UK NEQAS Histocompatibility & Immunogenetics

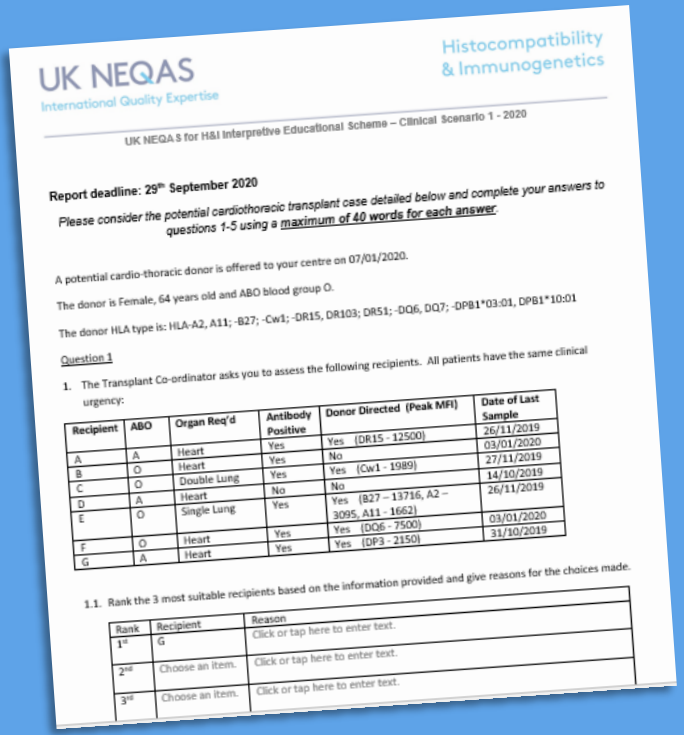
UK NEQAS H&I

Educational Scheme (iED) Scenario 1: Solid Organ Transplant Scenario Feedback

@UKneqasHI

@UK_NEQAS

Our iED Schemes



UK NEQAS
International Quality Expertise

Histocompatibility & Immunogenetics

UK NEQAS for H&I Interpretive Educational Scheme – Clinical Scenario 1 - 2020

Report deadline: 29th September 2020

Please consider the potential cardiothoracic transplant case detailed below and complete your answers to questions 1-5 using a maximum of 40 words for each answer.

A potential cardio-thoracic donor is offered to your centre on 07/01/2020.

The donor is Female, 64 years old and ABO blood group O.

The donor HLA type is: HLA-A2, A11; -B27; -Cw1; -DR15, DR103; DR51; -DQ6, DQ7; -DPB1*03:01, DPB1*10:01

Question 1

1. The Transplant Co-ordinator asks you to assess the following recipients. All patients have the same clinical urgency:

Recipient	ABO	Organ Req'd	Antibody Positive	Donor Directed (Peak MFI)	Date of Last Sample
A	A	Heart	Yes	Yes (DR15 - 12500)	26/11/2019
B	O	Heart	Yes	No	03/01/2020
C	O	Double Lung	Yes	Yes (Cw1 - 1989)	27/11/2019
D	A	Heart	No	No	14/10/2019
E	O	Single Lung	Yes	Yes (B27 – 13716, A2 – 3095, A11 - 1662)	26/11/2019
F	O	Heart	Yes	Yes (DQ6 - 7500)	03/01/2020
G	A	Heart	Yes	Yes (DP3 - 2150)	31/10/2019

1.1. Rank the 3 most suitable recipients based on the information provided and give reasons for the choices made.

Rank	Recipient	Reason
1st	G	Click or tap here to enter text.
2nd	Choose an item.	Click or tap here to enter text.
3rd	Choose an item.	Click or tap here to enter text.

- 3 clinical scenarios a year
  - Solid organ, HSCT, platelet/transfusion
- Based on patient cases
  - Provide relevant clinical details and test results
  - Questions on interpretation of results and clinical advice
- Not assessed
- Provided free of charge

iED1 Scenarios

Year	Solid Organ Scenarios	Returns
2013	Live kidney transplant	46
2014	Deceased kidney transplant	50
2015	Cardiothoracic transplant	50
2016	Deceased donor virtual XM	50
2017	Cardiothoracic transplant	45
2018	Live kidney transplant	53
2019	Kidney after heart transplant	53
2020	Cardiothoracic transplant	45
2021	Kidney transplant – complex ab profile	47

- Dispatched on 31st May 2022
- 39 Responses: 17 from UK and Ireland (UK&I)
  22 from the Rest of the World (RoW)

Case History

Samples from a 26 year old male weighing 110kg, with IgA nephropathy, were received in the laboratory.
The patient was clinically well and had not yet started dialysis, with an eGFR of 11.
The patient had previous transfusions four years ago.

Patient HLA type:
A*02, A*23; B*07, B*15:01+; C*03:04+, C*07, -; DRB1*11, DRB1*13; DRB3*02; DQB1*03:01+, DQB1*06; DPB1*04:01, -

Patient blood group: B Positive

Case History

The patient's samples were tested using One Lambda LABScreen Mixed kits:

Class I negative.

Class II result positive.

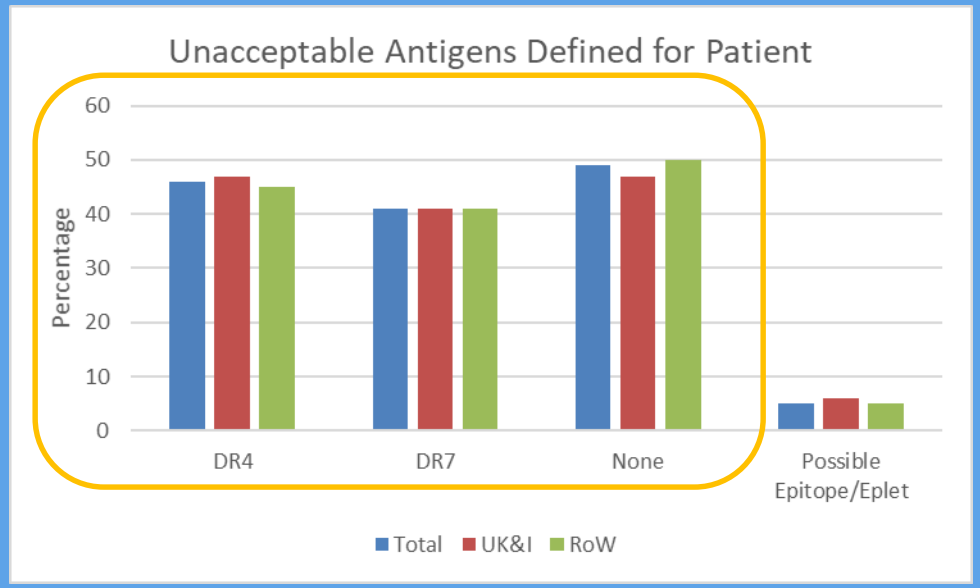
The patient was tested used a One Lambda LABScreen Single Antigen Bead Class II kit:

Bead Specificity	Sample 1	Sample 2
DRB1*04:01	1290	1132
DRB1*04:02	113	552
DRB1*04:04	1286	1198
DRB1*04:05	1307	1275
DRB1*07:01	1451	1358
DRB1*04:03	999	1054

Note all other beads <500 MFI

Q1) What Unacceptable Antigens Would You Define?

Unacceptable Antigen	Total		UK&I		RoW	
	Number	%	Number	%	Number	%
DR4	18	46%	8	47%	10	45%
DR7	16	41%	7	41%	9	41%
None	19	49%	8	47%	11	50%
Possible Epitope/Eplet	2	5%	1	6%	1	5%



Q1) What Unacceptable Antigens Would You Define?

Comments:
We would recommend that all laboratories perform their own evaluations to develop an understanding of what local MFI ranges may result in a positive flow crossmatch. These evaluations should incorporate clinical outcome data and be regularly reviewed to ensure optimum patient outcome without unnecessarily limiting access to transplantation.

Further information

Whilst waiting for an offer on the deceased donor register a potential living donor, Donor AA, comes forward. The potential donor is a 26 year old unrelated friend.

