



# Contralateral ACL rupture is More Common than ACL Graft Rupture in Netballers after ACL Reconstruction

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# Disclosures

In the past three years we have:

- Received institutional support from Friends of the Mater Foundation, Corin and Smith and Nephew
- Justin Roe is a paid consultant to Smith and Nephew



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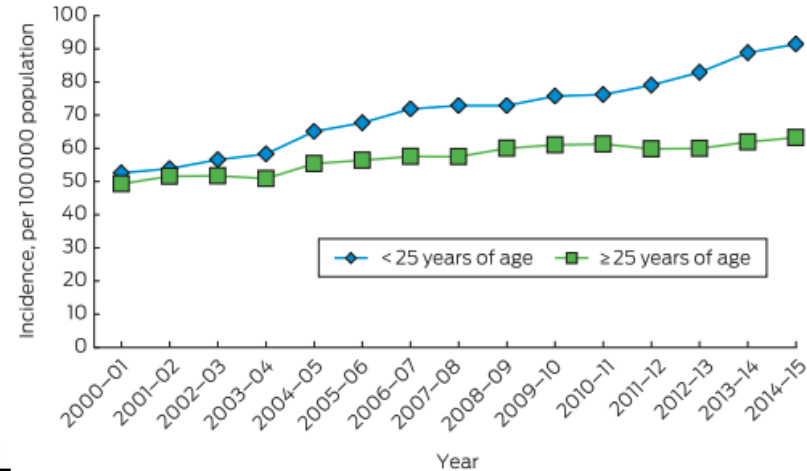
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# Introduction

- Netball is the most popular team sport for females aged <14 and 15+ in Australia<sup>1</sup>, Over 20'000'000 play worldwide yearly<sup>2</sup>
- 41% of injury insurance claims in Australian Netballers is secondary to knee injuries<sup>3</sup>
- Australia has an increasing incidence of ACL Reconstruction and the highest population adjusted rate in the world<sup>4</sup>

## ACLR Incidence in Australia, 2000–2015

Zbrojkiewicz et al. 2018 Medical J Australia



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# Aims

In female netballers following ACLR;

- To determine the prevalence of ACL graft rupture and contralateral ACL rupture
- To determine the rate of return to sport and psychological readiness in returning back to activity



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# Methods



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- Prospective Database of Knee Surgery with Ethical Approval
- Inclusion Criteria
  - Primary ACL injury sustained at netball
  - Female
  - ACLR with hamstring tendon autograft 2007–2015
  - 2 participating surgeons
  - No previous contralateral ACL injury
- 4 strand HT autograft with interference screw fixation, and anteromedial portal femoral drilling



# Assessment

## **E-Survey completed by patients at min 5 years post-op;**

- a) Further knee injuries and/or surgery
- b) Return to netball or other sport, and to what level
- c) ACL Return to Sport After Injury (ACL-RSI) score
- d) Cincinnati Sports Activity Scale (CSAS)
- e) Demographics, Family History of ACL injury, Body Mass Index

