



**American
Red Cross**

OM – G:
What is it?

Learning Objectives

After participating in this course, you will be able to:

- Identify when G studies are indicated
- Understand how to perform G investigation
- Determine if a patient is a candidate for RhIg

The G antigen

- G is an antigen in the Rh blood group system
 - Specifically, G maps to the shared exon 2 and the 103-serine residue on RhD, RhCe, and RhCE proteins
- G is present on all D positive and C positive cells

The G antibody

- Serologically presents as anti-D plus anti-C
- When only anti-G is present:
 - Anti-G often reacts more strongly with C+ cells and D+ cells
- Routine Transfusion:
 - Not necessary to distinguish between the antibodies
 - Products negative for C and D will usually be negative for G
- Prenatal serologic investigation:
 - A patient may demonstrate anti-G without the presence of anti-D
 - That patient is a candidate for RhIg

G Investigation

Two Adsorptions; One Eluate

- R2R2
- r'r
- G is in the eluate

Sequential Adsorptions

- Two eluates
- More complicated
- Limited patient sample

Routine IRL Prenatal Investigation

- ABO using anti-A, anti-B, anti-A,B, and A1, A2, and B cells
 - Repeat Prenatal samples do not require ABO typing
 - Rh type using anti-D including weak D testing
 - Repeat Rh negative samples do not require weak D testing
 - Repeat prenatal samples do not require Rh typing
 - Rh phenotype testing the patient for C, E, c, and e
 - DAT is performed using polyspecific antihuman globulin
 - A positive DAT with polyspecific AHG will reflex to DATs with anti-IgG and anti-C3
 - Repeat prenatal samples do not require DAT testing
 - An 11-cell panel and auto control in tube at IS and PEG/IAT
-

Case Study #1

- Age: 33
- Gender: Female
- Race: White
- ABO/Rh: A Negative
- Known Antibodies: anti-D and anti-C
- Diagnosis: Pregnancy
- Pregnancy History: currently 8 weeks into her 2nd pregnancy
- Medications: None, RhIg not given
- Transfusion History: Never

Case Study #1

Initial Antibody Testing

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	IS	Peg IgG
1	+	0	+	+	0	0	+	0	+	+	+	0	+	0	+	0	+	+	0	2+
2	+	0	+	+	0	0	+	+	+	+	0	+	0	+	+	0	+	+	0	2+
3	0	+	0	+	+	0	+	+	+	+	0	+	+	0	+	0	+	+	0	3+
4	0	+	0	+	+	0	+	+	+	0	+	+	0	+	0	0	+	+	0	3+
5	0	0	0	+	+	0	+	+	0	+	+	+	0	+	0	+	0	+	0	0 ^v
6	0	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	+	0	0	0 ^v
7	0	0	0	+	+	+	0	0	+	0	+	+	+	+	+	0	+	+	0	0 ^v
Patient																			0	0 ^v

Case Study #1

Initial Antibody Testing

	D	C	E	e	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	IS	Peg IgG	
1	+	0	+	+	0	0	+	0	+	+	+	0	+	0	+	0	+	+	0	0	2+
2	+	0	+	+	0	0	+	+	+	+	0	+	0	+	+	0	+	+	0	0	2+
3	0	+	0	+	+	0	+	+	+	+	0	+	+	0	+	0	+	+	0	0	3+
4	0	+	0	+	+	0	+	+	+	0	+	+	0	+	0	0	+	+	0	0	3+
5	0	0	0	+	+	0	+	+	0	+	+	+	0	+	0	+	0	+	0	0	0 ^v
6	0	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	+	0	0	0	0 ^v
7	0	0	0	+	+	+	0	0	+	0	+	+	+	+	0	+	+	0	0	0	0 ^v
Patient																				0	0 ^v

Cells 5, 6, and 7 are nonreactive

- This rules out everything except D and C

Cells 1 and 2 are reactive

- They are D positive and C negative, proving anti-D

Cells 3 and 4 are reactive

- They are D negative and C positive, proving anti-C

Case Study #1
Knowledge Check



Have we proven anti-D and anti-C?

- No

What else could this reactivity indicate?

- Anti-G

How does anti-G present?

