## **CHAPTER 10**

**CANCER REPORT** 

Angela Webster Germaine Wong Stephen McDonald This year the cancer working group is presented in an alternative format. Instead of reiterating analyses undertaken in previous reports with the updated dataset, we have summarised all recent cancer reports, and provide a bibliography and summary of all known publications which have used ANZDATA cancer data as source data for their analyses. We hope this will allow the "mapping" of ANZDATA cancer research activity to date, which should meet two aims; firstly to provide an easy reference list for those wanting to find ANZDATA cancer work, and secondly to help us plan future ANZDATA cancer analyses more strategically by better showing what has already been done, and better revealing the gaps in our use of the data, and the questions yet to be tackled.

## ANZDATA Cancer Reports From 2001 to Date

Listed here is the citation, summary and hyperlink to all ANZDATA cancer reports from 2001 to date

Year	Citation	Hyperlink to Report pdfs and any Related Slides	Principle Contents
2010	Webster AC, Wong G, Chapter 10, Cancer. ANZDATA Registry Report 2009. 33 <sup>rd</sup> Annual Report. Adelaide, South Australia: Australia and New Zealand Dialysis and Transplant Registry 2011		Summary of ANZDATA Cancer Reports from 2001-To Date and bibliography and description of all known published papers using ANZDATA cancer data
2009	Webster AC, Wong G, McDonald SP. Chapter 10, Cancer. ANZDATA Registry Report 2009. 32 <sup>nd</sup> Annual Report. Adelaide, South Australia: Australia and New Zealand Dialysis and Transplant Registry 2010	Chapter: http://www.anzdata.org.au/anzdata/ AnzdataReport/32ndReport/Ch10.pdf Powerpoint: http://www.anzdata.org.au/anzdata/ AnzdataReport/32ndReport/Ch10.zip	<ol> <li>Site-specific cancer risk for people on dialysis and after kidney transplant.</li> <li>Survival for people with a kidney transplant and breast or colorectal cancer.</li> <li>Economic model of screening for renal cancer in the kidney transplant population.</li> </ol>
2008	Webster AC, Wong G. Chapter 10, Cancer. ANZDATA Registry Report 2008. 31st Annual Report. Adelaide, South Australia: Australia and New Zealand Dialysis and Transplant Registry 2009. P 10.2-10.5	Chapter: http://www.anzdata.org.au/anzdata/ AnzdataReport/31stReport/ Ch10CancerReport.pdf Powerpoint: http://www.anzdata.org.au/anzdata/ AnzdataReport/31stReport/Ch10.zip	Standardised mortality rates and mortality risk for people with cancer after transplantation     Economic evaluation of cervical cancer screening for women after transplantation
2007	Wong G, Webster AC Chapter 10, Cancer ANZDATA Registry Report 2007. 30 <sup>th</sup> Annual report. Adelaide, South Australia: Australia and New Zealand Dialysis and Transplant Registry 2008. P 10.2-10.8	Chapter: http://www.anzdata.org.au/anzdata/ AnzdataReport/30thReport/ Ch10Cancer.pdf Powerpoint: http://www.anzdata.org.au/anzdata/ AnzdataReport/30thReport/Ch10.zip	<ol> <li>Cancer risk after transplantation by age for most common sites. Absolute cancer risk for different patient subgroups at 1, 5 and 10 years after transplant.</li> <li>Economic evaluation of breast cancer screening for women on dialysis and for colorectal cancer screening after transplantation.</li> </ol>

