Carter BloodCare

To: Transfusion Services Managers
From: Hospital Relations
Date: May 12, 2023
Re: Daratumumab and Changes in R&T Testing

Background

In 2015, daratumumab became the first anti-CD38 monoclonal antibody to be FDA approved for the use in relapsed or refractory multiple myeloma patients. In late 2015, Carter BloodCare received initial patient samples where daratumumab interference with blood compatibility testing was observed. Since then, we have recommended performing red cell genotyping and/or employing serological methods to overcome the antibody interference.

Impact to Clients

- Review the options that the reference laboratory can employ to resolve antibody cases

Method	Mechanism	Advantages	Disadvantages
RBC Genotype	Antigen profile of patient RBCs	Only has to be performed once; reliable for future use	Turn around time; can be expensive; Extended match required
DTT	Denatures CD 38 antigen on reagent RBCs	Cheap, easy to apply, well-validated and reliable	Denatures K antigen; must give K negative RBCs
Trypsin	Cleaves CD38 on reagent RBCs	Cheap; easy to apply; does not degrade Kell antigens	Denatures M and N and other less common antigens

- The reference laboratory may employ multiple methods to resolve antibody cases.
- If a specific method is required by your facility for CD38 patient workups, please indicate on the Reference & Transfusion Request form. **If no selection is made, the reference laboratory will default to performing DTT treatment for resolution. Resolution via molecular testing will be available upon request.**

Client Action Required

- Update policies as applicable
- Notify facility Medical Director of the available options for testing.

Questions and Additional Information:

Please contact hospitalrelations@carterbloodcare.org with any concerns.