# Understanding daratumumab Interference with Blood Compatibility Testing

DARZALEX®
daratumumab
concentrate for solution for infusion

janssen | PHARMACEUTICAL COMPANIES of Johnson & Johnson

## 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. Albeniz 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.



Date of preparation: February 2017
PHMT/DAR/0217/0001


DARZALEX®
daratumumab
concentrate for solution for infusion

janssen | PHARMACEUTICAL COMPANIES of Johnson & Johnson

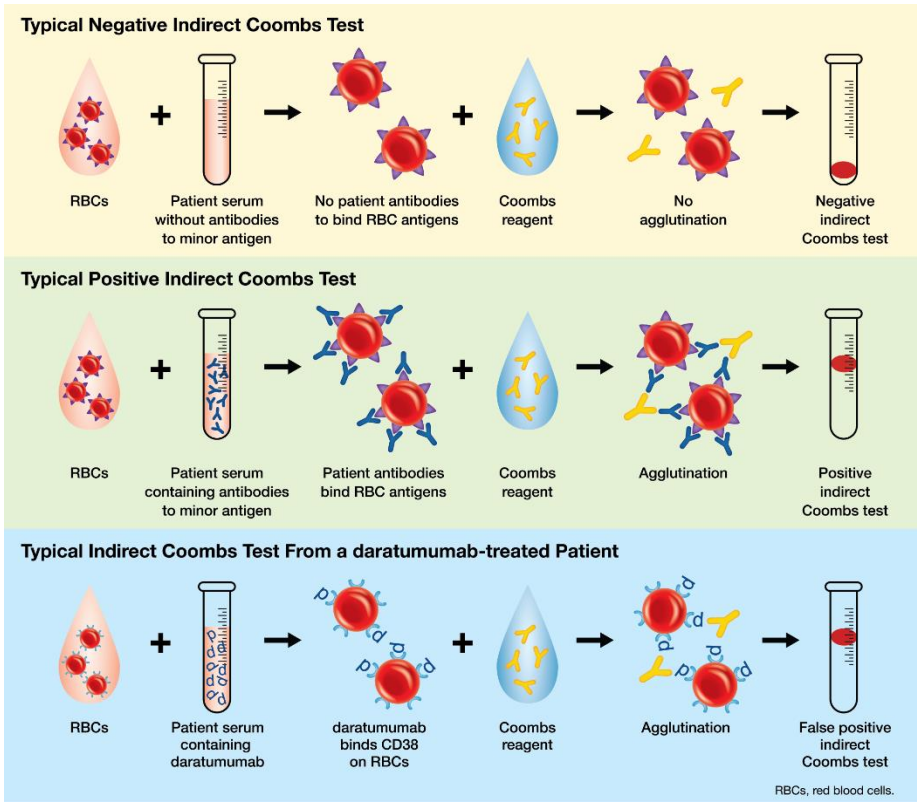
# To Ensure Timely Transfusions

## REMEMBER

*If a patient who received daratumumab requires a transfusion:*

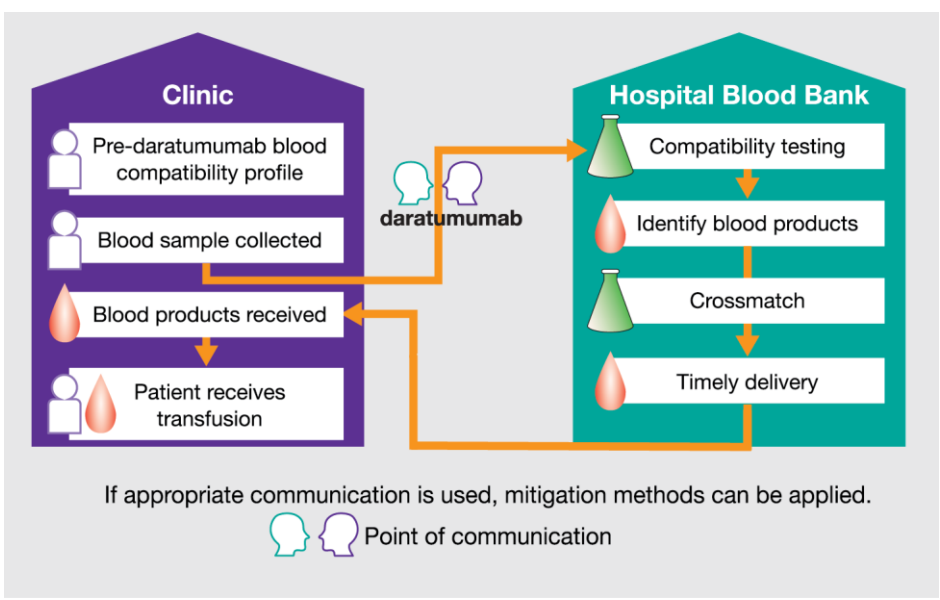
- Type and screen patients prior to starting daratumumab. Inform the blood bank that your patient has been treated with daratumumab which interferes with indirect antiglobulin tests
- Ensure that your patient's blood sample is identified as containing daratumumab
- Double-check standing orders for transfusions 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

# 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

# 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.

# 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

# Additional Resources

For additional information, please refer to the Summary of Product Characteristics (SmPC) or contact Janssen Medical Information by using one of the following methods:

**Phone**: 00356 2397 6000

**Email:** pv@ammangion.com

**Search:** www.ammangion.com.mt

To report SUSPECTED ADVERSE REACTIONS, contact Janssen on any of the following:

Phone (24/7): 00356 23976333

Email: pv@ammangion.com

Address: AM Mangion Ltd, Mangion Building, N/S Off Valletta Road, Luqa, LQA 6000, MALTA

Reporting of side effects:
If you get any side effects, talk to your doctor or nurse. You can also report side effects directly on www.medicinesauthority.gov.mt/adrportal.
By reporting side effects you can help provide more information on the safety of this medicine.