



### Module 3 Panels

Module 3: Antibody detection & identification

Lynsi Rahorst, MHPE, MT(ASCP)SBB<sup>CM</sup>

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#### Case 1: antibody screen

	Rh								Kell						Duffy		Kidd		Lewis		P	MNS					Lutheran		Xg	Results	
	D	C	E	c	e	f	V	C <sub>w</sub>	K	k	Kp <sub>a</sub>	Kp <sub>b</sub>	Js <sub>a</sub>	Js <sub>b</sub>	Fy <sub>a</sub>	Fy <sub>b</sub>	Jk <sub>a</sub>	Jk <sub>b</sub>	Le <sub>a</sub>	Le <sub>b</sub>	P <sub>1</sub>	M	N	S	s	Lu <sub>a</sub>	Lu <sub>b</sub>	Xg <sub>a</sub>	LISS 37C	LISS IAT	
SC I	+	+	0	0	+	0	0	0	0	+	0	+	0	+	+	+	+	+	0	+	0	+	+	+	+	0	+	+	0	0	
SC II	+	0	+	+	0	0	0	0	+	+	0	+	0	+	0	+	0	+	0	+	+	0	+	0	+	0	+	0	0	0	
SC III	0	0	0	+	+	+	0	0	0	+	0	+	0	+	+	0	+	+	+	0	+	+	0	+	+	0	+	0	0	0	

#### Case 1: crossmatches

Crossmatches (immediate spin)			
	Unit #1	Unit #2	Unit #3
Patient plasma	1+	2+	1+

#### Case 1: antibody panel

	Rh								Kell						Duffy		Kidd		Lewis		P	MNS					Lutheran		Xg	Results		
	D	C	E	c	e	f	V	C <sub>w</sub>	K	k	Kp <sub>a</sub>	Kp <sub>b</sub>	Js <sub>a</sub>	Js <sub>b</sub>	Fy <sub>a</sub>	Fy <sub>b</sub>	Jk <sub>a</sub>	Jk <sub>b</sub>	Le <sub>a</sub>	Le <sub>b</sub>	P <sub>1</sub>	M	N	S	s	Lu <sub>a</sub>	Lu <sub>b</sub>	Xg <sub>a</sub>	IS	LISS 37C	LISS IAT	
1	+	+	0	0	+	0	0	0	0	+	0	+	0	+	+	+	+	+	0	+	0	+	+	+	+	0	+	+	1+	0	0	
2	+	+	0	0	+	0	0	+	+	+	0	+	0	+	0	+	0	+	0	+	+	0	+	0	+	0	+	0	0	0	0	
3	+	0	+	+	0	0	0	0	0	+	0	+	0	+	+	0	+	+	+	0	+	0	+	+	+	0	+	0	0	0	0	
4	+	0	0	+	+	+	+	0	0	+	0	+	0	+	0	0	+	0	0	0	+	+	+	0	+	0	+	+	1+	0	0	
5	0	+	0	+	+	+	0	0	0	+	0	+	0	+	+	0	+	0	+	0	0	+	+	0	0	0	+	+	1+	0	0	
6	0	0	+	+	+	+	0	0	0	+	0	+	0	+	0	+	+	+	0	+	+	0	+	0	+	0	+	+	0	0	0	
7	0	0	0	+	+	+	0	0	+	+	0	+	0	+	0	+	0	0	+	0	+	0	+	+	0	+	+	2+	0	0		
8	0	0	0	+	+	+	0	0	0	+	0	+	0	+	+	+	0	+	0	+	+	0	+	+	0	+	0	0	0	0		
9	0	0	0	+	+	+	0	0	0	+	+	+	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	2+	0	0		
10	+	+	0	0	+	0	0	0	0	+	0	+	0	+	+	0	+	+	+	+	+	+	+	0	0	+	+	1+	0	0		
11	+	0	0	+	+	+	0	0	+	+	0	+	0	+	0	0	+	+	+	0	+	0	+	+	+	+	+	0	0	0		
Auto																												0	0	0		

