

# Outcomes of ATSI Transplant Recipients in Western Australia

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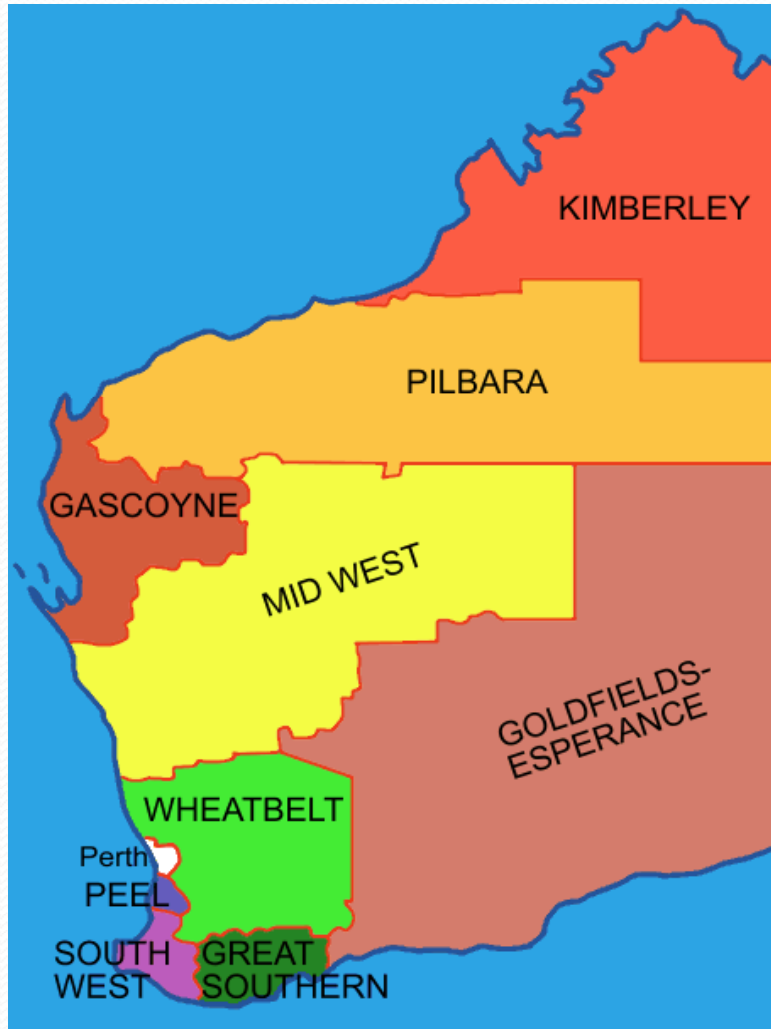
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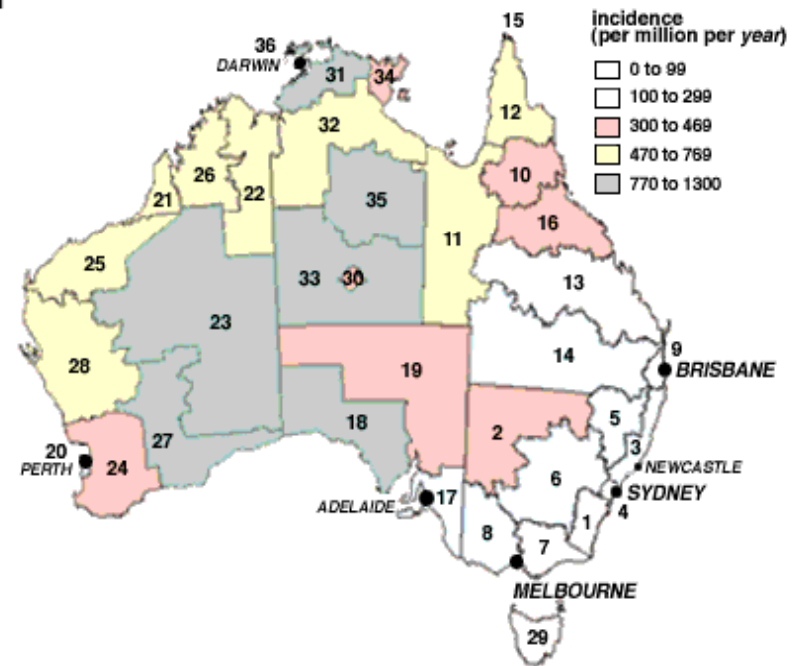
# Objectives

