Survival of End Stage Renal Failure Patients with Cancer

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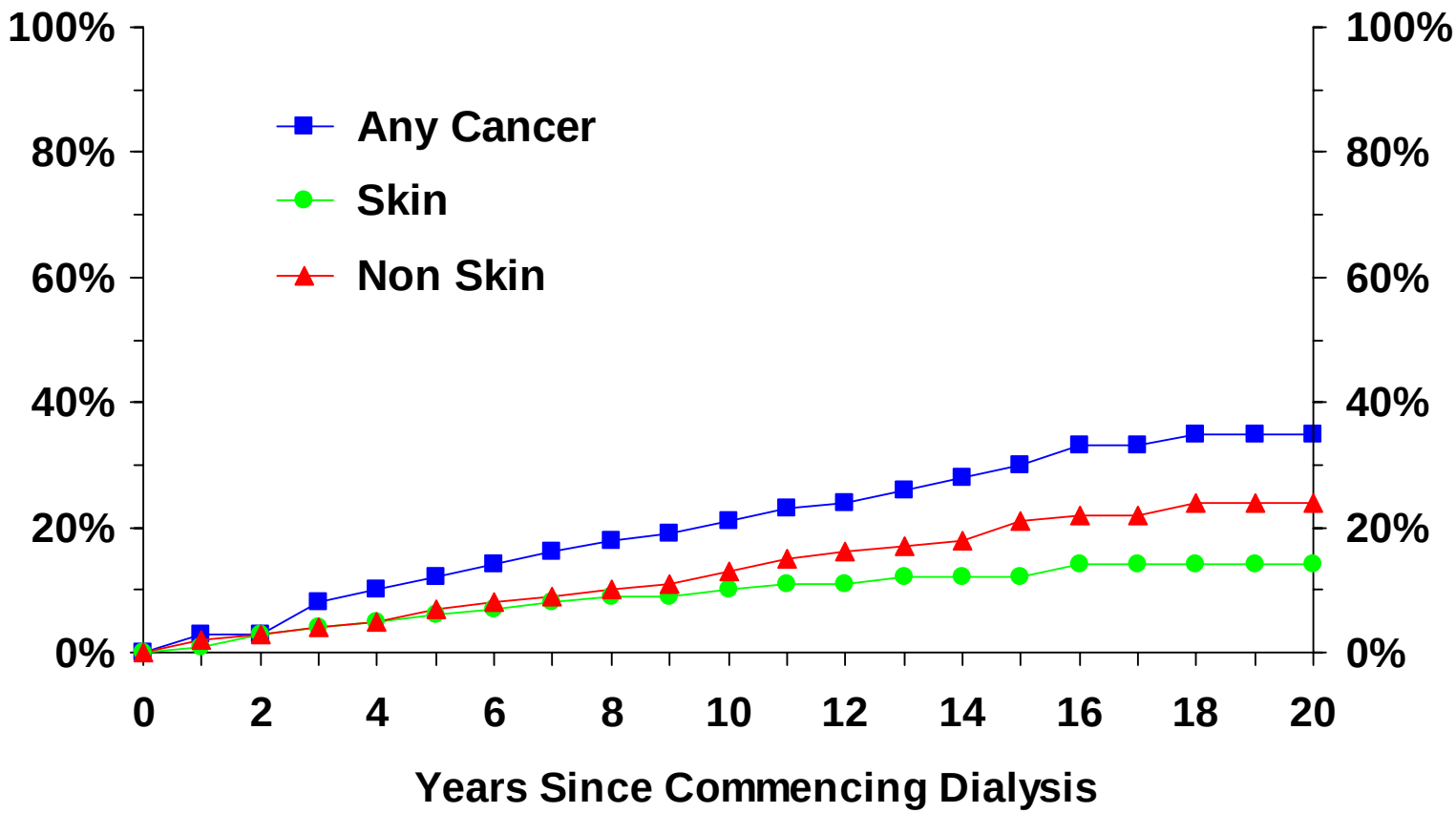
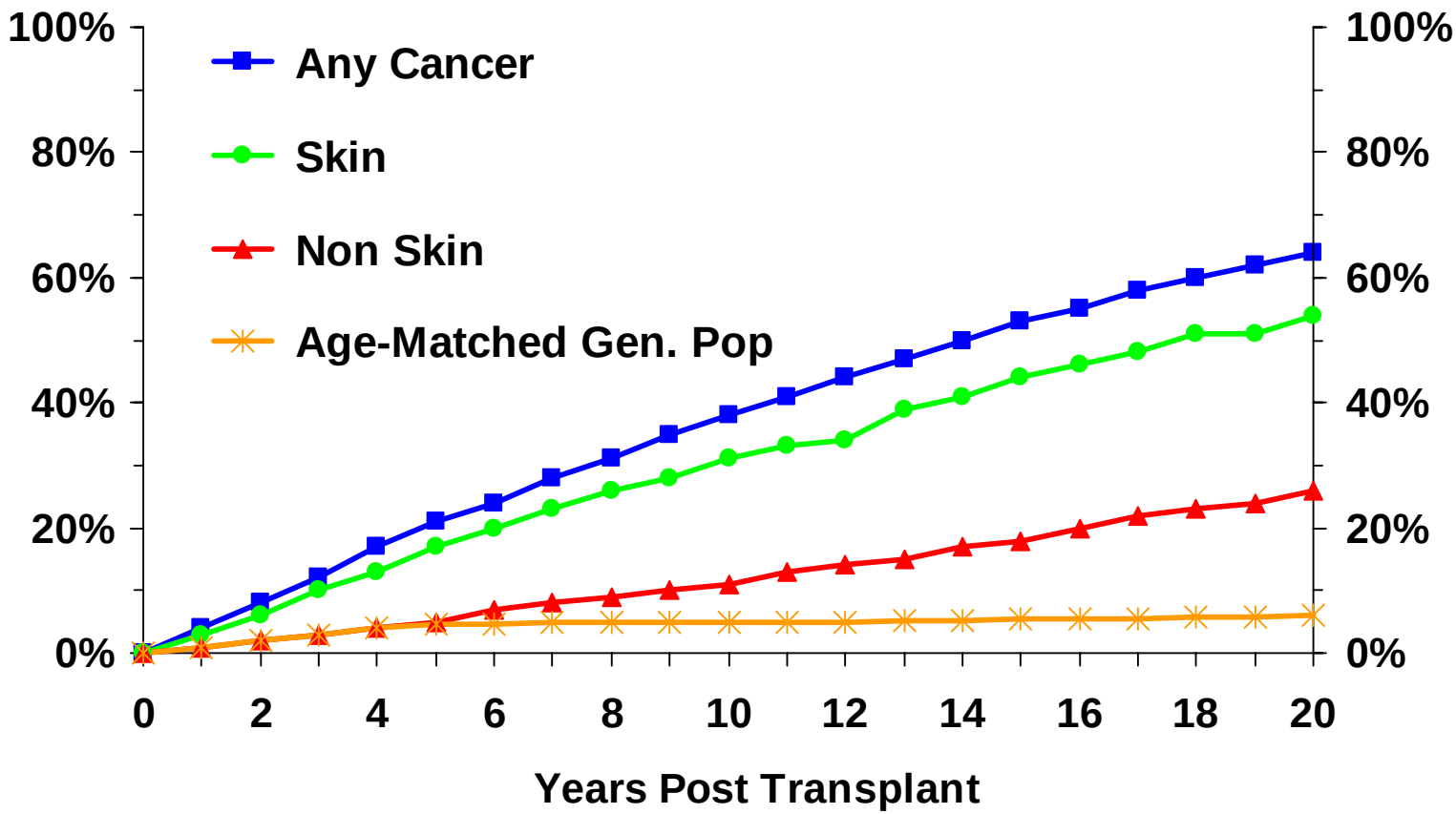
Cumulative risk of diagnosis of cancer after start of dialysis