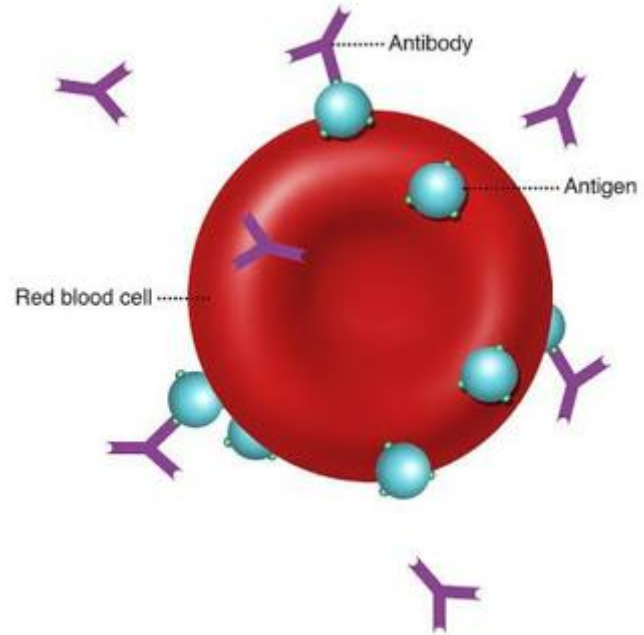
- Anti-G reacts with most cells positive for D or C antigen

Adsorptions

R₂R₂ Cells

- D, E, c positive

If anti-D and/or anti-G is present, it will be adsorbed onto the cells and removed from the patient sample



Case Study #1

R₂R₂ adsorbed plasma

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	PEG IgG	
1	+	0	+	+	0	0	+	0	+	+	+	0	+	0	+	0	+	+	+	O ^v
2	+	0	+	+	0	0	+	+	+	+	0	+	0	+	+	0	+	+		
3	0	+	0	+	+	0	+	+	+	+	0	+	+	0	+	0	+	+	+	W+
4	0	+	0	+	+	0	+	+	+	0	+	+	0	+	0	0	+	+	+	W+
5	0	0	0	+	+	0	+	+	0	+	+	+	0	+	0	+	0	+	+	O ^v
6	0	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	+	0	0	
7	0	0	0	+	+	+	0	0	+	0	+	+	+	+	+	0	+	+		
Patient																				

Case Study #1

R₂R₂ adsorbed plasma

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	PEG IgG
1	+	0	+	+	0	0	+	0	+	+	+	0	+	0	+	0	+	+	0 ^v
2	+	0	+	+	0	0	+	+	+	+	0	+	0	+	+	0	+	+	
3	0	+	0	+	+	0	+	+	+	+	0	+	+	0	+	0	+	+	w+
4	0	+	0	+	+	0	+	+	+	0	+	+	0	+	0	0	+	+	w+
5	0	0	0	+	+	0	+	+	0	+	+	+	0	+	0	+	0	+	0 ^v
6	0	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	+	0	
7	0	0	0	+	+	+	0	0	+	0	+	+	+	+	+	0	+	+	
Patient																			

Cell 1 is nonreactive

- It is D positive and C negative
- Verifies anti-D and/or anti-G has been absorbed out

Cell 5 is nonreactive

- It is D and C negative

Cells 3 and 4 are reactive

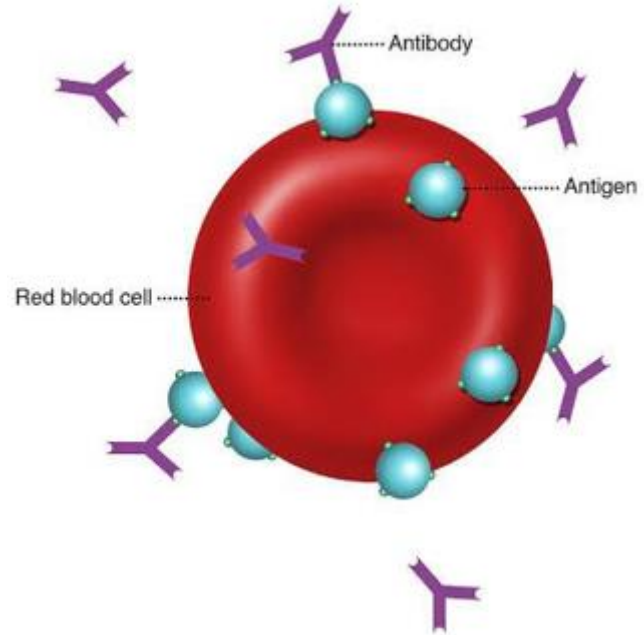
- They are D negative and C positive
- This proves anti-C

