To Ensure Timely Transfusions

REMEMBER

If a patient who received daratumumab requires a transfusion:

- Type and screen patients prior to starting daratumumab. Inform the blood bank that your patient has been treated with daratumumab which interferes with indirect antiglobulin tests
- Ensure that your patient's blood sample is identified as containing daratumumab
- Double-check standing orders for transfusions to determine if your patient received daratumumab within the last year
- Ensure patients are given a Patient ID Card for daratumumab and provide your patient's pre-daratumumab compatibility profile, if available, to the blood bank
- Ask your patient to tell their other HCPs that they have received daratumumab, particularly before a transfusion

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References

1. de Weers M, Tai YT, van der Veer MS, et al. Daratumumab, a novel therapeutic human CD38 monoclonal antibody, induces killing of multiple myeloma and other hematological tumors. *J Immunol*. 2011;186(3):1840-1848.
2. Chapuy CI, Nicholson RT, Aguad MD, et al. Resolving the daratumumab interference with blood compatibility testing. *Transfusion*. 2015;55(6Pt 2):1545-1554.
3. Alberici I, Demir O, Turker-Sener L, Yalcintepe L, Nurten R, Bermek E. Erythrocyte CD38 as a prognostic marker in cancer. *Hematology*. 2007;12(5):409-414.
4. Mehta K, Shahid U, Malavasi F. Human CD38, a cell-surface protein with multiple functions. *FASEB J*. 1996;10(12):1408-1417.
5. Zocchi E, Franco L, Guida L, et al. A single protein immunologically identified as CD38 displays NAD+ glycohydrolase, ADP-ribosyl cyclase and cyclic ADP-ribose hydrolase activities at the outer surface of human erythrocytes. *Biochem Biophys Res Commun*. 1993;196(3):1459-1465.
6. Oostendorp M, Lammerts van Bueren JJ, Doshi P, et al. When blood transfusion medicine becomes complicated due to interference by monoclonal antibody therapy. *Transfusion*. 2015;55(6 Pt 2):1555-1562.
7. Hannon JL, Clarke G. Transfusion management of patients receiving daratumumab therapy for advanced plasma cell myeloma. *Transfusion*. 2015;55(11):2770.

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Healthcare Professional Guide for Understanding daratumumab Interference with Blood Compatibility Testing

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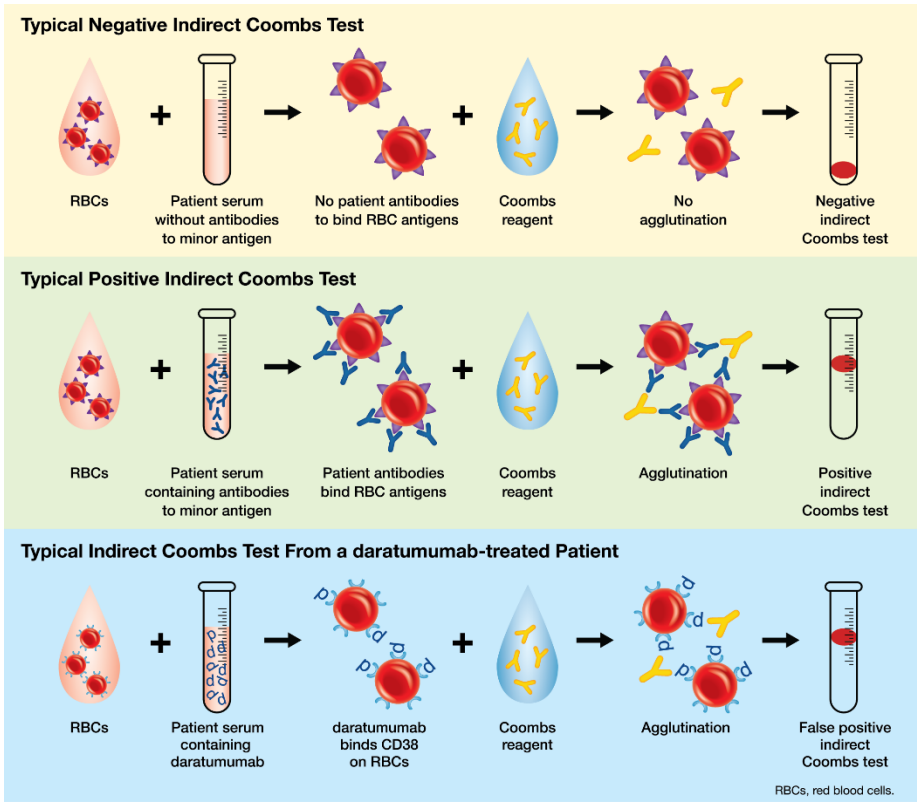
daratumumab Results in a False Positive Indirect Coombs Test