Year	Citation	Hyperlink to Report pdfs and any Related Slides	Principle Contents
2006	Wong G, Howard K, Craig JC, McDonald S, Chapman JR. Chapter 10, Cancer. ANZDATA Registry Report 2005. 28th Annual Report. Adelaide, South Australia: Australia and New Zealand Dialysis and Transplant Registry 2006. p. 131-9	Chapter: http://www.anzdata.org.au/anzdata/ AnzdataReport/29thReport/ Ch10Cancer.pdf Powerpoint http://www.anzdata.org.au/anzdata/ AnzdataReport/29thReport/Ch10.zip	Standardised incidence ratios for Australian dialysis and transplant Patients by cancer site.      Economic evaluation of colorectal cancer screening in the kidney transplant population.
2005	Webster AC, Chapman JR. Chapter 10, Cancer. ANZDATA Registry Report 2005. 28th Annual Report. Adelaide, South Australia: Australia and New Zealand Dialysis and Transplant Registry 2006. p 99-103	Chapter: http://www.anzdata.org.au/anzdata/ AnzdataReport/28thReport/ Ch10Cancer.pdf Powerpoint: http://www.anzdata.org.au/anzdata/ AnzdataReport/28thReport/Ch10.zip	Agreement of cancer records held by ANZDATA and by the New South Wales Cancer Registry
2004	Webster AC, Chapman JR. Chapter 10, Cancer. ANZDATA Registry Report 2004. 27th Annual Report. Adelaide, South Australia: Australia and New Zealand Dialysis and Transplant Registry 2005. p. 100-6.	Chapter: http://www.anzdata.org.au/anzdata/ AnzdataReport/27thReport/files/ Ch10Cancer.pdf Powerpoint: http://www.anzdata.org.au/anzdata/ AnzdataReport/27thReport/files/ Ch10.zip	Standardised incidence ratios for dialysis and transplant patients by cancer site, cumulative and absolute risk of cancer.
2003	No Cancer Report		
2002	Webster AC, Chapman JR. Chapter 10, Cancer. ANZDATA Registry 2002. 25th Annual Report. Adelaide, South Australia: Australia and New Zealand Dialysis and Transplant Registry 2003. p. 83-90.	Chapter: http://www.anzdata.org.au/anzdata/AnzdataReport/25thReport/files/Ch.10%20Cancer.zip Powerpoint: http://www.anzdata.org.au/anzdata/AnzdataReport/25thReport/files/10%20Cancer%20part%20a.zip and http://www.anzdata.org.au/anzdata/AnzdataReport/25thReport/files/10%20Cancer%20part%20b.zip	Risk of cancer on dialysis and after transplant, cumulative and site specific. Survival following diagnosis of cancer
2001	Sheil AGR. Chapter 10, ANZDATA Registry 2001. 24th Annual Report. Adelaide, South Australia: Australia and New Zealand Dialysis and Transplant Registry 2002, p83-90	Chapter: http://www.anzdata.org.au/anzdata/AnzdataReport/24thReport/files/Ch.09%20cancer.pdf Powerpoint: http://www.anzdata.org.au/anzdata/AnzdataReport/24thReport/files/pptCh09Cancer.zip	Risk of cancer after transplant, cumulative and site specific. Risk of cancer by immunosuppressive regimen

## Bibliography of Publications Using ANZDATA Cancer Data

To summarise all publications known to have used ANZDATA cancer records, we undertook a literature search of MEDLINE and Pre-MEDLINE via the OvidSP platform on 6<sup>th</sup> December 2010 using the following search strategy:

- 1. anzdata.tw.
- 2. (australia\$ adj10 transplant\$).tw.
- 3. (australia\$ adj10 dialysis).tw.
- 4. exp Neoplasms/
- 5. cancer.tw.
- 6. malignan\$.tw
- 7. 4 or 5 or 6
- 8. 1 or 2 or 3
- 9. 7and 8

We examined the search results and the full text of publications if necessary, to find all original article publications in peer-reviewed journals arising from ANZDATA cancer data. We did not include conference abstracts, or papers where cancer was not the principal focus of the study.

The search gave 73 citations in MEDLINE, and 0 in Pre-MEDLINE. Of the 73 citations, 3 were duplicate records, and 49 were not relevant, leaving 21 citations which we included. To these 21 citations, we added a further 22 additional citations known to the authors of this report, but that had not be identified by the search strategy. A total of 43 articles are listed below, ordered by calendar year of publication, with a brief description of the methodology employed and the study rationale.

Readers should note this is not an exhaustive list, and there may be other related publications that have used ANZDATA cancer records that we were not able to locate with the above search, and were not known to us. We apologise if we have inadvertently left out any publications, and welcome being informed about them.

