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Educational Crossmatching Scheme

Dispatched on the 22nd May 2018

Summary of Results

A total of 32 reports were received, but not all labs reported results for all tests.

Consensus HLA Type of whole blood donor sample EDXM 01/2018:

	A*	B*	C*	DRB1*	DRB4*	DQA1*	DQB1*	DPA1*	DPB1*
	24	45	06	04	01	02	02	01	01:01
	26	40	03	07	-	03	03	02	04:02
Number of reports	32	32	30	32	21	25	31	13	17 ¹
% Labs in consensus	100%	100%	100%	100%	76%	100%	100%	100%	100%

¹ These figures exclude an additional seven laboratories that did not report DPB1* at the second field level

EDXM 01 Serum 1/2018 Results

(Serum sourced from sensitised parous female)

HLA Antibody Detection and Definition

(Based on 75% Consensus)

		HLA Class I	No of labs	% consensus	HLA Class II	No of labs	% consensus
Detection	IgG	Positive	31	84%	Positive	31	100%
	IgM	Negative	3	100%	Negative	1	100%
Definition ¹	Total Number of Specificities Reported (by ≥ 1 lab)	16			20		
	Number of Specificities Absent (reported by < 5% labs)	25			10		
	Number of Specificities Present (reported by ≥ 75% labs)	7			1		
	MFI >10000	N/A	31	N/A	N/A	31	N/A
	MFI 5000 - 9999	Cw2, Cw5, Cw6, Cw15, Cw17, Cw18		80.6-83.9%	DR4		100%
	MFI 3000 - 4999	Cw4		83.9%	N/A		N/A
	MFI 1500 -2999	N/A		N/A	N/A		N/A

¹ 75% consensus 'present' specificities are displayed within the MFI value range reported by the **majority** of participants

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Crossmatching
(Based on 75% Consensus)

	CDC						Flow Cytometry	
	PBL		T Cells		B Cells		T Cells	B Cells
	Without DTT	With DTT	Without DTT	With DTT	Without DTT	With DTT	Not Assessed	Positive
	Negative	Negative	Negative	Negative	Negative	Negative		
Number of reports	6	7	14	13	15	15	26	22
% Labs in consensus	100%	100%	100%	100%	100%	100%	65.4%	86.4%

Interpretation

Identification of Donor Specific Antibodies:

Specificity	No of Participants (n=29)	MFI Range Reported
A24	4 (14%)	663-1315
Cw6	26 (90%)	1785-17738
DR4	28 (97%)	3287-17567
DR7	4 (14%)	1040-2316
DQ8	4 (14%)	710-2343
DR53	1 (3%)	774
DQA1*03	1 (3%)	1116

If the potential donor was a potential live kidney donor:

	<i>The most common responses included:</i>
Interpretation based on results	<ul style="list-style-type: none"> Negative CDC crossmatch Positive T and B cell FCXM Luminex defined DSAs
Assigned risk	Medium n = 11 (83%) High n = 11 (83%) Contraindication n = 7 (24%)
Immunological advice	<ul style="list-style-type: none"> Desensitise patient Aggressive immunosuppression protocol Post-transplant monitoring Perform C3d or C1q assay to define antibodies
If advice is not to transplant, recommendations for future transplants	Seek alternative donor: live, deceased or via a kidney sharing scheme

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EDXM 01 Serum 2/2018 Results
(Serum sourced from sensitised parous female)

HLA Antibody Detection and Definition
(Based on 75% Consensus)

		HLA Class I	No of labs	% consensus	HLA Class II	No of labs	% consensus
Detection	IgG	Positive	31	100%	Positive	31	100%
	IgM	Negative	3	66.6%	Positive	1	100%
Definition ¹	Total Number of Specificities Reported (by ≥ 1 lab)	30			40		
	Number of Specificities Absent (reported by < 5% labs)	24			6		
	Number of Specificities Present (reported by ≥ 75% labs)	5			17		
	MFI >10000	A29, A43	31	96.8-100%	DR7, DR9, DR53, DQ2, DPB1*03:01	31	87.1-100%
	MFI 5000 - 9999	A36		96.8%	DQ5, DQ7, DQ8, DPB1*02:01, DPB1*04:02, DPB1*06:01, DPB1*09:01, DPB1*14:01, DPB1*17:01, DPB1*18:012, DPB1*		77.4-87.1%
	MFI 3000 - 4999	N/A		N/A	DR11		83.9%
	MFI 1500 -2999	A31, A74		77.4%	N/A		N/A

¹ 75% consensus 'present' specificities are displayed within the MFI value range reported by the majority of participants

Crossmatching Results
(Based on 75% Consensus)

	CDC						Flow Cytometry	
	PBL		T Cells		B Cells		T Cells	B Cells
	Without DTT	With DTT	Without DTT	With DTT	Without DTT	With DTT		
Number of reports	5	7	14	13	15	15	26	25
% Labs in consensus	80%	57%	93%	92%	100%	100%	84.6%	100%

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Interpretation

Identification of Donor Specific Antibodies:

Specificity	No of Participants (n=29)	MFI Range Reported
B45	14 (%)	900-4873
DR7	28 (%)	11639-41634
DQ2	28 (%)	9025-34845
DQ8	22 (%)	1600-12641
DR53	19 (%)	7939-22216
DPB1*01:01	10 (%)	1841-4501
DPB1*04:02	16 (%)	3332-9410
DQA1*02:01	8 (%)	4788-15805
DQA1*03:01	2 (%)	>2000-16802
DPA1*01:03	1 (%)	>2000
DPA1*02:01	1 (%)	>2000

If the potential donor was a potential live kidney donor:

	<i>The most common responses included:</i>						
Interpretation based on results	<ul style="list-style-type: none"> Positive CDC B cell crossmatch Positive B cell FC crossmatch Multiple DSAs detected 						
Assigned risk	<table> <tr> <td>Medium</td> <td>n = 1 (3%)</td> </tr> <tr> <td>High</td> <td>n = 8 (28%)</td> </tr> <tr> <td>Contraindication</td> <td>n = 20 (69%)</td> </tr> </table>	Medium	n = 1 (3%)	High	n = 8 (28%)	Contraindication	n = 20 (69%)
Medium	n = 1 (3%)						
High	n = 8 (28%)						
Contraindication	n = 20 (69%)						
Immunological advice	<ul style="list-style-type: none"> Immunologically high risk Do not proceed to transplant 						
If advice is not to transplant, recommendations for future transplants	Seek alternative donor: live, deceased or via a kidney sharing scheme						

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EDXM 01 Serum 3/2018 Results
(Serum sourced from sensitised parous female)

HLA Antibody Detection and Definition
(Based on 75% Consensus)

		HLA Class I	No of labs	% consensus	HLA Class II	No of labs	% consensus
Detection	IgG	Positive	31	94%	Positive	31	100%
	IgM	Negative	3	66.6%	Negative	1	100%
Definition ¹	Total Number of Specificities Reported (by ≥ 1 lab)	50			26		
	Number of Specificities Absent (reported by < 5% labs)	10			15		
	Number of Specificities Present (reported by ≥ 75% labs)	3			9		
	MFI >10000	N/A		N/A	N/A		N/A
	MFI 5000 - 9999	A1	31	96.8%	DR15, DR16, DR51, DQ6, DQ8, DQ9	31	90.3-96.8%
	MFI 3000-4999	A36		96.8%	DPB1*02:01, DPB1*04:02		77.4-80.6%
	MFI 1500-2999	A11		87.1%	DR11		77.4%

¹ 75% consensus 'present' specificities are displayed within the MFI value range reported by the **majority** of participants

Crossmatching
(Based on 75% Consensus)

	CDC						Flow Cytometry	
	PBL		T Cells		B Cells		T Cells	B Cells
	Without DTT	With DTT	Without DTT	With DTT	Without DTT	With DTT		
	Negative	Negative	Negative	Negative	Negative	Negative	Not Assessed	Not Assessed
Number of reports	6	7	14	13	15	15	27	24
% Labs in consensus	100%	100%	100%	100%	100%	100%	66.7%	58.3%

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Interpretation

Identification of Donor Specific Antibodies:

Specificity	No of Participants	MFI Range Reported
A24	14 (%)	550-2969
A26	9 (%)	936-5288
B60	15 (%)	1100-4628
B45	16 (%)	1000-4389
Cw6	2 (%)	516-1073
Cw10	1 (%)	675
DR4	1 (%)	501
DR7	2 (%)	663-1080
DQ2	1 (%)	>2000
DQ8	25 (%)	1964-16477
DQA1*02:01	1 (%)	>2000
DQA1*03:01	1 (%)	>2000
DPB1*04:02	17 (%)	1149-4666
DPA1*01:03	1 (%)	>2000
DPA1*02:01	1 (%)	>2000

If the potential donor was a potential live kidney donor:

	<i>The most common responses included:</i>												
Interpretation based on results	<ul style="list-style-type: none"> Negative CDC crossmatch Negative T cell FC crossmatch Negative or weak positive B cell FC crossmatch DSAs detected 												
Assigned risk	<table> <tr> <td>Low</td> <td>n = 5</td> <td>(17.5%)</td> </tr> <tr> <td>Medium</td> <td>n = 16</td> <td>(55%)</td> </tr> <tr> <td>High</td> <td>n = 3</td> <td>(10%)</td> </tr> <tr> <td>Contraindication</td> <td>n = 5</td> <td>(17.5%)</td> </tr> </table>	Low	n = 5	(17.5%)	Medium	n = 16	(55%)	High	n = 3	(10%)	Contraindication	n = 5	(17.5%)
Low	n = 5	(17.5%)											
Medium	n = 16	(55%)											
High	n = 3	(10%)											
Contraindication	n = 5	(17.5%)											
Immunological advice	<ul style="list-style-type: none"> Discuss at MDT meeting Post transplant monitoring recommended Antibody reduction protocol Enhanced immunosuppression 												
If advice is not to transplant, recommendations for future transplants	Investigate alternative donor: live, deceased or via a kidney sharing scheme												