

Dechamma M P¹, Chandrashekar R¹, Nitin Agarwal¹, Patrick Paul¹

¹DKMS Foundation India, Bangalore, India

Aim

DKMS has a global presence in 5 continents, 7 countries, 13 entities with a Life-Saving Impact of Over 115,00 blood stem cell donations. Every 17 seconds, someone somewhere in the world is diagnosed with Blood Cancer, Sickle Cell Disease or Thalassemia and currently, more than 10 million people worldwide are affected. Unfortunately, only 1% of the worldwide population is registered as a blood stem cell donor, and hence, there is a dire need to increase their availability .

This retrospective study aims to investigate the availability of unrelated potential blood stem cell donors and to identify the reasons contributing to their unavailability for donation in India.

Method

The retrospective data was gathered for three years (January 2022 – December 2024). A thorough analysis of the data resulted in categorising statistics for availability and unavailability of blood stem cell donors at Confirmatory Tying (CT) stage in India.

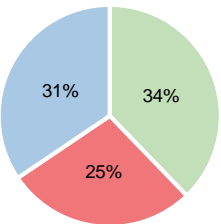
Results

- The requests received have steadily increased each year, reflecting the enhanced level of outreach and awareness among the general public. The cases have increased as such: 2022 (380 requests), 2023 (668 requests), and 2024 (942 requests).
- Over the past three years, DKMS received a total of 1990 requests, out of which the overall donor availability has reached up to 29% (584 requests) and overall donor unavailability is at 71% (1406 requests).
- Donor Unavailability has been categorised into temporary and permanent unavailability.
- The most common reason for temporary unavailability was observed to be unexplained personal issues, accounting for 50 % of cases, followed by unsupportive family (34%).
- For permanent unavailability, an unsupportive family emerged as the leading cause constituting 46%. Personal reasons followed closely, representing 43% and other factors, wherein the donors were unable to be contacted accounted for 8 %.

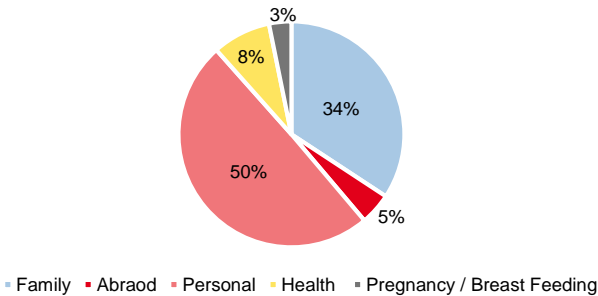
Reasons for Unavailability of Potentially Matched Donors

Reasons for Temporary Unavailability	Reasons for Permanent Unavailability
Family – 225 (34%)	Family – 342 (46%)
Abroad – 30 (5%)	Abroad – 16 (2%)
Personal – 326 (50%)	Personal – 323 (43%)
Health – 55 (8%)	Health – 8 (1%)
Pregnancy / Breast Feeding – 21 (3%)	Unable to Contact 60 (8%)

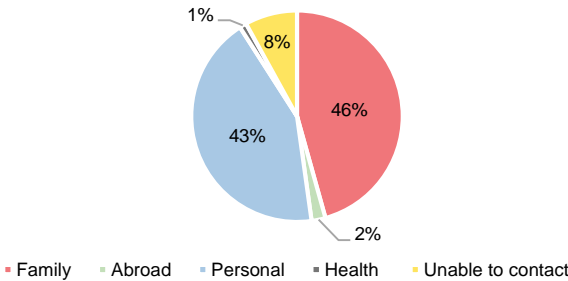
Matched Unrelated Donor Availability - 2022 to 2024



Reasons for Temporary Unavailability - 2022 to 2024



Reasons for Permanent Unavailability - 2022 to 2024



Conclusion

- This study reflects on two major reasons for the overall unavailability: unexplained personal circumstances and lack of awareness in general public that leads to family concerns and denial of permission to donate.
- In addition to unsupportive family and personal reasons being the predominant cause of temporary and permanent unavailability, the results also highlight other reasons which affect donor retention for stem cell donation, such as: lack of awareness, fear of granulocyte colony stimulating factor (G-CSF) injection, pregnancy or nursing status, health and geographic reasons (donor relocation to another country), and challenges in reaching out to donors whose contact information is outdated.
- Increasing Donor Availability: Social media outreach and building donor trust, organizing donor-patient meet-ups, connecting potential blood stem cell donors with medical professionals, and previously donated donors have been instrumental in motivating potential donors. In-depth analysis of donor availability and retention needs to be performed to better understand the issue.