



Australia &  
New Zealand Dialysis  
& Transplant Registry

# Chapter 10

## Cancer

**ANZDATA gratefully acknowledges the contributions of the Cancer Working Group convened by Germaine Wong**

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### Suggested Citation:

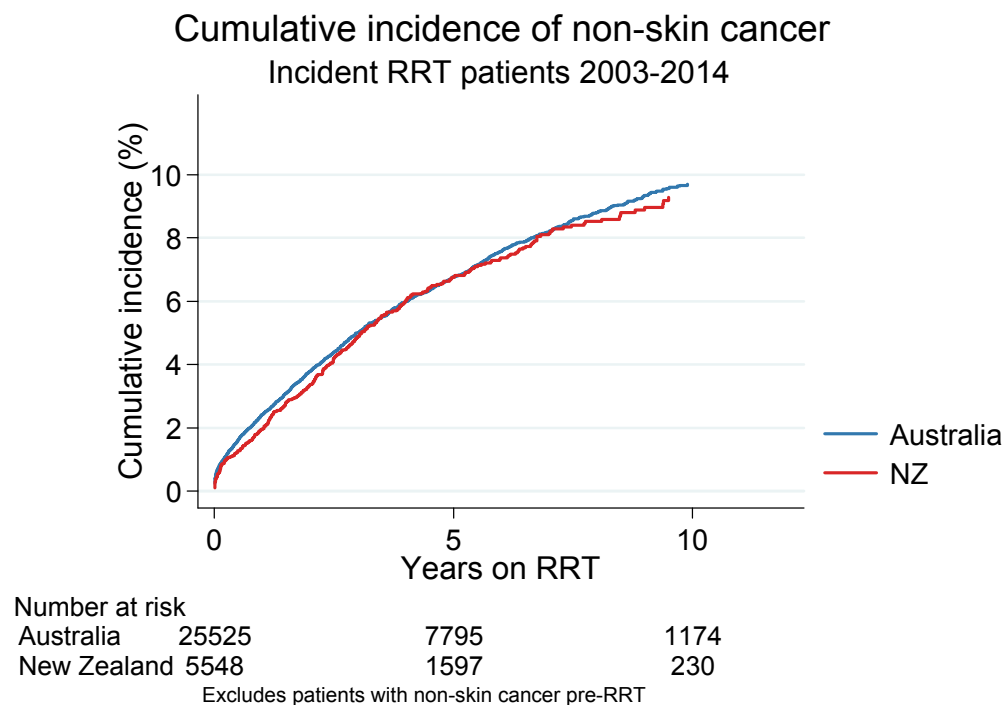
ANZDATA Registry. 38th Report, Chapter 10: Cancer. Australia and New Zealand Dialysis and Transplant Registry, Adelaide, Australia. 2016. Available at: <http://www.anzdata.org.au>

## Incidence of Cancer on Renal Replacement Therapy

Figures 10.1-10.6 and table 10.1 show the cumulative incidence of non-skin cancer in patients receiving renal replacement therapy (RRT) during 2003-2014. These data are censored at loss to follow-up and recovery of native kidney function, and death is handled as a competing risk.

Figure 10.1 and table 10.1 show the cumulative incidence of any non-skin cancer on RRT, stratified by country at RRT start. The overall incidence is approximately 10% at 10 years. Figure 10.2 shows this incidence for new transplant recipients, stratified by country and age. These data are not censored at graft failure. Figure 10.3 shows cancer incidence in new dialysis patients, stratified by country and age, and censored at transplantation. Cancer is more common in older patients, and more common after transplantation than while on dialysis.

**Figure 10.1**



**Table 10.1. Cumulative Incidence of Non-Skin Cancer on Renal Replacement Therapy (% , 95% CI)**

Country	6 months	1 year	2 years	5 years	10 years
Australia	1.6 (1.5, 1.8)	2.4 (2.2, 2.6)	3.8 (3.6, 4.0)	6.8 (6.4, 7.1)	9.7 (9.2, 10.2)
New Zealand	1.3 (1.0, 1.6)	2.0 (1.6, 2.4)	3.4 (2.9, 3.9)	6.8 (6.0, 7.5)	9.3 (8.3, 10.3)

