

Beaumont

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Applicability All Beaumont Hospitals

Disposition of Components From Which an Aliquot has Been Removed - Blood Bank

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

The purpose of this document is to provide the Blood Bank staff with guidelines used for determining whether a component from which an aliquot has been removed may be transfused to another patient.

II. PRINCIPLE:

- A. The needs of both patients are considered:
 - 1. **For the patient who received the first aliquot (original recipient):** the Blood Bank will attempt to minimize the number of donor exposures by keeping the unit available for this patient for as long as possible.
 - 2. **For the patient who may receive the remaining volume of the component (potential recipient):** the Blood Bank will ensure that the remaining component has an adequate remaining volume (RBCs) or an adequate remaining platelet count (platelets).

III. ACRONYMS:

- A. **RBC:** Red Blood Cell
- B. **NI:** Not Indicated
- C. **TX'd:** Transfused
- D. **MD:** Medical Director
- E. **BBIS:** Blood Bank Information System

IV. SCOPE:

This document applies only to components from which an aliquot has been removed.

V. POLICIES:

A. Policy to Limit the Number of Donor Exposures

1. The Blood Bank shall attempt to limit the number of donors to which a patient is exposed. Therefore, if an aliquot of a component is transfused to a patient, the Blood Bank shall attempt to keep the component available for that patient for as long as possible, in the event that additional transfusions are required. The remaining component shall not be released to available inventory unless:
 - a. The recipient has expired, or
 - b. The component's expiration date meets the criteria in the *Expiration Date of the Component* section below.

B. Expiration Date of the Component

1. The remaining component shall not be released to available inventory, even if the original recipient has been discharged, until:
 - a. The day that a platelet expires.
 - b. Five days before a RBC component expires.
2. The component shall not be released to inventory if the original recipient is scheduled for surgery before the component's expiration date.

C. Notification / Approval of the Patient's Nurse Required

1. This policy applies to components from which an aliquot has been removed and transfused. If the original recipient is in-house, then the Blood Bank must notify the patient's nurse or physician to obtain approval in order to release the remainder of the component to inventory so that it may be transfused to another patient. This approval shall be documented in the "Nurse's Approval" column on one of the following forms:
 - a. *Disposition of Platelet Components from which an Aliquot has been Removed*
 - b. *RBC Aliquot Log*
2. If the original recipient has expired, or if an aliquot has been removed but not transfused, then the "Nurse's Approval" shall be documented as not indicated (NI) as follows: "NI /pt. exp." or "NI / not TX'd."

D. Platelet Components from which an Aliquot has been Removed

1. Any apheresis or pooled platelet component from which an aliquot has been removed must have a remaining platelet count of at least 3×10^{11} in order to release the remainder of the component to

inventory or to transfuse to another patient. The remaining platelet count is calculated as follows:

$$\begin{array}{rclclcl} \text{Remaining} & & \text{Original PLT count} & & \text{remaining} & & \text{original} \\ \text{Platelet} & = & \text{(from tag of} & \times & \text{volume} & \div & \text{volume} \\ \text{Count} & & \text{original component)} & & & & \end{array}$$

1. For example:

- a. *original platelet count was 4.1×10^{11} (from tag of original component)*
- b. *original volume (from the face label or computer) was 250 ml.*
- c. *remaining volume is 220 mL; remember that the remaining volume is the weight of the platelet + bag (when weighed on the scale) – the weight of the bag*

$$\begin{array}{l} \text{Remaining} \\ \text{Platelet} \\ \text{Count} \end{array} = 4.1 \times 10^{11} \times 220 \text{ ml} \div 250 \text{ ml} = 3.6 \times 10^{11}$$

1. If the remaining platelet count is less than 3×10^{11} , then the Medical Director (MD) shall be consulted. The MD will determine whether it is acceptable to release the remainder of the component to inventory or to transfuse to another patient.
2. The remaining platelet count calculation and the MD's decision shall be documented on the *Disposition of Platelet Components from which an Aliquot has been Removed* form.
3. It is only necessary to calculate the remaining platelet one time; before the first transfusion to the potential recipient.
4. If the tag with the original platelet count is missing, then for the purposes of calculating the remaining platelet count the original platelet count shall be assumed to be 3×10^{11} .

E. RBC and Plasma Units from which an Aliquot has been Removed

1. Once an aliquot is removed from a RBC unit, the unit shall be documented on the *RBC Aliquot Log*.
2. The remaining volume of the RBC unit must be ≥ 250 mL in order to release the unit to available stock. If the remaining volume is < 250 mL, the MD must be consulted to determine the appropriate status of the unit and this will be documented on the *RBC Aliquot Log*. This policy applies to all RBC units, regardless of whether the anticoagulant is ADSOL or CPDA (CPDA units generally have lower volumes to begin with).
3. Once an aliquot is removed from a plasma unit, the MD must be consulted to determine the appropriate status of the unit.

