



Australia &  
New Zealand Dialysis  
& Transplant Registry

# Chapter 10

## Cancer

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

### Contents:

<b>Cancer</b>	<b>10-1</b>
Incidence of Cancer on Renal Replacement Therapy	10-2
Kidney Cancer	10-5

### Suggested Citation:

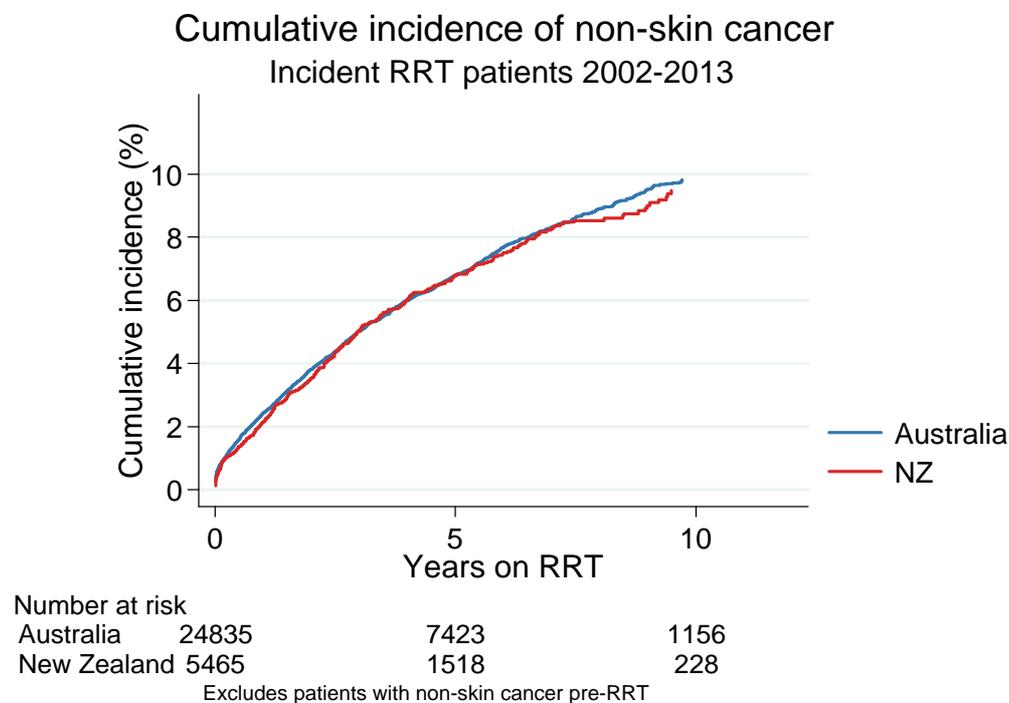
ANZDATA Registry. 37th Report, Chapter 10: Cancer. Australia and New Zealand Dialysis and Transplant Registry, Adelaide, Australia. 2015. Available at: <http://www.anzdata.org.au>

## 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 2002-2013. 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**

Country	Cumulative incidence (%; 95% CI)				
	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, 4.1)	6.8 (6.5, 7.2)	9.8 (9.3, 10.3)
New Zealand	1.4 (1.1, 1.7)	2.1 (1.8, 2.6)	3.6 (3.1, 4.1)	6.8 (6.0, 7.5)	9.5 (8.5, 10.6)

