic status								
Affluent	209	15%	140	129	92%	69	37	54%
Middle	872	64%	554	527	95%	318	145	46%
Disadvantaged	282	21%	162	155	96%	120	48	40%
Remoteness								
Metropolitan	873	64%	556	525	94%	317	147	46%
Inner Regional	300	22%	168	162	96%	132	50	38%
Outer Regional	156	11%	106	99	93%	50	28	56%
Remote & very remote	34	2%	26	25	96%	8	5	63%
Comorbidities								
0-1 Comorbidities	1,108	81%	725	688	95%	383	182	48%
2+ Comorbidities	255	19%	131	123	94%	124	48	39%
HHS								
Cairns and Hinterland	69	5%	50	47	94%	19	10	53%
Central Queensland	49	4%	25	24	96%	24	12	50%
Central West	4	0%	4	3	75%	0	0	-
Darling Downs	100	7%	50	48	96%	50	25	50%
Gold Coast	183	13%	97	91	94%	86	38	44%
Mackay	44	3%	30	29	97%	14	6	43%
Metro North	249	18%	165	153	93%	84	38	45%
Metro South	299	22%	195	186	95%	104	45	43%
North West	7	1%	5	5	100%	2	0	0%
South West	7	1%	6	6	100%	1	1	100%
Sunshine Coast	126	9%	68	65	96%	58	27	47%
Torres and Cape	8	1%	7	7	100%	1	1	100%
Townsville	67	5%	44	40	91%	23	14	61%
West Moreton	72	5%	61	59	97%	11	6	55%
Wide Bay	79	6%	49	48	98%	30	7	23%
Queensland	**1,363**	**100%**	**856**	**811**	**95%**	**507**	**230**	**45%**

§Includes MDT's that use QOOLTM and therefore numbers are under reported.

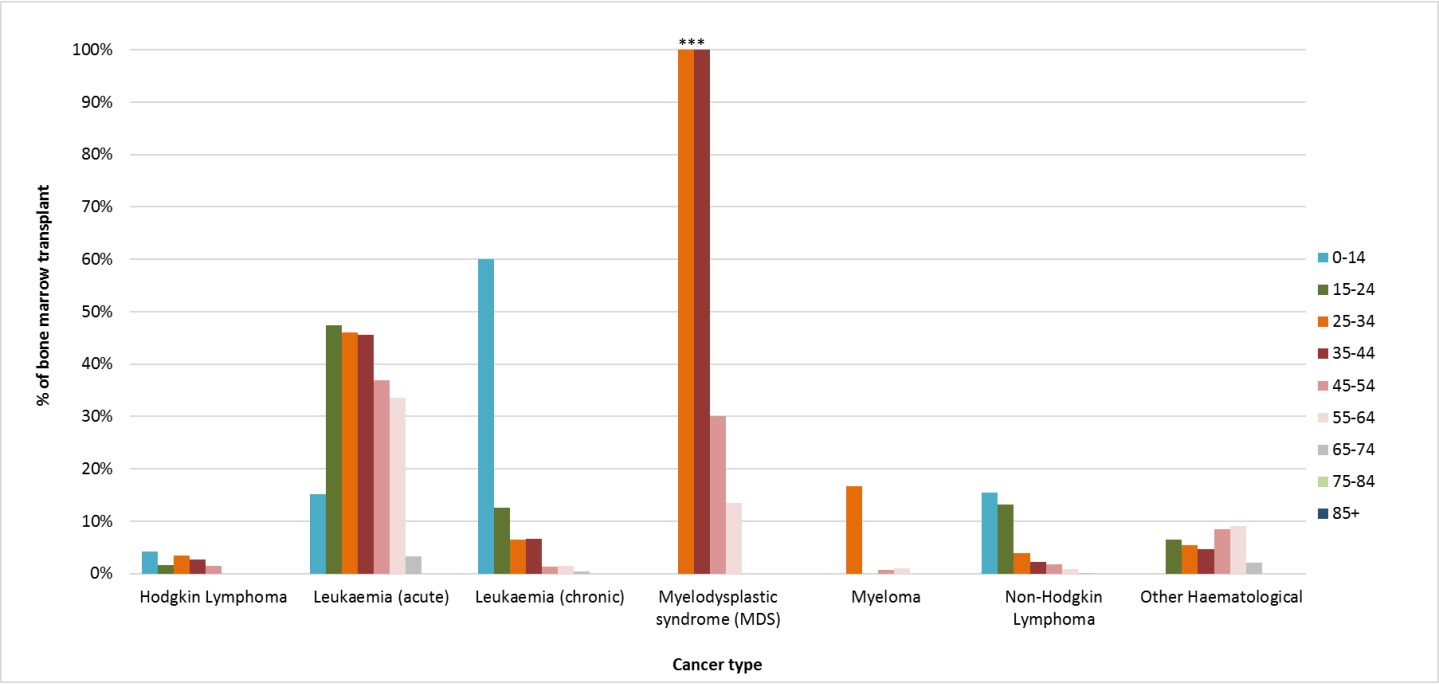
5.5.7 Proportion of haematological patients receiving autologous bone marrow transplant (by ten-year age group)