Donor AA - Unrelated potential donor HLA type:
A*02, -; B*15:01+, ***B*40:01+***; ***C*03:03+***, C*03:04+; ***DRB1*04***, ***DRB1*09***; ***DRB4*01***; DQB1*03:01+, ***DQB1*03:03+***; DPB1*04:01, ***DPB1*06:01***

Donor AA blood group: O Negative

HLA mismatch: 012

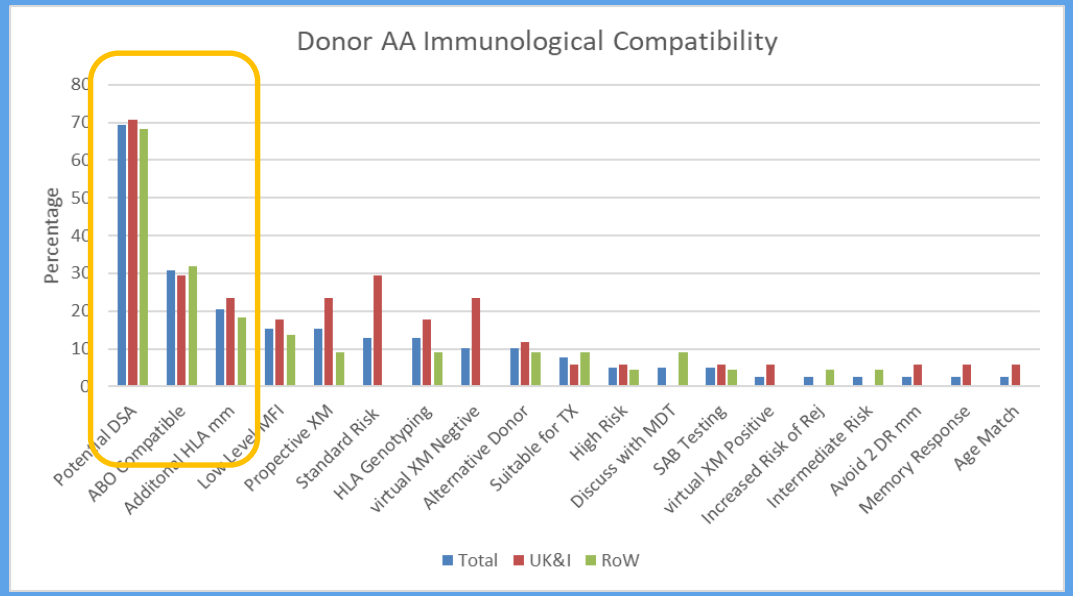
Bead Specificity	Sample 1	Sample 2
DRB1*04:01	1290	1132
DRB1*04:02	113	552
DRB1*04:04	1286	1198
DRB1*04:05	1307	1275
DRB1*07:01	1451	1358
DRB1*04:03	999	1054

Patient HLA type:
A*02, A*23; B*07, B*15:01+; C*03:04+, C*07, -; DRB1*11, DRB1*13; DRB3*02; DQB1*03:01+, DQB1*06; DPB1*04:01, -

Q2) Comment on the Immunological Compatibility of Donor AA

Immunological Compatibility	Total		UK&I		RoW	
	Number	%	Number	%	Number	%
Potential Donor Specific Antibody	27	69%	12	71%	15	68%
ABO Compatible	12	31%	5	29%	7	32%
Additional HLA Mismatches	8	21%	4	24%	4	18%
Low Level MFI	6	15%	3	18%	3	14%
Perform Prospective Crossmatch	6	15%	4	24%	2	9%
Standard Risk	5	13%	5	29%	0	0%
High Resolution HLA Genotyping	5	13%	3	18%	2	9%
Virtual XM Negative	4	10%	4	24%	0	0%
Use Kidney Exchange Scheme/Seek Alternative Donor	4	10%	2	12%	2	9%
Suitable for Direct Donation	3	8%	1	6%	2	9%
High Risk	2	5%	1	6%	1	5%
Discuss with MDT	2	5%	0	0%	2	9%
SAB Testing	2	5%	1	6%	1	5%
Virtual XM Positive	1	3%	1	6%	0	0%
Increased Risk of Rejection	1	3%	0	0%	1	5%
Intermediate Risk	1	3%	0	0%	1	5%
Avoid 2 DR Mismatch	1	3%	1	6%	0	0%
Potential Memory Immune Response	1	3%	1	6%	0	0%
Age Match	1	3%	1	6%	0	0%

Q2) Comment on the Immunological Compatibility of Donor AA



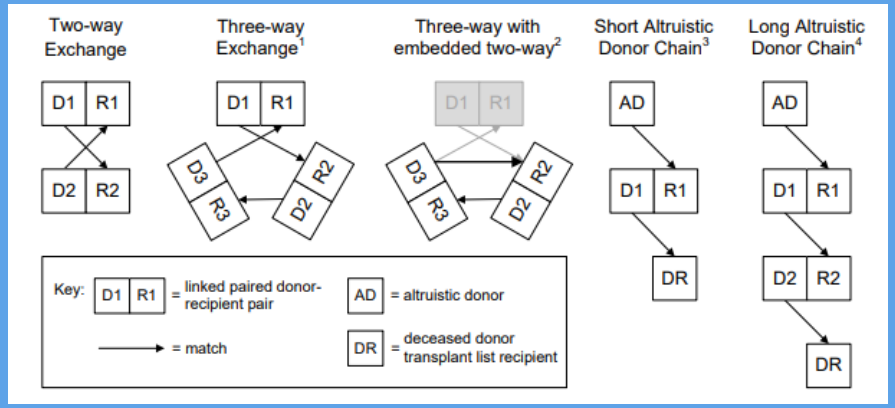
Comments:

The patient may have a donor specific antibody to DR4 that requires further investigation.

The patient is young and clinically stable so may benefit from entering a kidney exchange scheme. This may provide a more favourable donor, avoiding any potential donor specific antibodies, improve on the 012 HLA match and limit future sensitisation of the patient.

Further information

The case was discussed at the multi-disciplinary team meeting (MDT) and the decision was made to enter the patient and Donor AA into a Living Kidney Sharing Scheme (LKSS).

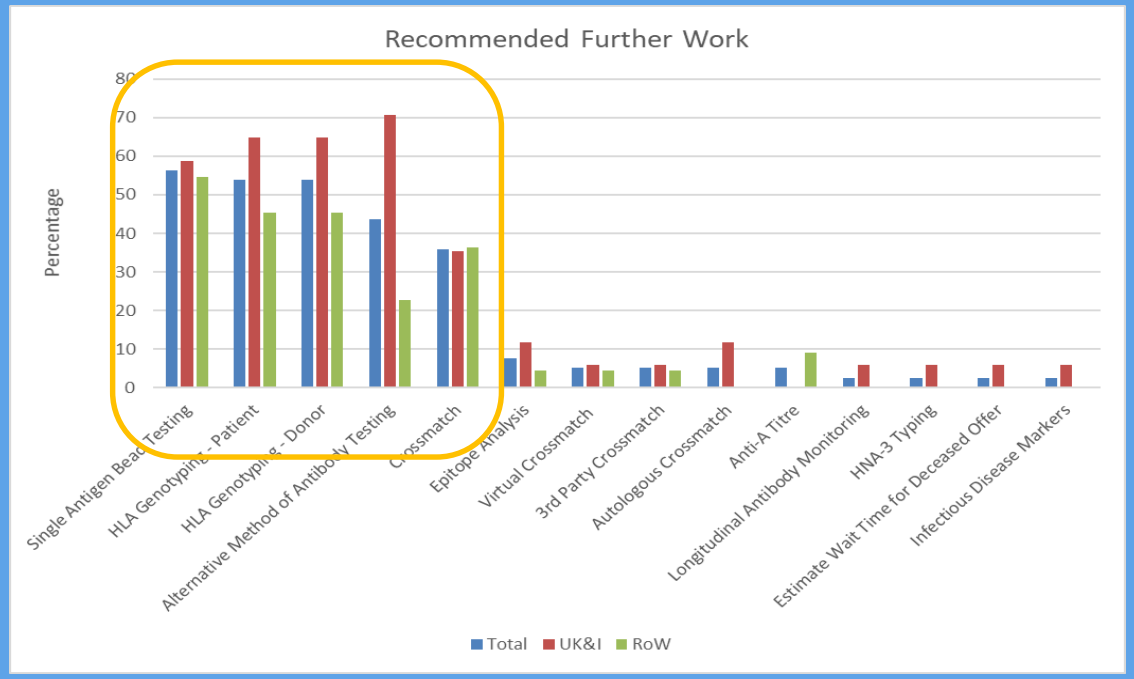


https://www.odt.nhs.uk/living-donation/uk-living-kidney-sharing-scheme/

Q3) Further Lab Work Prior to Listing in KSS

Further Work	Total		UK&I		RoW	
	Number	%	Number	%	Number	%
Single Antigen Bead Testing	22	56%	10	59%	12	55%
HLA Genotyping - Patient	21	54%	11	65%	10	45%
HLA Genotyping - Donor	21	54%	11	65%	10	45%
Alternative Method of Antibody Testing	17	44%	12	71%	5	23%
Crossmatch	14	36%	6	35%	8	36%
Epitope Analysis	3	8%	2	12%	1	5%
Virtual Crossmatch	2	5%	1	6%	1	5%
3rd Party Crossmatch	2	5%	1	6%	1	5%
Autologous Crossmatch	2	5%	2	12%	0	0%
Anti-A Titre	2	5%	0	0%	2	9%

