

# Kidney Paired Exchange (KPE) New Caledonia / Australia



Dr. Fadi Haidar - fhaidar@u2nc.nc

# KPE New Caledonia / Australia

1. Is there a need to do it ?
2. Are we really able to do it and do it successfully ?
3. Clinical cases
4. Prospective Kidney Exchange in our Pacific area



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# KPE in France

- Authorization: July 2011
- Decree of application: September 2012
- Effective start December 2013
- Achievement: first 2 kidney transplants in 2014

# KPE in France

Tableau R41. Evolution des inscriptions et greffes en don croisé au 31 décembre 2017

	2013	2014	2015	2016	2017
Nombre de paires inscrites depuis le début du programme	12	39	48	64	74
Nombre de cycles d'appariement depuis le début du programme	1	4	7	11	14
Nombre d'échanges possibles dans l'année	1	3	0	2	1
Nombre de greffes réalisées dans l'année	0	4	2	4	2

Données extraites de la base CRISTAL le 05/03/2018

Tableau R42. Caractéristiques des donneurs et des receveurs des paires inscrites entre le 01/01/2013 et le 31/12/2017

	N	Age moyen [min - max]	Groupe A	Groupe B	Groupe AB	Groupe O	Taux de greffons incompatibles >85%
Donneurs	74	52 [32 - 73]	39	13	6	16	
Receveurs	74	50 [18 - 76]	22	8	2	42	14

Données extraites de la base CRISTAL le 05/03/2018

# KPE in France : registered pairs

	N
Donneur ascendant direct (père, mère)	7
Donneur collatéral direct (frère, sœur)	5
Donneur conjoint	47
Donneur descendant direct (fils, fille)	4
Donneur collatéral indirect (cousin germain, oncle, tante)	2
Donneur vie commune supérieure à 2 ans	3
Donneur conjoint du père ou de la mère	2
Liens affectifs étroits et stables	4
<b>Total</b>	<b>74</b>

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# KPE : Feasibility ?

- Already shared programme New Caledonia / RPAH Sydney
- Financial aspect is already sorted out
- All HLA done locally
- Flow Cross Match (XM) in Sydney
- Surgery in Sydney
- Ethical and cultural barriers / Hesitancy to donate to a stranger



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# Noumean Incompatible Pairs

<b>Recipient</b>	<b>Donor</b>	<b>Blood Group</b>	<b>Relationship</b>	<b>Prior Tx</b>	<b>Obstacle</b>	<b>Motivation / KPE</b>
Gilbert, 44 yo	Rose, 51 yo	AB / O	Spouse	1	Bld Group, DSA, XM+	+++
Bruno, 54 yo	M. Françoise, 53 yo	O / O	Siblings	0	DSA , XM + CMF B Cells	+++
Chantal, 62 yo	Virginie, 40 yo	O / A	Mother / Daughter	1	Bld Group, DSA, XM+	+++
Lucienne, 50 yo	Atonio, 43 yo	O / O	Spouse	0	DSA , XM +	+
Pierre, 60 yo	Rolande, 60 yo	A / A	Spouse	0	DSA DQ8 , XM neg	+++
Malia, 39 yo	Lusia, 38 yo	O / O	Siblings	1	DSA	++

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# Gilbert ... the traveling recipient

## France / Reims

- Nephropathy: undetermined (GN?)
- 2005 Dialysis
- 2007 FR - not sensitized HLA



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- Nephropathy: undetermined (GN?)
- 2005 Dialysis
- 2007 FR - not sensitized HLA
- 2009 1st Tx : deceased donor
  - A3 24 B38 62DR17 13 DQ2 DQ6
  - A11 34 B75 48 DR4 8 DQ4 DQ6
- 2011 CAN
  - ABMR : Px - anti CD20
  - Ig A nephropathy + cABMR



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## France / Reims

- Nephropathy: undetermined (GN?)
- 2005 Dialysis
- 2007 FR - not sensitized HLA
- 2009 1st Tx : deceased donor
  - A3 24 B38 62DR17 13 DQ2 DQ6
  - A11 34 B75 48 DR4 8 DQ4 DQ6
- 2011 CAN
  - ABMR : Px - anti CD20
  - Ig A nephropathy + cABMR
- 2013 Dialysis
  - High anti HLA : PRA 97%
- 2014 Transplantectomy
- 2015 Candidate 2nd Tx



Name: **Gilbert** Doctor: Professor Steven Chadban  
 Centre: New South Wales Laboratory Reference: KR 17280  
 Status: Off List National Reference: 270231301  
 Hospital: ROYAL PRINCE ALFRED HOSPITAL Hospital Reference:  
 Birth Date: 30/08/1973 Program Entry Date: 20/12/2016  
 Gender: Male Abo: AB Positive