Patients at Risk (30,892)



Cumulative risk of diagnosis of cancer post transplantation

Patients at Risk (8,881)



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  - **1079 dialysis deaths**
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- **5466 people with a functioning transplant**
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  - **37 (25%) deaths attributed to cancer**
  - **735 (13.4%) alive with a diagnosis**

Common cancers 1963-2002

	Dialysis		Cad Transplant		LR Transplant	
	RR	N	RR	N	RR	N
Kidney	4.8		6.7		8.8	
Bladder	4.1		6.5		5.1	
Ureter	94		233			

Common cancers 1963-2002

	Dialysis		Cad Transplant		LR Transplant	
	RR	N	RR	N	RR	N
Kidney	4.8	91	6.7	72	8.8	6
Bladder	4.1	103	6.5	71	5.1	3
Ureter	94	15	233	14		1
Total at risk	30 892		8881		1808	

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Ureter	94	15	233	14		1
NHL	1.0	22	8.7	129	10.8	13
Endocrine	6.9	28	4.8	19	4.0	2
Cervix	1.5	9	3.0	15	5.5	3
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Cervix	1.5	9	3.0	15	5.5	3
Colon	**1.2**	**78**	**2.6**	**81**	**2.2**	**4**
Lung	**1.8**	**153**	**2.1**	**87**	**2.4**	**5**
Melanoma	**1.3**	**62**	**3.6**	**130**	**3.1**	**12**
Breast	**1.2**	**88**	**1.0**	**58**	**1.9**	**8**

Common non-skin cancers

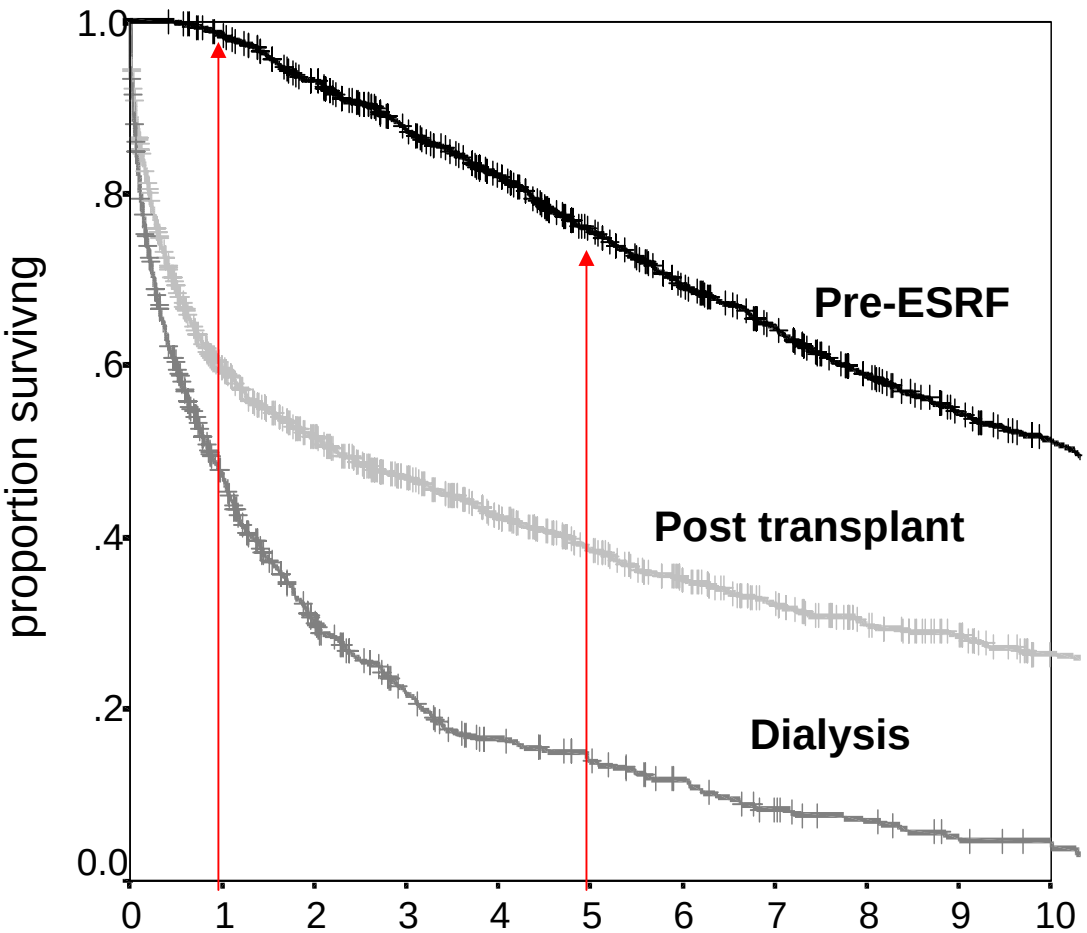
- **Relative and absolute risks**
- **Analysis of survival**
- **Attributed cause of death**