YEAR OF DIAGNOSIS 2011-2015



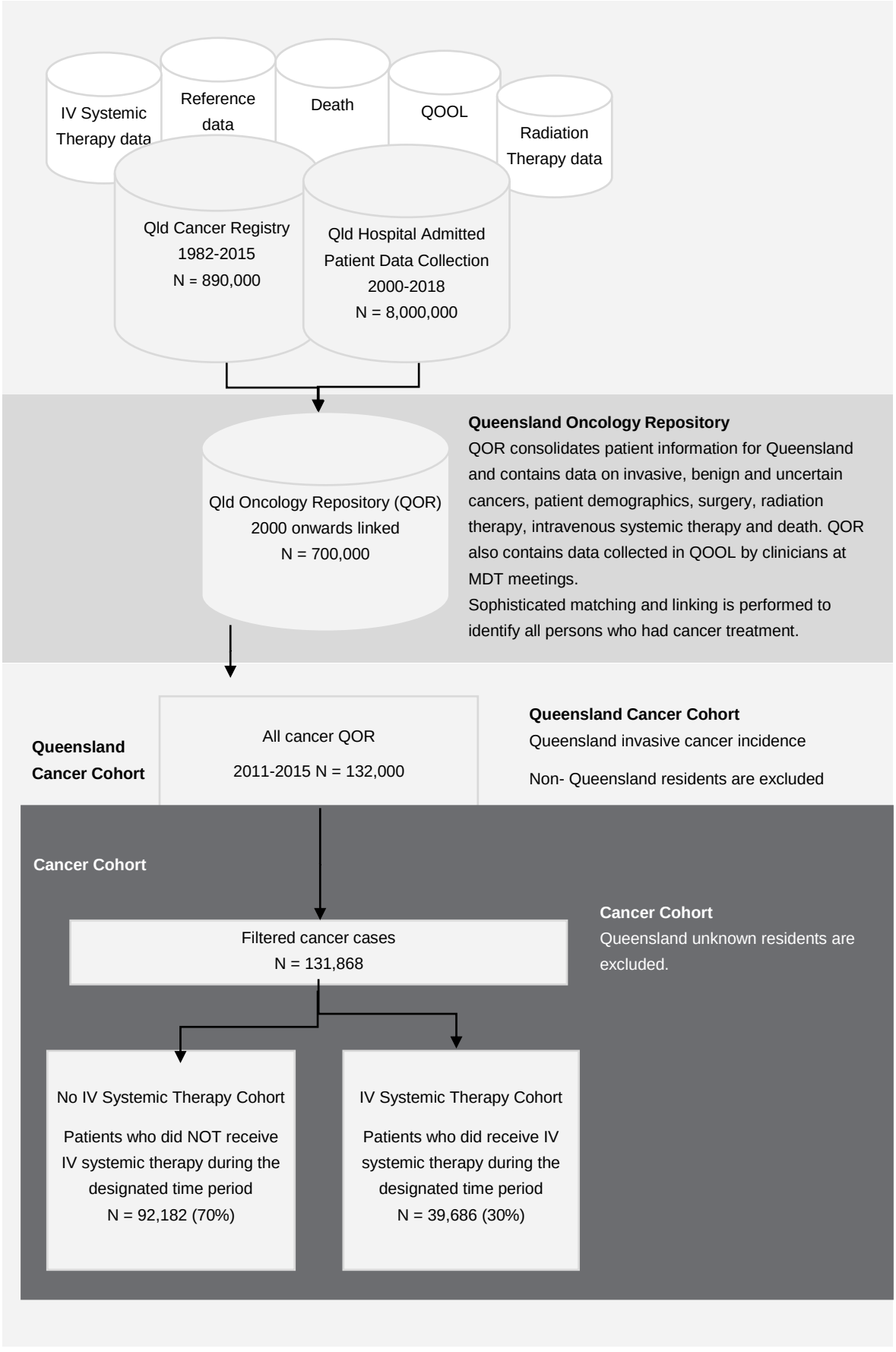
5.5.8 Proportion of haematological patients receiving allogenic bone marrow transplant (by ten-year age group)