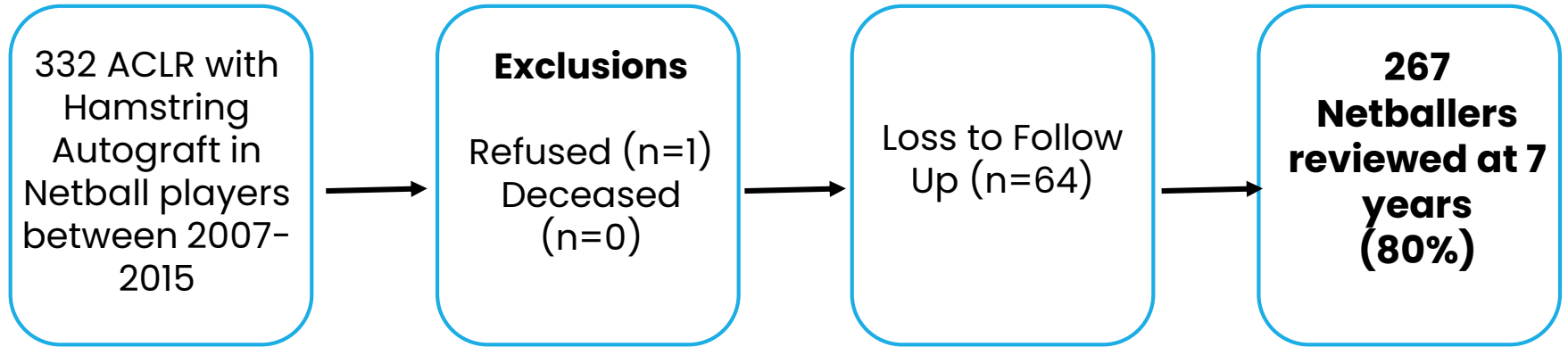


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# Participant Flow



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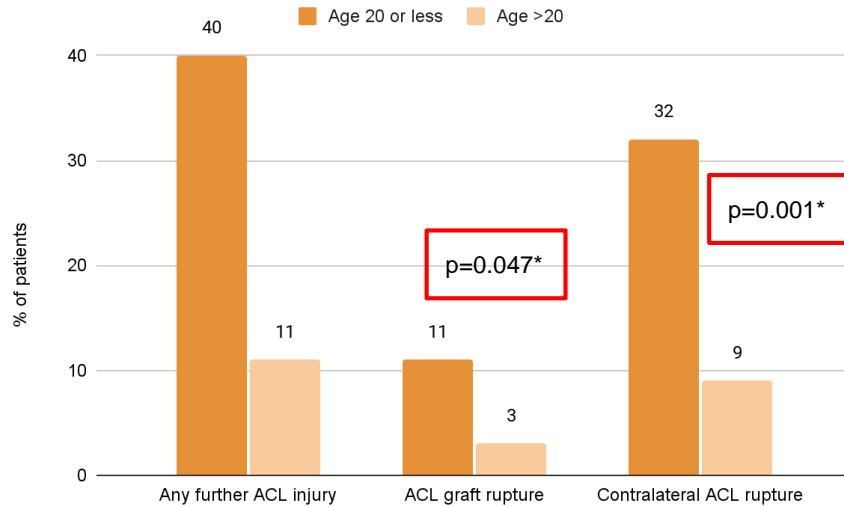


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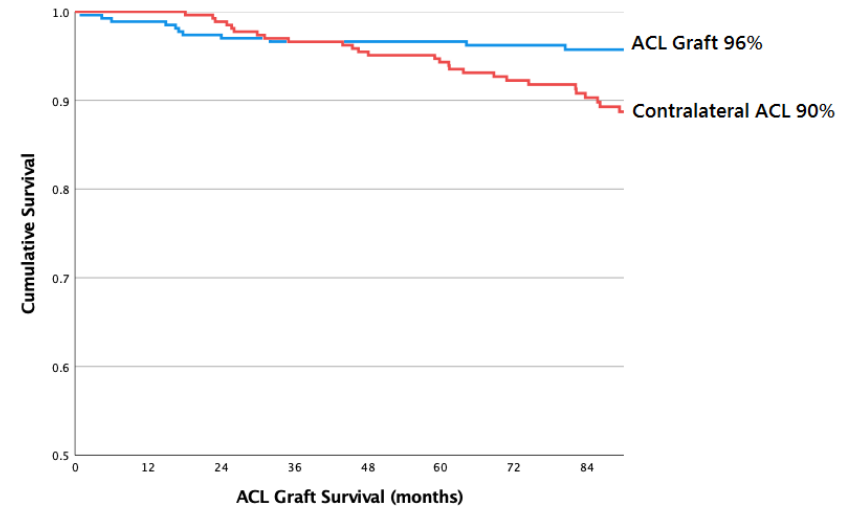


# Results

## Repeat ACL Injury by Age



## 7 year survival Analysis: Graft vs CACL





# Predictors of ACL & CACL Survival



## Predictors of 7-year Survival of ACL Graft on Multivariate Regression

Age (years)	Number	Survival	HR (95% CI)	p Value
20 or less	55	91%	3.3 (1-10.9)	0.047*
>20	212	97%		

## Predictors of 7-year Survival of Contralateral ACL on Multivariate Regression

Age (years)	Number	Survival	HR (95% CI)	p Value
20 or less	55	78%	3.1 (1.4-6.6)	0.004*
>20	212	93%		
<b>Return to Level 1 CSAS</b>				
Yes	186	87%	10 (1.3-74.2)	0.025*
No	81	99%		

# Return to Netball



**62%** returned to netball at some point after their ACLR

Of those who did not return to netball

- **70%** (67) reported that it was because of their operated knee



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# Conclusion

In netball players after ACLR with HT,

- ACL graft survival is **96% at 7 years**
- Contralateral ACL injury has more than double the prevalence than graft rupture
- Risk factors for further ACL injury include: younger age and return to level 1 CSAS
- 62% of patients return to netball



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# References

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