

### Initial Data:

GH, a 23-year-old female, is scheduled for orthopedic surgery on her hip. She was born with congenital hip malformations. This will be her third surgical procedure to repair the joint; her last surgery was 1 year ago. Each of the two prior surgeries required transfusion of 2 units of Red Blood Cells (RBCs). Her physician has ordered 2 units to be available for this procedure.

### ABO and RH Typing:

Forward (Cell) Typing			Reverse (Serum) Typing	
Anti-A	Anti-B	Anti-D	A <sub>1</sub> Cells	B Cells
0	0	4+	4+	4+

## Case Study 14

### Antibody Detection Test (Screen):

	RH						MNS				LU		P	Lewis		Kell		Duffy		Kidd		Gel
	D	C	E	c	e	f	M	N	S	s	Lu <sup>a</sup>	Lu <sup>b</sup>	P <sub>1</sub>	Le <sup>a</sup>	Le <sup>b</sup>	K	k	Fy <sup>a</sup>	Fy <sup>b</sup>	JK <sup>a</sup>	JK <sup>b</sup>	IAT
<b>1</b>	+	+	0	0	+	0	+	+	0	+	0	+	+	+	0	+	+	+	0	0	+	<b>3+</b>
<b>2</b>	+	0	+	+	0	0	+	0	+	0	0	+	+	0	+	0	+	0	+	+	0	<b>0</b>

1. What is GH's ABO type?

- A. Group O.
- B. Group A.
- C. Group B.
- D. Group AB.

### Feedback:

Response A is correct. Given her initial serologic data, GH's ABO typing can be interpreted as group O. In the forward typing, her red cells were nonreactive with both anti-A and anti-B, indicating the lack of both A and B antigens on the red cell surface. Strong plasma reactivity was seen with both A<sub>1</sub> and B cells. The presence of anti-A and anti-B is consistent with the forward type and an interpretation of group O.

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### 2. What is GH's RH type?

- A. D+.
- B. D-.
- C. Weak D+.
- D. Cannot determine with the data provided.