Adsorptions

r'r Cells

- C, c, e positive

If anti-C and/or anti-G is present, it will be adsorbed onto the cells and removed from the patient sample



Case Study #1

r'r adsorbed plasma

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	PEG IgG
1	+	0	+	+	0	0	+	0	+	+	+	0	+	0	+	0	+	+	w+
2	+	0	+	+	0	0	+	+	+	+	0	+	0	+	+	0	+	+	w+
3	0	+	0	+	+	0	+	+	+	+	0	+	+	0	+	0	+	+	0 ^v
4	0	+	0	+	+	0	+	+	+	0	+	+	0	+	0	0	+	+	
5	0	0	0	+	+	0	+	+	0	+	+	+	0	+	0	+	0	+	0 ^v
6	0	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	+	0	
7	0	0	0	+	+	+	0	0	+	0	+	+	+	+	+	0	+	+	
Patient																			

Case Study #1

r'r adsorbed plasma

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	PEG IgG
1	+	0	+	+	0	0	+	0	+	+	+	0	+	0	+	0	+	+	W+
2	+	0	+	+	0	0	+	+	+	+	0	+	0	+	+	0	+	+	W+
3	0	+	0	+	+	0	+	+	+	+	0	+	+	0	+	0	+	+	0 ^y
4	0	+	0	+	+	0	+	+	+	0	+	+	0	+	0	0	+	+	
5	0	0	0	+	+	0	+	+	0	+	+	+	0	+	0	+	0	+	0 ^y
6	0	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	+	0	
7	0	0	0	+	+	+	0	0	+	0	+	+	+	+	+	0	+	+	
Patient																			

Cell 3 is nonreactive

- It is D negative and C positive
- Verifies anti-C and/or anti-G has been absorbed out

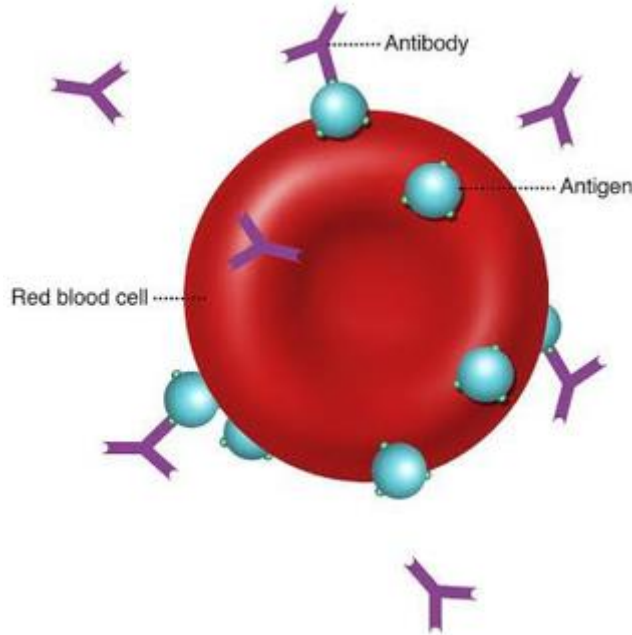
Cell 5 is nonreactive

- It is D and C negative

Cells 1 and 2 are reactive

- They are D positive and C negative
- This proves anti-D

Adsorptions/Elutions



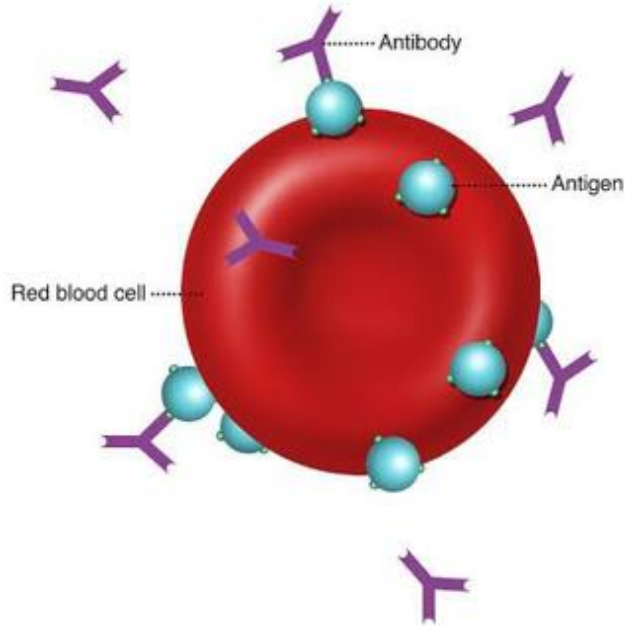
R₂R₂ Cells

- D, E, c positive

If anti-D and/or anti-G is present, it will be adsorbed onto the cells

We can test for the presence of anti-D and anti-G by performing an elution on the adsorbing cells

