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	+	o	+	+	o	o	+	o	+	+	+	o	+	o	+	o	+	+	o	2+
2	+	o	+	+	o	o	+	+	+	+	o	+	o	+	+	o	+	+	o	2+
3	o	+	o	+	+	o	+	+	+	+	o	+	+	o	+	o	+	+	o	3+
4	o	+	o	+	+	o	+	+	+	o	+	+	o	+	o	o	+	+	o	3+
5	o	o	o	+	+	o	+	+	o	+	+	+	o	+	o	+	o	+	o	o$^\checkmark$
6	o	o	+	+	+	o	+	+	+	+	o	o	+	o	+	o	+	o	o	o$^\checkmark$
7	o	o	o	+	+	+	o	o	+	o	+	+	+	+	+	o	+	+	o	o$^\checkmark$
Patient																			o	o$^\checkmark$

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Case Study #1
Initial Antibody Testing

	D	C	E	c	e	K	k	Fyᵃ	Fyᵇ	Jkᵃ	Jkᵇ	M	N	S	s	Leᵃ	Leᵇ	P₁	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	0ᵛ
6	0	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	+	0	0	0ᵛ
7	0	0	0	+	+	+	0	0	+	0	+	+	+	+	+	+	+	0	0ᵛ
Patient																			0	0ᵛ

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

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Knowledge Check

Have we proven anti-D and anti-C?

- No

What else could this reactivity indicate?
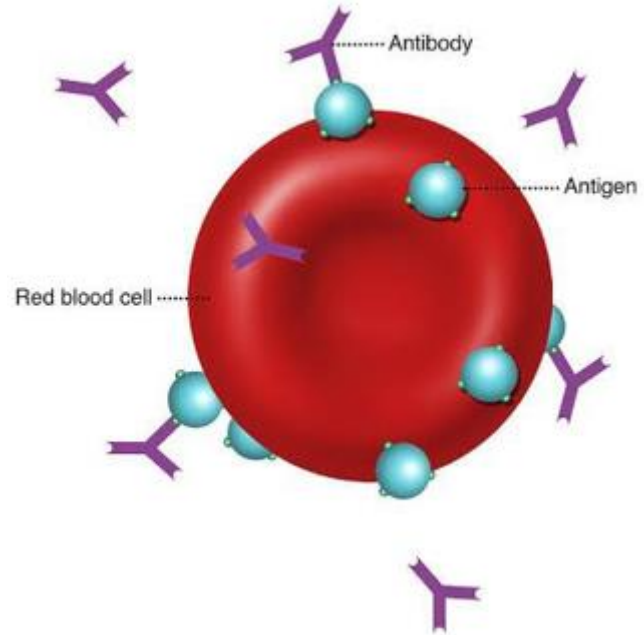
- Anti-G

How does anti-G present?

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

Adsorptions

R_2R_2 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

Antibody

Antigen

Red blood cell

Case Study #1
R_2R_2 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	+	O	+	+	O	O	+	O	+	+	+	O	+	O	+	O	+	+	$O^{\checkmark}$
2	+	O	+	+	O	O	+	+	+	+	O	+	O	+	+	O	+	+	
3	O	+	O	+	+	O	+	+	+	+	O	+	+	O	+	O	+	+	w+
4	O	+	O	+	+	O	+	+	+	O	+	+	O	+	O	O	+	+	w+
5	O	O	O	+	+	O	+	+	O	+	+	+	O	+	O	+	O	+	$O^{\checkmark}$
6	O	O	+	+	+	O	+	+	+	+	O	O	+	O	+	O	+	O	
7	O	O	O	+	+	+	O	O	+	O	+	+	+	+	+	O	+	+	
Patient																			

R_2R_2 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
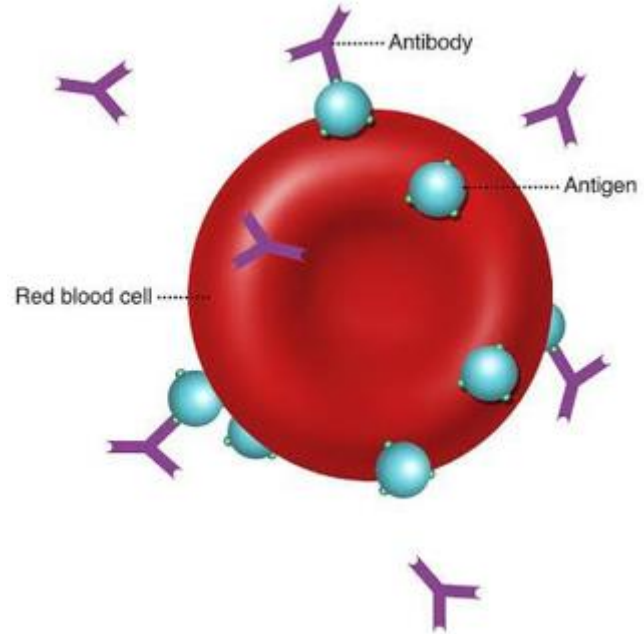
- They are D negative and C positive
- This proves anti-C

