



# LAB ALERT

## THE MEDICAL FOUNDATION

### PLEASE DIRECT THIS NOTICE TO PHARMACY, HEMATOLOGY AND ONCOLOGY DEPARTMENTS

**Nature of the Problem:** Darzalex (daratumumab) is a drug for treatment of multiple myeloma. It is a biologic agent, a human monoclonal antibody of IgG1k class that specifically targets human CD38, which is highly expressed on the malignant plasma cells of multiple myeloma (MM). In Phase I and II clinical trials Darzalex showed significant anti-MM activity as monotherapy in heavily treated patients with relapsed or refractory disease. However, it was also noted that routine blood bank tests designed to detect alloantibodies directed at red blood cell (RBC) antigens showed a pan-reactive false positive result as CD38 is also present on the surface of normal RBCs. Darzalex binding to RBCs will interfere with blood bank RBC compatibility tests such as a Type and Screen and some Crossmatch procedures. This reactivity significantly complicates the ability of the blood bank to identify and characterize RBC alloantibodies, which is necessary for the provision of compatible blood for transfusion.

**Recommendations:** Blood Banks in The Medical Foundation system are aware of this issue, and we and our reference laboratory networks have procedures in place to work around this problem. However, in order to help us provide the safest transfusion for your patients who are taking this drug, the following steps are recommended:

- **Order a Type and Screen (SBMF number 22354) PRIOR to starting Darzalex therapy** so the blood bank has a baseline serologic result to compare with reactivity seen during treatment
- Especially if your patient has known blood group alloantibodies or other historic serologic compatibility problems, **request a full RBC antigen phenotype (Red Blood Cell Antigen Phenotype, Molecular Analysis, SBF number 36174) prior to starting therapy** as this will facilitate provision of antigen matched RBC units in a timely fashion
- **ALWAYS notify Blood Bank Staff who will perform compatibility testing when you request transfusion of RBCs and your patient is currently taking Darzalex or has taken Darzalex within the last 6 months**

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