Figure 10.2.1

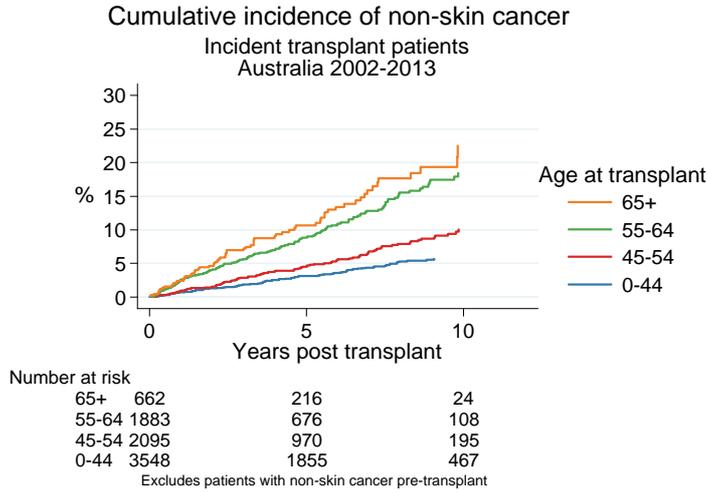


Figure 10.2.2

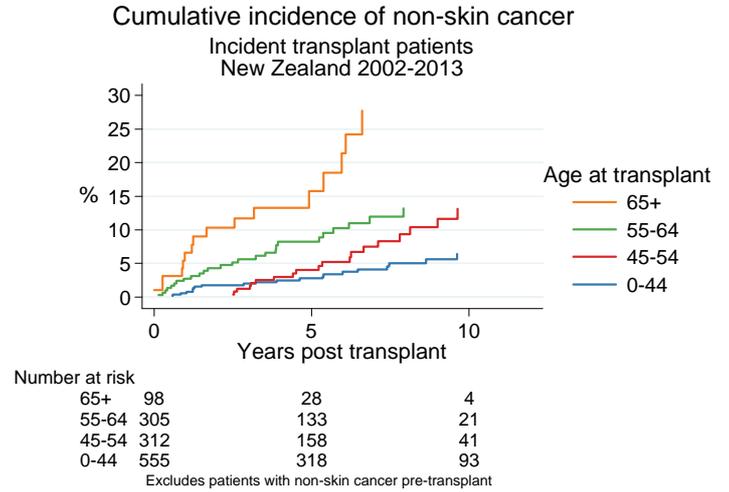


Figure 10.3.1