- Overview of the organisation of ATSI transplants in WA
- Review the Transplant activity and outcomes in WA ATSI Population

# Regional WA

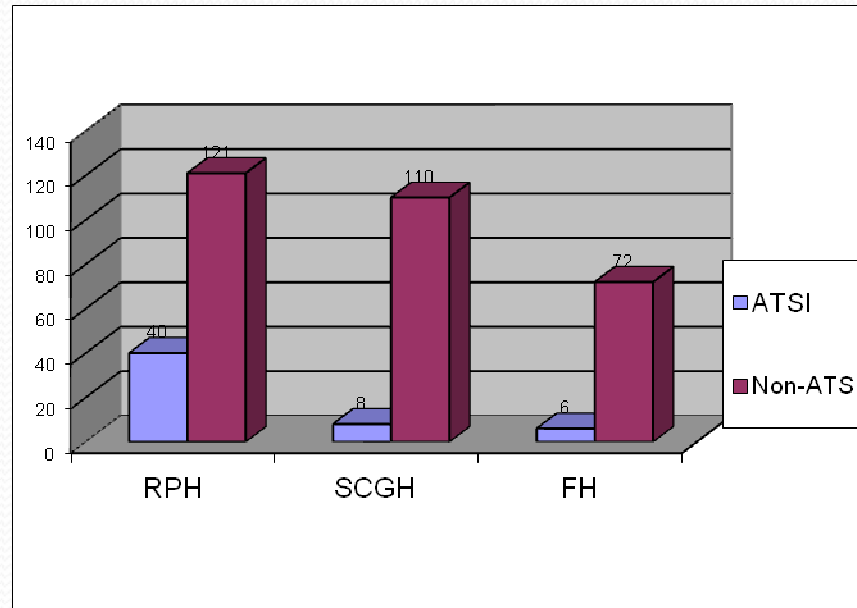


1: Incidence of end-stage renal disease in the Indigenous population, by ATSI region





# Number of Transplants



	RPH	SCGH	FH	Total
2005	8/22	0/26	0/9	8
2006	3/11	0/14	1/11	4
2007	3/13	2/11	0/12	5
2008	6/18	3/14	2/9	11
2009	4/15	2/16	3/8	9
2010	8/20	0/13	1/9	9
2011	10/33	1/16	0/14	11
<b>Total</b>	<b>42/132</b>	<b>8/110</b>	<b>8/73</b>	<b>57</b>

# Projections

## Population

Table 13: Aboriginal Population Projections

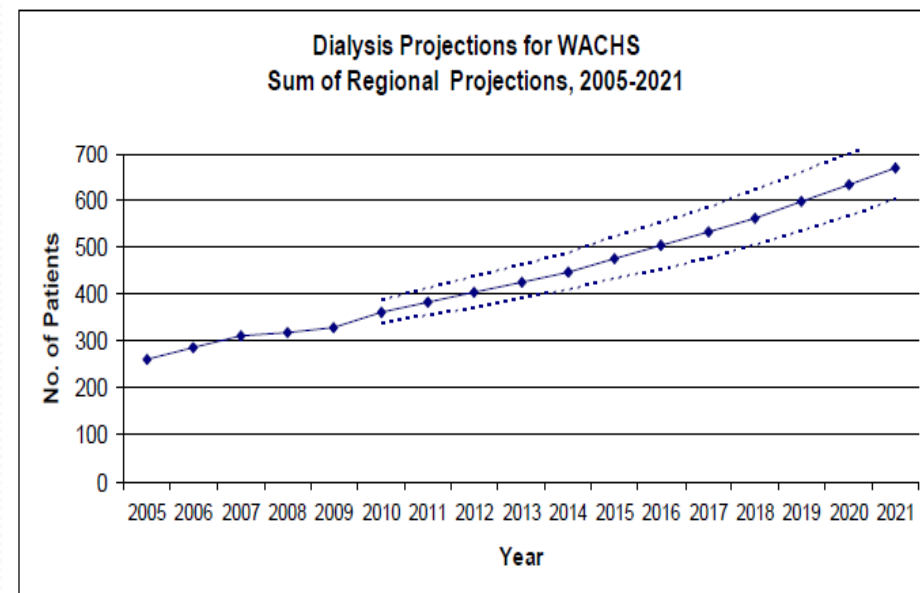
Health Region	2008	2011	2016	2021
Goldfields	5,920	6,400	6,734	7,068
Great Southern	2,129	2,190	2,277	2,348
Kimberley	15,632	22,209	25,998	29,849
Mid West	7,327	8,391	8,731	8,975
Pilbara	7,611	7,992	8,606	9,135
South West	3,173	3,331	3,542	3,700
Wheatbelt	3,658	3,880	4,102	4,349
Metro WA	27,585	29,011	31,533	34,079
<b>Total</b>	<b>73,035</b>	<b>87,160</b>	<b>95,758</b>	<b>109,373</b>