N	Year	Citation	Methodology	Rationale
1.	2010	Gallagher MP, Kelly PJ, Jardine M, Perkovic, Cass A, Craig JC, Eris J, Webster AC. Cancer after kidney transplantation: 20 year results of a randomised trial of maintenance azathioprine-prednisolone or cyclosporine. <i>Journal of the American Society of Nephrology</i> . 2010;21: 852-858	Cross synthesis design: RCT linked to ANZDATA to obtain long term outcomes	Skin cancer and cancer outcomes at 20 years post randomisation to 3 different immunosuppressive regimens
2.	2010	Vajdic CM, van Leeuwen MT, Turner JJ, McDonald AM, Webster AC, McDonald SP, Chapman JR, Kaldor JM, Grulich AE. No excess risk of follicular lymphoma in kidney transplant and HIV-related immune deficiency. International Journal of Cancer. 2010 [in press doi 10.1002/ijc.25272]	Cohort study: ANZDATA and Australian National HIV/AIDS Registries linked to Australian National Cancer Statistics Clear- ing House	Risk of Non Hodgkin Lymphoma subtypes compared for kidney transplant recipients and for those with HIV infection
3.	2010	Wong G, Howard K, Webster AC, Chapman JR, Craig JC. Screening for renal cancer in recipients of kidney transplants. <i>Nephroogyl Dialysis Transplanation</i> . 2010 Oct 20 doi: 10.1093/ndt/gfq627	Economic evaluation	Benefit, cost and harm of screening for renal cancer with ultrasound in native kidneys post kidney transplantation
4.	2010	Webster AC, Supramaniam R, Connell DL, Chapman JR, Craig JC. Validity of registry data: agreement between cancer records in an end stage kidney disease registry (voluntary reporting) and a cancer register (statutory reporting). <i>Nephrology</i> 2010;15:491-501	Cohort study: data linkage of NSW ANZDATA to NSW Cancer Registry	Agreement of cancer records from 2 registries, by cancer site, and by ESKD treatment modality
5.	2010	van Leeuwen MT, Webster AC, McCredie MRE, Stewart JH, McDonald SP, Amin J, Kaldor JM, Chapman JR, Vajdic CM, Grulich AE. Reduction of immunosuppression after kidney transplant failure is associated with decreased risk of some cancer types. <i>BMJ</i> 2010;340:c570	Cohort study: data linkage of Australian ANZDATA to Australian National Cancer Statistics Clearing House	Change in cancer incidence/ risk by site following graft failure and return to dialysis
6.	2009	Stewart JH, Vajdic CM, van Leeuwen MT, Amin J, Webster AC, Chapman JR, McDonald SP,Grulich AE, McCredie MRE. The pattern of excess cancer in dialysis and transplantation. <i>Nephrology Dialysis Transplantation</i> 2009; 24: 3225-3231	Cohort study with data linkage of Australian ANZDATA to Australian National Cancer Statistics Clearing House	Comparison of cancer incidence by site relative to the general population, for people with ESKD treated with either dialysis or transplantation

N	Year	Citation	Methodology	Rationale
7.	2009	Vajdic CM, van Leeuwen MT, Webster AC, McCredie MRE, Stewart JH, Chapman JR, Amin J, McDonald SP, Grulich AE. Grulich. Cutaneous Melanoma is Related to Immune Suppression in Kidney Transplant Recipients. Cancer Epidemiology, Biomarkers and Prevention 2009;18:2297-2303	Cohort study with data linkage of Australian ANZDATA to Australian National Cancer Statistics Clearing House	Melanoma incidence and risk factors in Australians with kidney transplants
8.	2009	van Leeuwen MT, Grulich AE, Webster AC, McCredie MRE, Stewart JH, McDonald SP, Amin J, Kaldor JM, Chapman JR, Vajdic CM. Immunosuppression and other risk factors for early and late non- Hodgkin lymphoma after kidney transplantation. <i>Blood</i> 2009; 114 (3):630-7	Cohort study with data linkage of Australian National Cancer Statistics Clearing House	Non Hodgkin Lymphoma incidence and risk factors in Australians with kidney transplants
9.	2009	van Leeuwen MT., Grulich AE., McDonald SP., McCredie MRE, Amin J, Stewart JH, Webster AC, Chapman JR, Vajdic CM. Immunosuppression and other risk factors for lip cancer after kidney transplantation. Cancer Epidemiology, Biomarkers and Prevention 2009; 18(2):561-569	Cohort study with data linkage of Australian National Cancer Statistics Clearing House	Lip cancer incidence and risk factors in Australians with kidney transplants
10.	2009	Wong G, Howard K, Webster AC, Chapman JR, Craig JC. The health and economic impact of cervical cancer screening and HPV vaccination in kidney transplant recipients. <i>Transplantation</i> 2009;87 (7):1078-91	Economic evaluation	Benefit, cost and harm of cervical cancer screening and HPV vaccination in women with kidney transplants.
11.	2009	Rey JW, Heister P, Wirges U, Nadalin S, Breuer R, Niehues T. Organ donor with unclear primary brain tumor, a contraindication for transplantation? Case report of a one year old child. <i>Klinische Padiatrie</i> . 2009;221(6):390-2.	Case report and literature review	Outcome of transplanted organs from donors with CNS malignancy, with review of registry cases
12.	2008	Wong G, Howard K, Chapman JR, Craig JC. Cost-effectiveness of breast cancer screening in women on dialysis. <i>American J ournal of Kidney Diseases</i> . 2008;52(5):916-29.	Economic evaluation	Benefit, cost and harm of breast cancer screening with mammography for women on dialysis.