All non - skin cancers

	Dialysis	Post transplantation	
		Cad/LUR	LR
At risk	30892	8881	1808
Expected #	738	398	28
Diagnosed	1034	1200	125
Relative R	1.4	3.0	4.4
Incidence* N	24	45	16
ESRF	34	135	69
Absolute R *	10	90	54

age matched SA population * per 1000

Survival: all cancers



age	survival (95%CI)
57	10.25 (9.5,11.0)
52	2.23 (1.7, 2.8)
64	0.86 (0.7, 1.0)

Cause of death of cancer patients

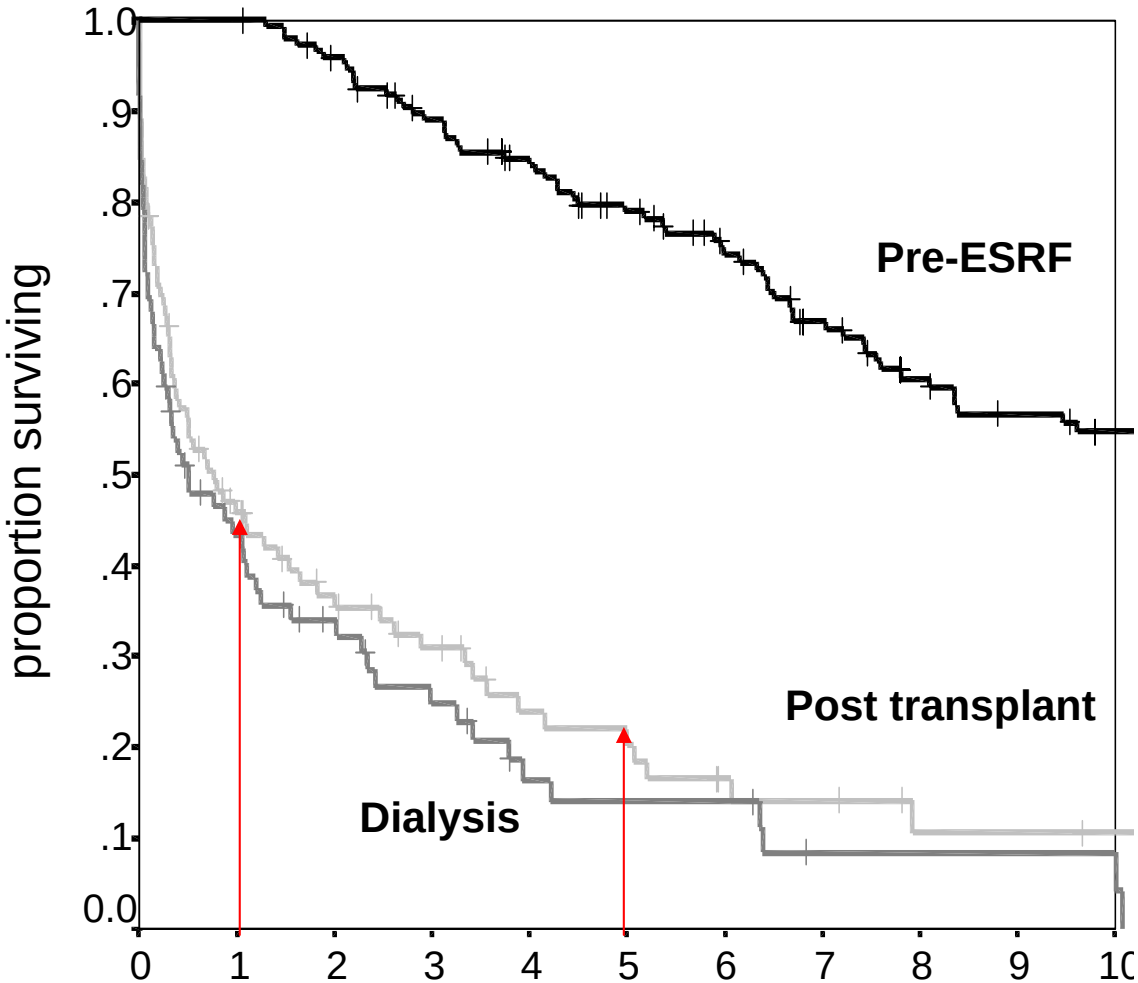
Cause of death %	Time of diagnosis		
	Pre ESRF	Dialysis	Post Tx
cancer	29	46	68
cardiac	28	19	12
vascular	8	5	5
social	20	17	3
infection	12	11	8
other	3	2	4

Colon cancer

		Dialysis	Post transplantation	
			Cad/LUR	LR
Expected #		63	31	1.83
Diagnosed		78	81	4
RR		1.2	2.6	2.2
Incidence*	N	2	4	1
	ESRF	3	9	2
AR *		1	5	1

