

Frequently Asked Questions

Blood and Marrow Transplant

What is bone marrow?

Bone marrow, found inside bones, is a spongy material where blood cells are made.

What are stem cells?

These are the “mother” cells in the bone marrow space which produce white blood cells and platelets.

Why a transplant?

Bone marrow/stem cell transplants are performed for individuals who have diseased marrow or who will be receiving high doses of cancer therapy which will damage their marrow. Among the most common types of cancer treated with a transplant are ovarian, testicular, lymphoma, myeloma leukemias, and aplastic anemia. While transplants do not provide 100% assurance that the disease will not recur, it can increase the likelihood of a cure or may prolong the period of remission in many patients.

Are there different types of transplants?

Yes. Autologous transplants occur when the patient’s own stem cells are harvested and stored for re infusion after high-dose chemotherapy and/or radiation treatments.

Allogeneic transplants occur when stem cells are harvested from a sibling with matching marrow, an unrelated donor with matching marrow, a donor with mismatched marrow or umbilical cord blood, and are stored for transfusion following high-dose chemotherapy and/or radiation treatments.

What is a harvest?

Stem cells are collected by one of two methods: bone marrow harvest and aphaeresis. The highest concentration of stem cells is in the bone marrow. A bone marrow harvest is performed in the operating room under general anesthesia. Marrow with stem cells is collected from the back of the hips and, occasionally, the breast bone (sternum), or from the front of the hip bones. The collected marrow is then processed, frozen, and stored. To collect peripheral stem cells, a growth factor (such as Neupogen®) is given for four days in order to move the stem cells into the bloodstream. A special cell-separating machine is then used to collect the se cells from the patient. This process is done on an outpatient basis over several days.

What if I can not have an autologous transplant and do not have a matching donor?

If a patient does not have a matched donor from their family, the transplant center will search for potential donors through the National Marrow Donor Program and other national and international marrow registries.

What are the risks associated with a blood or marrow transplant?

When your white blood cell count is low, your risk for infection is high. Most of the infections in transplant patients are caused by bacteria and viruses which are normally present in your body. When you receive chemotherapy, your body’s normal protective mechanisms (such as mucous membranes in your mouth and gut, and the healthy white blood cells that make up your immune system) are temporarily destroyed. When this happens, you become more likely to develop an infection. Anyone who comes into your hospital room is required to wash their hands. Person who are sick or who have been exposed to anything contagious are not allowed to visit during that time. You will shower daily with a special soap that is provided to keep your skin from germs. There are special filter systems in some room s to keep the air clean for patients at high risk of infection. While your blood cell count is low, antibiotics are given to prevent and treat any infections that might occur. Bleeding precautions are another important aspect of your care. Because your platelet count will be low, you ill bruise and

bleed more easily. You will be provided a special sponge-like toothbrush to use, you be asked not to floss your teeth. You will also be asked not to use razors and/or nail clippers. These precautions are for your protection.

Why are cell and blood bone counts so important?

All mature blood cells begin as stem cells. White blood cells fight infection, while red blood cells deliver oxygen. Platelets prevent bleeding. Following high doses of chemotherapy and/or radiation, the bone marrow is damaged causing a decrease in the white and red blood cells and platelets. Blood counts are monitored daily.

What if someone want to donate blood for my use?

Some patients have family or fiends who would like to donate blood products for their use. The contact number for South Texas Blood and Tissue Center is 210-731-5555.

Why is chemotherapy given before the transplant?

Chemotherapy drugs are given for two reasons (1) to destroy diseased cells and (2) to suppress the immune system. The immune system is the body's mechanism for fighting off anything foreign that enters it. In an allogeneic bone marrow transplant, the immune system is suppressed so that the body will not reject the new bone marrow or stem cells. While it is undesirable to suppress the immune system in an autologous transplant, that is a side effect of chemotherapy. Patients may have been treated with chemotherapy before and maybe familiar with its side effects. However, the chemotherapy received as part of the transplant process is given in much higher doses.