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### Case 2: Antibody screen

	Rh								Kell					Duffy		Kidd		Lewis		P	MNS					Lutheran		Xg	Results	
	D	C	E	c	e	f	V	C <sub>w</sub>	K	k	Kp <sub>a</sub>	Kp <sub>b</sub>	Js <sub>a</sub>	Js <sub>b</sub>	Fy <sub>a</sub>	Fy <sub>b</sub>	Jk <sub>a</sub>	Jk <sub>b</sub>	Le <sub>a</sub>	Le <sub>b</sub>	P <sub>1</sub>	M	N	S	s	Lu <sub>a</sub>	Lu <sub>b</sub>	Xg <sub>a</sub>	LISS 37C	LISS IAT
SC I	+	+	0	0	+	0	0	0	+	0	+	0	+	+	+	+	0	+	0	+	+	+	+	0	+	+	0	0	2+	
SC II	+	0	+	+	0	0	0	0	+	+	0	+	0	0	+	0	+	0	+	+	0	+	0	+	0	+	0	0	0	
SC III	0	0	0	+	+	+	0	0	0	+	0	+	0	+	0	+	+	0	+	+	0	+	+	0	+	0	0	0	3+	

### Case 2: Antibody panel

	Rh								Kell					Duffy		Kidd		Lewis		P	MNS					Lutheran		Xg	Results	
	D	C	E	c	e	f	V	C <sub>w</sub>	K	k	Kp <sub>a</sub>	Kp <sub>b</sub>	Js <sub>a</sub>	Js <sub>b</sub>	Fy <sub>a</sub>	Fy <sub>b</sub>	Jk <sub>a</sub>	Jk <sub>b</sub>	Le <sub>a</sub>	Le <sub>b</sub>	P <sub>1</sub>	M	N	S	s	Lu <sub>a</sub>	Lu <sub>b</sub>	Xg <sub>a</sub>	LISS 37C	LISS IAT
1	+	+	0	0	+	0	0	0	0	+	0	+	0	+	+	+	+	0	+	0	+	+	+	+	0	+	+	0	0	2+
2	+	+	0	0	+	0	0	+	0	+	0	+	0	+	0	+	+	0	+	+	0	+	0	+	+	0	+	0	0	0
3	+	0	+	+	0	0	0	0	0	+	0	+	0	+	0	+	+	0	+	0	+	+	0	+	+	0	+	0	0	3+
4	+	0	0	+	+	+	+	0	0	+	0	+	0	+	0	0	+	0	+	0	+	+	+	0	+	0	+	0	0	0
5	0	+	0	+	+	+	0	0	+	+	0	+	0	+	+	0	+	0	+	0	0	+	+	0	0	0	+	0	3+	
6	0	0	+	+	+	+	0	0	0	+	0	+	0	+	+	+	+	0	+	+	0	+	0	+	0	+	0	+	0	2+
7	0	0	0	+	+	+	0	0	0	+	0	+	0	+	0	+	0	0	+	0	+	0	+	+	0	+	0	+	0	0
8	0	0	0	+	+	+	0	0	0	+	0	+	0	+	+	0	+	0	+	0	0	+	+	+	0	+	0	0	2+	
9	0	0	0	+	+	+	0	0	0	+	+	+	0	+	+	0	+	0	+	+	+	0	0	+	0	+	0	0	2+	
10	+	+	0	0	+	0	0	0	0	+	0	+	0	+	+	0	+	+	0	+	+	+	+	0	0	+	0	0	3+	
11	+	0	0	+	+	+	0	0	+	+	0	+	0	+	+	0	+	+	0	+	+	0	+	+	+	+	0	0	3+	
Auto																												0	0	

### Case 2: Patient phenotype

	D	C	E	c	e	K	k	Fy <sup>a</sup>	Fy <sup>b</sup>	Jk <sup>a</sup>	Jk <sup>b</sup>	M	N	S	s
Patient RBCs	+	0	0	+	+	0	+	0	+	+	0	+	+	+	+

