ABID CASE #14

1. What is the probable identity of this antibody(ies)? *Anti-Fy^a plus anti-V.*

2. Is any further workup needed to prove it? If additional cells must be tested, select them from the following panel. Attempt to complete the workup with as few additional tests as possible.

   Anti-E must be ruled out, and anti-V must be ruled in. Antigen typing would also be preferred, but the frozen anti-V we had gave an invalid positive reaction. The technologist who worked up the problem also ruled out anti-C^w using a cell on another panel. Note that cell #1 on the initial panel is C^w positive. Reactivity of that cell is explained by the hypothesis that there is anti-Fy^a, but most experienced serologists would rule out underlying antibodies against low frequency antigens that appear on reactive panel cells. This is not required by our SOP, and is not entirely logically consistent, since there are many other clinically significant antibodies directed against low frequency antigens that we are not ruling out. But it is a good practice that can be followed if the needed rule out cells are readily available.

		Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheren		Other			Saline, 4 drop serum		
Cell	Rh	D	C	E	c	e	V	K	k	Kp^a	Kp^b	Js^a	Js^b	Fy^a	Fy^b	Jk^a	Jk^b	Xg^a	Le^a	Le^b	S	s	M	N	P1	Lu^a	Lu^b	Typings	Cell	Gel	IS	30', 37°	AHG
1	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	+	0	+	0	+	0	+	0	+	+	0	+	0	+	C^w, Co^b	1				
2	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	+	+	0	+	+	0	+	0	+	0	+	+	0	+		2				
3	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	+	+	0	+	+	0	+	+	+	+	+	0	0	+		3				
4	R1R1	+	+	0	0	+	0	0	+	0	+	+	+	0	+	+	0	+	+	0	0	+	+	+	+	0	+		4				
5	RzR1	+	+	+	0	+	0	0	+	0	+	0	+	+	0	+	+	0	0	+	+	0	0	+	+	0	+		5				
6	RzR2	+	w	+	+	0	0	0	+	0	+	0	+	+	0	0	+	0	+	0	0	+	+	+	+	0	+		6				
7	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	0	+	0	0	+	0	+	+	0	+	0	+		7	0			
8	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	0	+	0	+	0	+	0	+	0	+	+	0	+	Co^b, Yt^b	8				
9	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	+	0	+	+	0	+	+	0	+	+	+	0	+		9				
10	R1r	+	+	0	+	+	0	0	+	+	0	0	+	+	+	+	+	+	0	+	+	+	+	+	0	0	+	Yt^b	10				
11	r'r	0	+	0	+	+	0	0	+	0	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+	0	+		11				
12	r"r	0	0	+	+	+	0	0	+	0	+	0	+	+	0	0	+	+	+	0	+	+	+	+	0	0	+		12				
13	rr	0	0	0	+	+	0	+	+	0	+	0	+	+	+	+	0	+	0	+	+	+	+	0	+	+	+		13				
14	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	0	+	+	0	+	0	+	+	0	+	+	+	Yt^b	14				
15	rr	0	0	0	+	+	+	0	+	0	+	0	+	0	0	+	+	0	0	+	+	+	+	0	+	0	+		15	2+	0	0	vw+
16	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	+	0	+	0	+	+	0	+	0	0	0	+	Yt^b	16				
17	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	+	+	0	+	0	+	0	+	+	0	+	Co^b, Yt	17				
18	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	+	+	0	+	0	+	+	+	+	0	+		18				
19	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	0	+	0	+	+	+	+	0	+	0	+		19				
20	Ror	+	0	0	+	+	+	0	+	0	+	+	+	0	0	+	+	+	0	0	0	+	+	+	+	0	+		20	2+	0	0	vw+
Patient																													AC		0	0	0

3. Does this antibody(ies) cause hemolytic transfusion reactions? *Both do.* Hemolytic disease of the newborn? *Both do.*

4. How would we select compatible blood in this case? Would selection of any particular IAT technique be useful in deciding how to select compatible RBCs?

   Ideally one would type the A or O positive donors for both Fy^a and V and perform an antiglobulin crossmatch. However, since the anti-V did not work, the saline/4 drop plasma IAT with V positive cells was done to determine whether crossmatches would detect incompatibility due to the anti-V.

5. What cells in the above panel likely come from donors of African origin? *Cells 15 and 20 (discuss Rh, Fy, Kell, and Le system).*