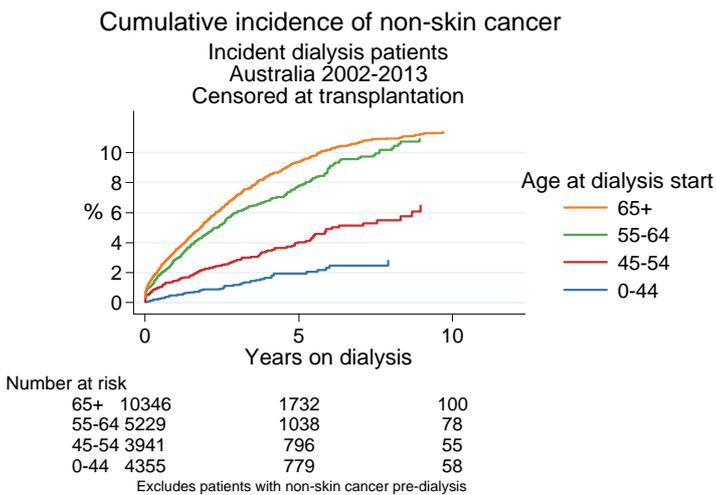
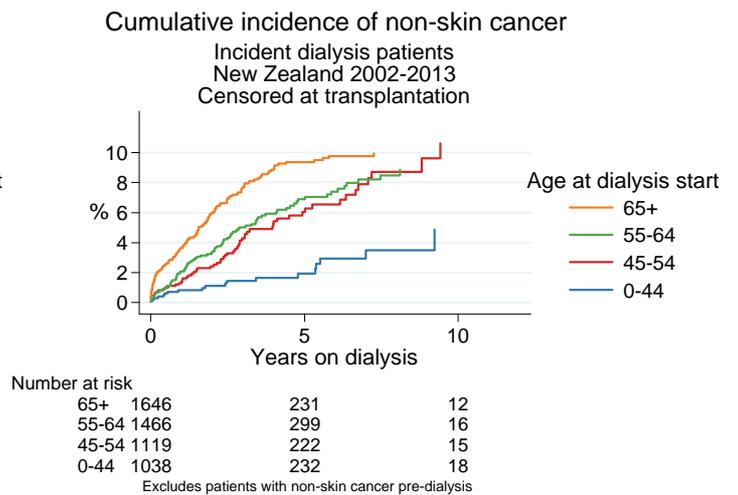
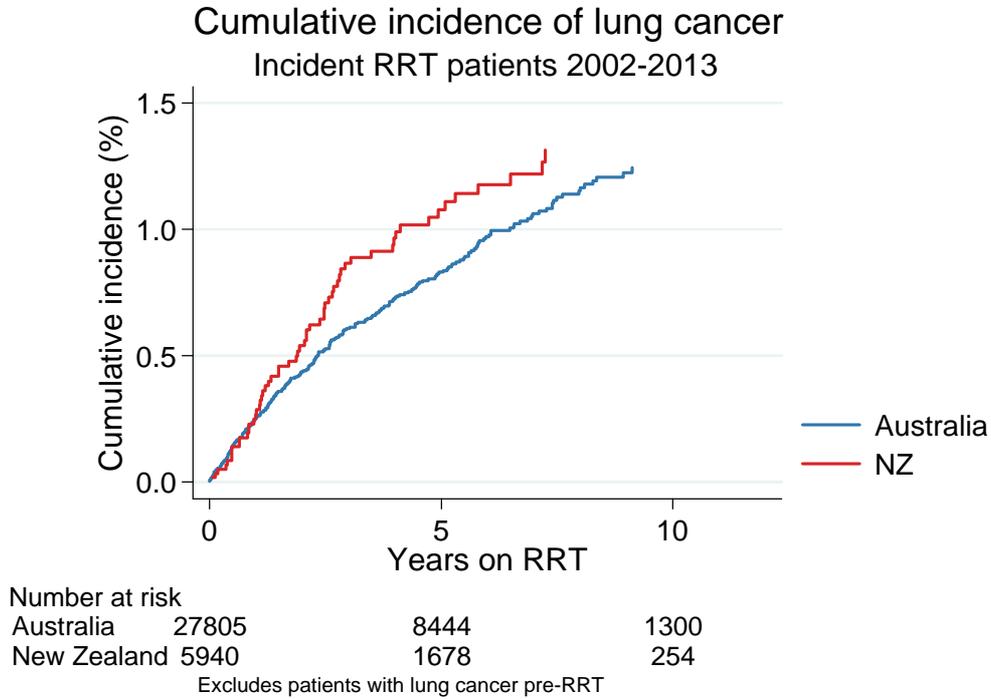


