



**Stem Cell Transplant Patients
Connect Care Blood Groups and Transfusion Requirements**

Applicability

This document applies to AHS, Covenant Health, and all other health care professionals involved in the transfusion of blood components and products in Alberta.

Background

Allogeneic transplant patients who have received a Cellular Therapy Product (CTP) such as a stem cell transplant (SCT) often have unique blood group test results and transfusion requirements. Patients whose donor is ABO-identical will have the same ABO compatibility as before their transplant. Patients whose donor has a different ABO blood group may have a mixture of blood types in their circulation (often temporarily), due to the different blood group of the donor(s) or the components with which the patient is being transfused. This affects blood component compatibility.

Interpreting Blood Group Results

Patients who have had an SCT are identified in Connect Care by a blood group that starts with "SCT". The SCT ABO group is interpreted as follows:

- Patient who has had a single stem cell transplant:
SCT + Patient's original ABO group + Donor ABO group
- Patient who has had multiple stem cell transplants:
SCT + Patient's original ABO group + Most recent donor ABO group
OR the patient will be assigned the most appropriate blood group to provide the most compatible blood components.

The Rh displayed for the patient will be Neg if **either** the donor or recipient is Rh negative. Rh will display as Pos if both the donor and recipient are Rh positive.

*Note: Colors on table will not display in Connect Care

	WellSky Transfusion Tag	Patient (Original) ABO Group	SCT Donor ABO Group
ABO Identical SCT	SCTOO	O	O
	SCTAA	A	A
	SCTBB	B	B
	STABAB	AB	AB
ABO Non-Identical SCT	SCTOA	O	A
	SCTOB	O	B
	SCTOAB	O	AB
	SCTAO	A	O
	SCTAB	A	B
	SCTAAB	A	AB
	SCTBO	B	O
	SCTBA	B	A
	SCTBAB	B	AB
	SCTABO	AB	O
	SCTABA	AB	A
	SCTABB	AB	B



Transfusion Requirements

Transfusion Requirements for Stem Cell Transplant patients are available to view in Connect Care and in Netcare under the test "TRANS REQR". TRANS REQR information should be reviewed prior to patient transfusion as part of pretransfusion checks, confirming that the blood component provided is compatible with the patient, per AHS Transfusion of Blood Components and Products Policy

TRANS REQR

Patient has received an allogeneic cellular therapy product on ___(date)_____.

Patient should receive:

Red cells: Group __ Irradiated

Plasma: Group __

Platelets: First choice: Group __ Irradiated platelets

Second Choice: Group _ volume reduced or low titre Irradiated platelets

Patient pretransplant blood group: _

Donor blood group: _

Contact TM laboratory performing blood group typing for current blood group status.

Comment: This report contains guidelines for transfusion support of allogeneic bone marrow transplant patients. These guidelines suggest compatible ABO blood products covering both recipient and donor ABO blood groups.

Note:

If assistance is required with transfusion decisions, please contact Alberta Precision Laboratories, Transfusion Medicine. If patient develops HLA antibodies, please contact Alberta Precision Laboratories, Transfusion Medicine.

Contact Information

Transfusion.SafetyTeam@albertaprecisionlabs.ca

References

fCLS CTL.220 Transfusion Support of Cellular Therapy Recipients Attachment A – Products ABO RH for CTP Transplants

Grossman BJ, Hillyer CD, Westhoff CM, editors. (2014) *AABB Technical Manual* (18th ed) Bethesda, MD: American Association of Blood Banks.