Adsorptions/Elutions



r'r Cells

- C, c, e positive

If anti-C and/or anti-G is present, it will be adsorbed onto the cells

We can test for the presence of anti-C and anti-G by performing an elution on the adsorbing cells

Case Study #1

Eluate from the R₂R₂ adsorption

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	PEG IgG	
1	+	0	+	+	0	0	+	0	+	+	+	0	+	0	+	0	+	+	+	1+
2	+	0	+	+	0	0	+	+	+	+	0	+	0	+	+	0	+	+		
3	0	+	0	+	+	0	+	+	+	+	0	+	+	0	+	0	+	+	+	1+
4	0	+	0	+	+	0	+	+	+	0	+	+	0	+	0	0	+	+	+	w+
5	0	0	0	+	+	0	+	+	0	+	+	+	0	+	0	+	0	+	+	0 ^v
6	0	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	+	0	0	0 ^v
7	0	0	0	+	+	+	0	0	+	0	+	+	+	+	+	0	+	+		
Patient																				

Case Study #1

Eluate from the R2R2 adsorption

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	PEG IgG	
1	+	0	+	+	0	0	+	0	+	+	+	0	+	0	+	0	+	+	+	1+
2	+	0	+	+	0	0	+	+	+	+	0	+	0	+	+	0	+	+	+	
3	0	+	0	+	+	0	+	+	+	+	0	+	+	0	+	0	+	+	+	1+
4	0	+	0	+	+	0	+	+	+	0	+	+	0	+	0	0	+	+	+	w+
5	0	0	0	+	+	0	+	+	0	+	+	+	0	+	0	+	0	+	+	0 ^v
6	0	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	+	0	+	0 ^v
7	0	0	0	+	+	+	0	0	+	0	+	+	+	+	+	0	+	+	+	
Patient																				

Cells 5 and 6 are nonreactive

- They are D and C negative

Cell 1 is reactive

- It is D and G positive, and C negative

Cells 3 and 4 are reactive

- They are D negative and C positive
- This proves anti-G

Case Study #1

Summary

- Initial testing indicates anti-D, anti-C, and/or anti-G is present in the patient plasma
- The R₂R₂ adsorbed plasma proves the anti-C
- The r'r adsorbed plasma proves the anti-D
- The eluate from the R₂R₂ adsorption proves the anti-G

Conclusion

The patient has:

Anti-D

Anti-C

Anti-G

Additional alloantibodies were excluded

Administration of Rh Immune Globulin?

- No
- Why?
 - Patient has already developed anti-D

Case Study #2

- Age: 26
- Gender: Female
- Race: Black or African American
- ABO/Rh: A Negative
- Known Antibodies: anti-D, anti-C, and WAA
- Diagnosis: Sickle Cell Anemia, Pregnancy
- Pregnancy History: current; 2nd pregnancy
- Medications: Not Provided; unknown if Rhlg given
- Transfusion History: >3 months

Case Study #2

Initial Antibody Testing

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	IS	Peg IgG
1	0	0	+	+	+	0	+	+	w	0	+	+	0	+	0	0	+	+	0	0 ^v
2	0	0	0	+	+	+	0	+	+	0	+	+	0	0	+	+	0	+	0	0 ^v
3	0	0	+	+	+	0	+	+	+	+	0	+	+	+	+	+	0	0	0	0 ^v
4	0	0	0	+	+	+	+	0	+	0	+	0	+	0	+	0	+	+	0	0 ^v
5	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	0	+	0	0 ^v
6	+	0	+	+	0	0	+	+	+	+	+	+	+	+	+	0	+	+	0	3+
7	+	0	+	+	+	+	0	0	+	+	0	+	+	+	+	0	0	+	0	3+
8	0	+	0	+	+	+	+	+	w	+	+	+	+	+	0	0	0	0	0	3+
9	0	+	0	+	+	+	+	+	0	0	+	+	0	+	+	+	0	0	0	3+
10	+	0	+	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	0	3+
11	+	0	+	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+		
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+		
Patient																			0	0 ^v