Q3) Further Lab Work Prior to Listing in KSS



Comments:

It would be prudent to re-test the patient for HLA antibodies prior to entry in to a kidney sharing scheme, perhaps incorporating extended testing using kits from alternate manufacturers if available. It may also be useful to perform crossmatching using cells expressing DR4 to determine the clinical relevance of the potential antibody detected by the One Lambda single antigen bead kit. Likewise, epitope analysis might be useful to explain reactivity patterns.

If your local kidney sharing scheme allows it, we would also recommend adding limits on the maximum mismatch grade. This would ensure that any offers the patient received were a better HLA match than Donor AA.

Q4) Would You Alter Defined Unacceptable Antigens Prior to Listing?

YES

28%

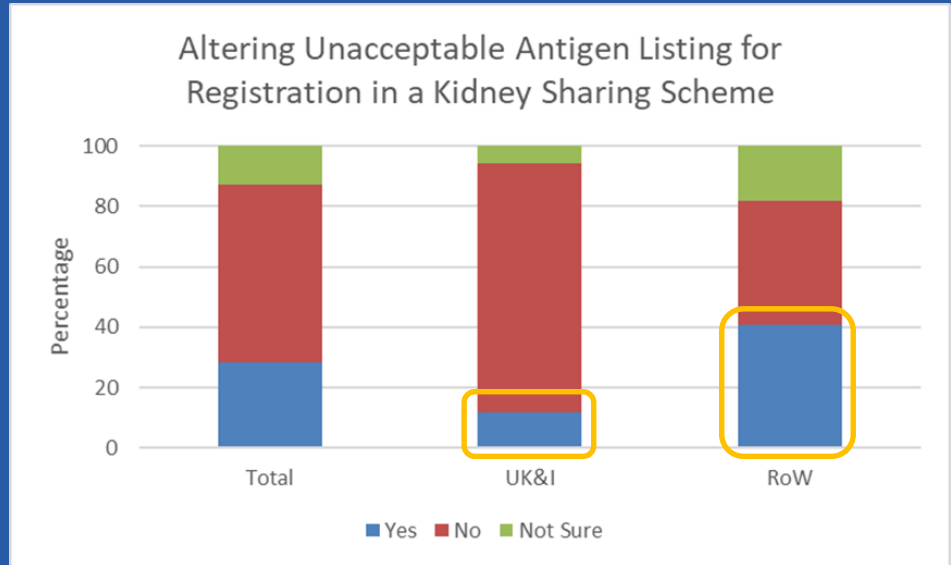
Not Sure

13%

NO

59%

Alter UA for KSS	Total		UK&I		RoW	
	Number	%	Number	%	Number	%
Yes	11	**28%**	2	**12%**	9	**41%**
No	23	**59%**	14	**82%**	9	**41%**
Not Sure	5	**13%**	1	**6%**	4	**18%**



Q4) Reasons for response

Option	Reasons	Total		UK&I		RoW	
		Number	%	Number	%	Number	%
Yes	Antibodies do not meet local listing criteria/low MFI	2	5%	0	0%	2	9%
	Avoid donors with DR4 and DR7	6	15%	2	12%	4	18%
	Require more information/further testing	1	3%	0	0%	1	5%
	Get patient a better HLA match	1	3%	0	0%	1	5%
	Patient factors: young, fit, pre-dialysis	2	5%	1	6%	1	5%
	Reduce risk	2	5%	0	0%	2	9%
	No new antibodies detected	1	3%	0	0%	1	5%
No	Antibodies do not meet local listing criteria/low MFI	9	23%	7	41%	2	9%
	Avoid donors with DR4 and DR7	1	3%	1	6%	0	0%
	Require more information/further testing	3	8%	1	6%	2	9%
	Get patient a better HLA match	2	5%	1	6%	1	5%
	Patient factors: young, fit, pre-dialysis	2	5%	1	6%	1	5%
	Reduce risk	1	3%	0	0%	1	5%
	MDT decision	2	5%	1	6%	1	5%
	Secondary immune response	1	3%	1	6%	0	0%
	No new antibodies detected	2	5%	1	6%	1	5%
Not Sure	Avoid donors with DR4 and DR7	2	5%	1	6%	1	5%
	Require more information/further testing	5	13%	1	6%	4	18%
	Get patient a better HLA match	1	3%	1	6%	0	0%
	MDT decision	1	3%	1	6%	0	0%

Q4) Reasons for response

Comments:
If the patient was entered into a kidney sharing scheme and your laboratory believed the DR4 and DR7 antibody reactivity to be clinically relevant it would be useful to list both DR4 and DR7 as unacceptable antigens. This would prevent HLA-DR4 and DR7 positive donors being offered to the patient which, if declined, could break a donor chain.

Further information

The pair are entered into the kidney sharing scheme. Two potential matches for the patient were identified, details provided below:

Donor ID	Donor gender	Donor age	Donor HLA type	NHSBT-ODT mismatch grade
1	Male	57	A2; B13, B60(40); Bw4, Bw6; Cw10(3), Cw6; DR11(5), DR7; DR52; DR53; DQ2, DQ7(3); DPB1*03:01, DPB1*17:01	021
2	Female	42	A3, A24(9); B64(14), B63(15); Bw4, Bw6; Cw7, Cw8; DR13(6), DR7; DR52; DR53; DQ6(1), DQ2; DPB1*03:01, DPB1*04:02	111

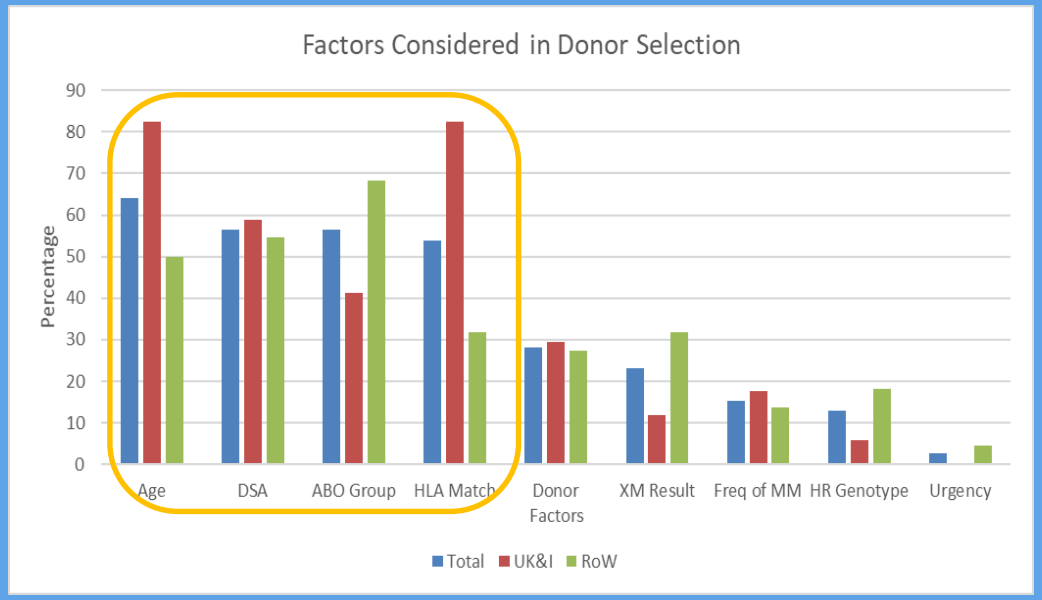
Bead Specificity	Sample 1	Sample 2
DRB1*04:01	1290	1132
DRB1*04:02	113	552
DRB1*04:04	1286	1198
DRB1*04:05	1307	1275
DRB1*07:01	1451	1358
DRB1*04:03	999	1054

