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Background

DKMS is an international charity dedicated to the fight against blood cancer and blood disorders. DKMS is the global leader in the facilitation of unrelated blood stem cell transplants. In India, more than 1.5 lakh potential blood stem cell donors are registered with DKMS-BMST. Within the First year of registration, less than 0.03% potential donor in India will match with a patient in need and donate their blood stem cells. However, insufficient donor availability constitutes a major bottleneck in the stem cell transplantation process, significantly compromising patient outcomes.

Objective

This retrospective study aims to investigate the availability of 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 a period of 2.7 years (Jan 2022 - July 2024). A thorough analysis of the data resulted in categorising the reasons for a better understating of the donor unavailability in India.

Total Availability = (Total Number of Successful cases / Total Requests Received) ×100

Conclusion

- Every 27 seconds, someone somewhere in the world is diagnosed with Blood Cancer, Sickle Cell Disease or Thalassemia and every year over 1.2 million people worldwide are diagnosed with blood cancer (Globocan 2020). Unfortunately, only 1% of the worldwide population of relevant age are registered as a blood stem cell donor and hence there is a dire need to increase their availability.
- Our study reflects two major reasons that affect unavailability in India: unexplained personal circumstances and lack of awareness that leads to family concerns and hence difficulty in donating.

Steps to Increase Donor Availability

- To increase donor availability, we should build trust among our donors.
- Social media outreach and sharing relevant videos to build trust.
- Patient-donor meet-ups.
- Counselling sessions with medical professionals and previous donors.

Results

Reasons for unavailability can be categorised into Temporary Unavailability and Permanent Unavailability (Exclusion)

Time Frame	Total Number of Cases Received	Temporary Unavailability	% of Unavailability	Permanent Unavailability	% of Unavailability
2022	382	115	30.10	139	36.38
2023	668	221	33.08	297	44.46
2024 (January – July)	552	174	31.52	225	40.76

Reasons for Donor Withdrawal

- Lack of awareness leading to family concerns and denial of permission.
- Unexplained personal circumstances.
- Pregnancy or nursing status.
- Medical conditions.
- Relocation to another country.
- Outdated contact information.

Donor Availability Y-o-Y

Reasons for Temporary Unavailability

Reasons for Permanent Unavailability