Note: 2006 Aboriginal population from ABS census, projections based on 2008 proportions applied to total population estimates derived by the WA Department of Health Epidemiology Branch.

There are approximately 330 remote Aboriginal communities in WA. 17% of WA's Aboriginal people reside in the bottom 10% of ranked socio-economic areas.

## Dialysis

Figure 6: Dialysis projections for WACHS excluding transplants by place of initial treatment.



# Prior to 2005

- 2000: 2
- 2001:1 (21)
- 2002: 2 (17)
- 2003: 1 (13)
- 2004: 1 (26)

5/7 at RPH and 2/7 SCGH



# Study outline

- Retrospective
  - All WA ATSI since 2005 compared with cadaveric all Tx at RPH
  - Median follow- up 36 (17- 59) months
  - ATSI included 4 LRD
    - ( 1 LRD, 2 TRK, 1 ABO)
- 57 ATSI vs.84 non ATSI

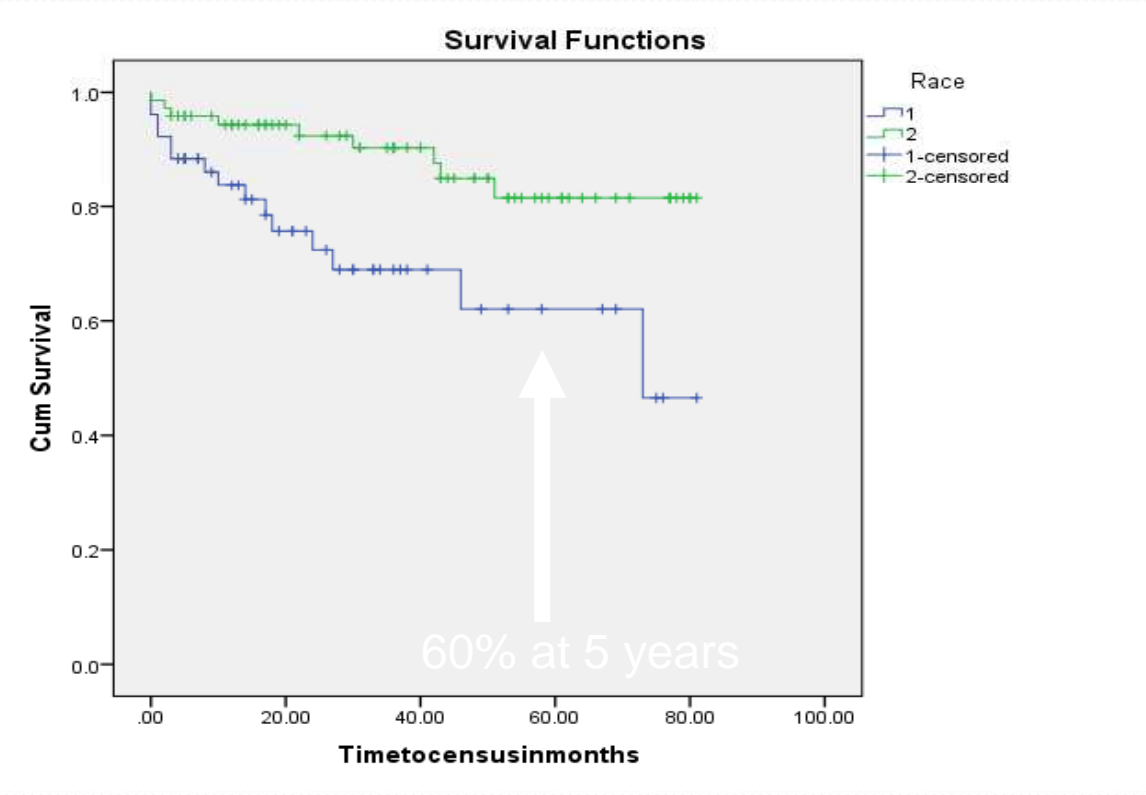
# Differences

- ATSI more remote,
  - waited longer, more diabetes,
  - worse HLA match,
  - worse DGF<sub>51</sub> vs. 31% (but no difference in cold ischaemia)
- Greater length of:
  - hospital stay (22 vs 7 days)
  - more ICU days
  - greater readmissions, infections, wound breakdowns.



# Graft Loss

## Death Censored Graft Loss



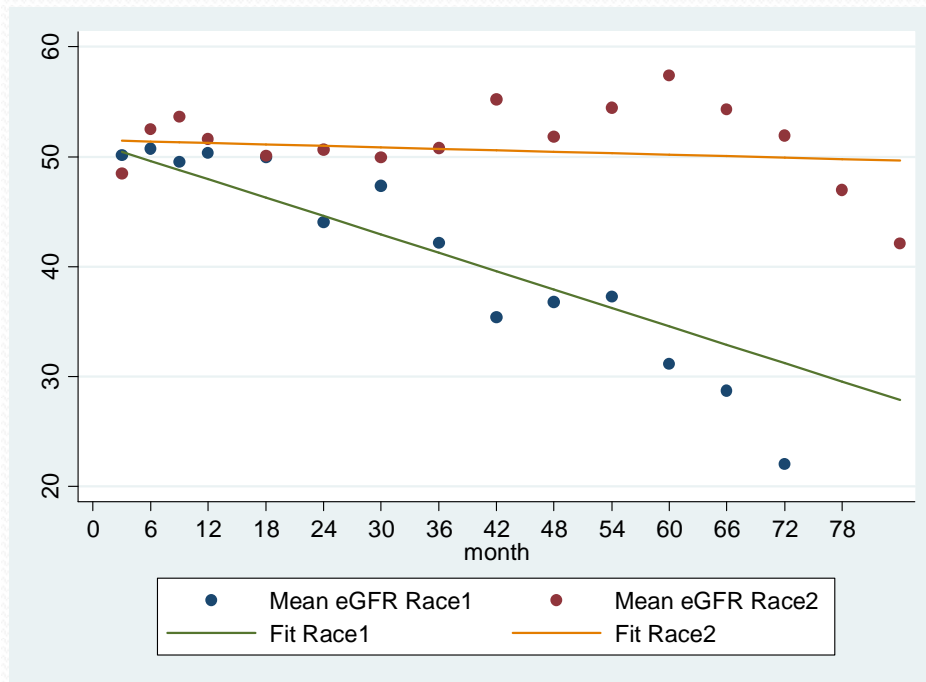
**P=0.002**

# Graft Loss

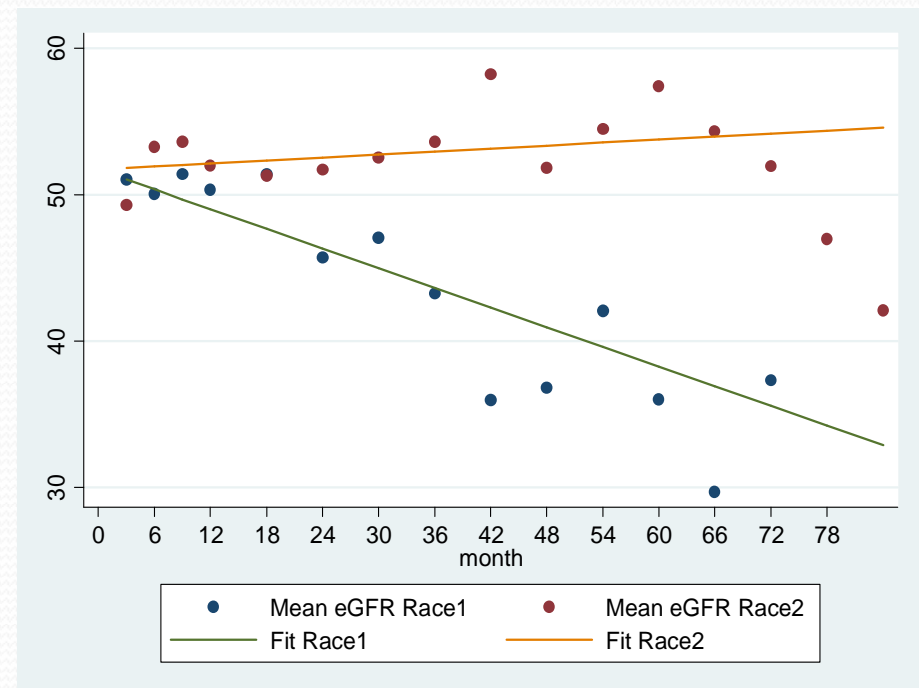
- 33% graft loss vs. 11% (  $P=0.001$  )
- Actual Numbers
  - 19 /58 vs.9/83
  - HR is 3.1 95% CI (1.5,6.5)  $p=0.002$ .
- ATSI: 50% was due to non-compliance and rejection