Figure 10.3.2



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 colorectal and urinary tract cancers.

**Figure 10.4**



**Figure 10.5**

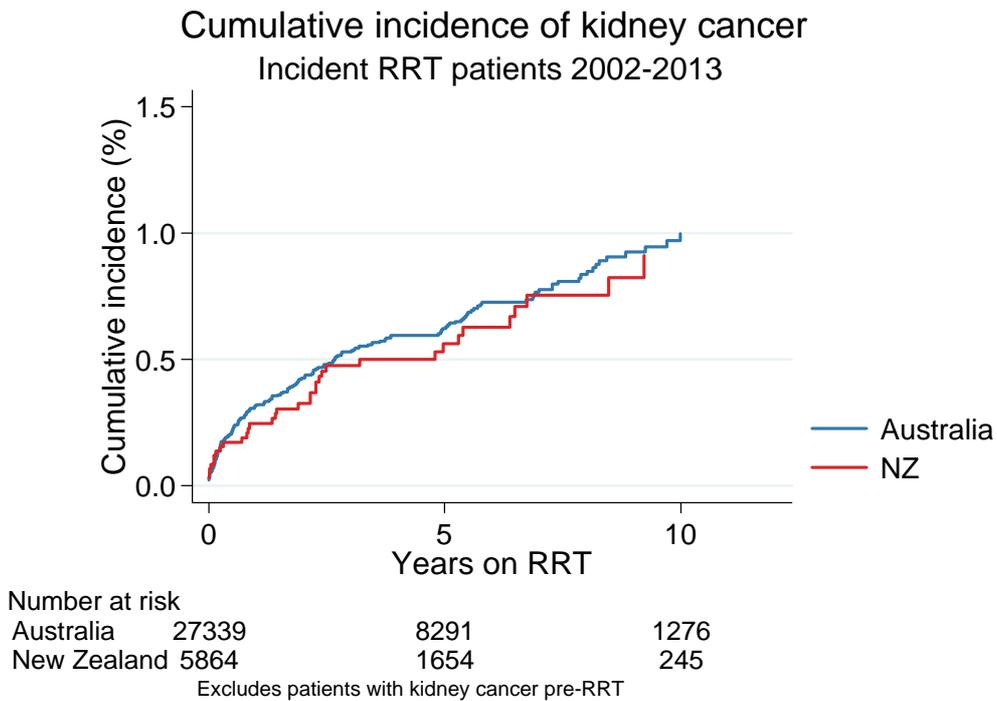
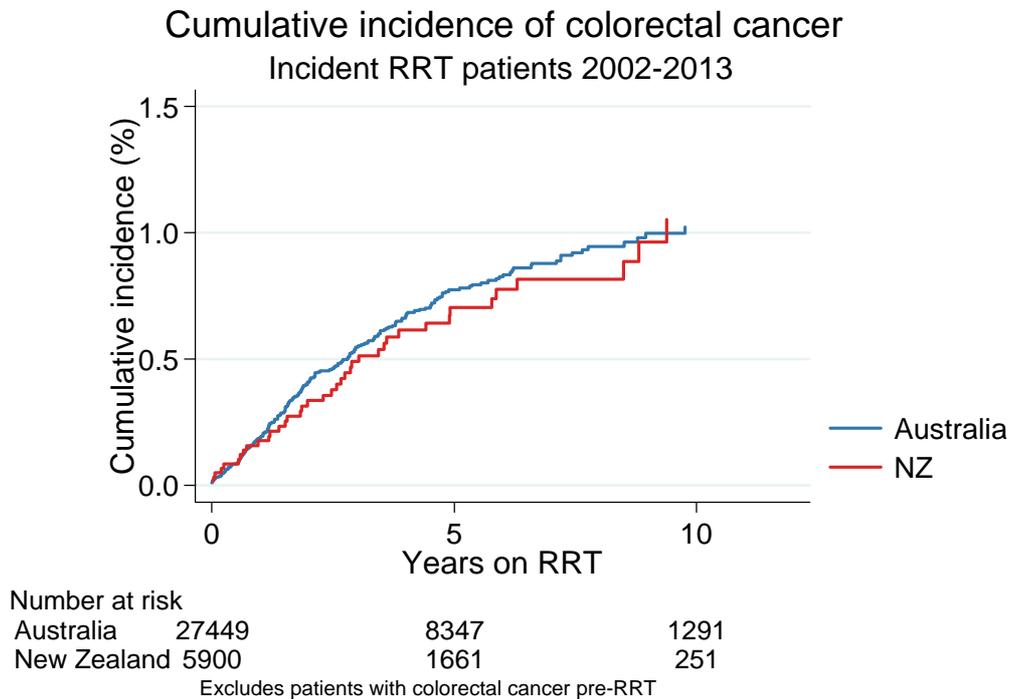


Figure 10.6



## Kidney Cancer

In this year's Report we focus on kidney cancer. Over 2002-2013 there were 523 kidney cancers diagnosed in patients receiving RRT in Australia or New Zealand. The cancer rates (per 1000 patient-years) are shown in table 2, stratified by RRT modality; the rates increase with age and are very similar between dialysis and transplant patients.

Table 10.2

**Kidney cancer rates per 1000 patient-years 2002-2013**

Age	Dialysis cancers	Dialysis exposure	Dialysis cancer rate (95% CI)	Transplant cancers	Transplant exposure	Transplant cancer rate (95% CI)
0-44	34	22.80	1.5 (1.0, 2.1)	32	36.66	0.9 (0.6, 1.2)
45-54	55	22.96	2.4 (1.8, 3.1)	47	26.33	1.8 (1.3, 2.4)
55-64	82	31.52	2.6 (2.1, 3.2)	69	25.66	2.7 (2.1, 3.4)
65+	159	60.97	2.6 (2.2, 3.0)	45	15.98	2.8 (2.1, 3.8)