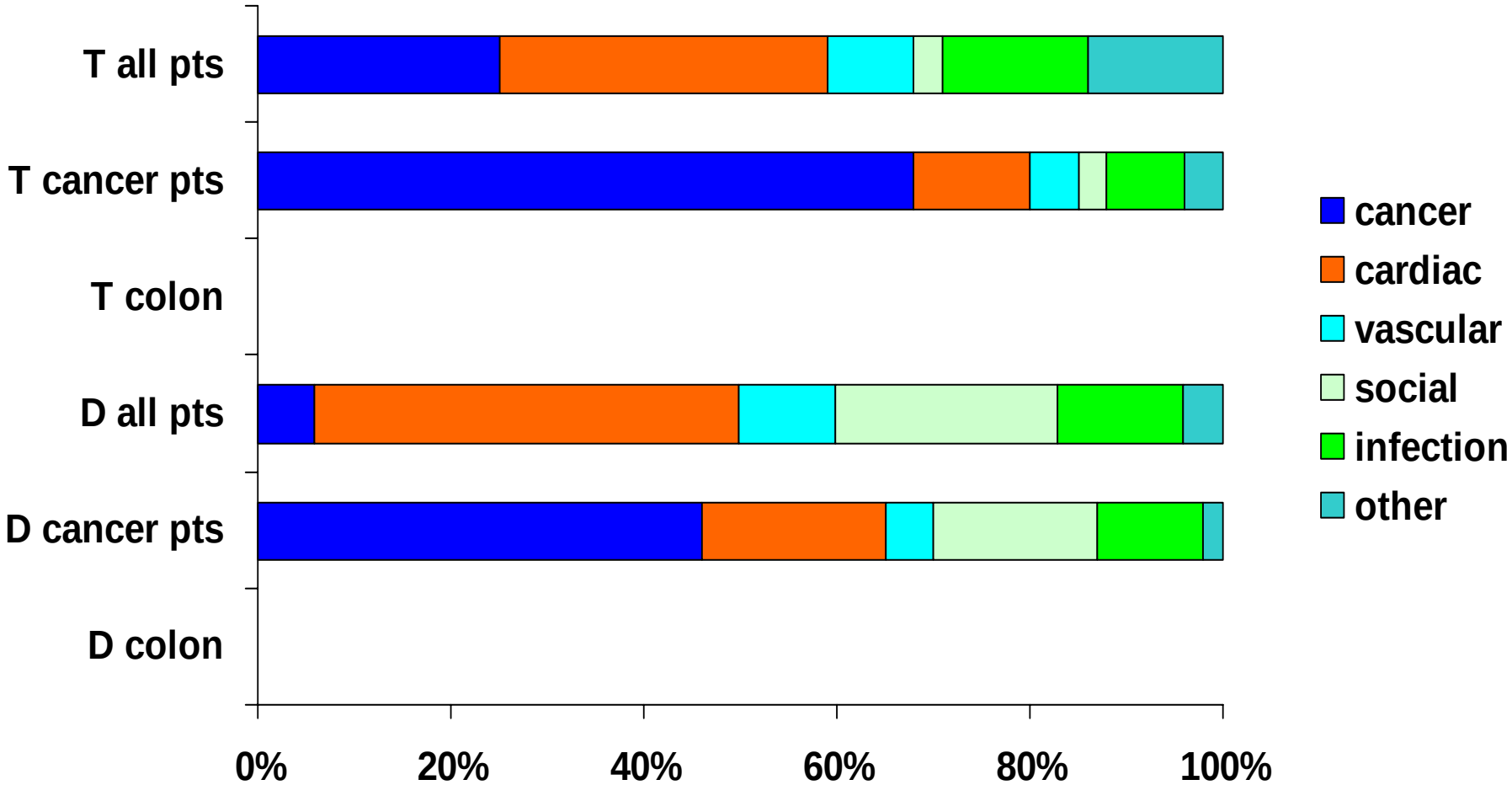
age matched SA population * per 1000

Survival: colon cancer



	age	survival (95%CI)
Pre-ESRF	62	10.86 (9.2,12.5)
Post transplant	59	0.76 (0.2, 1.3)
Dialysis	66	0.51 (0.0, 1.1)