N	Year	Citation	Methodology	Rationale
13.	2008	Wong G, Howard K, Craig JC, Chapman JR. Cost-effectiveness of colorectal cancer screening in renal transplant recipients. <i>Transplantation</i> . 2008, 27;85 (4):532-41.	Economic evaluation	Benefit, cost and harm of colorectal cancer screening using immunochemical faecal occult blood testing in kidney transplant recipients
14.	2007	Webster AC, Craig JC, Simpson JM, Jones MP, Chapman JR Identifying high risk groups and quantifying absolute risk of cancer after kidney transplantation: a cohort study of 15,183 recipients. <i>American Journal of Transplantation</i> . 2007;7 (9):2140-51	Cohort study with standardised comparison with Australian and New Zealand general population data	Cumulative, relative and absolute risk of cancer and most common cancers overall and for patient subgroups for Australian and New Zealander transplant recipients
15,	2007	Vajdic CM, McDonald SP, McCredie MRE, van Leeuwen MT, Stewart JH, Webster AC et al. Increased incidence of squamous cell carcinoma of the eye after kidney transplantation. <i>Journal of the National Cancer Institute</i> . 2007; 99(17):1340-2	Cohort study with data linkage of ANZDATA to Australian National Cancer Statistics Clearing House	Squamous cell cancer of the eye incidence and risk factors in Australians with kidney transplants
16.	2006	Vajdic CM, McDonald SP, McCredie MRE, van Leeuwen MT, Stewart JH, Webster AC et al. Cancer incidence before and after kidney transplantation. <i>JAMA</i> 2006; 296(23):2823-2831	Cohort study with data linkage of ANZDATA to Australian National Cancer Statistics Clearing House	Standardised risk of cancer by site for Australians on dialysis or with kidney transplants
17.	2005	Pond F, Serpell JW, Webster A. Thyroid cancer in the renal transplant population: epidemiological study. Australia and New Zealand Journal of Surgery. 2005; 75(3):106-109.	Cohort study	Epidemiology of thyroid cancer in ESKD
18.	2005	Faull RJ, Hollett P, McDonald SP. Lymphoproliferative disease after renal transplantation in Australia and New Zealand. <i>Transplantation</i> . 2005 Jul 27;80(2):193-7	Cohort study	Epidemiology of Post transplant lymphoproliferative disease