Case Study #2

Initial Antibody Testing

	D	C	E	e	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	IS	Peg IgG
1	0	0	+	+	+	0	+	+	w	0	+	+	0	+	0	0	+	+	0	0'
2	0	0	0	+	+	+	0	+	+	0	+	+	0	0	+	+	0	+	0	0'
3	0	0	+	+	+	0	+	+	+	+	0	+	+	+	+	+	0	0	0	0'
4	0	0	0	+	+	+	+	0	+	0	+	0	+	0	+	0	+	+	0	0'
5	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	0	+	0	0'
6	+	0	+	+	0	0	+	+	+	+	+	+	+	+	+	0	+	+	0	3+
7	+	0	+	+	+	+	0	0	+	+	0	+	+	+	+	0	0	+	0	3+
8	0	+	0	+	+	+	+	+	w	+	+	+	+	+	0	0	0	0	0	3+
9	0	+	0	+	+	+	+	+	0	0	+	+	0	+	+	+	0	0	0	3+
10	+	0	+	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	0	3+
11	+	0	+	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+		
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+		
Patient																			0	0'

Cells 1, 2, 3, 4 and 5 are nonreactive and rule out everything except D and C

Cells 6, 7, and 10 are reactive

- They are D positive and C negative, indicating an apparent anti-D

Cells 8 and 10 are reactive

- They are D negative and C positive, indicating an apparent anti-C

Case Study #2
Knowledge Check



Next Steps:

- R_2R_2 adsorption
- $r'r$ adsorption
- Elution from at least one of the adsorbing cells

Case Study #2

R₂R₂ adsorbed plasma

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	PEG IgG
1	0	0	+	+	+	0	+	+	w	0	+	+	0	+	0	0	+	+	
2	0	0	0	+	+	+	0	+	+	0	+	+	0	0	+	+	0	+	
3	0	0	+	+	+	0	+	+	+	+	0	+	+	+	+	+	0	0	
4	0	0	0	+	+	+	+	0	+	0	+	0	+	0	+	0	+	+	
5	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	0	+	
6	+	0	+	+	0	0	+	+	+	+	+	+	+	+	+	0	+	+	
7	+	0	+	+	+	+	0	0	+	+	0	+	+	+	+	0	0	+	
8	0	+	0	+	+	+	+	+	w	+	+	+	+	+	0	0	0	0	3+
9	0	+	0	+	+	+	+	+	0	0	+	+	0	+	+	+	0	0	3+
10	+	0	+	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	0 ^v
11	+	0	+	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+	0 ^v
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+	

Case Study #2

R₂R₂ adsorbed plasma

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	PEG IgG
1	0	0	+	+	+	0	+	+	w	0	+	+	0	+	0	0	+	+	+
2	0	0	0	+	+	+	0	+	+	0	+	+	0	0	+	+	0	+	+
3	0	0	+	+	+	0	+	+	+	+	0	+	+	+	+	+	0	0	+
4	0	0	0	+	+	+	+	0	+	0	+	0	+	0	+	0	+	+	+
5	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	0	0	+
6	+	0	+	+	0	0	+	+	+	+	+	+	+	+	+	0	+	+	+
7	+	0	+	+	+	+	0	0	+	+	0	+	+	+	+	0	0	+	+
8	0	+	0	+	+	+	+	+	w	+	+	+	+	+	0	0	0	0	3+
9	0	+	0	+	+	+	+	+	0	0	+	+	0	+	+	+	0	0	3+
10	+	0	+	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	0 ⁺
11	+	0	+	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+	0 ⁺
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+	+

Cells 10 and 11 are nonreactive

- It is D positive and C negative
- Verifies anti-D and/or anti-G has been absorbed out.

Cells 8 and 9 are reactive

- They are D negative and C positive
- This proves anti-C

Case Study #2

r'r adsorbed plasma

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	Peg IgG
1	0	0	+	+	+	0	+	+	w	0	+	+	0	+	0	0	+	+	
2	0	0	0	+	+	+	0	+	+	0	+	+	0	0	+	+	0	+	
3	0	0	+	+	+	0	+	+	+	0	+	+	+	+	+	+	0	0	
4	0	0	0	+	+	+	+	0	+	0	+	0	+	0	+	0	+	+	
5	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	0	+	
6	+	0	+	+	0	0	+	+	+	+	+	+	+	+	+	0	+	+	
7	+	0	+	+	+	+	0	0	+	+	0	+	+	+	+	0	0	+	
8	0	+	0	+	+	+	+	+	w	+	+	+	+	+	0	0	0	0	0 [√]
9	0	+	0	+	+	+	+	+	0	0	+	+	0	+	+	+	0	0	0 [√]
10	+	0	+	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	0 [√]
11	+	0	+	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+	0 [√]
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+	

