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## **Treatment Trends For Multiple Myeloma – Allogeneic Stem Cell Transplants**

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### **Dr. Reece's findings about allogeneic stem cell transplants.**

In the July issue of *Current Opinion in Hematology*, Dr. Donna E. Reece of the Princess Margaret Hospital in Toronto, Canada reviewed the current approaches to treating newly diagnosed multiple myeloma patients.

In the review, Dr. Reece discussed autologous and allogeneic stem cell transplants for younger patients and treatment options for older patients. This article focuses on Dr. Reece's findings about allogeneic stem cell transplants.

In allogeneic stem cell transplants, stem cells are collected from a healthy donor and then placed into the patient's body after chemotherapy. Though not as commonly used in multiple myeloma treatment as autologous stem cell transplants, allogeneic stem cell transplants continue to interest myeloma researchers because stem cells from allogeneic transplants are able to work against the patient's myeloma cells in a "possibly curative" reaction, according to the National Cancer Institute.

Authors of a study published in the journal *Blood* in April stated that "despite recent advances, allografting remains the only potential cure for myeloma."

In her review, Dr. Reece discussed the effectiveness of allogeneic transplants, especially compared to autologous transplants. The jury is still out, Reece concluded.

The newest way that allogeneic stem cell transplants are being used is following an autologous transplant and nonmyeloablative, or less intense, chemotherapy.

Several cancer centers in the U.S. and Italy collaborated to produce a study that treated 102 people with newly-diagnosed multiple myeloma and followed up on them after six years. Fifty-nine participants achieved complete remissions and the participants' disease remained stable for a median of three years. The biggest problem with the treatment was graft-versus-host disease, in which the donated cells attack the transplant recipient's body, resulting in jaundice, rashes, and other symptoms, as well as special vulnerability to infections. Eighteen percent of the participants died from causes not related to relapse, almost all from graft-versus-host disease or infections.

In another study on nonmyeloablative allogeneic transplants, an international team of scientists analyzed how people's individual genetic makeup may affect their response to stem cell transplants. They found allogeneic stem cell transplants helped people with a genetic abnormality called t(4;14), in which DNA is moved between the fourth chromosome in a person's genes to the 14th chromosome. However, study participants with a genetic abnormality called del(17p3) fared worse than other participants.

To assess allogeneic transplants' promise against results from autologous transplants, Reece examined three studies. Two of the three studies found that people who were treated with allogeneic transplants had shorter median times of stable disease than people who underwent autologous transplants. One study found that people who underwent allogeneic transplants had shorter median overall length of survival, while the other two studies were still in the process of collecting survival data.

Reece's review gave a picture of a treatment that is improving, but not yet ready for widespread use. The 18 percent rate of death that the U.S.-Italy study found was lower than mortality rates associated with allogeneic transplants in the past.

However, comparative studies show that at this time, allogeneic stem cell transplants do not improve lifespans. "The role of allogeneic stem cell transplants remains to be defined," Reece concluded.