\*\*calculated  
 match probability  
 with May2018  
 AKX donor pool  
 is: 0.063

Class I & II  
 cPRA:96%

Please note that the 4 digit alleles entered  
 in matchmaker have been assumed as the  
 CWD alleles when typing to this level has  
 not been completed. Matchmaker version  
 used for analysis : ABC + DROQDP Eplet  
 Matching Macro v2.1: Duquestroy  
 (Research use only)

	HLA Class I						HLA Class II													
	A*	B*	C*	DRB1*	DQB1*	DQA1*	DPB1*	DRB3*	DRB4*	DRB5*										
Patient																				
<b>Gilbert AB+ 44Y</b>	*11:01	*34:01	*48:01	*15:21	*04:03	*08:01	*04:10	*08:03	*04:02	*06:01	*01:03	*03:01	*04:01	*05:01	*-	*-	*01:01	*-	*-	*-
AKX Reg Donor																				
<b>Rose LOD 6347 O+ 49Y</b>	*11:01	<u>*24:02</u>	<u>*13:01</u>	<u>*56:01</u>	<u>*01:02</u>	<u>*04:01</u>	<u>*11:01</u>	<u>*15:02</u>	<u>*03:01</u>	*06:01	*01:03	<u>*05:05</u>	*04:01	<u>*29:01</u>	<u>*02:02</u>	*-	*-	*-	*-	<u>*01:01</u>
Eplets	-	12	6	3	3	1	5	8	4	-	-	14	-	8	8	-	-	-	-	6
DSA	-	moderate	v weak				moderate	Strong					no bead	Strong					no	
		5/12/16(3176) 22/8/17(2426) 18/4/18(6523)	5/12/16(534) 22/8/17(neg) 18/4/18(535)	no	no	no	5/12/16(5439) 22/8/17(2637) 18/4/18(2081)	no	5/12/16(19291) 22/8/17(25701) 18/4/18(25853)	-	-	-	-	5/12/16(19949) 22/8/17(24487) 18/4/18(25611)	-	-	-	-	no	
AKX Matched Donor																				
<b>GS LOD3758/NATID:3701927 75 AB+ 66Y</b>	<u>*01:01</u>	*-	<u>*37:01</u>	<u>*57:01</u>	<u>*06:02</u>	*-	<u>*04:04</u>	<u>*15:01</u>	<u>*06:02</u>	<u>*03:02</u>	<u>*01:02</u>	*03:01	<u>*02:01</u>	<u>*06:01</u>	*-	*-	<u>*01:03</u>	*-	*-	<u>*01:01</u>
Eplets	8	0	4	6	1	0	0	8	3	4	2	-	4	7	-	-	0	-	-	6
DSA	no	-	moderate	weak									no	no	-	-	-	-	-	no
			5/12/16 (1354) 22/8/17 ( 887) 18/4/18 (2878)	5/12/16(1974) 22/8/17(1084) 18/4/18(1747)	no	-	-	no	no	no	no	-	no	no	-	-	-	-	no	

Total unique  
Mismatch  
Eplets

71

Total unique  
Mismatch  
Eplets

47

# Gilbert: 2nd Kidney Transplantation July 2018

## Induction immunosuppression

- IVIG
- 5 doses of Thymoglobulin
- Methylprednisolone
- Tacrolimus
- Mycophenolate