# Graft Function

All patients



Graft loss censored





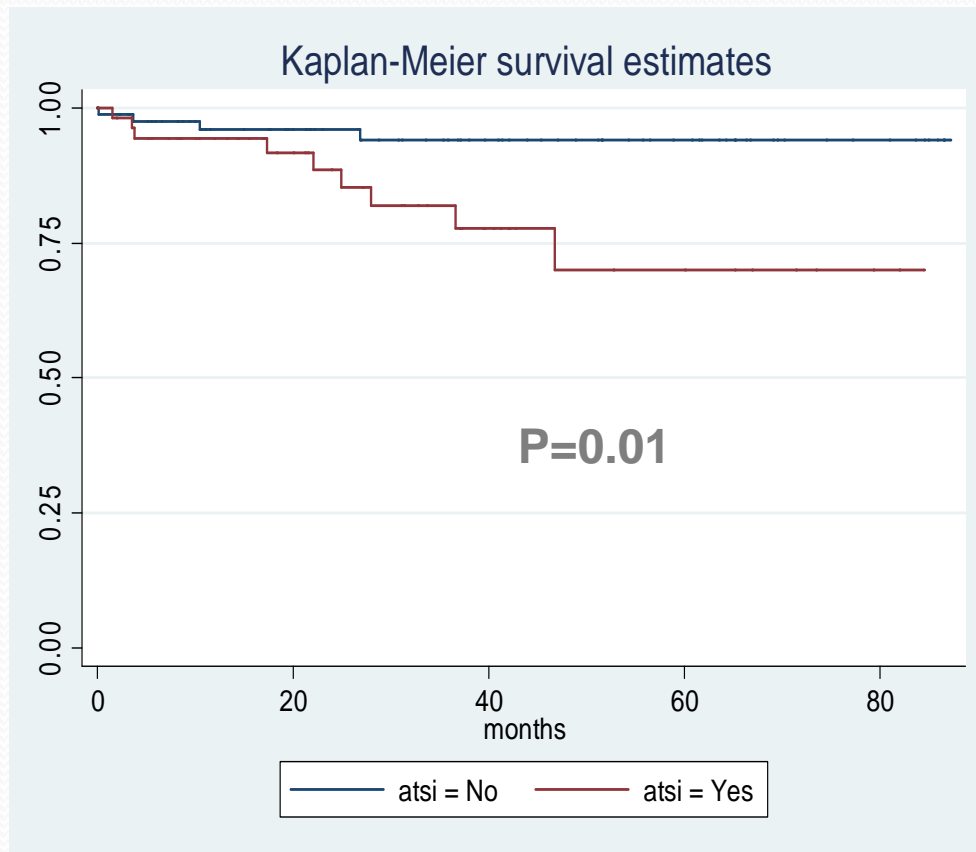
# Actual Numbers

Year	Total ATSI tx	Graft loss / Death	Functioning Grafts eGFR>20 %	eGFR<20
2005	8	3/1 (50%)	4 (50%)	0
2006	4	2/1 (75%)	1 (25%)	0
2007	5	1/2 (60%)	1 (20%)	1 (20%)
2008	11	2/4 (55%)	2(18%)	3 (27%)
2009	9	1/2 (33%)	3 (33%)	3 (33%)
2010	9	2/0 (22%)	6 (67%)	1 (11%)
2011	11	1/1 (18%)	8 (73%)	1 (9%)

# Real numbers

- Transplanted 57 (20/57 in 2010 and 2011)
- 11 Deaths
- 12 Dialysis
- 9 Imminent graft failure
  
- Only 1/3 of those who were transplanted in 2005 to 2007 have functioning grafts.