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19.	2003	Ramsay HM, Fryer AA, Hawley CM, Smith AG, Nicol DL, Harden PN. Factors associated with nonmelanoma skin cancer following renal transplantation in Queensland, Australia. <i>Journal of the American Academy of Dermatology.</i> 2003;49(3):397-406.	Single centre case series	Epidemiology of skin cancers in Queensland transplant recipients, using ANZDATA records for prior diagnoses	
20.	2003	Stewart JH, Buccianti G, Agodoa L, Gellert R, McCredie MRE, Lowenfels AB, et al. Cancers of the kidney and urinary tract in patients on dialysis for end-stage renal disease: analysis of data from the United States, Europe, and Australia and New Zealand. Journal of the American Society of Nephrology. 2003;14(1):197-207	Cohort study using USRDS, EDTA and ANZDATA registry data with standardised comparison with general population	Standardised risk of cancers of the renal tract for people on dialysis overall, and for patient subgroups	
21.	2002	Ramsay HM, Fryer AA, Hawley CM, Smith AG, Harden PN. Non-melanoma skin cancer risk in the Queensland renal transplant population. <i>British Journal of Dermatology</i> . 2002;147(5):950-6.	Single centre case series	Epidemiology of skin cancers in Queensland transplant recipients, compared with ANZDATA records for prior diagnoses	
22.	2001	Chapman JR, Sheil AG, Disney AP. Recurrence of cancer after renal transplantation. <i>Transplantation Proceedings.</i> 2001;33(1-2):1830-1.	Cohort study	Cohort study	
23.	2001	Hibberd AD, Trevillian PR, Wlodarzcyk JH, Gillies AH, Stein AM, Sheil AG, et al. Predialysis immunosuppression is an independent risk factor for some cancers in renal transplantation. <i>Transplantation Proceedings</i> . 2001;33(1-2):1846-7.	Cohort study	Risk of lymphoma and female genital tract cancer among those with exposure to immunosuppression prior to dialysis	
24.	1999	Chui AK, Herbertt K, Wang LS, Kyd G, Hodgeman G, Verran DJ, et al. Risk of tumor transmission in transplantation from donors with primary brain tumors: an Australian and New Zealand Registry Report. <i>Transplantation Proceedings.</i> 1999;31(1-2):1266-7.	Registry (ANZOD) linked to brain tumours ANZDATA		
25.	1999	Hibberd AD, Trevillian PR, Wlodarzcyk JH, Gillies AH, Stein AM, Sheil AG, et al. Cancer risk associated with ATG/OKT3 in renal transplantation. <i>Transplantation Proceedings</i> . 1999;31(1-2):1271-2	Cohort study	Risk of lymphoma and female genital tract cancer among those with exposure to ATG or OKT3 induction immunosuppression at ransplantation	

N	Year	Citation	Methodology	Rationale
26.	1999	Maisonneuve P, Agodoa L, Gellert R, Stewart JH, Buccianti G, Lowenfels AB, et al. Cancer in patients on dialysis for end-stage renal disease: an international collaborative study. <i>Lancet</i> . 1999;10;354(9173):93-9.	Cohort study using USRDS, EDTA and ANZDATA registry data with standardised comparison with general popu- lation	Standardised risk of cancer by site, and for patient subgroups whilst on dialysis
27.	1998	Swindle P, Falk M, Rigby R, Petrie J, Hawley C, Nicol D. Transitional cell carcinoma in renal transplant recipients: the influence of compound analgesics. <i>British Journal of Urology</i> . 1998;81(2):229-33.	Single centre case series	Risk of post transplant ransitional cell carcinoma for recipients with analgesic nephropathy versus those with other primary renal disease
28.	1997	Bouwes Bavinck JN, Claas FH, Hardie DR, Green A, Vermeer BJ, Hardie IR. Relation between HLA antigens and skin cancer in renal transplant recipients in Queensland, Australia. <i>Journal of Investigative Dermatology.</i> 1997;108(5):708-11.		
29.	1997	Sheil AG, Disney AP, Mathew TH, Livingston BE, Keogh AM. Lymphoma incidence, cyclosporine, and the evolution and major impact of malignancy following organ transplantation. <i>Transplantation Proceedings.</i> 1997;29(1-2):825-7.	Cohort study of ANZDATA, Liver and heart transplant registries of Australia and New Zealand	Incidence rate of lymphoma and all-site cancer by organ transplanted
30.	1996	Bouwes Bavinck JN, Hardie DR, Green A, Cutmore S, MacNaught A, O'Sullivan B, et al. The risk of skin cancer in renal transplant recipients in Queensland, Australia. A follow-up study. <i>Transplantation</i> . 1996 15;61(5):715-21.	Single centre case series	Epidemiology of skin cancer in Queensland transplant recipients
31.	1994	Fairley CK, Sheil AG, McNeil JJ, Ugoni AM, Disney AP, Giles GG, et al. The risk of ano-genital malignancies in dialysis and transplant patients. <i>Clinical Nephrology</i> . 1994;41(2):101-5.	Cohort study with comparison to the Victorian general population	Risk of anogenital and breast cancers in dialysis and transplant population
32.	1993	Sheil AG, Disney AP, Mathew TH, Amiss N. De novo malignancy emerges as a major cause of morbidity and late failure in renal transplantation. <i>Transplantation Proceedings</i> . 1993;25(1 Pt 2):1383-4.		