Figure 10.2.1

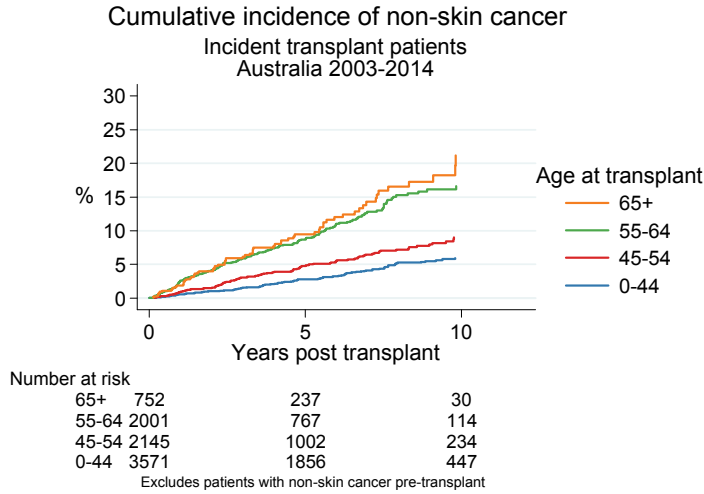


Figure 10.2.2

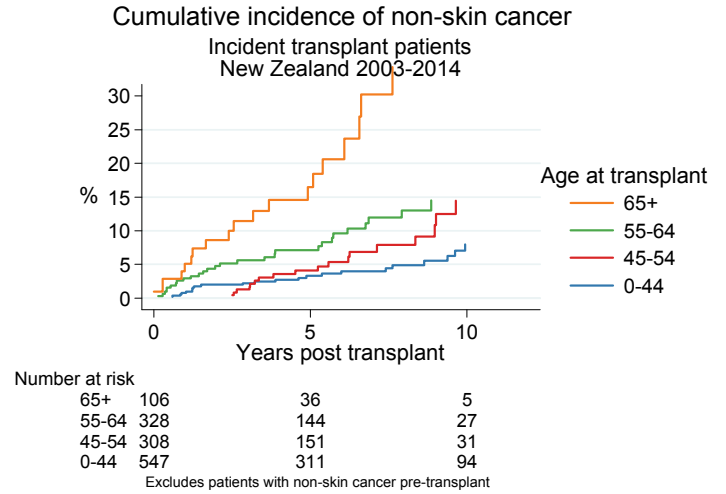


Figure 10.3.1

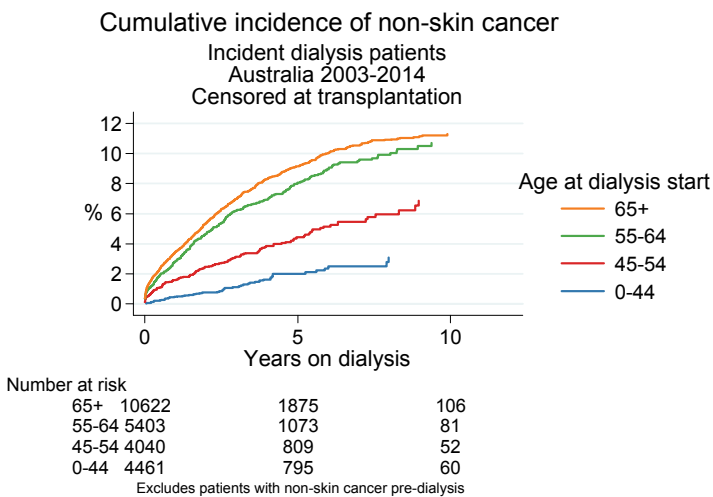
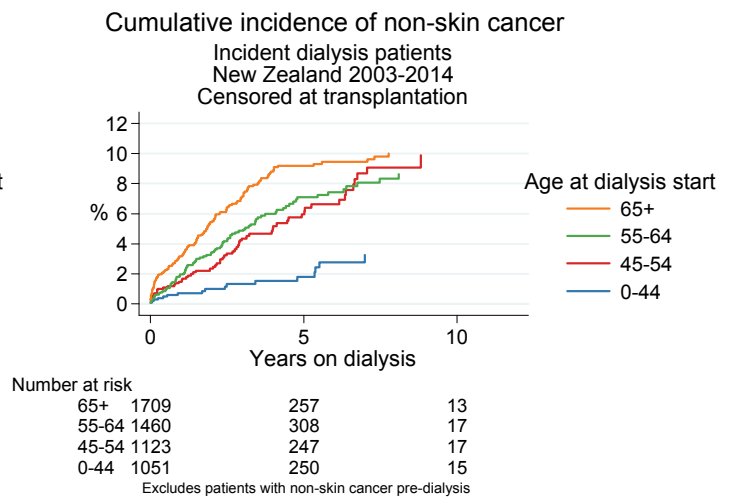
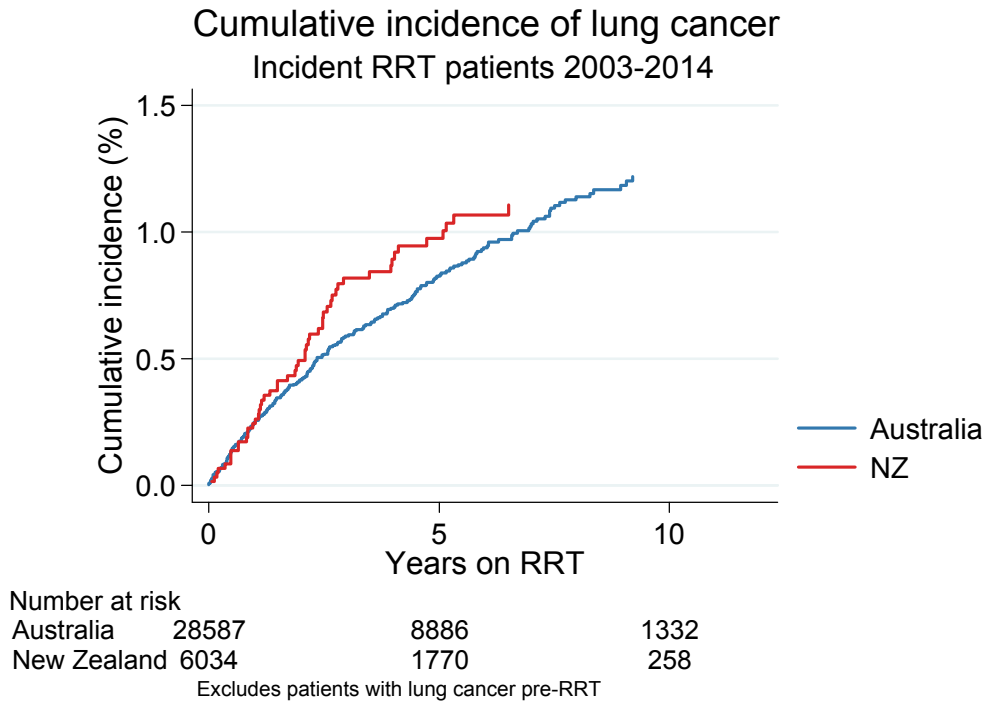


Figure 10.3.2



Figures 10.4-10.6 show the incidence of the three most common cancer types among those on RRT in Australia and New Zealand. Cancer of the lung is the most common cancer type, followed by urinary tract and colorectal cancers.