YEAR OF DIAGNOSIS 2011-2015



*** 1 case of 25-34 and 1 case of 35-44 years old diagnosed of MDS and had bone marrow transplant.

Appendix 1: How are the cohorts identified?



Appendix 2: Cancer groupings

Cancer group	Cancer	ICD-10 AM code
Bone and soft tissue	Bone	C40 - C41
	Soft Tissue	C38, C46 - C49
Breast	Breast	C50
CNS and Brain	CNS and Brain	C70 - C72
Colorectal	Anus (not incl Anal Canal)	C21
	Colon	C18
	Rectal	C19 - C20, C218
	Other colorectal	Appendix: C181 & M84803, Carcinoid/neuroendocrine: C18-C21 & M80833, M82403, M82413, M82433, M82493, M82463
Endocrine	Adrenal/Pituitary/ Thymus Glands	C37, C74 - C75
	Thyroid Gland	C73
Gynaecological	Cervix	C53
	Ovary	C56
	Uterus	C54
	Vagina	C52
	Vulva	C51
	Other Gynaecological	C55 - C58
Haematological	Hodgkin Lymphoma	M965-M966
	Leukaemia (acute)	M97333, M98013, M98053, M98263, M98353, M98363, M98373, M98403, M98613, M98663, M98673, M98713, M98723, M98733, M98743, M98913, M98953, M98963, M98973, M99103, M99203, M99303, M99313, M99843
	Leukaemia (chronic)	M98003, M98233, M98323, M98333, M98343, M98633, M98753, M98763, M99403, M99463, M98313
	Myelodysplastic syndrome (MDS)	M99453
	Myeloma	M973
	Non-Hodgkin Lymphoma	M967-M972, M98273
	Other Haematological	M974-M976, M995-M996, M998, M98603

Appendix 2 (continued)

Cancer group	Cancer	ICD-10 AM code
Head and neck	Larynx	C32
	Nasal Cavity and Paranasal Sinuses	C30 - C31
	Oral Cavity	C02 - C06
	Pharynx (nasopharynx, oropharynx, hypopharynx)	C01, C09 - C14
	Salivary Glands	C07 - C08
Hepatobiliary	Biliary Tract (not incl Bile Ducts and Vater)	C24
	Gallbladder	C23
	Liver	C22
	Pancreas	C25
Lung	NSCLC/SCLC/other lung	C33-C34
Melanoma	Melanoma	C43, C809
Mesothelioma	Mesothelioma	C45
Ophthalmic	Other Ophthalmic	C69
Prostate	Prostate	C61
Upper GI	Oesophagus	C15
	Small intestine	C17
	Stomach	C16
Urological	Kidney	C64
	Testis	C62
	Bladder	C67
	Other Urological	C60, C63, C65-C66, C68
Other	Other invasive cancers	C00, C26, C39, C44, C76, C80

Appendix 3: What cancers are included in the 'Other' group?