Patient HLA type:
A*02, A*23; B*07, B*15:01+; C*03:04+, C*07, -; DRB1*11, DRB1*13; DRB3*02; DQB1*03:01+, DQB1*06; DPB1*04:01, -
Patient Age: 26 years old

Q5) Factors to Consider in Decision to Progress with Donor

Factors Considered in Donor Selection	Total		UK&I		RoW	
	Number	%	Number	%	Number	%
Age	25	**64%**	14	**82%**	11	**50%**
Donor Specific Antibodies	22	**56%**	10	**59%**	12	**55%**
Blood Group	22	**56%**	7	**41%**	15	**68%**
HLA Match Grade	21	**54%**	14	**82%**	7	**32%**
Donor Size / Health	11	**28%**	5	**29%**	6	**27%**
Crossmatch Result	9	**23%**	2	**12%**	7	**32%**
Frequency of Mismatch/Epitope Load	6	**15%**	3	**18%**	3	**14%**
High Resolution Genotype	5	**13%**	1	**6%**	4	**18%**
Clinical Urgency	1	**3%**	0	**0%**	1	**5%**

Q5) Factors to Consider in Decision to Progress with Donor



Comments:
Factors to consider when assessing the suitability of Donor 1 and 2 include the HLA match, the antigen frequency of any HLA mismatches and the age of donors. It is also wise to consider the presence of any unlisted donor directed HLA antibodies the patient may have e.g. DR7.

Q5) Which Donor Would You Select?

Donor 1

10%

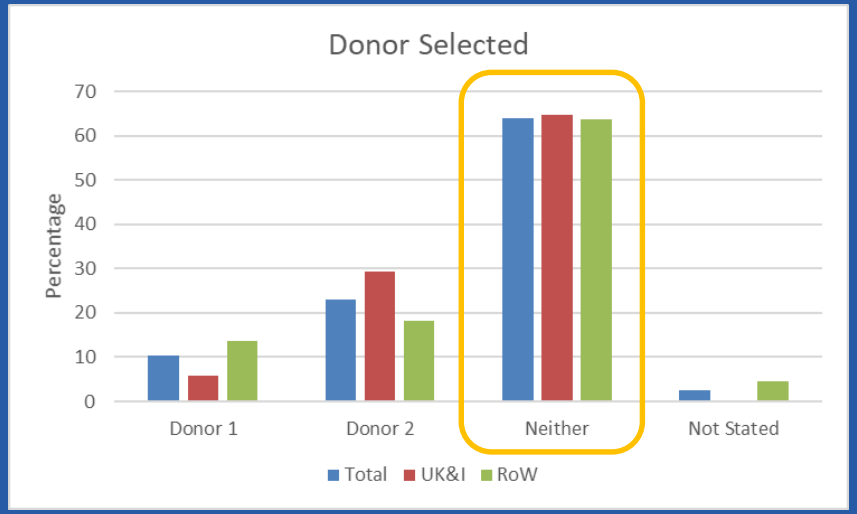
Neither

64%

Donor 2

23%

Reasons	Total		UK&I		RoW	
	Number	%	Number	%	Number	%
Donor 1	4	10%	1	6%	3	14%
Donor 2	9	23%	5	29%	4	18%
Neither	25	64%	11	65%	14	64%
Not Stated	1	3%	0	0%	1	5%



Q5) Which Donor Would You Select?

10%

64%

23%

Comments:
We feel that neither Donor present an optimum match for this patient. The donors both possess high frequency HLA mismatches (e.g. HLA-DQ2) and generate an increased potential percentage calculated reaction frequency compared to Donor AA (https://www.odt.nhs.uk/transplantation/tools-policies-and-guidance/calculators/ - Donor AA cRF = 50%, Donor 1 cRF = 60%, Donor 2 cRF = 71%).

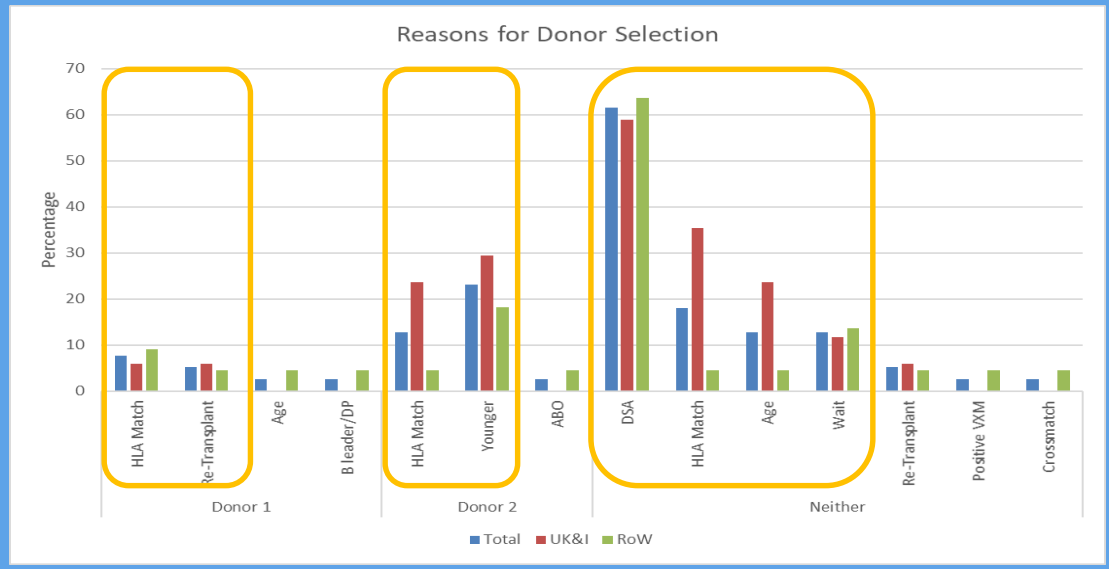
Q5) Reason for Donor Selection

Option	Reasons	Total		UK&I		RoW	
		Number	%	Number	%	Number	%
Donor 1	Better HLA Match	3	8%	1	6%	2	9%
	Reduced Sensitisation for Re-Transplant	2	5%	1	6%	1	5%
	Age	1	3%	0	0%	1	5%
	B leader mm/DP permissive/C mm	1	3%	0	0%	1	5%
Donor 2	Better HLA Match	5	13%	4	24%	1	5%
	Younger	9	23%	5	29%	4	18%
	ABO compatible	1	3%	0	0%	1	5%
Neither	Donor Specific Antibodies	24	62%	10	59%	14	64%
	HLA Match Grade	7	18%	6	35%	1	5%
	Age	5	13%	4	24%	1	5%
	Wait for Better Donor	5	13%	2	12%	3	14%
	Sensitisation for Re-Transplant	2	5%	1	6%	1	5%
	Positive Virtual Crossmatch	1	3%	0	0%	1	5%
	Perform Crossmatch	1	3%	0	0%	1	5%

Donor ID	Donor gender	Donor age	Donor HLA type	NHSBT-ODT mismatch grade
1	Male	57	A2; B13, B60(40); Bw4, Bw6; Cw10(3), Cw6; DR11(5), DR7; DR52; DR53; DQ2, DQ7(3); DPB1*03:01, DPB1*17:01	021
2	Female	42	A3, A24(9); B64(14), B63(15); Bw4, Bw6; Cw7, Cw8; DR13(6), DR7; DR52; DR53; DQ6(1), DQ2; DPB1*03:01, DPB1*04:02	111

Q5) Reason for Donor Selection

Donor ID	Donor gender	Donor age	Donor HLA type	NHSBT-ODT mismatch grade
1	Male	57	A2; B13, B60(40); Bw4, Bw6; Cw10(3), Cw6; DR11(5), DR7; DR52; DR53; DQ2, DQ7(3); DPB1*03:01, DPB1*17:01	021
2	Female	42	A3, A24(9); B64(14), B63(15); Bw4, Bw6; Cw7, Cw8; DR13(6), DR7; DR52; DR53; DQ6(1), DQ2; DPB1*03:01, DPB1*04:02	111



Further information

The transplant does not proceed.