**Figure 10.4**



**Figure 10.5**

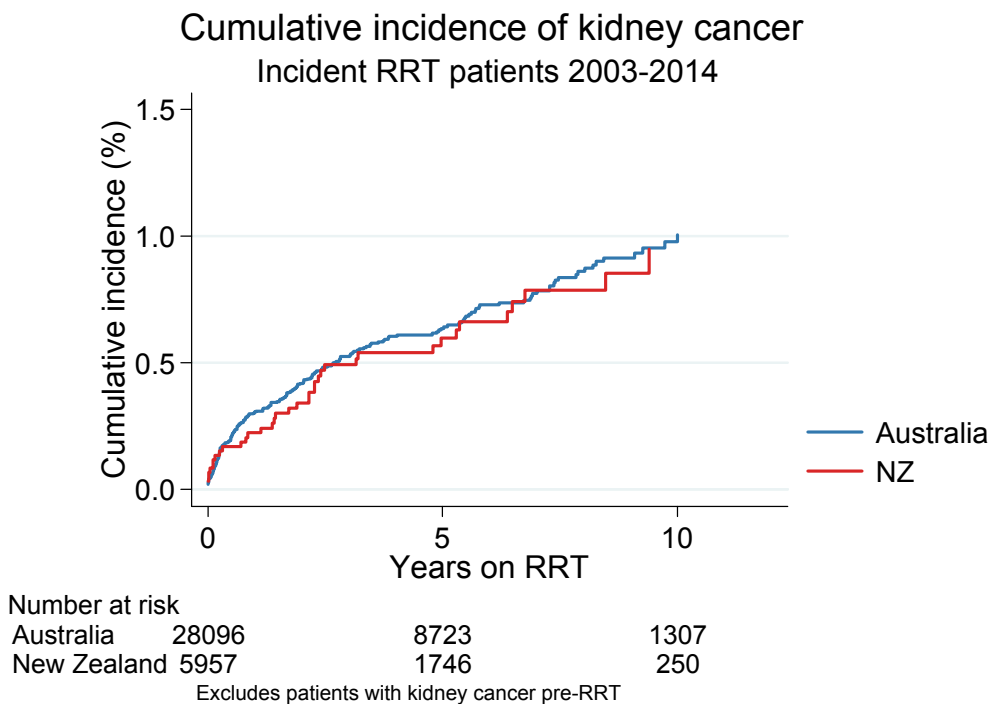
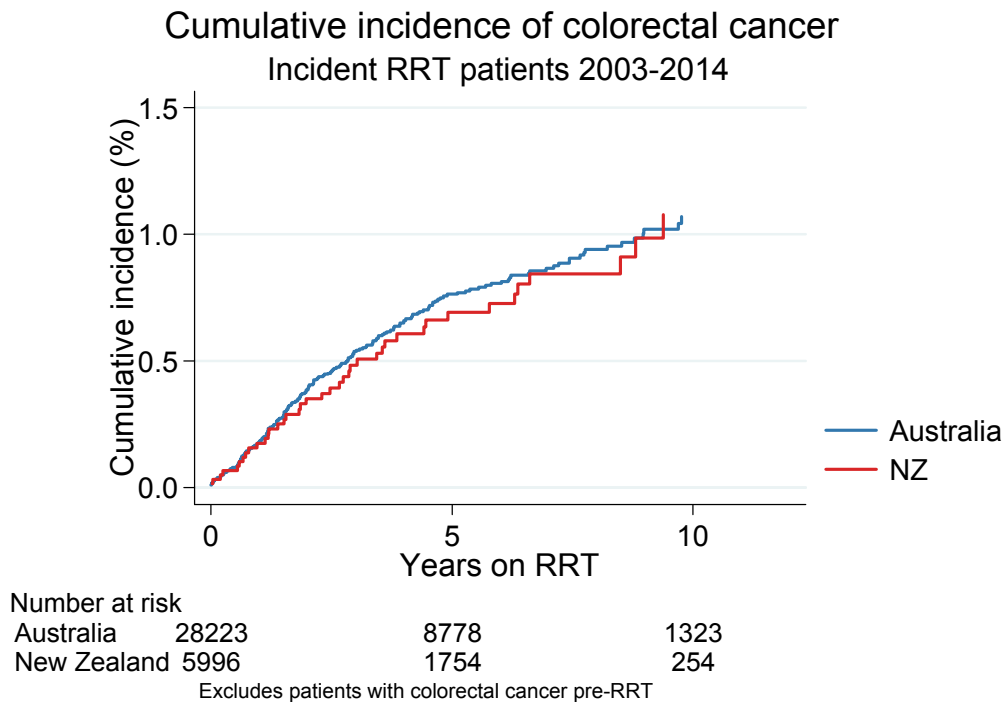


Figure 10.6



## Melanoma

In this year's report we focus on melanoma. Over 2003-2014 there were 365 melanomas diagnosed in patients receiving RRT in Australia or New Zealand. The melanoma rates (per 1000 patient-years) are shown in table 10.2, stratified by RRT modality; the rates increase with age and are higher in transplant than dialysis patients.

**Table 10.2. Melanoma Rates per 1000 Patient-Years 2003-2014**

Age	Dialysis cancers	Dialysis exposure	Dialysis cancer rate (95% CI)	Transplant cancers	Transplant exposure	Transplant cancer rate (95% CI)
0-44	3	23.05	0.1 (0.0, 0.4)	22	37.13	0.6 (0.4, 0.9)
45-54	13	23.79	0.5 (0.3, 0.9)	52	27.36	1.9 (1.4, 2.5)
55-64	53	32.96	1.6 (1.2, 2.1)	60	27.38	2.2 (1.7, 2.8)
65+	108	64.46	1.7 (1.4, 2.0)	54	17.50	3.1 (2.3, 4.0)