Attributed cause of death



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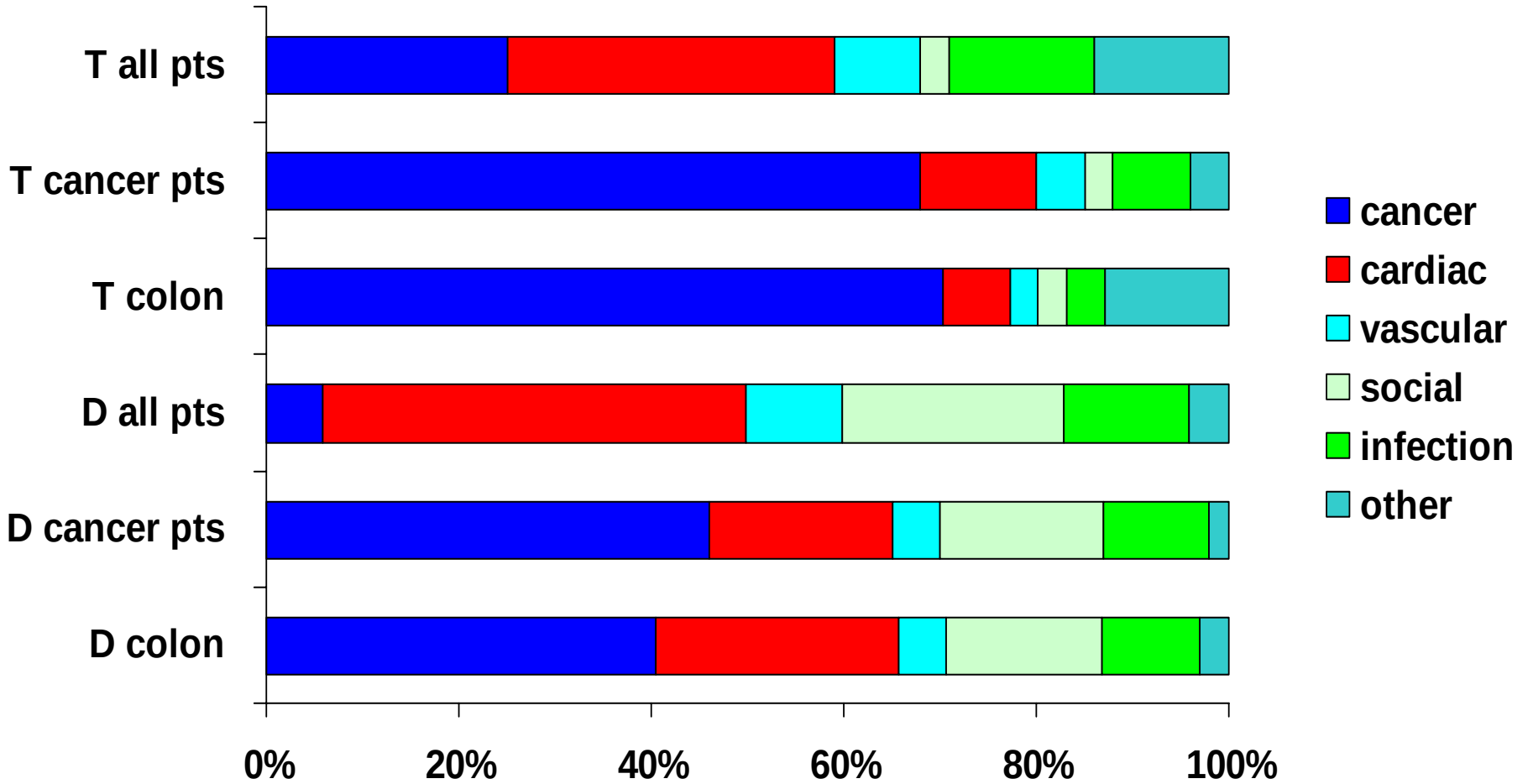
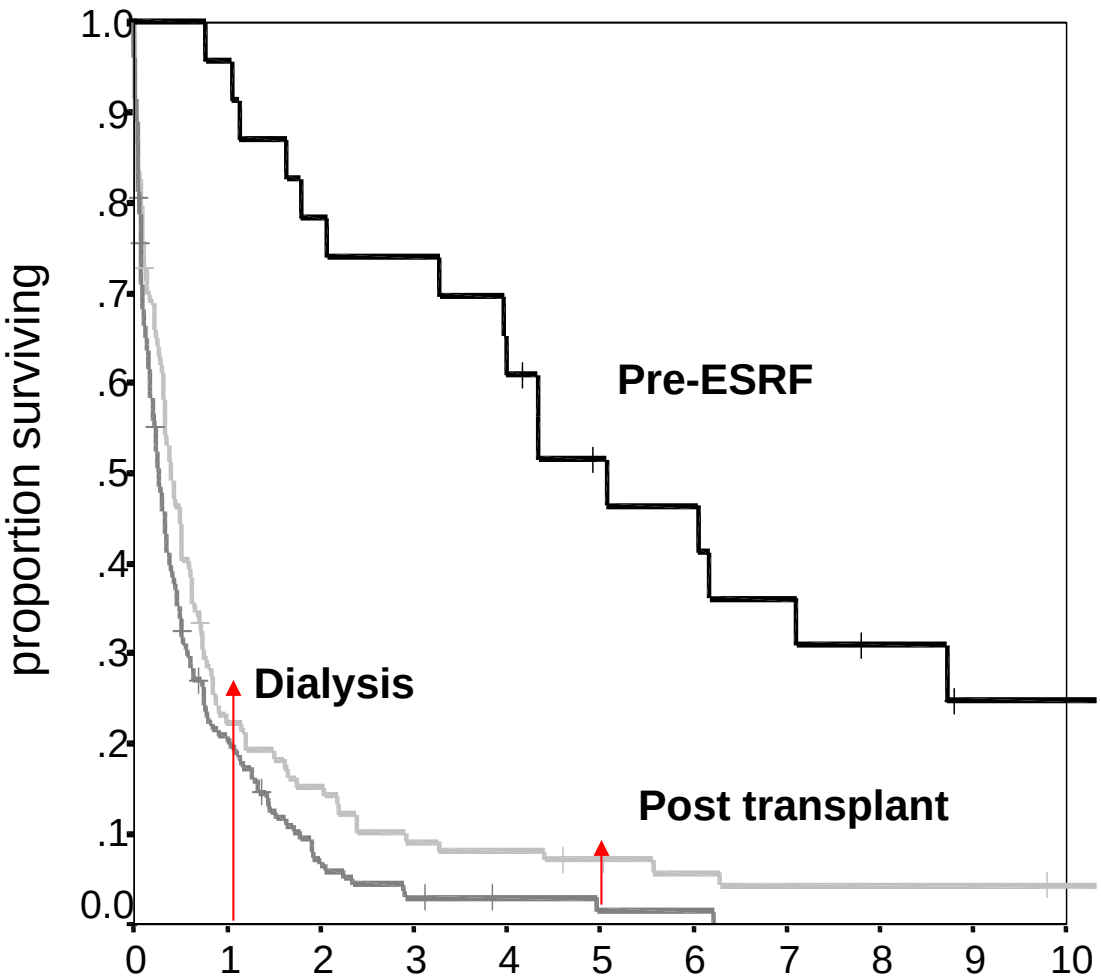


Lung cancer

		Dialysis	Post transplantation	
			Cad/LUR	LR
Expected #		87	41	2.1
Diagnosed		153	87	5
RR		1.8	2.1	2.4
Incidence*	N	3	5	2
	ESRF	5	10	5
AR *		2	5	3

