

**Keywords:** hematopoietic stem cell transplantation

## Introduction

Hematopoietic stem cell transplantation (HSCT) is a procedure that involves replacing the patient's diseased or damaged bone marrow with healthy stem cells from a donor. This process is used to treat various types of cancer, such as leukemia, lymphoma, and multiple myeloma, as well as certain types of blood disorders and autoimmune diseases. The procedure involves the collection of stem cells from the donor, followed by the administration of high-dose chemotherapy and/or radiation therapy to the patient to destroy the diseased bone marrow. The donor's stem cells are then transplanted into the patient, where they will migrate to the bone marrow and begin producing new, healthy blood cells. HSCT is a complex procedure that requires careful selection of a donor and a recipient, as well as a thorough understanding of the risks and benefits of the procedure. The success of HSCT depends on many factors, including the patient's overall health, the type of disease being treated, and the quality of the donor's stem cells. Despite the risks, HSCT has become a standard of care for many types of cancer and blood disorders, and it has led to significant improvements in survival rates and quality of life for many patients.

## Hematopoietic stem cell transplantation

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