How is the transplant performed?

The frozen marrow and/or peripheral stem cells are thawed in a warm water bath at the bed side. It looks like blood as it is injected into the patient's central venous catheter. The cells find their way back into the bone marrow and in approximately seven to ten days begin to grow.

Why is there so much emphasis on nutrition?

Good nutrition will be especially important for the patient throughout the transplant process. A high-calorie, high-protein diet is encouraged. This diet will help withstand the side effects from treatments, help maintain strength, and prevent muscle and other body tissues from breaking down while rebuilding normal tissue affected by the treatment.

What kind of support can I expect from the transplant team?

Our approach is a team approach. During the transplant process the patient will have abundant access to the following resources: professional individual and/or family support counseling, volunteer peer counseling from other transplant recipients, support groups, resource books, video and audio tapes.

How do I know if I am a candidate for transplant?

Whether or not you are a transplant candidate requires a process involving very detailed information about your disease, what therapies you have received and how your disease has responded to previous treatments. The patient's personal physician is required to play an important role in their care before and after transplantation. Their doctor will discuss your disease history with the transplant doctor before the patient's initial visit.

Will my insurance pay for a bone marrow or stem cell transplant?

At the time that the patient is referred to the transplant program, a financial coordinator will verify the patient's transplant benefits with their insurance company. Confirmation of the patient's insurance is essential and must be completed prior to beginning the transplant process. Insurance coverage for the transplant and related services is dependent on the patient's individual insurance policy. The financial coordinator will work closely with the patient to ensure that all transplant benefits are

maximized. The insurance clearance process typically happens quickly upon referral, but in some instances could take a couple of weeks depending on the responsiveness of the insurance company to the requests for information. Do not assume that the insurance company will pay for a transplant. Also, if the insurance company initially denies coverage for any reason, there may be an appeal process available to overrule the initial decision.

What kinds of insurance does Methodist accept?

The transplant program is a Medicare and Medicaid provider. In addition, it is contracted for transplant services with almost every major insurance carrier. If Methodist is not contracted with a particular insurance company, they will work quickly to try and put an arrangement together in order for the patient to be treated in the clinic.

What types of charges should I expect?

You will incur separate bills for hospital and physician services. All of the doctors who treat you are independent contractors who bill for their services separately from the hospital. The transplant clinic is a hospital-based clinic; therefore you will receive a hospital outpatient bill for each time you are seen in the clinic. The financial coordinator and social worker will help the patient and their family become aware of what charges to expect and at what time during the process.

What is a clinical trial?

A clinical trial is a research study which involves cancer patients. Each study is specially designed to answer specific questions or to find new and better ways to help cancer patients. Advances in the treatment of cancer are the result of the new ideas developed from research. Many of the standard treatments used today are the result of clinical trials conducted years ago.

Are clinical trials safe?

Extensive testing is completed before a drug is used in a clinical trial. This testing happens in laboratories and in animal studies. The best results from this testing are then tried in patients before these drugs are available for use outside the clinical trial setting. Each clinical trial is carefully supervised, monitored and documented by both physicians and nurses involved in the trial. Each clinical trial is also supervised by the Institutional Review Board whose membership consists of clinical experts and laypersons.

Are there risks associated with clinical trials?

Yes. There are risks and potential side effects. Cancer treatment is particularly powerful because it is designed to destroy cancer cells. A clinical trial is a tool used to investigate new areas of cancer treatment. The risks and side effects are not always known ahead of time. Researchers are continually trying to develop treatments that destroy cancer cells but do not harm healthy cells and which may have few side effects. Although every effort has been made to identify the potential risks and side effects prior to a patient's participation, the possibility of unknown danger, side effects and still remain.

Who is eligible to participate in a clinical trial?

Each study has its own guidelines for who can participate. Generally, participants are alike in key ways such as the type and stage of cancer. The patient's physician will determine whether or not they are a candidate for a research trial.