F. Neonates with Unexpected Antibodies / Expiration of the Remaining Aliquot

1. This policy applies when there are unexpected antibodies in the neonatal or maternal record. Upon

the expiration date of the remaining aliquot (from which the neonate was previously transfused), a new sample may be required for crossmatching a new RBC unit. The technologist may be required to call the caregivers to request a new sample if additional crossmatching is indicated. Refer to Transfusion Medicine policies, [Neonatal Compatibility Testing Guidelines- Blood Bank and Policies for Providing Red Blood Cells to Patients with Unexpected Antibodies](#) to determine whether a new crossmatch is required.

VI. REFERENCES:

1. AABB, *Technical Manual*, current edition.
2. AABB, *Standards for Blood Banks and Transfusion Services*, current edition.

Attachments

[Disposition of Platelet Components from which an Aliquot has been Removed 09092024](#)

[RBC Aliquot Log 09092024](#)

Approval Signatures

Step Description	Approver	Date
	Kristina Davis: Staff Physician	9/30/2024
	Muhammad Arshad: Chief, Pathology	9/27/2024
	Jeremy Powers: Chief, Pathology	9/26/2024
	Ann Marie Blenc: System Med Dir, Hematopath	9/26/2024
	Hassan Kanaan: OUWB Clinical Faculty	9/23/2024
	Ryan Johnson: OUWB Clinical Faculty	9/19/2024
	John Pui: Chief, Pathology	9/19/2024
	Masood Siddiqui: Staff Pathologist	9/19/2024
Policy and Forms Steering Committee (if needed)	Kelly Sartor: Mgr, Division Laboratory	9/18/2024
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Teresa Lovins: Supv, Laboratory [KS]	9/18/2024
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Katherine Persinger: Mgr, Laboratory	9/17/2024
Ashley Beesley: Mgr, Laboratory	9/17/2024
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Suzanne Chahine: Medical Technologist Lead	9/17/2024
Kelly Sartor: Mgr, Division Laboratory	9/16/2024
Kelly Sartor: Mgr, Division Laboratory	9/16/2024

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Disposition of a Platelet from which an Aliquot has been Removed

This log shall be used as described in Transfusion Medicine Policy, *Disposition of Components from which an Aliquot has been Removed*. Any apheresis or pooled platelet from which an aliquot has been removed must have a remaining platelet count of $> 3 \times 10^{11}$ in order to transfuse the platelet to another patient. If the remaining platelet count is less than 3×10^{11} , then the Medical director will determine whether to issue the platelet to another patient.* The remaining platelet count is calculated as follows:

$$\text{Remaining Platelet Count} = \left(\frac{\text{Original PLT count}}{\text{original volume}} \right) \times \left(\frac{\text{remaining volume}}{\text{original volume}} \right) + \text{original volume}$$

Patient's Name (Who platelet was originally set up on)	Patient's MRN	Original Exp. Date of the Platelet	Platelet Donor Unit Number	Original Platelet Count	Original Volume	Remaining Volume	Remaining Platelet Count	Nurse's Notification / Approval to Release	Medical Director's Approval*
Doe, AGirlBaby	12345678	3/10/2020	W120620123456	4.1 x 10 ¹¹	250 ml	220 ml	3.6 x 10 ¹¹	Yes / JS / 3-10-10 RN# 4444	N.A.
Smith, ABoyBaby	87654321	3/10/2020	W120620654321	3.6 x 10 ¹¹	240 ml	180 ml	2.7 x 10 ¹¹	NI / Pt Expired	Yes / JS / 3/10/2010

Note: If the original platelet count is missing, it shall be assumed to be 3×10^{11} for the purposes of calculating the remaining platelet count.

RBC Aliquot Log

Patient's Name & MRN (Patient for whom aliquots are prepared)	Product code	Unit ID	Div #	Exp. Date of Unit	Original Volume	Remaining Volume	Exp. Date of Patient Sample	Nurse or Dr. Notification / Approval	Is baby discharged?	Final Disposition / Notes
Doe, AGirBaby 12345678	RU3	W201313654321	3	12/25/13	365 ml	305 ml	1/5/14	Yes / JS 3-27-10 RN# 4444	N / JS / 3-27-10	Available Inventory

MT Lead Review: _____ Date: _____