### Case 2: Testing enzyme treated cells:

	Rh								Kell					Duffy		Kidd		Lewis		P	MNS					Lutheran		Xg	Results		
	D	C	E	c	e	f	V	C <sub>w</sub>	K	k	Kp <sub>a</sub>	Kp <sub>b</sub>	Js <sub>a</sub>	Js <sub>b</sub>	Fy <sub>a</sub>	Fy <sub>b</sub>	Jk <sub>a</sub>	Jk <sub>b</sub>	Le <sub>a</sub>	Le <sub>b</sub>	P <sub>1</sub>	M	N	S	s	Lu <sub>a</sub>	Lu <sub>b</sub>	Xg <sub>a</sub>	LISS 37C	LISS IAT	Ficin IAT
1	+	+	0	0	+	0	0	0	0	+	0	+	0	+	+	+	+	0	+	0	+	+	+	+	0	+	+	0	2+	0	
2	+	+	0	0	+	0	0	+	0	+	0	+	0	+	0	+	+	0	+	+	0	+	+	+	0	+	0	0	0	0	
3	+	0	+	+	0	0	0	0	0	+	0	+	0	+	0	+	+	0	+	+	0	+	0	+	+	0	+	0	3+	0	
4	+	0	0	+	+	+	+	0	0	+	0	+	0	+	0	0	+	0	+	0	+	+	+	0	+	0	+	0	0	0	
5	0	+	0	+	+	+	0	0	+	+	0	+	0	+	+	0	+	0	0	+	0	+	+	0	0	0	+	0	3+	0	
6	0	0	+	+	+	+	0	0	0	+	0	+	0	+	+	+	+	0	+	+	0	+	0	+	0	+	+	0	2+	0	
7	0	0	0	+	+	+	0	0	0	+	0	+	0	+	0	+	0	0	+	0	+	0	+	+	0	+	+	0	0	0	
8	0	0	0	+	+	+	0	0	0	+	0	+	0	+	+	0	+	0	+	0	0	+	+	+	0	+	0	0	2+	0	
9	0	0	0	+	+	+	0	0	0	+	+	+	0	+	+	0	+	0	+	+	+	0	0	+	0	+	0	0	2+	0	
10	+	+	0	0	+	0	0	0	0	+	0	+	0	+	+	0	+	+	0	+	+	+	+	0	0	+	0	0	3+	0	
11	+	0	0	+	+	+	0	0	+	+	0	+	0	+	+	0	+	+	0	+	+	0	+	+	+	+	0	0	3+	0	
Auto																												0	0	NT	

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### Case 3: Antibody screen

	Rh								Kell						Duffy		Kidd		Lewis		P	MNS					Lutheran		Xg	Results	
	D	C	E	c	e	f	V	C <sub>w</sub>	K	k	Kp <sub>a</sub>	Kp <sub>b</sub>	Js <sub>a</sub>	Js <sub>b</sub>	Fy <sub>a</sub>	Fy <sub>b</sub>	Jk <sub>a</sub>	Jk <sub>b</sub>	Le <sub>a</sub>	Le <sub>b</sub>	P <sub>1</sub>	M	N	S	s	Lu <sub>a</sub>	Lu <sub>b</sub>	Xg <sub>a</sub>	IS	PEG IAT	
SC I	+	+	0	0	+	0	0	0	+	0	+	0	+	+	+	+	0	+	0	+	+	+	+	+	0	+	+	0	2+		
SC II	+	0	+	+	0	0	0	+	+	0	+	0	+	0	+	0	+	+	+	+	0	+	+	+	+	0	+	0	4+		
SC III	0	0	0	+	+	+	0	0	+	0	+	0	+	+	0	+	+	0	+	+	+	0	0	+	0	+	0	0			