N	Year	Citation	Methodology	Rationale
33.	1992	LS Roeger, AGR Sheil, APS Disney, TH Mathew, N Amiss. Risk factors associated with the development of squamous cell carcinomas in immunosuppressed renal transplant recipients. <i>Clinical</i> <i>Transplantation</i> 1992 6:202-211	Cohort study	Risk factors for squamous cell skin cancer in transplant recipients
34.	1992	Sheil AG, Disney AP, Mathew TG, Amiss N, Excell L. Malignancy following renal transplantation. <i>Transplantation Proceedings</i> . 1992;24(5):1946-7.	Cohort study with comparison to the South Australian general population	Risk of non-skin cancer for most frequent sites in transplant recipients
35.	1992	Disney AP. Complications of immunosuppressive therapy in transplantation. 1: Neoplasia and infection. <i>Medical Journal of Australia</i> . 1992, 17;157(4):262-4.	Narrative review describing ANZDATA analyses	Relative risk of non-skin cancer for most frequent sites in cadaveric transplant recipients
36.	1992	Sheil AG. Development of malignancy following renal transplantation in Australia and New Zealand. <i>Transplantation Proceedings</i> . 1992;24(4):1275-9.	Cohort study	Relative risk of non-skin cancer in cadaveric transplant recipients
37.	1991	Sheil AG, Disney AP, Mathew TH, Amiss N, Excell L. Cancer development in cadaveric donor renal allograft recipients treated with azathioprine (AZA) or cyclosporine (CyA) or AZA/CyA. <i>Transplantation Proceedings</i> . 1991;23(1 Pt 2):1111-2.	Cohort study	Incidence of cancer after transplantation
38.	1990	McCredie M, Coates MS, Ford JM, Disney APS, Auld JJ, Stewart JH. Geographical distribution of cancers of the kidney and urinary tract and analgaesic nephropathy in Australia and New Zealand.  Australian and New Zealand Journal of Medicine, 1990; 20: 684-688 and 694	Cohort study using ANZDATA compared with NSW, ACT, Queensland, Victoria, Tasmania and New Zealand cancer registry data	Standardised incidence rates of renal tract cancer over time

N	Year	Citation	Methodology	Rationale
39.	1989	McCredie M, Stewart JH, Mathew TH, Disney AP, Ford JM. The effect of withdrawal of phenacetin-containing analgesics on the incidence of kidney and urothelial cancer and renal failure. <i>Clinical Nephrology.</i> 1989;31(1):35-9.	Cohort study of NSW and ACT ANZDATA, compared with NSW and ACT cancer registry data	Standardised incidence rates of renal tract cancer over time
40.	1987	Sheil AG, Flavel S, Disney AP, Mathew TH, Hall BM. Cancer incidence in renal transplant patients treated with azathioprine or cyclosporine. <i>Transplantation Proceedings</i> . 1987;19(1 Pt 3):2214-6.	Cohort Study	Relative risk of skin and non- skin cancer in cadaveric transplant recipients
41.	1986	Sheil AG. Cancer after transplantation. World Journal of Surgery. 1986;10(3):389-96.	Narrative review describing ANZDATA analyses	Cumulative risk and site specific risk of cancer after transplantation
42.	1985	Sheil AG, Flavel S, Disney AP, Mathew TH. Cancer development in patients progressing to dialysis and renal transplantation.  Transplantation Proceedings. 1985;17(2):1685-8.	Cohort study	Incidence, cumulative incidence and outcome of skin and non-skin cancer
43.	1977	Sheil AG. Cancer in renal allograft recipients in Australia and New Zealand. <i>Transplantation Proceedings</i> . 1977;9(1):1133-6.	Cohort study	Incidence and outcome of cancer after transplantation