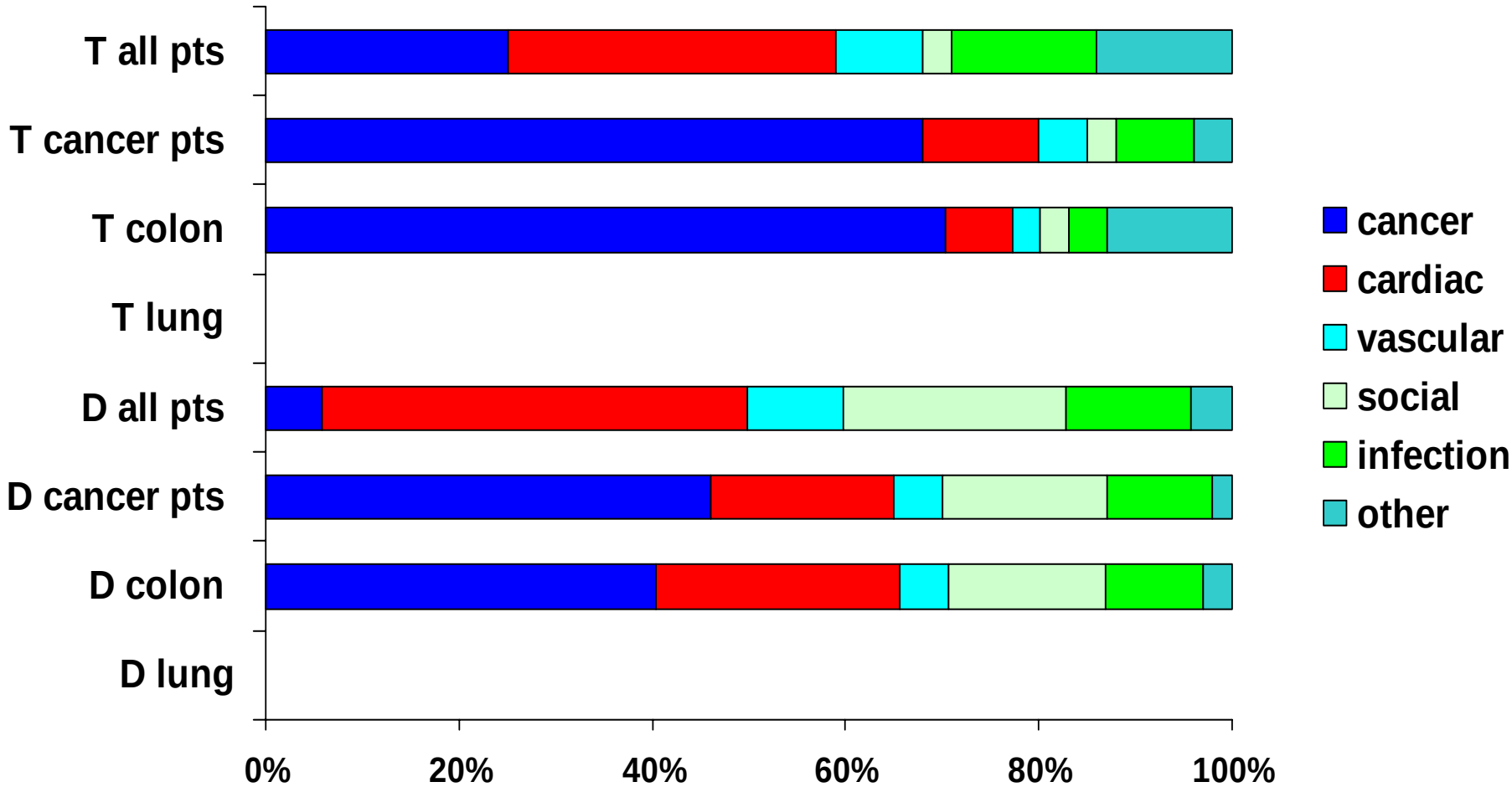
age matched SA population * per 1000

Survival: lung cancer



age	survival (95%CI)
63	5.07 (2.7, 7.5)
60	0.40 (0.3, 0.5)
67	0.26 (0.2, 0.3)