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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	+	O	+	+	O	O	+	O	+	+	+	O	+	O	+	O	+	+	w+
2	+	O	+	+	O	O	+	+	+	+	O	+	O	+	+	O	+	+	w+
3	O	+	O	+	+	O	+	+	+	+	O	+	+	O	+	O	+	+	O$^\checkmark$
4	O	+	O	+	+	O	+	+	+	O	+	+	O	+	O	O	+	+	
5	O	O	O	+	+	O	+	+	O	+	+	+	O	+	O	+	O	+	O$^\checkmark$
6	O	O	+	+	+	O	+	+	+	+	O	O	+	O	+	O	+	O	
7	O	O	O	+	+	+	O	O	+	O	+	+	+	+	+	O	+	+	
Patient																			

r'r adsorbed plasma

	D	C	E	c	e	K	k	Fyᵃ	Fyᵇ	Jkᵃ	Jkᵇ	M	N	S	s	Leᵃ	Leᵇ	P₁	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	+	+	0ʸ
4	0	+	0	+	+	0	+	+	+	0	+	+	0	+	0	0	+	+	
5	0	0	0	+	+	0	+	+	0	+	+	+	0	+	0	+	0	+	0ʸ
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
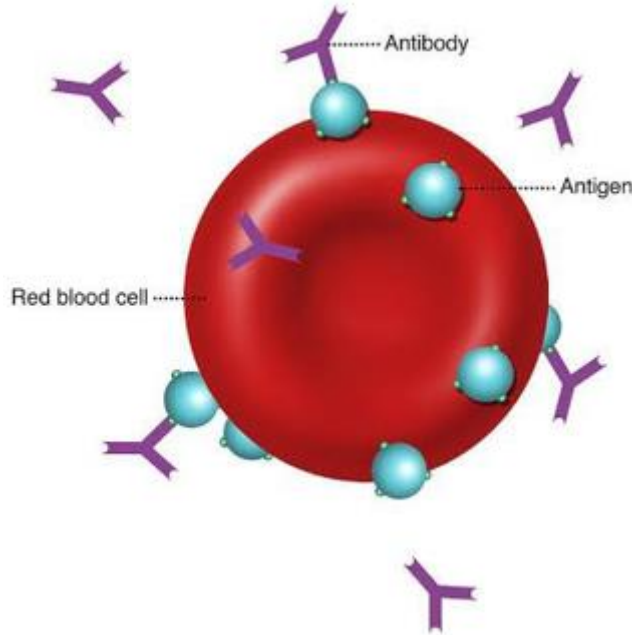
Red blood cell · · · · ·
Antibody
Antigen

R_2R_2 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

Eluate from the R_2R_2 adsorption

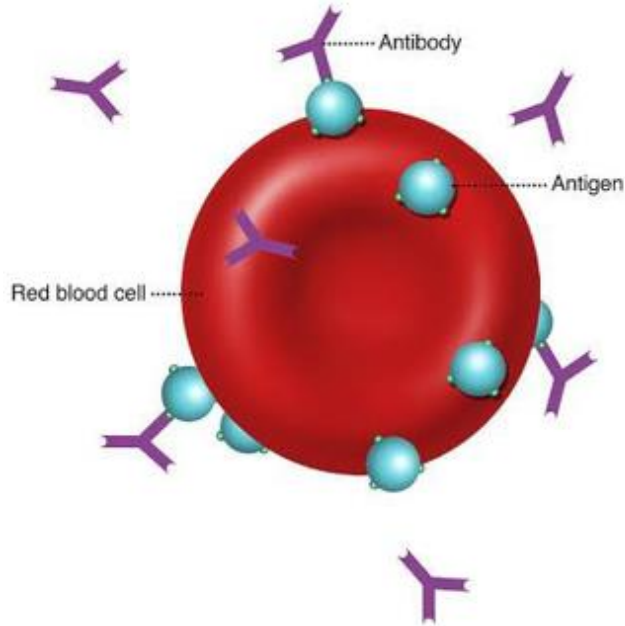|	D	C	E	c	e	K	k	Fy^a	Fy^b	Jk^a	Jk^b	M	N	S	s	Le^a	Le^b	P$_1$	PEG IgG
1	+	O	+	+	O	O	+	O	+	+	+	O	+	O	+	O	+	+	1+
2	+	O	+	+	O	O	+	+	+	+	O	+	O	+	+	O	+	+	
3	O	+	O	+	+	O	+	+	+	+	O	+	+	O	+	O	+	+	1+
4	O	+	O	+	+	O	+	+	+	O	+	+	O	+	O	O	+	+	w+
5	O	O	O	+	+	O	+	+	O	+	+	+	O	+	O	+	O	+	O$^\checkmark$
6	O	O	+	+	+	O	+	+	+	+	O	O	+	O	+	O	+	O	O$^\checkmark$
7	O	O	O	+	+	+	O	O	+	O	+	+	+	+	+	+	O	+	
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	+	+	
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

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Summary

- Initial testing indicates anti-D, anti-C, and/or anti-G is present in the patient plasma