In a subsequent kidney sharing scheme matching run the patient is matched to another potential donor:

Donor 3 - 39 year old male:
HLA-A2, *A24*; *B44*, *B18*; *Bw4*, Bw6; *Cw5*, -; *DR17*, *DR12*; DR52; *DQ2*, DQ7; *DPB1*02:01*, DPB1*04:01

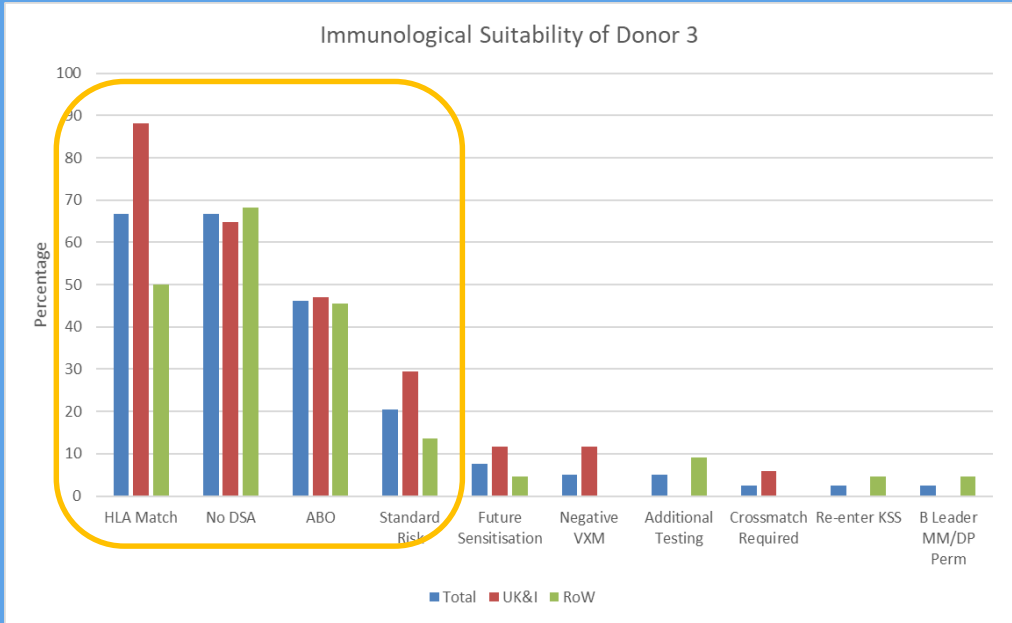
Blood group: O Positive

Patient HLA type:
A*02, A*23; B*07, B*15:01+; C*03:04+, C*07, -; DRB1*11, DRB1*13; DRB3*02; DQB1*03:01+, DQB1*06; DPB1*04:01, -

Q6) Comment on the Immunological Suitability of Donor 3

Comments on Suitability	Total		UK&I		RoW	
	Number	%	Number	%	Number	%
HLA Match	26	**67%**	15	**88%**	11	**50**
No DSA	26	**67%**	11	**65%**	15	**68**
ABO Compatible	18	**46%**	8	**47%**	10	**45**
Low/Standard Risk	8	**21%**	5	**29%**	3	**14**
Future Sensitisation	3	**8%**	2	**12%**	1	**5**
Negative Virtual Crossmatch	2	**5%**	2	**12%**	0	**0**
Additional Testing Required	2	**5%**	0	**0%**	2	**9**
Crossmatch Required	1	**3%**	1	**6%**	0	**0**
Re-enter Kidney Sharing Scheme	1	**3%**	0	**0%**	1	**5**
B Leader Mismatch / DP Permissive	1	**3%**	0	**0%**	1	**5**

Q6) Comment on the Immunological Suitability of Donor 3



Comments:

The patient has no potential donor specific antibodies to this donor. We would anticipate a negative virtual crossmatch and a standard risk transplant. However, when matching at the 'broad' level the HLA mismatch grade is 021, at 'split' level specificity the mismatch would be 122. The HLA mismatched antigens have a potential for generating 69% calculated reaction frequency (https://www.odt.nhs.uk/transplantation/tools-policies-and-guidance/calculators/) which is a cause for concern given the patient is young and will likely need re-transplantation in the future.

Laboratories may want to consider programmes such as HLA matchmaker to assess donor and patient compatibility at an epitope level.

Q7) Which Donor Would You Select?

Donor AA

13%

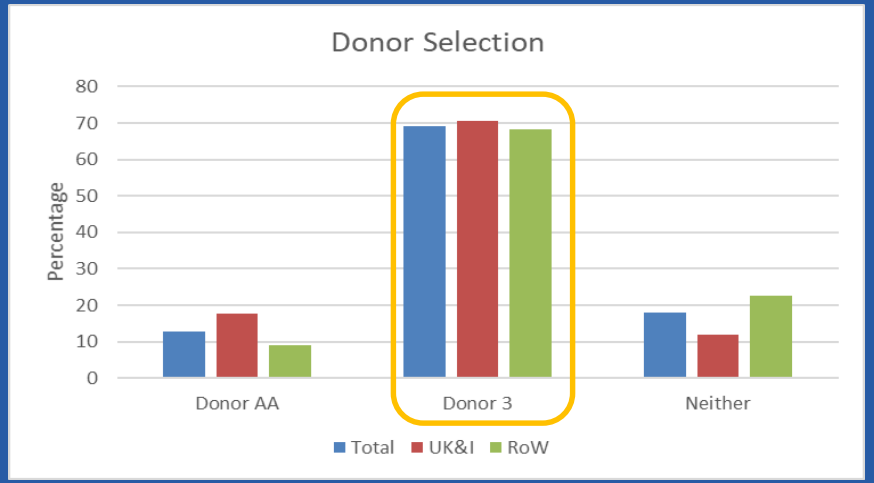
Neither

18%

Donor 3

69%

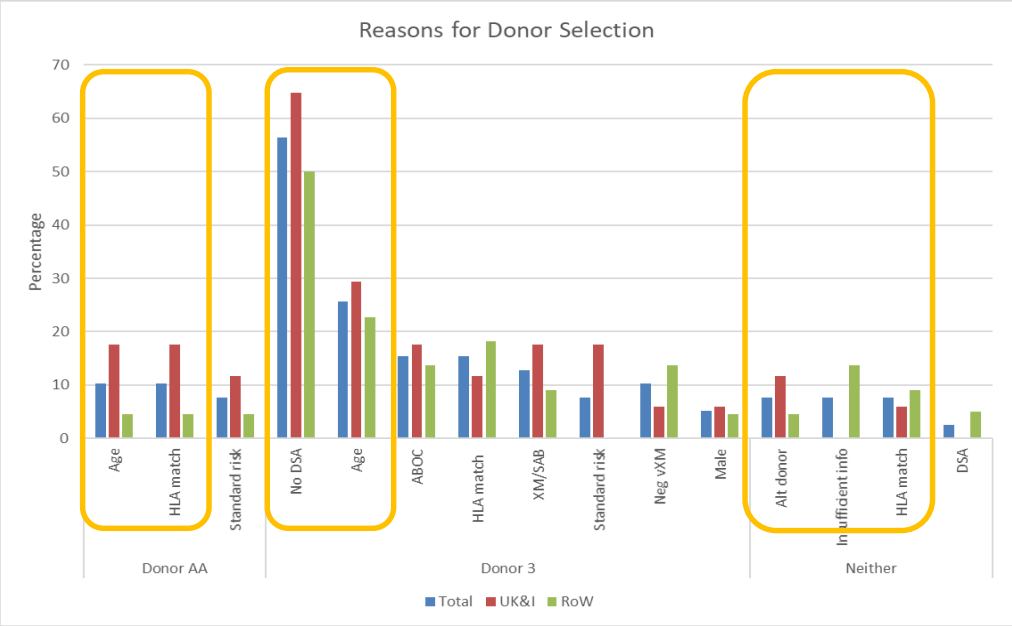
Reasons	Total		UK&I		RoW	
	Number	%	Number	%	Number	%
Donor AA	5	13%	3	18%	2	9%
Donor 3	27	69%	12	71%	15	68%
Neither	7	18%	2	12%	5	23%



Q7) Reasons for Donor Selection

Option	Reason	Total		UK&I		RoW	
		Number	%	Number	%	Number	%
Donor AA 13%	Age - younger donor	4	10%	3	18%	1	5%
	HLA match / Sensitisation	4	10%	3	18%	1	5%
	Standard risk	3	8%	2	12%	1	5%
Donor 3 69%	No Donor Specific Antibodies	22	56%	11	65%	11	50%
	Age - younger donor	10	26%	5	29%	5	23%
	ABO compatible	6	15%	3	18%	3	14%
	HLA match	6	15%	2	12%	4	18%
	Perform crossmatch / SAB analysis	5	13%	3	18%	2	9%
	Standard risk	3	8%	3	18%	0	0%
	Negative virtual crossmatch	4	10%	1	6%	3	14%
	Male	2	5%	1	6%	1	5%
Neither 18%	Wait for alternative donor	3	8%	2	12%	1	5%
	Insufficient info / further test required	3	8%	0	0%	3	14%
	HLA match	3	8%	1	6%	2	9%
	Donor specific antibodies	1	3%	0	0%	1	5%

Q7) Reasons for Donor Selection



Comments:

We would advise declining the offer from Donor 3.