Attributed cause of death



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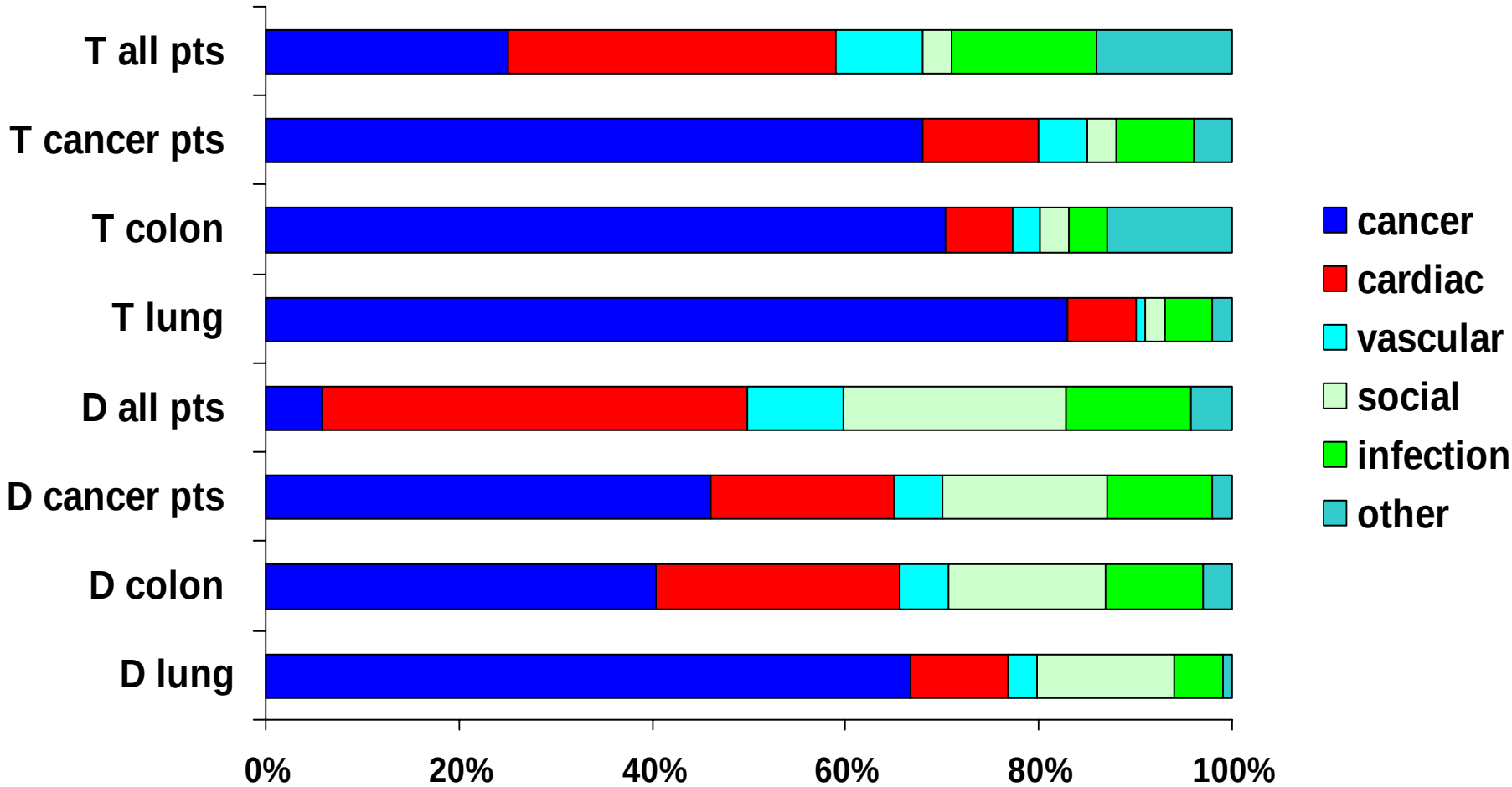
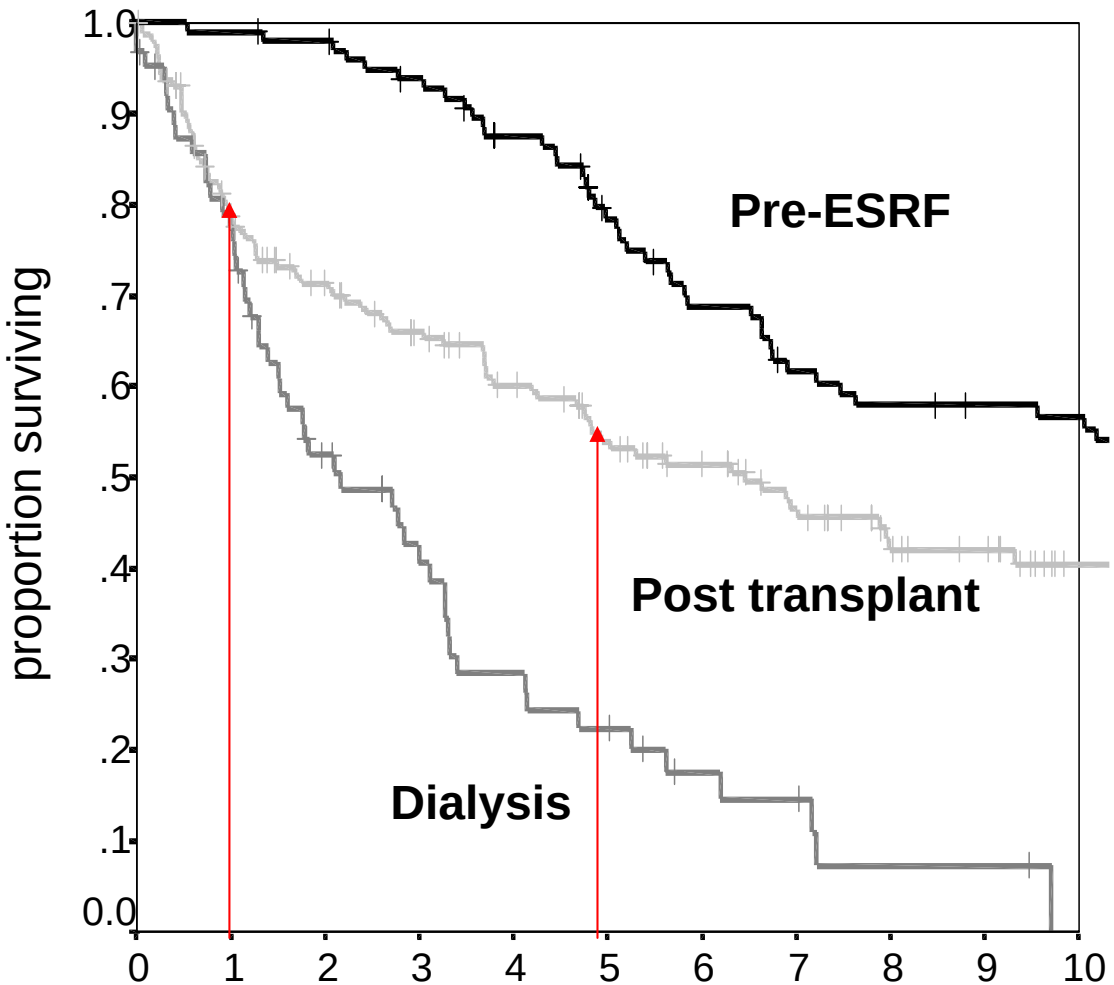


Melanoma

		Dialysis	Post transplantation	
			Cad/LUR	LR
Expected #		46	36	4
Diagnosed		62	130	12
RR		1.3	3.6	3.1
Incidence*	N	1	4	2
	ESRF	2	15	7
AR *		1	11	5