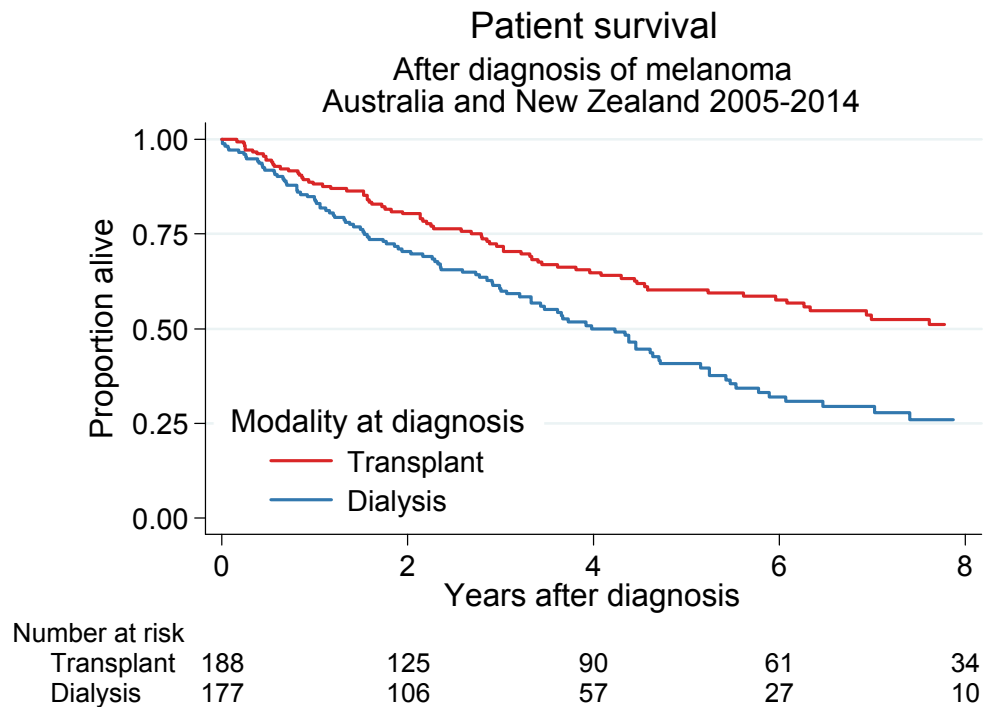
The characteristics of the patients diagnosed with melanoma are shown in table 10.3. Four percent of these patients had a previous melanoma prior to commencing RRT.

**Table 10.3. Characteristics of RRT Patients Diagnosed with Melanoma 2003-2014**

<b>Factor</b>	<b>Value</b>
<b>N</b>	365
<b>Age at diagnosis (years), median (IQR)</b>	63 (55, 73)
<b>Male sex</b>	238 (65.2%)
<b>Race</b>	
Caucasian	362 (99.2%)
Māori	2 (0.5%)
Other	1 (0.3%)
<b>Primary Renal Disease</b>	
GN	144 (39.5%)
Analgesic	10 (2.7%)
Polycystic	58 (15.9%)
Reflux	29 (7.9%)
Hypertension	28 (7.7%)
Diabetes	47 (12.9%)
Other	32 (8.8%)
Uncertain	17 (4.7%)
<b>RRT duration (years), median (IQR)</b>	4.7 (1.9, 10.7)
<b>Smoking status at RRT entry</b>	
Never	179 (52.3%)
Former	146 (42.7%)
Current	17 (5.0%)
<b>Previous melanoma</b>	15 (4.1%)
<b>Modality at diagnosis</b>	
Dialysis	177 (48.5%)
Transplant	188 (51.5%)

The survival of patients diagnosed with melanoma while receiving RRT is shown in figure 10.7. The cause of death for these patients is shown in table 10.4. Over half of patients died from cancer, either directly or due to withdrawal of renal replacement therapy as a result of cancer.

**Figure 10.7**



**Table 10.4. Cause of Death in Patients Diagnosed with Melanoma 2003-2014**

Cause of death	n (%)
Cancer	72 (42%)
Withdrawal - cancer	22 (13%)
Withdrawal - other	25 (15%)
Cardiovascular	28 (16%)
Infection	7 (4%)
Other	18 (10%)
<b>Total</b>	<b>172 (100%)</b>

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C-\ Royal Adelaide Hospital  
East Wing 9th Floor  
North Terrace, Adelaide  
South Australia  
Australia

[www.anzdata.org.au](http://www.anzdata.org.au)

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