



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 | Component Compatibility | | |
|------------------------------|-------------------------|------------------------------|---------------------|-------------------------|--------------|--|
| | | | | Red Blood Cells | Plasma | Platelets |
| ABO Identical SCT | SCTOO | O | O | O | O, A, B, AB* | Compatible platelets will be determined and provided by TM |
| | SCTAA | A | A | A, O | A, AB* | |
| | SCTBB | B | B | B, O | B, AB* | |
| | STABAB | AB | AB | AB*, A, B, O | AB* | |
| ABO Non-Identical SCT | SCTOA | O | A | O | A, AB* | |
| | SCTOB | O | B | O | B, AB* | |
| | SCTOAB | O | AB | O | AB* | |
| | SCTAO | A | O | O | A, AB* | |
| | SCTAB | A | B | O | AB* | |
| | SCTAAB | A | AB | A, O | AB* | |
| | SCTBO | B | O | O | B, AB* | |
| | SCTBA | B | A | O | AB* | |
| | SCTBAB | B | AB | B, O | AB* | |
| | SCTABO | AB | O | O | AB* | |
| | SCTABA | AB | A | A, O | AB* | |
| | SCTABB | AB | B | B, O | AB* | |

* Indicates AB or Low Titre



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.