Cancer group	Cancer	Diagnosis year					
		2011	2012	2013	2014	2015	Total
		n (N)	n (N)	n (N)	n (N)	n (N)	n (N)
Other colorectal	Appendix	45% (9 (20))	52% (11 (21))	70% (19 (27))	68% (17 (25))	60% (15 (25))	60% (71 (118))
	Carcinoid/neuroendocrine	33% (73 (220))	36% (76 (213))	31% (69 (224))	34% (86 (250))	40% (96 (238))	35% (400 (1,145))
Other Gynaecological	Gestational trophoblastic	50% (1 (2))	100% (2 (2))	50% (1 (2))	100% (1 (1))	100% (4 (4))	82% (9 (11))
	Broad ligament	- (0 (0))	- (0 (0))	- (0 (0))	0% (0 (1))	100% (1 (1))	50% (1 (2))
	Fallopian tube	86% (18 (21))	67% (8 (12))	71% (15 (21))	93% (26 (28))	100% (38 (38))	88% (105 (120))
	Female genital organ	50% (4 (8))	29% (2 (7))	55% (6 (11))	50% (4 (8))	38% (5 (13))	45% (21 (47))
	Overlapping malignant lesion of female genital organs	- (0 (0))	50% (2 (4))	0% (0 (2))	100% (1 (1))	0% (0 (1))	38% (3 (8))
	Parametrium	- (0 (0))	- (0 (0))	- (0 (0))	100% (1 (1))	- (0 (0))	100% (1 (1))
	Uterine adnexa	- (0 (0))	- (0 (0))	100% (1 (1))	- (0 (0))	- (0 (0))	100% (1 (1))
	Uterus, part unspecified	38% (5 (13))	20% (2 (10))	38% (5 (13))	55% (6 (11))	38% (5 (13))	38% (23 (60))
Other Haematological	Chronic eosinophilic leukaemia [hypereosinophilic syndrome]	0% (0 (1))	33% (1 (3))	0% (0 (1))	0% (0 (1))	17% (1 (6))	17% (2 (12))
	Chronic myeloproliferative disease	8% (3 (39))	6% (4 (69))	7% (4 (61))	10% (7 (73))	5% (3 (63))	7% (21 (305))
	Essential (haemorrhagic) thrombocythaemia	3% (2 (72))	6% (6 (104))	4% (3 (82))	2% (2 (86))	1% (1 (78))	3% (14 (422))
	Histiocytic sarcoma	50% (1 (2))	100% (1 (1))	100% (1 (1))	- (0 (0))	- (0 (0))	75% (3 (4))
	Immunoproliferative small intestinal disease	- (0 (0))	- (0 (0))	100% (1 (1))	- (0 (0))	- (0 (0))	100% (1 (1))
	Lymphoid, haematopoietic and related tissue	- (0 (0))	- (0 (0))	100% (1 (1))	100% (1 (1))	- (0 (0))	100% (2 (2))
	Malignant immunoproliferative disease	- (0 (0))	50% (1 (2))	- (0 (0))	- (0 (0))	100% (1 (1))	67% (2 (3))
	Malignant mast cell tumour	0% (0 (2))	20% (1 (5))	0% (0 (6))	60% (3 (5))	0% (0 (8))	15% (4 (26))
	Myelodysplastic syndrome	5% (5 (91))	11% (8 (75))	3% (2 (79))	4% (3 (77))	10% (7 (70))	6% (25 (392))
	Myelodysplastic syndrome with isolated del(5q) chromosomal	0% (0 (1))	0% (0 (1))	- (0 (0))	50% (3 (6))	0% (0 (2))	30% (3 (10))
	Myeloid leukaemia	- (0 (0))	- (0 (0))	0% (0 (1))	- (0 (0))	0% (0 (2))	0% (0 (3))
	Osteomyelofibrosis	13% (3 (24))	27% (8 (30))	25% (8 (32))	6% (2 (33))	3% (1 (30))	15% (22 (149))
	Other myelodysplastic syndromes	50% (1 (2))	0% (0 (1))	0% (0 (1))	0% (0 (2))	50% (2 (4))	30% (3 (10))
	Polycythaemia vera	2% (1 (51))	2% (1 (51))	6% (4 (64))	1% (1 (73))	9% (5 (55))	4% (12 (294))
	Refractory anaemia	6% (1 (16))	0% (0 (8))	45% (5 (11))	18% (2 (11))	25% (1 (4))	18% (9 (50))
	Refractory anaemia with excess of blasts [raeb]	54% (26 (48))	73% (33 (45))	36% (21 (58))	50% (26 (52))	55% (23 (42))	53% (129 (245))
	Refractory anaemia with multilineage dysplasia	15% (11 (75))	24% (19 (80))	23% (18 (79))	16% (14 (89))	20% (20 (101))	19% (82 (424))
	Refractory anaemia with ring sideroblasts	12% (3 (25))	0% (0 (25))	17% (3 (18))	0% (0 (21))	9% (2 (22))	7% (8 (111))
	Sarcoma of dendritic cells (accessory cells)	- (0 (0))	0% (0 (1))	- (0 (0))	- (0 (0))	- (0 (0))	0% (0 (1))
	Unifocal langerhans-cell histiocytosis	38% (5 (13))	43% (6 (14))	37% (7 (19))	38% (6 (16))	35% (6 (17))	38% (30 (79))
	Waldenstrom macroglobulinaemia	40% (2 (5))	17% (1 (6))	50% (2 (4))	60% (6 (10))	80% (8 (10))	54% (19 (35))

