

ABO discrepancy #2

Case study by Jim Perkins, M.D. (© 2009)



History: This patient was a 79 year old man with a chest x-ray and sputum cytology suggestive of lung cancer admitted for cervical mediastinoscopy and video bronchoscopy.

ABO and Rh Typing

<A	<B	A1 cells	B cells	6% alb	<D	<D/AHG	CCC	Interp
4+	4+	2+	0	0	4+			?

Antibody Screen

	Gel
SCI	0
SCII	0

Direct Antiglobulin Test (tube method)

	Poly	IgG	<C3
AHG	0		
CCC	2+		

Additional testing

Cell type	Lot #	IS	30°, 37°	AHG	CC
A ₁	25036	3+	0	0	2+
A ₁	0605348	3+	0	0	2+
A ₁	3430618 (donor)	3+	0	0	2+
A ₂	0410245	0	0	0	2+
A ₂	0612376	0	0	0	2+
A ₂	0508296	0	0	0	2+

Antigen Phenotype

	Rh system				Kell				Duffy		Kidd		Lewis		MNSs				PI	I	H	A ₁		
	C	E	c	e	K	k	Kp ^a	Js ^a	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Le ^a	Le ^b	S	s	M	N						
Patient																							0	
Pos control																								2+
Neg Control																								0

Questions:

1. What is the forward ABO type? If that is correct, what anomaly must one explain?
2. What is the reverse ABO type? If that is correct, what anomaly must one explain?
3. Which of these two possibilities did the technologist investigate? What information in the history and type-and-screen results prompted them to do so? What is the cause of this ABO discrepancy?
4. Compare the approach taken to this problem to the one in the first problem.
5. Why was the 6% albumin control run in the ABO/Rh typing?