Case Study #2

r'r adsorbed plasma

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	PEG IgG
1	0	0	+	+	+	0	+	+	w	0	+	+	0	+	0	0	+	+	
2	0	0	0	+	+	+	0	+	+	0	+	+	0	0	+	+	0	+	
3	0	0	+	+	+	0	+	+	+	+	0	+	+	+	+	+	0	0	
4	0	0	0	+	+	+	+	0	+	0	+	0	+	0	+	0	+	+	
5	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	0	+	
6	+	0	+	+	0	0	+	+	+	+	+	+	+	+	+	0	+	+	
7	+	0	+	+	+	+	0	0	+	+	0	+	+	+	+	0	0	+	
8	0	+	0	+	+	+	+	+	w	+	+	+	+	+	0	0	0	0	0 ^v
9	0	+	0	+	+	+	+	+	0	0	+	+	0	+	+	+	0	0	0 ^v
10	+	0	+	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	0 ^v
11	+	0	+	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+	0 ^v
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+	

Cells 8 and 9 are nonreactive

- It is D negative and C positive
- Verifies anti-C and/or anti-G has been absorbed out

Cells 10 and 11 are nonreactive

- They are D positive and C negative
- This rules out anti-D

Case Study #2

Eluate from the R₂R₂ adsorption

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	PEG IgG
1	0	0	+	+	+	0	+	+	w	0	+	+	0	+	0	0	+	+	
2	0	0	0	+	+	+	0	+	+	0	+	+	0	0	+	+	0	+	
3	0	0	+	+	+	0	+	+	+	+	0	+	+	+	+	+	0	0	
4	0	0	0	+	+	+	+	0	+	0	+	0	+	0	+	0	+	+	o/o ^v
5	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	0	+	
6	+	0	+	+	0	0	+	+	+	+	+	+	+	+	+	0	+	+	
7	+	0	+	+	+	+	0	0	+	+	0	+	+	+	+	0	0	+	
8	0	+	0	+	+	+	+	+	w	+	+	+	+	+	0	0	0	0	w+
9	0	+	0	+	+	+	+	+	0	0	+	+	0	+	+	+	0	0	w+
10	+	0	+	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	
11	+	0	+	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+	
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+	o/o ^v

Case Study #2

Eluate from the R2R2 adsorption

	D	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	P ₁	IgG
1	0	0	+	+	+	0	+	+	w	0	+	+	0	+	0	0	+	+	
2	0	0	0	+	+	+	0	+	+	0	+	+	0	0	+	+	0	+	
3	0	0	+	+	+	0	+	+	+	+	0	+	+	+	+	+	0	0	
4	0	0	0	+	+	+	+	0	+	0	+	0	+	0	+	0	+	+	0/0'
5	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	0	+	
6	+	0	+	+	0	0	+	+	+	+	+	+	+	+	+	0	+	+	
7	+	0	+	+	+	0	0	+	+	0	+	+	+	+	+	0	0	+	
8	0	+	0	+	+	+	+	+	w	+	+	+	+	+	0	0	0	0	w+
9	0	+	0	+	+	+	+	+	0	0	+	+	0	+	+	+	0	0	w+
10	+	0	+	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	
11	+	0	+	+	0	+	+	+	+	0	0	+	0	+	+	+	0	+	
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+	0/0'

Cells 4 and 12 are nonreactive

- They are D and C negative

Cells 8 and 9 are reactive

- They are D negative and C positive
- This proves anti-G

Case Study #2

Summary

- Initial testing indicates anti-D, anti-C, and/or anti-G is present in the patient plasma
- The R₂R₂ adsorbed plasma proves the anti-C
- The r'r adsorbed plasma rules out the anti-D
- The eluate from the R₂R₂ adsorption proves the anti-G

Conclusion

The patient has:

Anti-C

Anti-G

Additional alloantibodies were excluded

The previously identified anti-D was likely anti-G reacting with D positive red cells

Administration of Rh Immune Globulin?

- Yes
- Why?
 - Patient has not developed anti-D

Key Takeaways

- IF Rhlg has already been administered, it is NOT necessary to perform G determination
- The purpose of anti-G determination is to assess if Rhlg should be given
- Titers will NOT isolate anti-G
- Anti-G can only be isolated in an eluate

