BONE MARROW/STEM CELL TRANSPLANT
Bone marrow is a spongy material that is found inside the bones (particularly the pelvic bones). Stem cells are blood cells formed at the earliest stage of development in the bone marrow. When the cells are fully mature they are released into the bloodstream. Bone marrow produces the cells which develop into the three different types of blood cells: Red blood cells, white blood cells and the platelets. Normally, most of the stem cells in the body are in the bone marrow and there are only very small numbers of these cells found in the bloodstream.

The bones of the hip, chest (sternum/breastbone) and pelvis contain the largest amount of marrow and stem cells in an adult. Bone Marrow was earlier used as a source of stem cells, when it was demonstrated that few stem cells also circulate in the bloodstream. These are called Peripheral Blood Stem Cells (PBSCs).

Hematopoietic stem cell (HSCT)/Bone marrow transplantation (BMT) is a life saving treatment for variety of diseases including blood cancers like leukemia, lymphoma, Myeloma etc as well as benign disorders like aplastic anemia and thalassaemia.

The goal of cancer treatment such as radiation is to destroy cancer cells. Unfortunately, bone marrow and healthy cells are also destroyed in the process. Also, the cure rate of Hematological malignancies with chemotherapy is not 100 percent.

The Bone Marrow Transplantation (BMT) and Peripheral Blood Stem Cell Transplantation (PBSCT) are procedures that restore stem cells that have been destroyed by high doses of chemotherapy and/or radiation therapy.

In Autologous Transplant, patient has to stay in the hospital for 3 to 4 weeks. The Allogeneic Transplant requires 4 to 6 weeks of stay in the hospital. The doctor will require seeing you on regular and periodic basis as an outpatient following discharge for the next few months. Hence international patients require staying in India for 4 months including the hospital stay.

The Follow Up Care
The treating doctor provides instructions for the follow-up care, medications and information on preventing infections. After transplant, the reintegration into life outside the hospital is a big step. It will take time, as well as patience and understanding with yourself and others, to successfully negotiate this last part of treatment.
WHAT IS ROLE OF BMT IN LEUKEMIA?

Treatment of acute leukemia is very challenging. It requires availability of sophisticated diagnostic laboratory for accurate diagnosis of disease. Treatment of leukemia requires prolonged hospitalization, use of chemotherapy, extensive transfusion support and carries significant risk of infections. Treatment of leukemia is best done at transplant centers to support patients in the event of failure of chemotherapy. Allogeneic transplant is the only option for such patients.