Donor 3 is younger than Donor 1 and 2 were but still not ideal for the patient. The patient has no donor specific antibodies and is ABO compatible. This would represent a standard risk transplant.

However, the HLA mismatch is not optimal for clinical outcome and the risk of sensitising the patient to common antigens could affect the patient's ability to be re-transplanted successfully.

Further information

At this point a change in laboratory policy meant that the latest recipient sample (Sample 2) was tested using single antigen bead kits for Class I in addition to the Class II testing already performed.

Mixed screen	One Lambda SAB Class I	MFI
Negative	B*44:02	2432
	B*44:03	3785
	C*01:02	1978
	C*02:02	1859
	C*05:01	4652

Q8) Would You This Result Investigate Further?

Yes

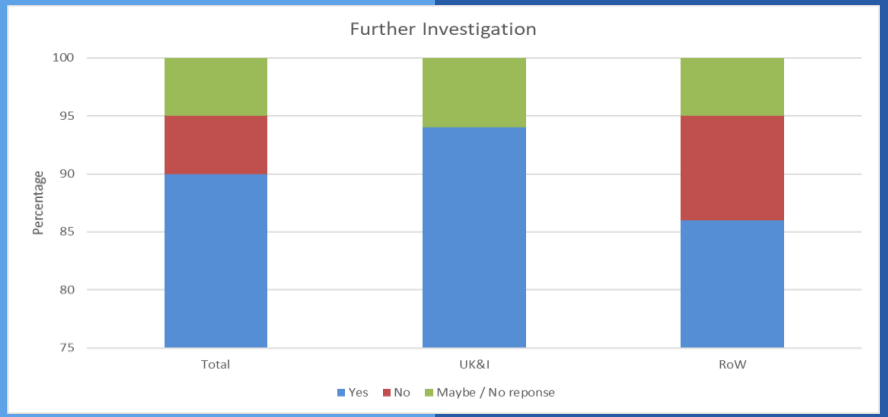
90%

Maybe

5%

No

5%



Q8) Would You This Result Investigate Further?

Option	Reason(s)	Total		UK&I		RoW	
		Number	%	Number	%	Number	%
Yes	Re-test SAB	35	90%	16	94%	19	86%
	Use alternative antibody detection method e.g. EDTA, Dilutions, PRA, Immucor, HistoSpot, C1q						
	Longitudinal antibody monitoring						
	High resolution HLA genotyping						
	Crossmatch						
	3rd party crossmatch						
	Request sensitising information						
No	Result is not unexpected	2	5%	0	0%	2	9%
Maybe / No response	May test historic samples	2	5%	1	6%	1	5%

Comments:
We would advise using additional testing such as an antibody kit from alternative manufacturer e.g. Immucor to gauge the clinical relevance of the Class I antibodies defined. It may also be useful to perform 3rd party or surrogate crossmatching.

Q8) Has This Altered Your Preferred Donor?

Reasons	Total		UK&I		RoW	
	Number	%	Number	%	Number	%
Donor AA	17	44%	7	41%	10	45%
Donor 3	1	3%	1	6%	0	0%
Neither	20	51%	9	53%	11	50%
No response	1	3%	0	0%	1	5%

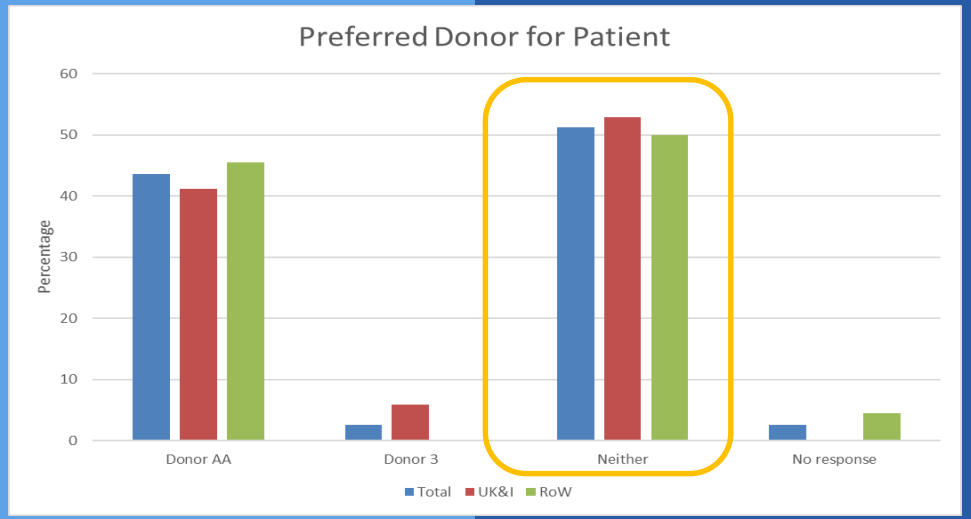
Donor AA

44%

A*02, -; B*15:01+, *B*40:01+*, *C*03:03+*, C*03:04+; *DRB1*04*, *DRB1*09*; *DRB4*01*; DQB1*03:01+, *DQB1*03:03+*; DPB1*04:01, *DPB1*06:01*

Age 26 years
HLA mm: 012
DR4 DSA <1500 MFI

51%



Donor 3

3%

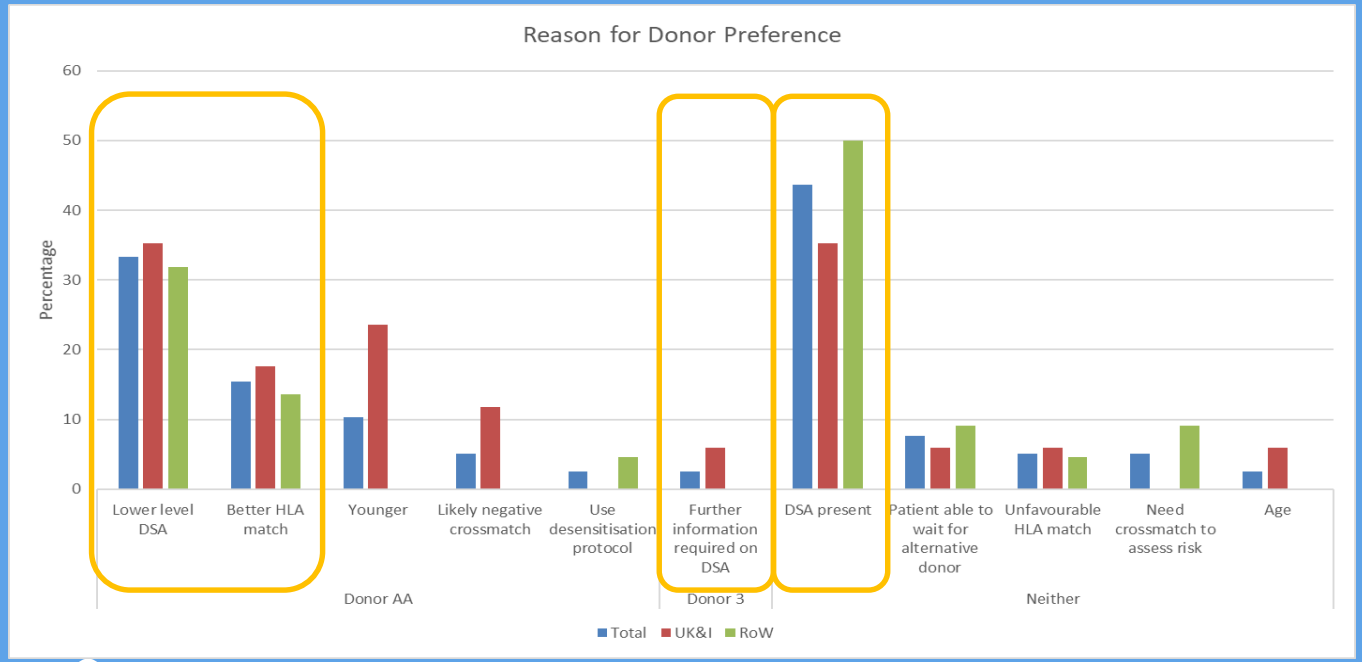
HLA-A2, *A24*, *B44*, *B18*, *Bw4*, Bw6; *Cw5*, -; *DR17*, *DR12*, DR52; *DQ2*, DQ7; *DPB1*02:01*, DPB1*04:01