- daratumumab is a human monoclonal antibody for the treatment of multiple myeloma[1]
- daratumumab binds to CD38,[2] a protein that is expressed at low levels on red blood cells (RBCs)[3-5]
- daratumumab binding to RBCs may mask the detection of antibodies to minor antigens in the patient's serum. This interferes with blood bank compatibility tests, including the antibody screening and crossmatching[2] (both indirect Coombs tests) that are part of a routine pretransfusion work up

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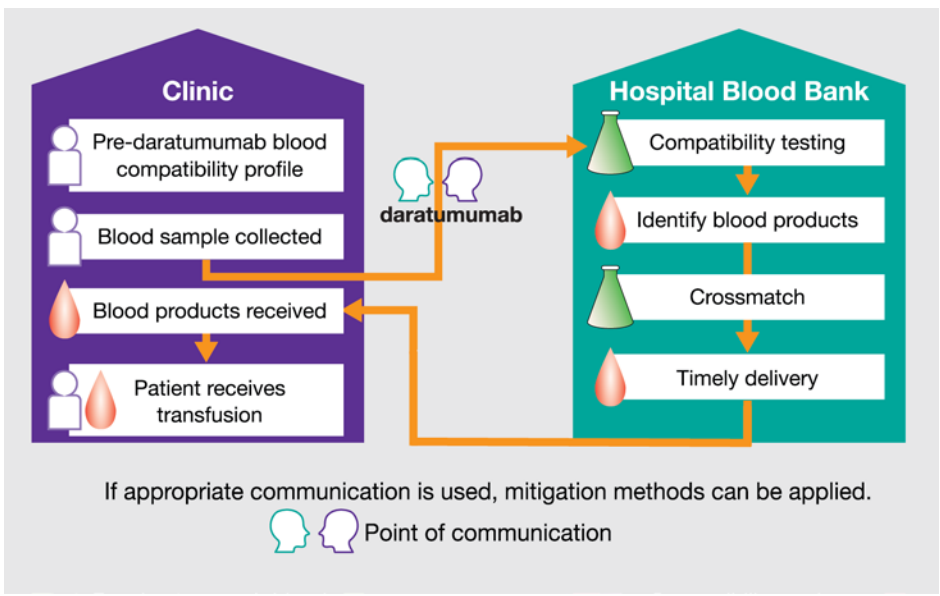
Help Prevent Blood Transfusion Delays



- Blood compatibility testing can still be performed on daratumumab-treated patients
- Blood products for transfusion can be identified for daratumumab-treated patients using protocols available in the literature[2,6], or locally validated methods. Genotyping may also be considered
- **To ensure that your patient receives a timely transfusion, type and screen patients prior to starting daratumumab and inform the blood bank that they will receive a sample from a daratumumab-treated patient. Phenotyping may be considered prior to starting daratumumab treatment as per local practice.**

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daratumumab Interference Is Clinically Manageable

- To date, no clinically significant hemolysis has been observed in patients receiving daratumumab, and no transfusion reactions have occurred in patients requiring RBC and whole blood transfusions (data on file)
- daratumumab does not interfere with identification of ABO/RhD antigens[2]
- If an emergency transfusion is required, non-crossmatched, ABO/RhD-compatible RBCs can be given, per local blood bank practices[6]
- Once treatment with daratumumab is discontinued, pan-agglutination may persist; the duration of this effect varies from patient to patient, but may persist for up to 6 months after the last daratumumab infusion[6]. Therefore, patients should carry their Patient ID Card for 6 months after the treatment has ended
- Patients should be advised to consult the Patient Information Leaflet (PIL) for further information

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Contact information:

If you have any additional questions, please contact Janssen Medical Information

RA-MedInfoEmMarkets@ITS.JNJ.com

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Fax: +966 11 2057662
Online: http://ade.sfda.gov.sa

For full prescribing information, please refer to the data sheet or contact Johnson & Johnson Middle East FZ LLC, Saudi Branch at Mawheba Building,3rd Floor, Al-Olaya Road, AlWaroud District P.OBox:55031 Riyadh:11533 Kingdom of Saudi Arabia.