Appendix 3 (continued)

Cancer group	Cancer	Diagnosis year					
		2011	2012	2013	2014	2015	Total
		n (N)	n (N)	n (N)	n (N)	n (N)	n (N)
Other Lung	Atypical carcinoid tumour	20% (2 (10))	0% (0 (5))	17% (1 (6))	75% (3 (4))	50% (3 (6))	29% (9 (31))
	Carcinoid tumour	6% (2 (32))	23% (6 (26))	6% (2 (35))	2% (1 (44))	2% (1 (46))	7% (12 (183))
	Carcinosarcoma	33% (1 (3))	- (0 (0))	100% (1 (1))	- (0 (0))	0% (0 (1))	40% (2 (5))
	Dedifferentiated liposarcoma	- (0 (0))	- (0 (0))	0% (0 (1))	- (0 (0))	- (0 (0))	0% (0 (1))
	Epithelioid haemangioendothelioma, malignant	- (0 (0))	100% (1 (1))	- (0 (0))	- (0 (0))	- (0 (0))	100% (1 (1))
	Leiomyosarcoma	- (0 (0))	0% (0 (1))	- (0 (0))	- (0 (0))	- (0 (0))	0% (0 (1))
	Malignant tumour, spindle cell type	- (0 (0))	- (0 (0))	- (0 (0))	100% (1 (1))	- (0 (0))	100% (1 (1))
	Neoplasm, malignant	1% (1 (141))	4% (6 (167))	2% (4 (161))	2% (4 (178))	0% (0 (178))	2% (15 (825))
	Pleuropulmonary blastoma	100% (1 (1))	- (0 (0))	- (0 (0))	- (0 (0))	- (0 (0))	100% (1 (1))
	Sarcoma	0% (0 (1))	- (0 (0))	- (0 (0))	- (0 (0))	- (0 (0))	0% (0 (1))
	Solitary fibrous tumour, malignant	- (0 (0))	- (0 (0))	100% (1 (1))	0% (0 (2))	- (0 (0))	33% (1 (3))
	Spindle cell sarcoma	- (0 (0))	- (0 (0))	100% (1 (1))	0% (0 (1))	0% (0 (1))	33% (1 (3))
Other Urological	Overlapping malignant lesion of urinary organs	- (0 (0))	100% (1 (1))	0% (0 (1))	50% (2 (4))	0% (0 (1))	43% (3 (7))
	Urethra	35% (6 (17))	50% (3 (6))	75% (6 (8))	40% (4 (10))	25% (2 (8))	43% (21 (49))
	Urinary organ	25% (1 (4))	17% (1 (6))	50% (3 (6))	0% (0 (4))	17% (1 (6))	23% (6 (26))
	Penis	19% (5 (26))	14% (5 (36))	14% (4 (28))	20% (5 (25))	10% (3 (29))	15% (22 (144))
	Renal Pelvis and Ureter	25% (21 (85))	29% (27 (93))	33% (26 (78))	36% (31 (87))	35% (34 (96))	32% (139 (439))
Other invasive cancers	Digestive System	4% (1 (28))	18% (7 (40))	15% (7 (46))	11% (5 (47))	7% (3 (42))	11% (23 (203))
	Ill-Defined and Unknown Sites	17% (83 (481))	19% (94 (485))	17% (96 (568))	20% (105 (536))	23% (133 (577))	19% (511 (2,647))
	Lip	3% (7 (228))	2% (5 (220))	4% (11 (252))	5% (9 (193))	3% (5 (188))	3% (37 (1,081))
	Other Skin	13% (25 (192))	13% (29 (216))	14% (32 (231))	10% (22 (219))	10% (24 (234))	12% (132 (1,092))

