Hematology and Hematopoietic Cell Transplantation

Advancing the Promise of Transplantation

City of Hope's pioneering Hematology and Hematopoietic Cell Transplantation (HCT) Program dates back over 30 years when we began treating leukemia patients with bone marrow transplants. We have since expanded this technology in treating other blood-based diseases, performing transplants with either bone marrow or peripheral blood cells, which can be obtained from related or unrelated donors, umbilical cords and, most commonly, the patient's own blood. Today, ***we are the largest HCT service provider in California*** and remain one of the most advanced transplant research and treatment centers in the world. Patients need improved treatments and cures now, so we are urgently applying all our resources, expertise and technology to achieve our aims with a unique distinction: informing our work with a patient-centered philosophy.

The program is chaired by internationally recognized researcher and physician, Stephen J. Forman, M.D., the Francis and Kathleen McNamara Distinguished Chair in Hematology. Dr. Forman serves as the principal investigator of many prominent research studies, including a five-year National Cancer Institute (NCI) bone marrow transplantation program project and a five-year Specialized Program of Research Excellence (SPORE) grant by the NCI for translational research studies for Hodgkin's and non-Hodgkin's lymphoma. He has also co-edited Thomas' Hematopoietic Cell Transplantation, a definitive textbook for scientists and health-care professionals.

Expanding Transplant Options

Our investigators designed methods to transplant bone marrow from non-related donors, serving to increase the pool of available donors for patients. This is significant since only 30% of patients will find matches within their related families. ***City of Hope has one of the largest matched unrelated donor transplant programs in the world***, treating patients from Europe, the Middle East, Japan, Australia, Africa and elsewhere.

Stephen J. Forman, M.D., Chair of the Division of Hematology & Hematopoietic Cell Transplantation, is researching dramatic new methods of cancer treatment that improve bone marrow transplant success without immune-suppressive drugs.

We were also among the first to offer a less invasive form of HCT called a "mini-BMT", affording elderly patients and those with compromised immune systems this life-saving option.

Making Transplants Safer

Our team has enhanced patient healing and survival by creating a drug regimen preventing infections commonly associated with transplants such as *CMV*, a virus often leading to life-threatening pneumonia.

Preventing Transplant Rejection

City of Hope researchers are developing innovative treatments that prevent a patient's immune system from rejecting the transplant. Significantly, these novel concepts avoid the need for immune-suppressing drugs, thereby improving the success of the transplant while enhancing patient quality of life.

Expanding Less Invasive Therapies

Our researchers are developing novel therapies that harness the body's immune system that spare healthy cells, unlike standard radiation treatment or chemotherapy. In one example, our investigators are applying HCT in combination with engineered T-cells that home in on the cancer. The precision provided by this technology means patients heal sooner without many side effects.

Addressing Autoimmune Diseases

Traditionally, we have used HCT to treat patients with blood-based disorders. We are now applying our technology seek cures for patients facing autoimmune illnesses, like multiple sclerosis or lupus. These diseases are commonly treated with immune-suppressive therapies, but they reduce symptoms without providing a real solution and they often produce complications. In one innovative effort targeting lupus, our researchers are using a combination of radiation, globulin, followed by blood stem cell transplant from a healthy donor and immunosuppression drugs. Our doctors believe that this approach will prevent rejection by the patient's body, while also reducing the possibility of opportunistic infection.

Focusing on scleroderma — a condition that causes the skin to become hard — our team is exploring the use of stem cell transplantation which is showing promise in achieving long-term remission and improved organ function. Another creative exploration involves high-dose chemotherapy followed by stem cell transplantation, with the goal of rebuilding the patient's immune system without risking re-growth of scleroderma cells.

Joining in a collaborative study among three other cancer centers, City of Hope will perform a trial testing high-dose chemotherapy followed by stem cell transplantation in patients with multiple sclerosis. Our investigators think that patients will derive the maximum benefit by applying this approach during the earliest disease phases.

Help Us Conquer Cancer

Individual donors play a major role in enabling our investigators to pursue studies that have and will continue to save lives worldwide. This is especially true since the pool of governmental research funding continues to dwindle, despite City of Hope's competitive ability to attain such grants.

The benefit of supporting research at City of Hope is that our ideas influence the treatment of patients around the world. In particular, our Hematology/HCT Program initiatives have steadily increased in stature, becoming globally influential in the treatment of cancer. We invite you to partner with City of Hope in its mission to deliver the promise of the Hematology/HCT Program: saving more lives. Our Development staff welcome your inquiries about how you can play an integral role in helping us achieve our life-saving mission. Contact Sharon White in the Gift Planning Dept. at 800-232-3314 or via email at swhite@coh.org. Thank you for your consideration of support.

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