Age 39 years
HLA mm: 122 (split)
B44, CW5 DSA cMFI 8437

Q8) Reasons for Decision

Option	Reason	Total		UK&I		RoW	
		Number	%	Number	%	Number	%
Donor AA 44%	Lower level DSA	13	33%	6	35%	7	32%
	Better HLA match	6	15%	3	18%	3	14%
	Younger	4	10%	4	24%	0	0%
	Likely negative crossmatch	2	5%	2	12%	0	0%
	Use desensitisation protocol	1	3%	0	0%	1	5%
Donor 3 3%	Further information required on DSA	1	3%	1	6%	0	0%
Neither 51%	DSA present	17	44%	6	35%	11	50%
	Patient able to wait for alternative donor	3	8%	1	6%	2	9%
	Unfavourable HLA match	2	5%	1	6%	1	5%
	Need crossmatch to assess risk	2	5%	0	0%	2	9%
	Age	1	3%	1	6%	0	0%

Q8) Reasons for Decision

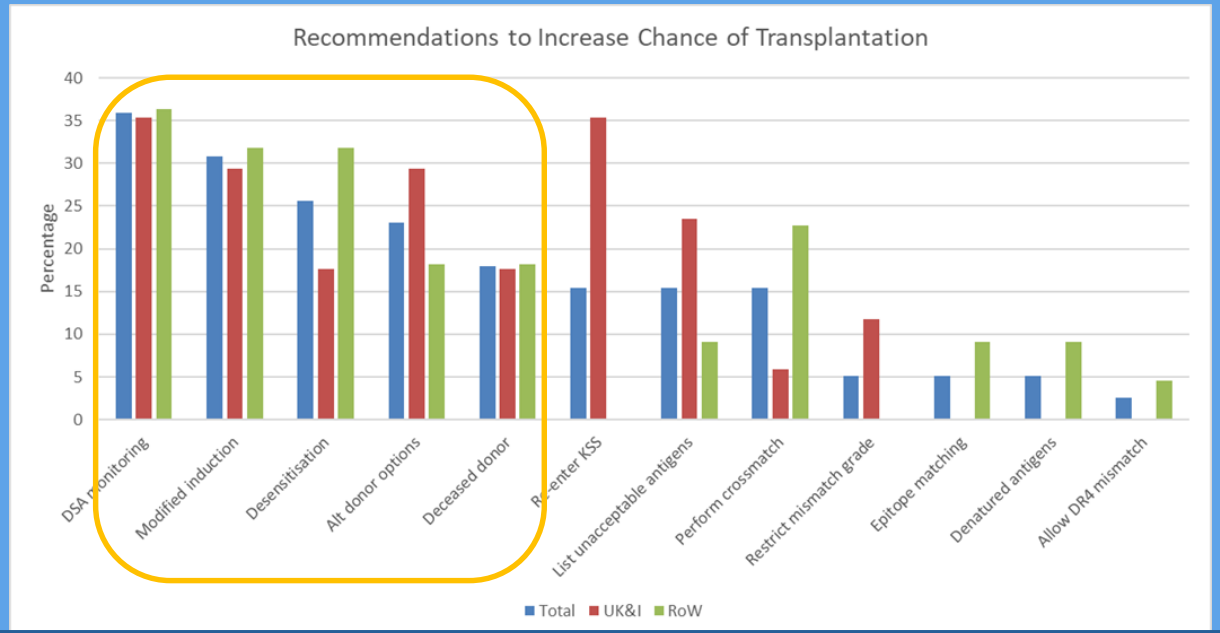


Comments:
Our preferred donor of those represented for this patient would be Donor AA. This is due to the potential donor directed HLA-B44 and Cw5 antibodies to Donor 3. Donor AA is also younger and a better HLA match. Although there are potential DSA to DR4, these antibodies were detected at low level. A crossmatch should be performed to fully assess immunological risk.

Q8) Recommendations for Success Transplantation

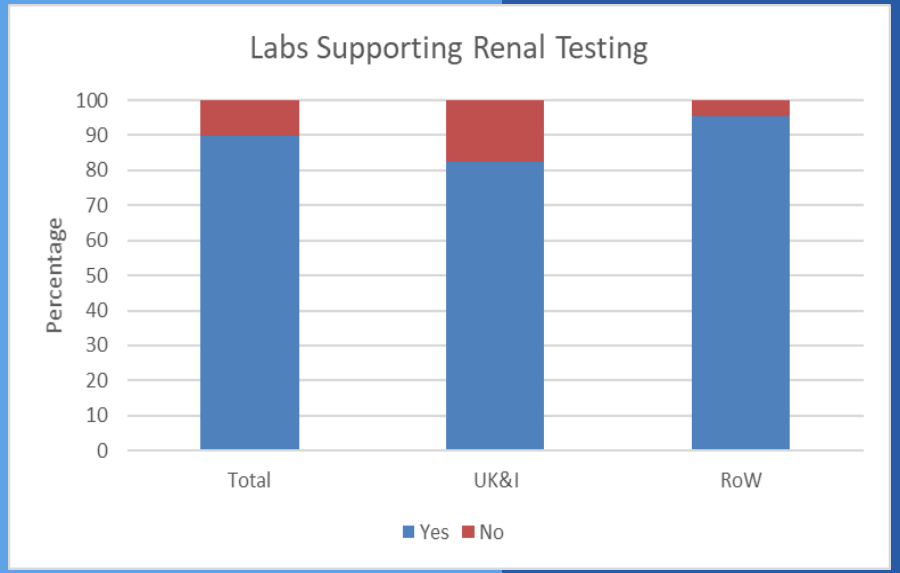
Recommendation	Total		UK&I		RoW	
	Number	%	Number	%	Number	%
Regular DSA monitoring	14	36%	6	35%	8	36%
Modified induction therapy	12	31%	5	29%	7	32%
Desensitisation	10	26%	3	18%	7	32%
Alternative donor options	9	23%	5	29%	4	18%
Register for deceased donor	7	18%	3	18%	4	18%
Re-enter kidney sharing scheme	6	15%	6	35%	0	0%
List unacceptable antigens	6	15%	4	24%	2	9%
Perform crossmatch	6	15%	1	6%	5	23%
Restrict mismatch grade to 2 DR	2	5%	2	12%	0	0%
Epitope matching	2	5%	0	0%	2	9%
Check for reactivity to denatured antigens	2	5%	0	0%	2	9%
Allow DR4 mismatch	1	3%	0	0%	1	5%

Q8) Recommendations for Success Transplantation



Comments:
To increase the chances of successful transplantation it may be useful to consider augmented immunosuppression and regular post-transplant monitoring.

Q9) Does Your Lab Support Testing for Renal Transplant?



