

# PROCEDURE: PERIPHERAL BLOOD STEM CELL COLLECTION (PBSC)

(ALSO REFERRED TO AS HEMATOPOIETIC STEM CELL COLLECTION (HSC) FOR USE IN BONE MARROW TRANSPLANTATION (BMT))

## Description:

Stem cells are immature cells from the bone marrow that can turn into mature red blood cells, white blood cells, or platelets. Certain medications can be used to increase the number of stem cells in the blood. These stem cells can then be collected from the blood using a machine that separates the blood using a centrifuge. The stem cells are collected into a bag and the rest of the blood is returned to the patient.

## Reason for the Procedure:

Many cancer patients require intensive chemotherapy that can destroy their bone marrow and prevent them from creating enough blood cells. The stem cells that are collected can restore the normal cells of the bone marrow.

## Venous Access:

Some stem cell collections can be performed using 2 intravenous needles, one in each arm. Blood is removed from one arm, processed in the machine, and returned to the patient through the other arm. In patients with small or fragile peripheral veins, the placement of a central venous catheter may be necessary.

## Duration:

A typical procedure lasts approximately 4-6 hours.

## Risks and Side Effects:

Peripheral blood stem cell collection is a safe procedure but side effects can occur. Common side effects include fatigue, nausea, dizziness, cold feeling, and tingling in the fingers and around the mouth. It is very important to notify medical staff if these symptoms occur. Serious complications, including abnormal heart rate and seizures are extremely rare, but can occur.

## Diseases for Which Peripheral Blood Stem Cell Collections are Used:

This procedure is most commonly used for cancers of the blood system, including lymphomas, leukemias and multiple myeloma. It can also be used in other diseases of the immune system.

## Number of Procedures that are Required:

The number of procedures will depend on the patient. In most cases, 2-4 stem cell collections are required over a period of 2-4 days. Patients should ask their physicians for specific details pertaining to their condition.

## Other Considerations:

Patients should talk to their physicians about any medication adjustments that may be required prior to undergoing the procedure. Many patients who require this procedure have a decreased level of blood platelets. This procedure may decrease the level of platelets even further. Your physician will carefully monitor your blood counts while you are receiving treatment.

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