

DAIR vs Revision for TKA PJI

Results from the PIANO Cohort

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Disclosure

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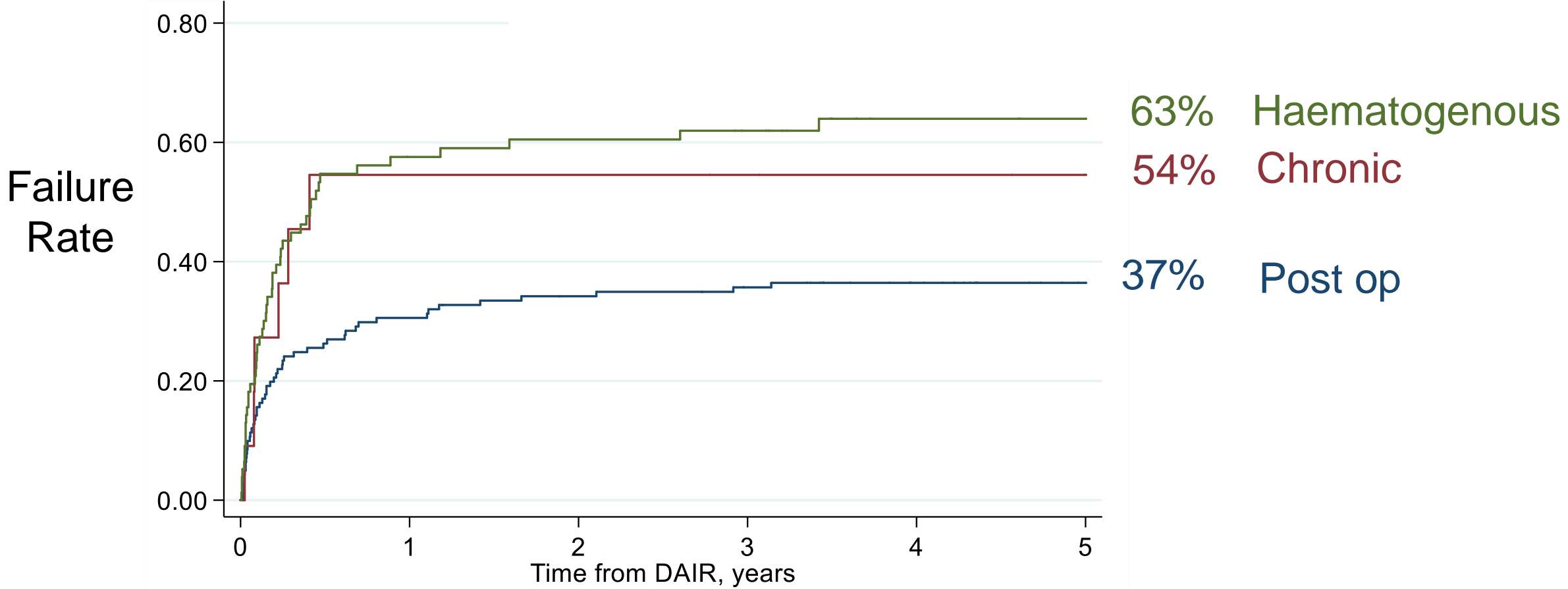
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Success Rates of Debridement, Antibiotics, and Implant Retention in 230 Infected Total Knee Arthroplasties: Implications for Classification of Periprosthetic Joint Infection

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DAIR has a high failure rate in infection occurring > 1 year post primary, regardless of classification



Surgical decision DAIR or Revision?

Early PJI < 1yr

Late PJI > 1yr

Requires comparison of DAIR vs
Revision for both early and late PJIs

A map of Australia and New Zealand is shown in the background. The map is color-coded by state/territory: Northern Territory (green), Queensland (blue), New South Wales (green), Victoria (purple), South Australia (purple), Western Australia (green), Tasmania (purple), and New Zealand (blue). Star markers are placed at Darwin, Cairns, Brisbane, Perth, Adelaide, Sydney, Canberra, Melbourne, Auckland, and Wellington. The word 'Australia' is written across the continent, and 'New Zealand' is written across the islands.

Aims

Compare efficacy of DAIR vs
Revision for early and late PJI

Identify Factors Predictive of Failure

USING the PIANO prospective cohort

2014-2017, Australia and NZ centres

Strict Failure Criteria

Death

Reoperation

Clinical or Microbiological Evidence of Infection

Suppressive Antibiotics

Early < 1yr
n = 117

Similar demographic and disease factors

	DAIR	Revision	P-Value
Male	56%	63%	0.56
Age ≥70	45%	38%	0.50
Symptoms <21d	88%	46%	<0.001
BMI ≥35	33%	17%	0.14
Sig comorbidities	47%	29%	0.11
CRP≥65	75%	71%	0.36
Polymicrobial	24%	21%	0.92
Staph aureus	57%	38%	0.10
Gram negative	16%	25%	0.31

Early < 1yr
n = 117

DAIR
n = 93

57%

Success
@ 2 yrs

P=0.878

Revision
n = 24

54%

No significant predictors of Failure
DAIR similar to Revision

Late > 1yr
n = 134

DAIR patients – more acute presentation

	DAIR	Revision	P-Value
Male	60%	47%	0.2
Age ≥70	40%	53%	0.8
Symptoms <21d	92%	42%	0.001
BMI ≥35	25%	32%	0.3
Sig comorbidities	60%	61%	0.8
CRP≥65	88%	63%	0.001
Polymicrobial	10%	21%	0.1
Staph aureus	42%	24%	0.1

Late > 1yr
n = 134

DAIR
n = 96

Revision
n = 38

34%

Success
@ 2yrs

61%

P=0.006

Late > 1yr
n = 134

		Odds of Failure	P Value
Management Strategy	Revision	Reference	
	DAIR	2.7 (1.2 – 7.1)	0.040
Sig. comorbidity	1 or more	3.4 (1.4-8.2)	0.006
	No	Reference	
Staph aureus	Staph aureus	3.0 (1.1-7.9)	0.028
	No	Reference	

Conclusion – DAIR

DAIR < 1 year

Revision > 1 year

Staph + comorb – high risk for failure

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