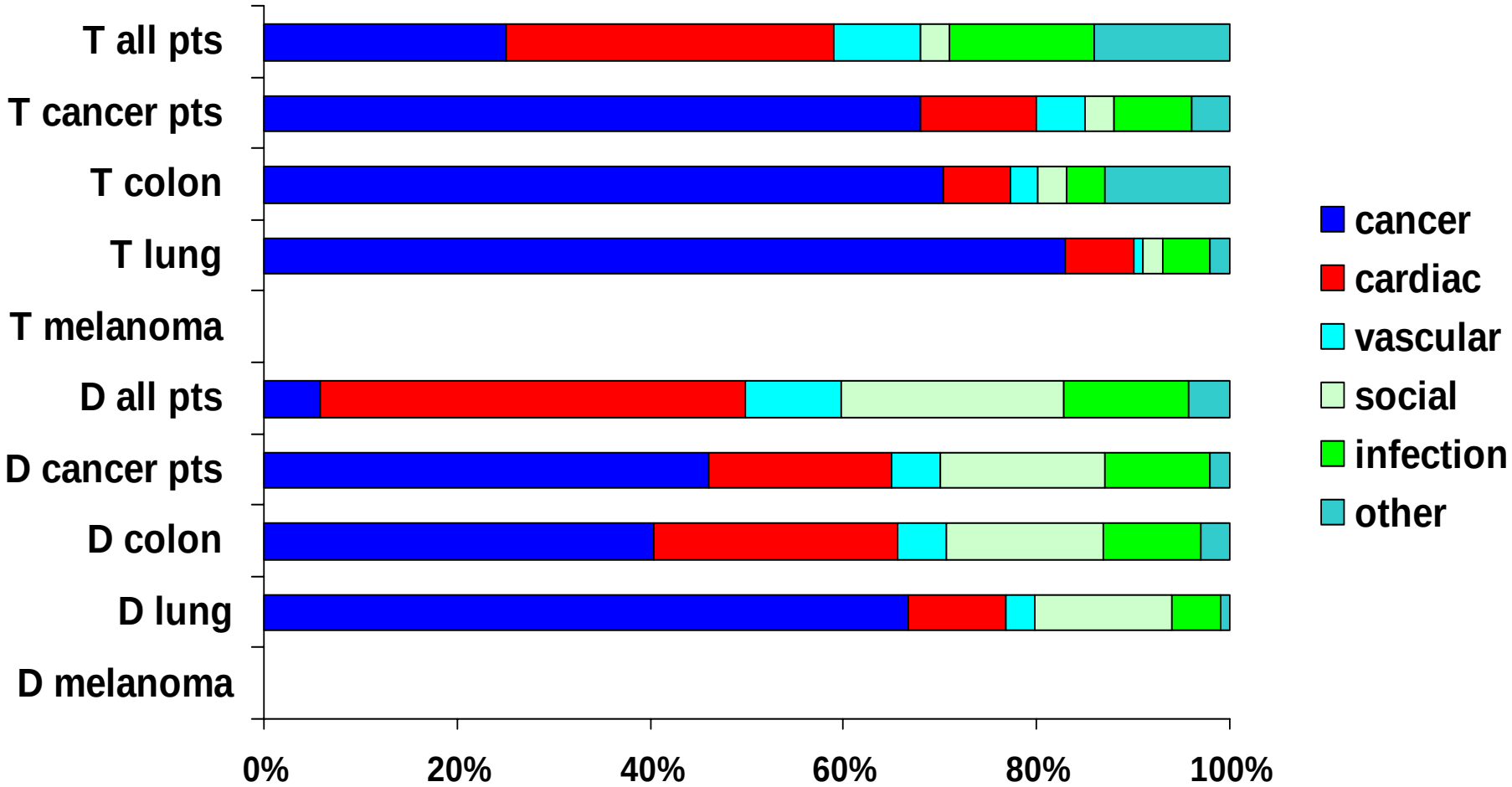
age matched SA population * per 1000

Survival: melanoma



age	survival (95%CI)
56	12.10 (9.1, 15.1)
53	6.46 (4.2, 8.7)
67	2.10 (1.0, 3.3)

Attributed cause of death



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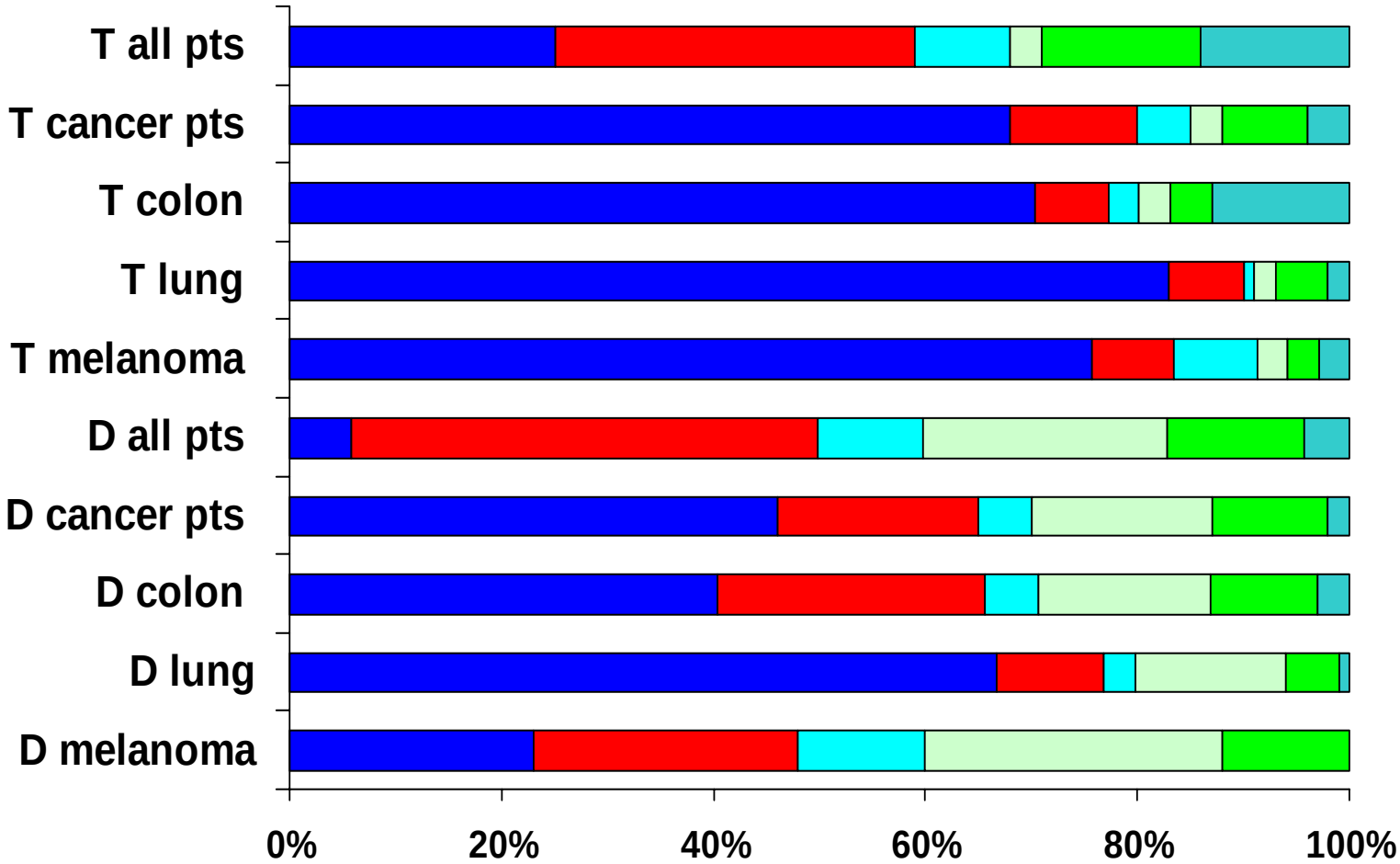

Conclusions

- **Common cancers in the general population are more common in the ESRF population**
- **For any cancer type, survival is worse for patients diagnosed whilst on dialysis than post transplantation**
- **Deaths from cancer are proportionally far greater post transplantation**

Future directions

- **Re-analysis of survival adjusting for confounders**
  - **age**
  - **duration of ESRF**
- **Comparison with general population**
- **Linkage of databases**