Appendix 4: AIHW Hospital Peer Groups

Principal referral hospitals

Principal referral hospitals are public acute hospitals that provide a very broad range of services, have a range of highly specialised service units, and have very large patient volumes. The term 'referral' recognises that these hospitals have specialist facilities not typically found in smaller hospitals.

Hospital list	
Gold Coast University Hospital	Princess Alexandra Hospital
Royal Brisbane & Women's Hospital	The Prince Charles Hospital
The Townsville Hospital	Sunshine Coast University Hospital

Public acute group A hospitals (Group A hospitals – Public)

Public acute group A hospitals are public acute hospitals that provide a wide range of services typically including a 24-hour emergency department, intensive care unit, coronary care unit and oncology unit, but do not provide the breadth of services provided by *Principal referral hospitals.*

Hospital list	
Bundaberg Base Hospital	Cairns Hospital
Hervey Bay Hospital	Ipswich Hospital
Logan Hospital	Mackay Base Hospital
Mater Hospital Brisbane	Nambour General Hospital
Queen Elizabeth II Jubilee Hospital	Redcliffe Hospital
Rockhampton Hospital	Toowoomba Hospital

Private acute group A hospitals (Group A hospitals – Private)

Private acute group A hospitals are private acute hospitals that have a 24-hour emergency department and an intensive care unit, and provide a number of other specialised services such as coronary care, special care nursery, cardiac surgery and neurosurgery.

Hospital list	
Gold Coast Private Hospital	Greenslopes Private Hospital
Holy Spirit Northside	John Flynn Private Hospital
Mater Private Hospital Brisbane	Noosa Hospital
Pindara Private Hospital	St Andrew's War Memorial Hospital
The Wesley Hospital	

Public acute group B hospitals (Group B hospitals)

Public acute group B hospitals are those public acute hospitals that do not have the service profile of the *Principal referral hospitals and Group A hospitals,* but do have 24-hour emergency department; they typically provide elective surgery and have specialised service units such as obstetric, paediatric and psychiatric units.

Hospital list	
Caboolture Hospital	Gladstone Hospital
Caloundra Hospital	Mount Isa Base Hospital
Gympie Hospital	Robina Hospital
Redland Hospital	

Private acute group B hospitals (Group B hospitals)

Private acute group B hospitals are private acute hospitals that do not have a 24-hour emergency department, but do have an intensive care unit and a number of other specialised services including coronary care, special care nursery, cardiac surgery and neurosurgery.

Hospital list	
Buderim Private Hospital	Mater Hospital Pimlico
Friendly Society Private Hospital	St Vincent's Hospital Toowoomba
St Andrew's Toowoomba Hospital	The Sunshine Coast Private Hospital
Sunshine Coast University Private Hospital	

Other hospitals

Hospital list	
Atherton Hospital	Icon Cancer Care Southport
Bowen Hospital	Icon Cancer Care Townsville
Collinsville Hospital	Icon Cancer Care Wesley
Dalby Hospital	Icon Cancer Centre Mackay
Emerald Hospital	Icon Integrated Cancer Care North Lakes
Goondiwindi Hospital	Icon Integrated Cancer Centre Bundaberg
Ingham Hospital	Mater Hospitals Brisbane/Icon Cancer Care South Brisbane
Innisfail Hospital	Mater Misericordiae Day Unit
Julia Creek Hospital	Mater Misericordiae Hospital Bundaberg
Kingaroy Hospital	Mater Misericordiae Hospital Gladstone
Lady Cilento Children's Hospital	Mater Misericordiae Hospital Mackay
Miles Hospital	Mater Misericordiae Hospital Rockhampton
Monto Hospital	Mater Private Hospital Redland
Proserpine Hospital	Mater Private Hospital Springfield
Roma Hospital	Mater Women's and Children's Hospital Hyde Park
Tully Hospital	Nambour Selangor Private Hospital
Warwick Hospital	North Lakes Day Hospital
Winton Hospital	North West Private Hospital
Brisbane Private Hospital	Pacific Private Day Hospital
Caboolture Private Hospital	Peninsula Private Hospital
Cairns Haematology And Oncology Clinic	St Andrew's - Ipswich Private Hospital
Cairns Private Hospital	St Stephen's Hospital Hervey Bay
Canossa Private Hospital	St Stephen's Private Hospital Maryborough
Chermside Day Hospital	Sunnybank Private Hospital
Gympie Private Hospital	Sunshine Coast Haematology & Oncology Clinic
Icon Cancer Care Chermside	Tasman Health Care Day Infusion Unit
Icon Cancer Care South Brisbane	The Wesley Hospital/Icon Cancer Care Wesley