# Patient Survival



- 11 Deaths 17% in The ATSI vs. 5% (4 deaths) mean follow-up 2.7 years! P=0.01

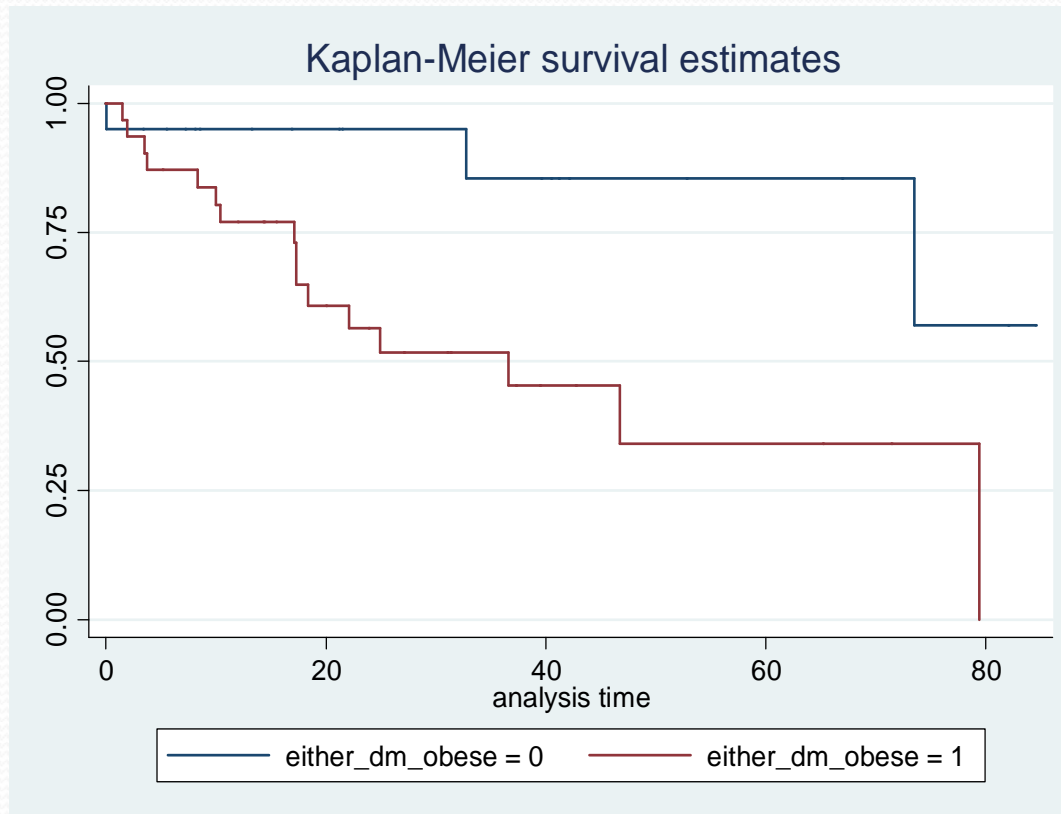
Death within 1<sup>st</sup> Year 3 in each group.

Cause of death

- ATSI: 8 related to sepsis; 1 Liver failure; 2 NOS
- 2 cancer; 1 sepsis; 1 post-op bleeding



# What Causes Graft loss in the ATSI?



**Diabetes +Obesity HR =30!**

# Infections

- Aspergillus x3
- Fungal
- TB osteomyelitis
- Cryptococcus
- Cryptosporidium x2
- ESBL E Coli X2
- Disseminated Nocardia

# Remote vs. Metro

- Kimberley 17
- Pilbara 17
- Metro 19
- Others 4
- No difference in
  - Patient survival
  - Graft survival





## Part 2 of WA story

- Stringent Selection
- Modification of immunosuppression
- Other

# Acknowledgements

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