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Email: GCC-PV2@its.jnj.com

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فاكس: 00966112057662
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للحصول على معلومات عن طريقة استخدام الدواء , يرجى الرجوع الى النشرة الداخلية او

التواصل مع فرع جونسون أند جونسون ميدل ايست – السعودية في مركز الموهبة, الطابق

الرياض: الثالث,شارع العليا, حي الورود,المملكة العربية السعودية, الرياض ص.ب 55031

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للإبلاغ عن الأعراض الجانبية و شكاوى عن المنتجات او اي استفسارات طبية, يرجى التواصل بنا

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Daratumumab Interference Is Clinically Manageable

- To date, no clinically significant hemolysis has been observed in patients receiving daratumumab, and no transfusion reactions have occurred in patients requiring transfusions (data on file)
- daratumumab does not interfere with identification of ABO/RhD antigens[1]
- If an emergency transfusion is required, non-crossmatched, ABO/RhD-compatible RBCs can be given, per local blood bank practices[6]
- A patient's compatibility profile, determined prior to their first dose of daratumumab, is recorded on the patient's ID card

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6. Oostendorp M, Lammerts van Bueren JJ, Doshi P, et al. When blood transfusion medicine becomes complicated due to interference by monoclonal

DARATUMUMAB

Guide for Blood Bank for Understanding & Mitigating daratumumab Interference with Blood Compatibility Testing

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daratumumab Interference Mitigation Methods

REMEMBER

daratumumab-treated patients may show pan-reactivity in Indirect Antiglobulin Test (IAT)

daratumumab interference mitigation methods

Treat reagent RBCs with DTT or locally validated methods

OR

Genotype

ID CARD

If available, refer to the patient's ID card for their blood type and antibody screen results conducted prior to initiation of daratumumab treatment.

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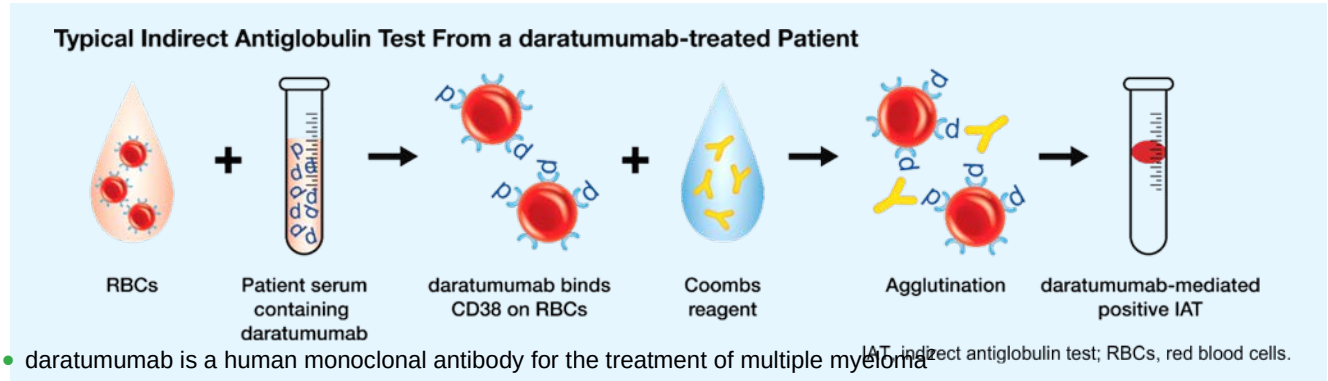
Daratumumab Results in a Positive Indirect Antiglobulin Test which may persist for up to 6 months after the last product's infusion



IAT, indirect antiglobulin test; RBCs, red blood cells.

- daratumumab is a human monoclonal antibody for the treatment of multiple myeloma[2]
- daratumumab binds to CD38,[1] a protein that is expressed at low levels on red blood cells (RBCs)[3-5]
- daratumumab binding to RBCs may mask the detection of antibodies to minor antigens. This interferes with compatibility tests, including the antibody screening and crossmatching[1]