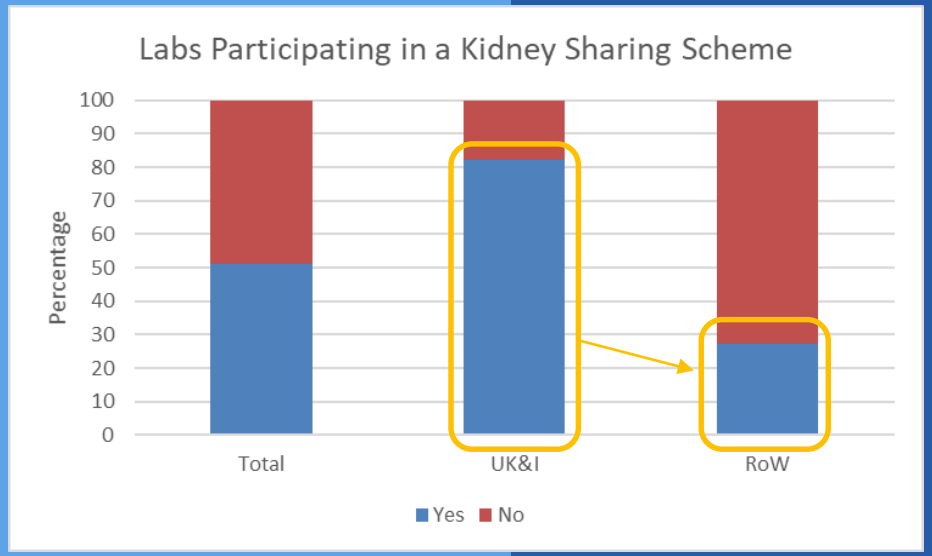
YES

90%

NO

10%

Q9) Do You Routinely Enter Patients in a Kidney Sharing Scheme



YES

51%

NO

49%

Relevant Comments

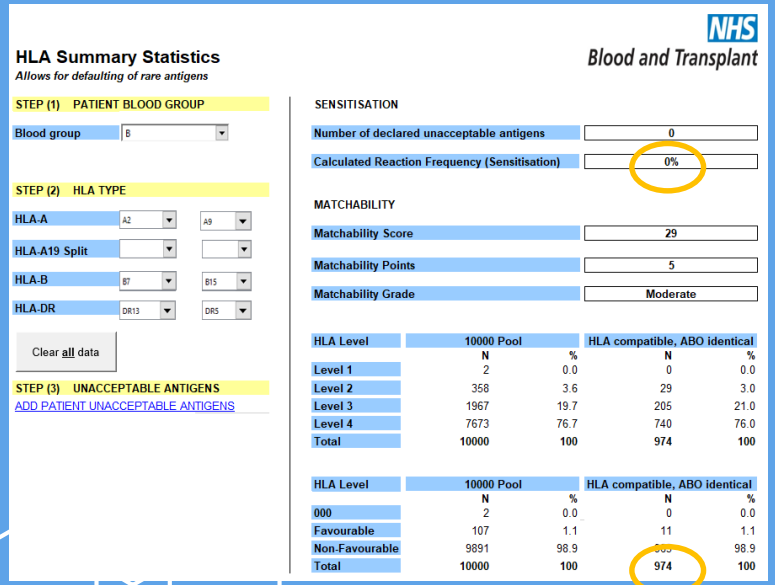
- Not enough information provided: results of crossmatches, high resolution HLA genotyping, antibody results from alternate kits.
- We would not normally have the option of two donors when reviewing matching runs from the sharing scheme, each patient has one donor assigned.
- Given the apparent health of the patient and the fact that he had not yet started dialysis the unit were very keen to transplant.
- There would be a potentially lower CIT with a direct living donor.
- This scenario highlights differences in centre protocols as it is unlikely that offering sharing scheme over direct transplantation would have been considered for this patient at our centre unless the preference for a lower mismatch was decided by Clinical Team prior to registration.
- In these cases, we like to use the NHSBT-ODT calculator to determine possible cRF for patient should they become sensitised to all mismatches in a specific donor.
- If flow cross matches for first donor AA were negative, we would not have entered this patient into the sharing scheme at all.

Relevant Comments

- In our center we have the policy to always perform Luminex SA class I and class II with the first serum sample available from the patient to have information about antibodies present in this technique.
- Before transplantation single antigens are recommended despite of negative screening to avoid false negative screening.
- Further discussion with clinical team is paramount. We would recommend to explore further options before proceeding with donor AA. If time permits, extensive search for a live donor is suggested.
- Assessment for recurrence of disease (Ig A nephropathy) needs particular careful workup after transplantation.
- Whole case seems to our opinion not really realistic case.

Differences in UA Listing Approach

UK&I UA	Number	Percent	% cRF
DR4 and DR7	6	35	53%
DR4	2	12	33%
DR7	1	6	25%
None	8	47	0%



HLA Summary Statistics

Allows for defaulting of rare antigens

NHS Blood and Transplant

STEP (1) PATIENT BLOOD GROUP

Blood group: B

STEP (2) HLA TYPE

HLA-A	A2	A9
HLA-A19 Split		
HLA-B	B7	B15
HLA-DR	DR13	DR5

Clear all data

STEP (3) UNACCEPTABLE ANTIGENS

ADD PATIENT UNACCEPTABLE ANTIGENS

SENSITISATION

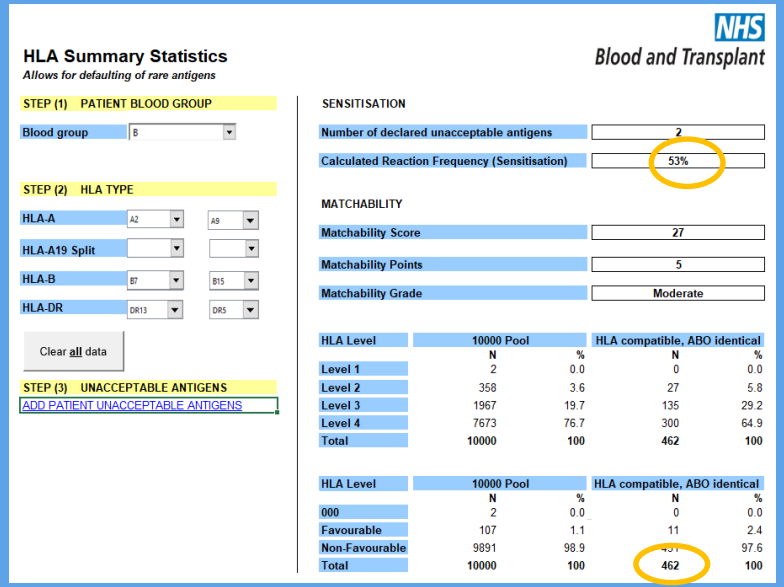
Number of declared unacceptable antigens	0
Calculated Reaction Frequency (Sensitisation)	0%

MATCHABILITY

Matchability Score	29
Matchability Points	5
Matchability Grade	Moderate

HLA Level	10000 Pool N	10000 Pool %	HLA compatible, ABO identical N	HLA compatible, ABO identical %
Level 1	2	0.0	0	0.0
Level 2	358	3.6	29	3.0
Level 3	1967	19.7	205	21.0
Level 4	7673	76.7	740	76.0
Total	10000	100	974	100

HLA Level	10000 Pool N	10000 Pool %	HLA compatible, ABO identical N	HLA compatible, ABO identical %
000	2	0.0	0	0.0
Favourable	107	1.1	11	1.1
Non-Favourable	9891	98.9	[illegible]	98.9
Total	10000	100	974	100



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Blood group: B

STEP (2) HLA TYPE

HLA-A	A2	A9
HLA-A19 Split		
HLA-B	B7	B15
HLA-DR	DR13	DR5

Clear all data

STEP (3) UNACCEPTABLE ANTIGENS

ADD PATIENT UNACCEPTABLE ANTIGENS

SENSITISATION

Number of declared unacceptable antigens	2
Calculated Reaction Frequency (Sensitisation)	53%

MATCHABILITY

Matchability Score	27
Matchability Points	5
Matchability Grade	Moderate

HLA Level	10000 Pool N	10000 Pool %	HLA compatible, ABO identical N	HLA compatible, ABO identical %
Level 1	2	0.0	0	0.0
Level 2	358	3.6	27	5.8
Level 3	1967	19.7	135	29.2
Level 4	7673	76.7	300	64.9
Total	10000	100	462	100

HLA Level	10000 Pool N	10000 Pool %	HLA compatible, ABO identical N	HLA compatible, ABO identical %
000	2	0.0	0	0.0
Favourable	107	1.1	11	2.4
Non-Favourable	9891	98.9	[illegible]	97.6
Total	10000	100	462	100

Thanks!

Do you have any questions?

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