References

1. Jacob S.A, Ng W.L. et al. Estimation of an Optimal Chemotherapy Utilisation rate for Cancer: Setting an Evidence-based benchmark for Quality Cancer Care. Clinical Oncology 2014; 27: 77-82.

2. Ng W, Jacob S, et al. Estimation of an optimal chemotherapy utilisation rate for head and neck carcinoma: Setting an evidence-based benchmark for best quality cancer care. European Journal of Cancer 2009; (45): 2150-20159

3. Jacob S, Hovey E, et al. Estimation of an optimal chemotherapy utilisation rate for lung cancer: An evidence-based benchmark for best quality cancer care. Lung Cancer 2010; 69:307-314

Glossary

Adjuvant
Additional therapy administered after the primary treatment and has been completed within 0-9 months of the primary treatment.

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 algorithm 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. E.g. A rectum cancer can be a comorbidity to a colon 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		

Distant Metastases

Patients are identified as having metastases at diagnosis from their stage at diagnosis as supplied by a number of sources or through subsequent identification of metastases during an admitted hospital episode of care.

Flows

In-flows

In-flows show the distribution of residence for the total group of patients who receive radiation therapy by a treating facility

Out-flows

Out-flows shows the proportion of patients residing in a given HHS who receive radiation therapy in a different HHS.

Forest plots
The forest plot is a graphical display of the results from a regression model, illustrating the hazard ratio (HR) or relative risk (RR) for each covariate included in the regression model. The dot represents the estimate of the HR/RR with the confidence interval of the estimate represented by a horizontal line. A central vertical line representing no effect is also plotted, and if the confidence intervals for an estimate cross this line then the effect is considered not to be statistically significant.

HHS of Residence
Hospital and Health Service of residence is a geographic area defined by a collection of Statistical Areas Level 2 (SA2s) where the patient resides at time of diagnosis. 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.

MDT Review

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

MDT number

Number of cancer patients who had MDT Review after diagnosis.

Median age (yrs)

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

Private facility

All other hospitals that are not Queensland Health hospitals.

Public facility

Queensland Health hospitals.

Radiotherapy

Includes Queensland residents of all ages diagnosed with invasive cancer who had radiotherapy after diagnosis.

Remoteness

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

<table>
<tr><th>ASGC classifications</th><th>Modified ASGC classification</th><th>Rurality classification</th></tr>
<tr><td>Major City</td><td>Metropolitan</td><td>Urban</td></tr>
<tr><td>Inner Regional</td><td rowspan="2">Regional</td><td rowspan="4">Rural</td></tr>
<tr><td>Outer Regional</td></tr>
<tr><td>Remote</td><td rowspan="2">Rural and Remote</td></tr>
<tr><td>Very Remote</td></tr>
</table>

An exception to this grouping is the metropolitan area of Townsville (originally classified as Rural). Townsville has been classified as Metropolitan because of the availability of tertiary level cancer services.

Sex

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

Socioeconomic status

Socioeconomic status is a measure of a person or population's social and economic wellbeing. It typically combines information on education, occupation/employment and income levels. People living in disadvantaged areas may have increased risk factors for social exclusion, including limited access to health, education or transport services. The index used in this report is based on the Socio-Economic Indexes for Areas (SEIFA) measure developed by the Australian Bureau of Statistics[1].

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

Systemic therapy

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

FOR MORE INFORMATION

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