# Applicable Laboratory(s)):

North Carolina Baptist Hospital (NCBH)

Lexington Medical Center (LMC)

Davie Medical Center (DMC)

Wilkes Medical Center (WMC)

High Point Medical Center (HPMC)

Westchester

Clemmons

# Procedure Statement

Bone Marrow or Stem Cell Transplantation is a procedure in which bone marrow (BM) or hematopoietic progenitor cells (HPC) are harvested, processed and infused or processed and stored for infusion at a later date. Groups and Types and antibody screens are completed on both the recipient and donor in order to determine the processing that is needed in Bone Marrow Transplant Lab and to determine the Groups/Types of blood products needed to support the transplant recipient.

# Scope

Procedure Owner/Implementer: Julie H. Simmons/Christina Warren

Procedure Prepared by: Julie H. Simmons

Who Performs Procedure: Blood Bank Staff/management

# Definitions

1. Procedure: A process or method for accomplishing a specific task or objective.
2. WFBH Lab System: Wake Forest Baptist Lab System is a health system that includes Wake Forest Baptist Medical Center and all affiliated organizations including Wake Forest University Health Sciences (WFUHS), North Carolina Baptist Hospital (NCBH), Lexington Medical Center (LMC), Davie Medical Center (DMC), Wilkes Medical Center (WMC), High Point Medical Center (HPMC), Lab at Westchester and Lab at Clemmons.
3. BM: Bone Marrow
4. HPC: Hematopoietic progenitor cell
5. BMP: Bone Marrow Protocol
6. NEG: Negative
7. POS: Positive
8. PCW: Patient Caution Window
9. SCC: Soft Computer Consultants, Blood Bank Computer System
10. NMDP: National Marrow Donor Program
11. SCTCT: Stem Cell Transplant Cellular Therapies (Bone Marrow Transplant): a procedure in which BM or HPC are harvested, processed and infused or stored for infusion at a later date.
12. AUTO: Autologous: Patient’s own product is harvested when a patient is in remission, then processed for a later re-infusion.
13. ALLO: Allogeneic: Donors to be given to specific recipients. They are usually processed and infused directly after harvest. Incompatible products require processing to remove red cells and/or plasma. Following engraftment, the recipient will the ABO/Rh of the donor.
14. TSX: Type and Screen: ABO type, Rh type, antibody screen
15. GTX: Group and type: ABO type, Rh type
16. ABOCK: Forward ABO type
17. TBMTD: ABO titer on Donor
18. TBMTR: ABO titer on Recipient
19. TPCLK: Forward ABO type donor
20. XMBM: Crossmatch Bone Marrow

# Procedure

1. **Ordering and Resulting Stem Cell Transplant Testing for Blood Bank**

Chemical Risk Assessment: Low

Biological Risk Assessment: Low

Protective Equipment: Lab coat/Gloves

Supplies: NA

Reagents: NA

Equipment: NA

Specimen Requirements: NA

| **STEPS** | **INSTRUCTIONS** | **CHANGE/**  **APPROVAL** |
| --- | --- | --- |
| **1.0** | **Ordering testing on Autologous Samples in Order Entry.**   * 1. EDTA specimen (labeled with both donor and recipient information) will be delivered to Blood Bank by SCTCT Tech with the testing ordered in Wake One and received into SCC.   2. Perform and result all testing according to SOP.  1. Perform TSX on first collection (weak D if necessary). 2. Perform GTX on second collection (weak D if necessary). 3. Perform ABOCK if needed.   1.3 Complete requisition.  1.4 Return the back copy of the request form to the Bone Marrow Lab.  1.5 File the top copy of the form in the Blood Bank. |  |
| **2.0** | **Ordering Testing on Allogeneic (Related and Unrelated) Donors**  2.1 Specimen (labeled with both donor and recipient information) will be  delivered to Blood Bank by SCTCT Tech with the testing ordered in Wake  one and received into SCC depending on whether related or unrelated.   * 1. Blood Bank Staff MUST positively identify both donor and recipient samples.  1. Add a red sticker to Donor Tube 2. Add a yellow sticker to Recipient Tube 3. A second tech must verify that samples were identified and labeled correctly. 4. Fill out SCT-FORMS-0148      * 1. Perform and result all testing according to SOP.  1. Related/Unrelated donors – Perform TSX and ABOCK (weak D if necessary) 2. Related/Unrelated product – Performed GTXBM and TPLCK (weak D on GTXBM if necessary).  * **ISXM is not validated for testing on the vision for Bone Marrow Crossmatches.**   *Refer to BB-SOP-0007: Crossmatch Procedures Attachment 2: Limitation of Crossmatch methods*   1. Do Titration.    * Order in SCC: TBMTD for ABO titer on donor    * Test includes Anti-A, -A1 and –B. Cancel parts not needed.   *Refer to BB-POL-0055: Transplant Testing Protocols Attachment: Titration and Processing for SCTCT Recipients and Donors*  For unrelated donors refer to *Refer to BB-POL-0055: Transplant Testing Protocols: Attachment: Titration and Processing for SCTCT Recipients and Donors* and perform if needed.   * + If an ABO titer is needed on the recipient, order in SCC: TBMTR   + Test includes Anti-A, -A1 and –B. Cancel parts not needed.   1. Complete requisition.   2. Return the back copy of the request form to the Bone Marrow Lab.   3. File the top copy of the form in the Blood Bank. |  |
| **3.0** | **Ordering a Crossmatch of Donor with Recipient**  3.1 Specimen (labeled with both donor and recipient information) will be  delivered to Blood Bank by SCTCT Tech with a *Request to Crossmatch Bone*  *Marrow Donor with Recipient* form with the following testing ordered in  Wake One and received into SCC.   * 1. Perform and result all testing according to SOP.  1. Perform XMBM 2. Perform TSX if recipient does not have current specimen tested and weak D if necessary. 3. Do titration if needed.   *Refer to BB-POL-0055: Transplant Testing Protocols Attachment: Titration and Processing for SCTCT Recipients and Donors*   1. For ABO titer on donor, order in SCC: TBMTD 2. For ABO titer on recipient, order in SCC: TBMTR 3. Tests includes Anti-A, -A1 and –B. Cancel parts not needed.    1. Complete requisition. 4. Record reactions for testing. 5. Verify that the Current Donor type matches the Previous Donor type by checking in SCC and recording the Previous Donor type beside ‘Donor Testing – Prior Record’.    1. Return the back copy of the request form to the Bone Marrow Lab.   3.5 File the top copy of the form in the Blood Bank. |  |

References

Technical Manual, AABB. Revised Periodically

Standards for Blood Banks and Transfusion Services. AABB. Revised Periodically

Email from Julie Simmons (9/14/15): Autologous unit for DONORS of Bone Marrow

# Related procedures/policies

Protocols: Transplant Testing Protocols

SCTCT: Routine: Ordering BMT Tests for Blood Bank

# Attachments/Linked documents (title 21)

Attachment 3: Email from Julie Simmons: Autologous unit for DONORS of Bone Marrow

# Revision Dates: Review Change Summary as represented in Title 21.