

NHS BLOOD AND TRANSPLANT

RESEARCH, INNOVATION, AND NOVEL TECHNOLOGIES ADVISORY GROUP

Analysis of kidney acceptance for research studies

INTRODUCTION

At a previous meeting of RINTAG the ODT Research Team presented results of analysis into reasons for decline for kidneys offered for research studies. Several potential influential factors were analysed, however only univariately. This paper presents results of a more detailed multivariable analysis.

ANALYSIS

Analysis on kidneys offered for research between May 2018 and July 2019 has been conducted. The data were collected by the ODT Research team, the team were copied into responses to offers in order to gather this data alongside extracting additional data from other NHSBT data sources. This data collection is ongoing.

Data were provided for 400 offers however, 272 offers were considered in this analysis, 128 offers were excluded due to missing data. A complete case method was used.

Variables that were considered in the analysis are as follows:

- Date/time of research offer – categorised into core hours (Mon-Fri 8am-6pm), outside core hours on weekdays (6pm-8am), and weekends (including Bank Holidays)
- Cold ischaemic time (CIT) at offer
- Research restrictions – categorised into animal, commercial, DNA, QUOD, or a combination of these
- Donor age
- Reason for organ not being transplanted
- Kidney offered – unspecified, left, or right kidney

RESULTS

A multivariable logistic regression analysis was conducted, **Table 1** shows the final model. After risk-adjustment analysis the only factors that remained significantly associated with consent were the date/time of research offer ($p<.0001$) and CIT at offer ($p=0.012$).

Other variables considered were not found to be significant whilst adjusting for offer time and CIT;

- Research restrictions – $p=0.4$
- Donor age – $p=0.6$
- Reason for organ not being transplanted – $p=0.7$
- Kidney offered – $p=0.3$

Table 1 – Model for predicting consent for kidney research offers

Factor (overall p value for factors with >2 levels)	Offers (n=272)	Offers accepted (n=129)		Odds Ratio	95% confidence intervals	p-value
		N	%			
<i>Date/time of research offer (p < .0001)</i>						
Core hours	70	49	70%	1	-	
Outside of core hours, weekdays	103	49	48%	0.36	0.18 - 0.69	0.5571
Weekend	99	31	31%	0.17	0.09 - 0.34	<.0001
<i>Cold ischaemia time at time of offer (per hour increase)</i>						
	272	129	47%	0.96	0.92 - 1	0.012

CONCLUSION

Results show that offers made during core hours are most likely to be accepted, odds of an offer being accepted outside of core hours on a weekday are 64% than in core hours and 83% less on a weekend than in core hours, when adjusting for CIT.

Odds of acceptance of a kidney for research reduce by 4% with every hour increase in CIT.

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