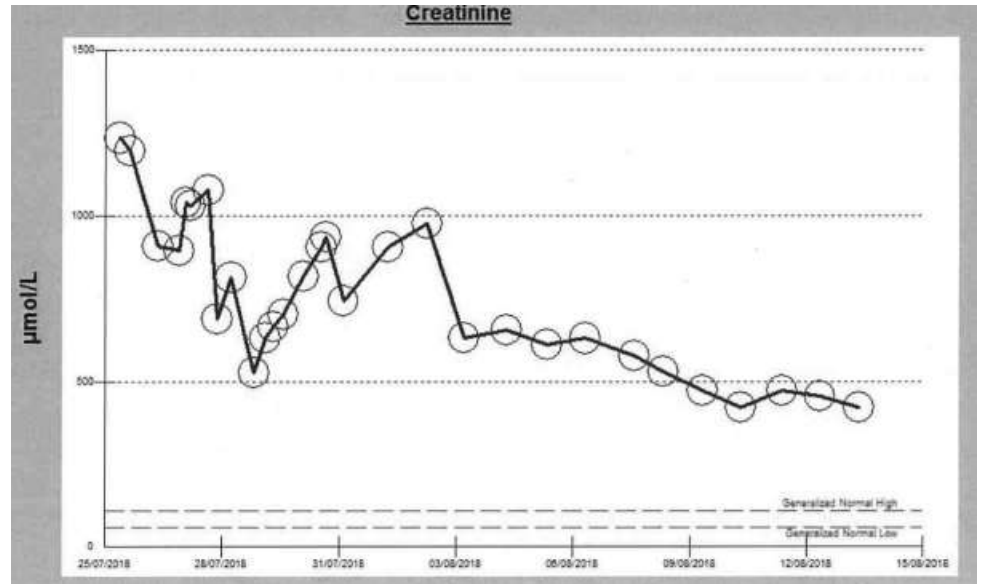


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## Evolution



# Gilbert: 2nd Kidney Transplantation July 2018

## Induction immunosuppression

- IVIG
- 5 doses of Thymoglobulin
- Methylprednisolone
- Tacrolimus
- Mycophenolate

## Evolution

- Delayed graft function
- Kidney biopsy day 6
  - ATN
- Kidney biopsy day 30
  - recovery tubular injury
  - C4d1
- Nouméa 25/09/2018
  - serum creatinine 283 microM

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# Think South Pacific... Think Different



# Current Organs Exchange Programs



# Future Directions for Organs Exchange Programs



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In memory of Dr Josette Eris



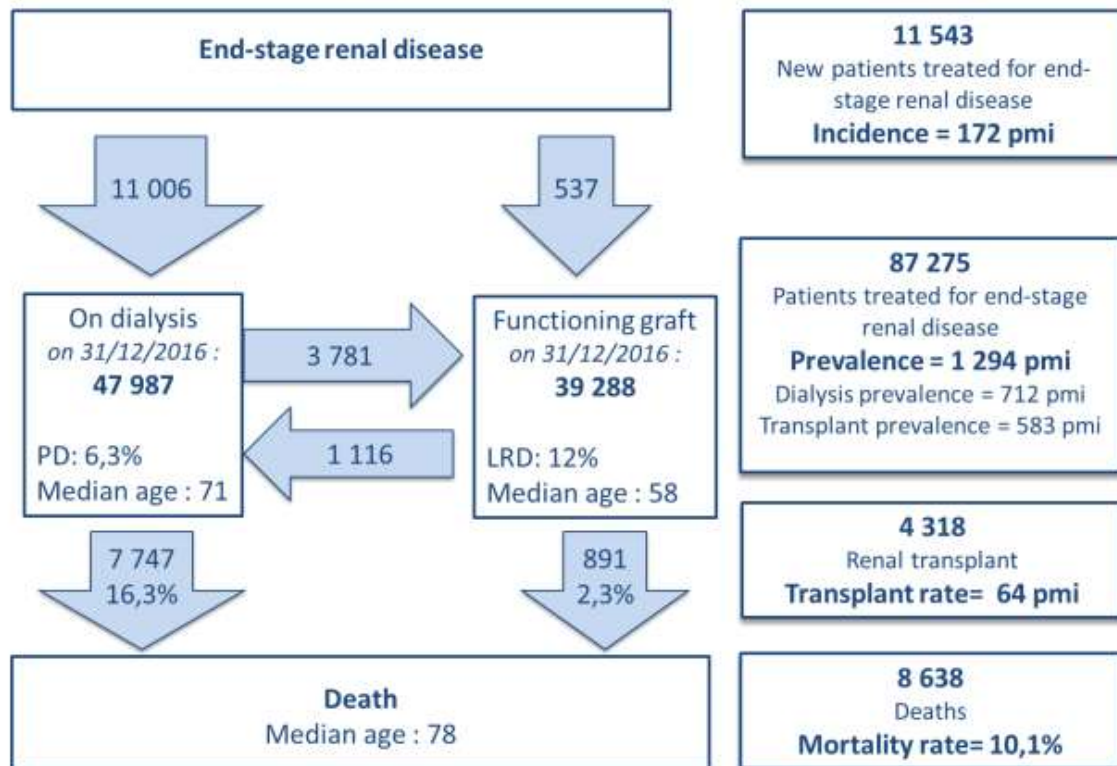
# The First International Paired Exchange Kidney Transplantation





# REIN Annual report 2017: Summary

In 2017



PD : peritoneal dialysis. LRD : living related donor. Pmp : per million population

# Gilbert - 33 ans



2011

2012

2015

de rein / Lupus Class IV