- The R_2R_2 adsorbed plasma proves the anti-C

- The r'r adsorbed plasma proves the anti-D

- The eluate from the R_2R_2 adsorption proves the anti-G

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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

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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 RhIg given
- Transfusion History: >3 months

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$^\checkmark$
2	0	0	0	+	+	+	0	+	+	0	+	+	0	0	+	+	0	+	0	0$^\checkmark$
3	0	0	+	+	+	0	+	+	+	+	0	+	+	+	+	+	0	0	0	0$^\checkmark$
4	0	0	0	+	+	+	+	0	+	0	+	0	+	0	+	0	+	+	0	0$^\checkmark$
5	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	0	+	0	0$^\checkmark$
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$^\checkmark$

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Case Study #2
Initial Antibody Testing

	D	C	E	e	e	K	k	Fyª	Fyᵇ	Jkª	Jkᵇ	M	N	S	s	Leª	Leᵇ	P₁	IS	Peg IgG
1	0	0	+	+	+	0	+	+	w	0	+	+	0	+	0	0	+	+	0	0ᵛ
2	0	0	0	+	+	+	0	+	+	0	+	+	0	0	+	+	0	+	0	0ᵛ
3	0	0	+	+	+	0	+	+	+	+	0	+	+	+	+	+	0	0	0	0ᵛ
4	0	0	0	+	+	+	+	0	+	0	+	0	+	0	+	0	+	+	0	0ᵛ
5	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	0	+	0	0ᵛ
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	0ᵛ

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

Knowledge Check

Next Steps:

- R_2R_2 adsorption

- r'r adsorption

- Eluation from at least one of the adsorbing cells

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Case Study #2
R$_2$R$_2$ 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$^\checkmark$
11	+	0	+	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+	0$^\checkmark$
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+	

R_2R_2 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	+	+	+	

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$^{\checkmark}$
9	0	+	0	+	+	+	+	+	0	0	+	+	0	+	+	+	0	0	0$^{\checkmark}$
10	+	0	+	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	0$^{\checkmark}$
11	+	0	+	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+	0$^{\checkmark}$
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+	

r'r adsorbed plasma

	D	C	E	c	e	K	k	Fyᵃ	Fyᵇ	Jkᵃ	Jkᵇ	M	N	S	s	Leᵃ	Leᵇ	P₁	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	0ʸ
9	0	+	0	+	+	+	+	+	0	0	+	0	+	0	+	+	0	0	0ʸ
10	+	0	+	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	0ʸ
11	+	0	+	+	0	+	+	0	+	+	0	0	+	0	+	+	0	+	0ʸ
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

Eluate from the R_2R_2 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	O	O	+	+	+	O	+	+	w	O	+	+	O	+	O	O	+	+	
2	O	O	O	+	+	+	O	+	+	O	+	+	O	O	+	+	O	+	
3	O	O	+	+	+	O	+	+	+	+	O	+	+	+	+	+	O	O	
4	O	O	O	+	+	+	+	O	+	O	+	O	+	O	+	O	+	+	o/o^v
5	O	O	O	+	+	O	+	+	O	+	O	O	+	O	+	+	O	+	
6	+	O	+	+	O	O	+	+	+	+	+	+	+	+	+	O	+	+	
7	+	O	+	+	+	+	O	O	+	+	O	+	+	+	+	O	O	+	
8	O	+	O	+	+	+	+	+	w	+	+	+	+	+	O	O	O	O	w+
9	O	+	O	+	+	+	+	+	O	O	+	+	O	+	+	+	O	O	w+
10	+	O	+	+	O	+	+	+	+	+	+	+	+	O	+	O	+	O	
11	+	O	+	+	O	+	+	O	+	+	O	O	+	O	+	+	O	+	
12	O	O	O	+	+	O	+	+	+	+	O	+	O	+	O	+	+	+	o/o^v

Case Study #2
Eluate from the R2R2 adsorption

	D	C	E	c	e	K	k	Fyᵃ	Fyᵇ	Jkᵃ	Jkᵇ	M	N	S	s	Leᵃ	Leᵇ	P₁	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	+	+	0/0ᵛ
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	w+
9	0	+	0	+	+	+	+	+	0	0	+	+	0	+	+	+	0	0	w+
10	+	0	+	0	+	+	+	+	+	+	+	+	0	+	0	+	0	0	
11	+	0	+	+	0	+	0	+	0	+	+	0	0	+	0	+	+	0	+
12	0	0	0	+	+	0	+	+	+	+	0	+	0	+	0	+	+	+	0/0ᵛ

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

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Summary

- Initial testing indicates anti-D, anti-C, and/or anti-G is present in the patient plasma

- The R_2R_2 adsorbed plasma proves the anti-C

- The r'r adsorbed plasma rules out the anti-D

- The eluate from the R_2R_2 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 RhIg has already been administered, it is NOT necessary to perform G determination

- The purpose of anti-G determination is to assess if RhIg should be given

- Titers will NOT isolate anti-G

- Anti-G can only be isolated in an eluate

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THANK YOU!

Questions?