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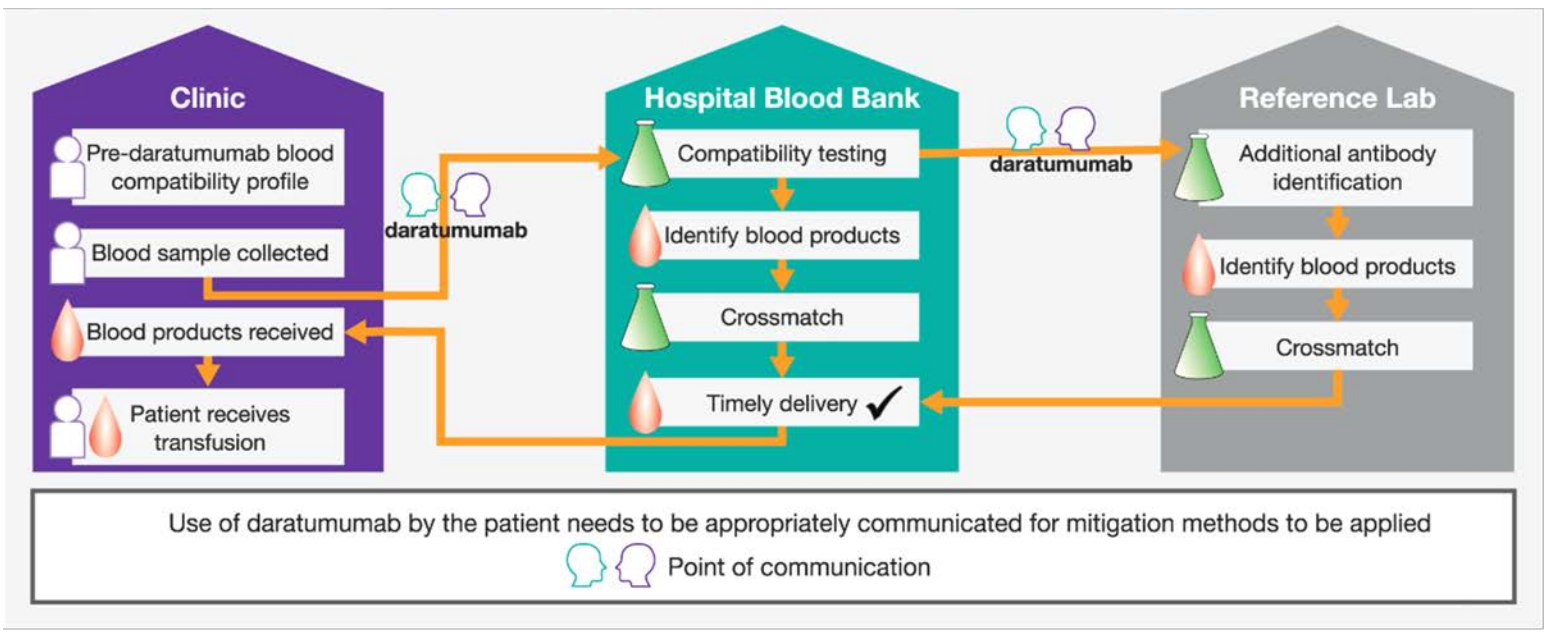
Help Prevent Delays by Applying Mitigation Methods



- If steps are not taken to mitigate daratumumab interference, delays in the release of blood products for transfusion may occur
- Blood products for transfusion can be identified for daratumumab-treated patients using protocols available in the literature[1,6] or by using genotyping[7]
- Mitigation methods should be used until pan-agglutination is no longer observed

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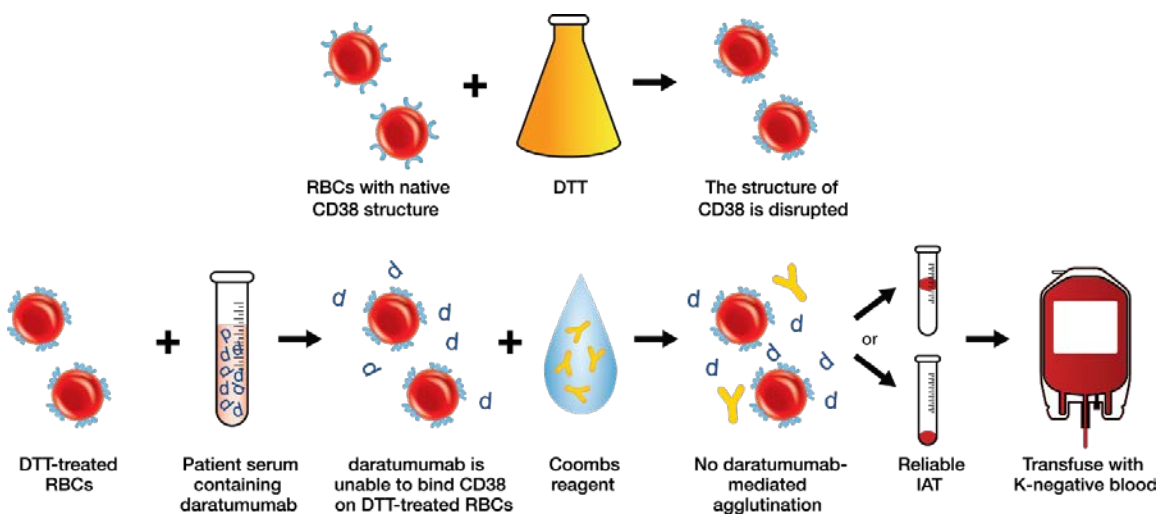
Treat Reagent RBCs With DTT or Locally Validated Method



DDT, dithiothreitol; IAT, indirect antiglobulin test; RBC, red blood cells.

- Treat reagent RBCs with dithiothreitol (DTT) to disrupt daratumumab binding, thus allowing antibody screening or crossmatching to be performed; the protocol can be found in Chapuy et al[1]. Alternative locally validated methods can also be used
- Blood products for transfusion were identified for daratumumab-treated patients, after using DTT-treated reagent RBCs for antibody screening[1]
- Since the Kell blood group system is also sensitive to DTT treatment,[8] K-negative units should be supplied after ruling out or identifying alloantibodies using DTT-treated RBCs

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