

## **ABID CASE #4, ANSWERS**

Case study by Jim Perkins, M.D. (© 2006)



1. What is the probable identity of this antibody?

*Alloanti-c*

2. Is any further workup needed to prove it? If additional cells must be tested, select them from the following panel.

*There are 3 c-positive cells that react and 3 c-negative cells that fail to react. However, standard criteria require that anti-E and anti-N be ruled out. A negative reaction with cell #5 (C+c-E+ e+-) will rule out anti-E on a single dose cell, the best that can usually be hoped for when there is anti-c present (a rare R<sup>Z</sup>R<sup>Z</sup> cell would be needed to rule anti-E out on a double dose cell). A negative reaction with cells #2 or #4 would rule out anti-N. The patient also needs to be phenotyped for c.*

3. What is the probable source of the immunizing stimulus in this case?

*Her surgical history suggests that she has been transfused.*

4. Does this antibody cause hemolytic transfusion reactions?     *Yes, severe.*

5. Does this antibody cause hemolytic disease of the fetus and newborn?

*It causes HDFN which can be similar in severity to that of anti-D.*

6. How would we select compatible blood in this case? What percentage of donors are expected to be compatible with this recipient?

*We would select group A or O, Rh positive RBCs, c-negative, and which were compatible by an antiglobulin crossmatch. Twenty per cent (20%) of European-American donors, but over twice that number of South Asian donors, and less than 5% of African-American donors are c negative.*