

Neither COVID-19, nor cryopreservation, prevented allogeneic product infusion

WHY?

During the pandemic, changes had to be made in hematopoietic stem cell transplant practices, which were performed with “fresh” product – bone marrow and peripheral blood stem cells – 90% of the time. The changes were necessary due to travel restrictions, border closures and other logistical obstacles. Out of necessity, the National Marrow Donor Program (NMDP) pivoted to requiring cryopreservation of products to ensure that patients would receive their transplant at the time of need.

WHAT?

Observational study during the COVID-19 pandemic to evaluate the impact of cryopreservation on the infusion rate of products.

WHO?

More than 9,000 bone marrow and peripheral blood stem cells were collected and cryopreserved.



WHEN?

March 2020 - September 2021

WHERE?



Product collections were facilitated by the NMDP for U.S. and international patients.

IMPACT/FINDINGS:

Overall, only 2.6% of the products collected during the study period were not infused, compared to a rate of approximately 1% before the pandemic. Despite mandated cryopreservation, there was a surprisingly low number of products not infused. As expected, the infusion rates significantly improved over the course of the pandemic as centers became more familiar with the cryopreservation process.

The study team also evaluated the impact of donor COVID infections during the study period. A total of 34 COVID positive cases among donors were reported. Seventeen recipients had a donor that tested positive for COVID-19 post-donation: 13 products were infused and 4 were not infused based on the transplant center's preference. 13 had a donor with COVID-19 concerns that caused the collection to be stopped and 4 were uncharacterized. None of the patients whose donors were COVID-positive became infected with COVID or reported any other adverse effects.

Hematopoietic stem cell transplant patient therapy needn't be delayed due to crises such as a pandemic when travel, logistics and close contact are inhibited. Early research shows that frozen, or cryopreserved, bone marrow and peripheral blood stem cells can be efficiently procured and infused without compromising patient or donor safety or efficacy – even in an environment of COVID-19 and with minimal waste. More experience and study will fine-tune these practices.

FROM THE EXPERTS

Our donors have been heroes throughout the pandemic, risking their health to donate lifesaving grafts to patients in urgent need. It is reassuring that even with all the hurdles imposed by the pandemic, the vast majority of these unrelated donor grafts saw their way into the patients.”



Dr. Heather Stefanski
Vice President, Medical Services, Be The Match | NMDP



Dr Steven Devine
Chief Medical Officer, Be The Match | NMDP

While COVID-19 presented challenges to the healthcare system, the data from the NMDP/CIBMTR show that Transplant Centers made adjustments in practice to adopt and safely provide their patients with a potentially life-saving treatment option.”