

Transfusion Medicine

Embark on an Adventure

The "Blood Bank" has historically been thought of as the place that provides blood to persons in need. Although this is true, Transfusion Medicine personnel perform many other activities that are vital to patient care. Some of these activities include stem cell collection and processing for bone marrow transplants, solid organ compatibility testing, and intraoperative blood salvage. Transfusion Medicine employs approximately 180 personnel with many different educational backgrounds to complete these functions. Transfusion Medicine includes eight work units.

Component Laboratory

The Component Lab is responsible for the processing and labeling of whole blood and apheresis blood products. In addition to routine processing, the lab performs some specialty processing for patients with special needs. The lab is very "hands on" with no testing or resulting performed by the techs.

Reference Laboratory

The Reference Laboratory performs serologic investigations utilizing antibody identification, ABO/Rh typing problem resolution, and patient or donor red cell antigen typing. The testing is performed to ensure selection of compatible red blood cell units for transfusion.

Human Cell Therapy (HCT) Laboratory

This laboratory is responsible for the processing and cryopreservation of stem cells used in transplantation for the treatment of blood cancers. Responsible for cell culture, manipulation, and quality control of rare immune type cells, such as dendritic cells, for treating a wide variety of diseases and cancers in clinical research protocols. Supports a clinical islet cell transplantation program. Highly regulated biological manufacturing clean room environments in a state of the art cell processing facility. Flexible, self directed team environment working in cutting edge biotechnology applications to save people's lives.

Product Testing Laboratory

The Product Testing Lab is responsible for the coordination of testing performed on all blood donor samples. They perform ABO and Rh testing of samples along with platelet counts. They also account for, and enter the results obtained from the TTV and Memorial Blood Center Labs. If an abnormal result is obtained, the techs take care of quarantining and discarding the implicated products.

Tissue Typing Laboratory

Both solid organ transplantation and bone marrow transplantation are supported by this laboratory. Solid organ transplants include kidney, pancreas, heart, lung and liver. Post transplant monitoring regarding checking a patient's antibody level for signs of early rejection of a kidney transplant is also routinely performed. Both recipients and potential donors are typed using molecular (SSP and SSO) and serological methods. Platelet Antibody Testing, Granulocyte Antibody Testing, Platelet Cross-matching, and matching for HLA platelet donors is testing performed for Transfusion Medicine. This testing involves establishing compatibility for platelet transfusions. The different types of laboratory

- Transfusion Medicine continued from previous page

technologies offered by the Tissue Typing Laboratory are as follows: Fluorescent testing, Flow Cytometric Testing, ELISA Based Testing, Lymphocytotoxicity Testing, Molecular Testing, Luminex Testing, and Solid Phase Testing. All of our technologists are required to perform all of the tests offered by the Tissue Typing Laboratory. Currently the laboratory operates between the hours of 7:00 am to 5:00 pm Sunday through Friday. Each technologist is required to take emergency on-call. The duration of the on-call is for one week beginning Friday morning. The technologist on-call must be available to perform emergency testing for our customers 24 hours a day for that week.

Intraoperative Autologous Transfusion

Autologous transfusion has been utilized at Mayo since 1983 and is a method of salvaging a patient's own blood during (intraoperative) or immediately following surgery. The blood is collected, filtered, washed, and packaged for immediate transfusion.

Crossmatch Laboratory

The crossmatch lab is at the front line in patient care. The laboratory is responsible for assuring that appropriate blood products are ordered, processed, issued, and transfused to the appropriate patient. The testing performed includes ABO/Rh typing, direct antiglobulin testing, antibody screens, as well as crossmatching.

Donor Services

Donor Services collects the majority of blood products transfused at Mayo Clinic. Donor Services personnel perform new donor registration, schedule appointments for donation, evaluate the suitability of donors within the guidelines of the accrediting and regulatory agencies, perform phlebotomy, and provide care to donors in cases of adverse reactions.

Transfusion Laboratory

Exciting, dynamic fast paced 24/7 immunohematology laboratory specialized in providing the safest possible blood products utilizing the most advanced technology and serologic techniques. Entry level lab assistants reconcile blood orders, pool and issue products for one of the largest surgical center in the United States. Four year science degreed individuals can enter an "on the job" paid training program and receive a blood bank certificate with a commitment to work in our lab performing serologic compatibility techniques along side Medical Laboratory technicians. Medical technologists perform advanced serologic techniques for patients requiring rare donor types. Excellent internal career ladder. Self directed team oriented problem solving.