### Case 3: Antibody panel

	Rh								Kell						Duffy		Kidd		Lewis		P	MNS					Lutheran		Xg	Results	
	D	C	E	c	e	f	V	C <sub>w</sub>	K	k	Kp <sub>a</sub>	Kp <sub>b</sub>	Js <sub>a</sub>	Js <sub>b</sub>	Fy <sub>a</sub>	Fy <sub>b</sub>	Jk <sub>a</sub>	Jk <sub>b</sub>	Le <sub>a</sub>	Le <sub>b</sub>	P <sub>1</sub>	M	N	S	s	Lu <sub>a</sub>	Lu <sub>b</sub>	Xg <sub>a</sub>	IS	PEG IAT	
1	+	+	0	0	+	0	0	0	+	0	+	0	+	+	+	+	0	+	0	+	+	+	+	+	0	+	+	0	2+		
2	+	+	0	0	+	0	0	+	+	0	+	0	+	0	+	0	+	+	+	+	0	+	+	0	+	0	+	0	1+	4+	
3	+	0	+	+	0	0	0	0	+	0	+	0	+	+	0	+	+	+	0	+	+	+	0	+	0	+	0	0	2+		
4	+	0	0	+	+	+	+	0	0	+	0	+	0	+	0	0	+	+	0	0	+	+	+	0	+	0	+	0	0	0	
5	0	+	0	+	+	+	0	0	0	+	0	+	0	+	+	0	+	0	+	0	0	+	+	+	0	0	+	+	0	2+	
6	0	0	+	+	+	+	0	0	0	+	0	+	0	+	0	+	+	+	0	+	+	0	+	0	+	0	+	+	0	0	
7	0	0	0	+	+	+	0	0	+	+	0	+	0	+	0	+	+	0	0	+	0	+	0	+	+	0	+	+	1+	4+	
8	0	0	0	+	+	+	0	0	0	+	0	+	0	+	+	+	0	+	0	+	0	0	+	+	+	0	+	0	0	2+	
9	0	0	0	+	+	+	0	0	+	+	+	0	+	+	+	0	+	+	0	+	+	0	0	+	0	+	0	+	1+	4+	
10	+	+	0	0	+	0	0	0	0	+	0	+	0	+	+	0	+	+	0	+	+	+	+	0	0	+	+	0	0	2+	
11	+	0	0	+	+	+	0	0	+	+	0	+	0	+	0	+	+	+	0	+	0	+	+	+	+	+	+	+	1+	4+	
Auto																													0	0	

### Case 3: Patient phenotype

	D	C	E	c	e	K	k	Fy <sup>a</sup>	Fy <sup>b</sup>	Jk <sup>a</sup>	Jk <sup>b</sup>	M	N	S	s
Patient RBCs	+	+	0	0	+	0	+	0	+	0	+	+	+	0	+

### Case 3: Testing enzyme-treated cells

	Rh								Kell						Duffy		Kidd		Lewis		P	MNS					Lutheran		Xg	Results		
	D	C	E	c	e	f	V	C <sub>w</sub>	K	k	Kp <sub>a</sub>	Kp <sub>b</sub>	Js <sub>a</sub>	Js <sub>b</sub>	Fy <sub>a</sub>	Fy <sub>b</sub>	Jk <sub>a</sub>	Jk <sub>b</sub>	Le <sub>a</sub>	Le <sub>b</sub>	P <sub>1</sub>	M	N	S	s	Lu <sub>a</sub>	Lu <sub>b</sub>	Xg <sub>a</sub>	IS	PEG IAT	Ficin IAT	
1	+	+	0	0	+	0	0	0	+	0	+	0	+	+	+	+	+	0	+	0	+	+	+	+	+	0	+	+	0	2+	0	
2	+	+	0	0	+	0	0	+	+	0	+	0	+	0	+	0	+	+	+	+	0	+	+	0	+	0	+	0	1+	4+	4+	
3	+	0	+	+	0	0	0	0	+	0	+	0	+	+	0	+	+	+	0	+	+	+	0	+	0	+	0	0	2+	0	0	
4	+	0	0	+	+	+	+	0	0	+	0	+	0	+	0	0	+	+	0	0	+	+	+	0	+	0	+	0	0	0	0	
5	0	+	0	+	+	+	0	0	0	+	0	+	0	+	+	0	+	0	+	0	0	+	+	+	0	0	+	+	0	2+	0	
6	0	0	+	+	+	+	0	0	0	+	0	+	0	+	0	+	+	+	0	+	+	0	+	0	+	0	+	+	0	0	0	
7	0	0	0	+	+	+	0	0	+	+	0	+	0	+	+	0	+	0	+	0	+	0	+	+	+	0	+	+	1+	4+	4+	
8	0	0	0	+	+	+	0	0	0	+	0	+	0	+	+	0	+	0	+	0	0	+	+	+	0	+	0	0	2+	0	0	
9	0	0	0	+	+	+	0	0	+	+	+	0	+	+	+	0	+	+	+	0	+	+	0	0	+	0	+	0	1+	4+	4+	
10	+	+	0	0	+	0	0	0	0	+	0	+	0	+	+	0	+	+	+	0	+	+	+	+	0	0	+	+	0	2+	0	
11	+	0	0	+	+	+	0	0	+	+	0	+	0	+	0	0	+	+	+	0	+	0	+	+	+	+	+	+	1+	4+	4+	
Auto																													0	0	NT	