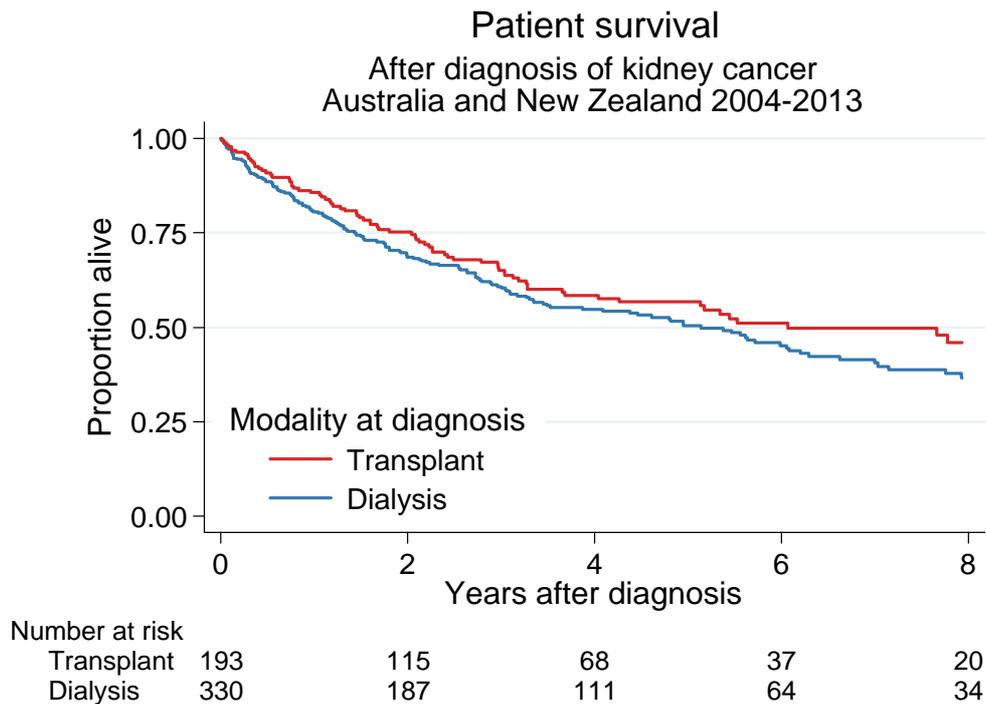
The characteristics of the patients diagnosed with kidney cancer are shown in table 10.3. Just under 10% of these patients had a previous kidney cancer prior to commencing RRT.

**Table 10.3**  
**Characteristics of RRT patients diagnosed with kidney cancer 2002-2013**

Factor	Value
<b>N</b>	523
<b>Age at diagnosis (years), median (IQR)</b>	61 (51, 69)
<b>Male sex</b>	385 (73.6%)
<b>Race</b>	
Caucasian	454 (86.8%)
Aboriginal/TSI	7 (1.3%)
Asian	27 (5.2%)
Māori	19 (3.6%)
Pacific	6 (1.1%)
Other	9 (1.7%)
Not reported	1 (0.2%)
<b>Primary Renal Disease</b>	
GN	221 (42.3%)
Analgesic	14 (2.7%)
Polycystic	28 (5.4%)
Reflux	17 (3.3%)
Hypertension	49 (9.4%)
Diabetes	74 (14.1%)
Other	98 (18.7%)
Uncertain	22 (4.2%)
<b>RRT duration (years), median (IQR)</b>	5.3 (0.7, 13.0)
<b>Smoking status at RRT entry</b>	
Never	214 (44.0%)
Former	211 (43.4%)
Current	61 (12.6%)
<b>Kidney cancer prior to RRT</b>	51 (9.8%)
<b>Modality at diagnosis</b>	
Dialysis	330 (63.1%)
Transplant	193 (36.9%)

The survival of patients diagnosed with kidney cancer 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 kidney cancer 2002-2013**

Cause of death	n (%)
Cancer	89 (37%)
Withdrawal - cancer	47 (20%)
Withdrawal - other	17 (7%)
Cardiovascular	53 (22%)
Infection	8 (3%)
Other	24 (10%)
<b>Total</b>	<b>238 (100%)</b>

**Suggested Citation:**

ANZDATA Registry. 37th Report, Chapter 10: Cancer. Australia and New Zealand Dialysis and Transplant Registry, Adelaide, Australia. 2015. Available at: <http://www.anzdata.org.au>

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

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

2015 ©