

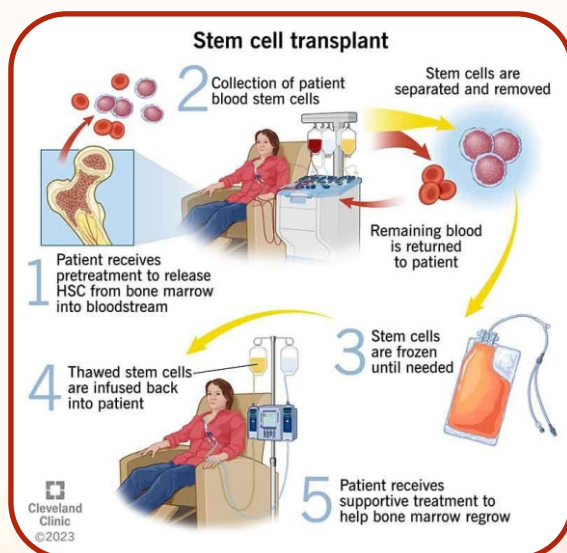
**HAPPY NEW YEAR 2024.**

## PBSC

- ▶ New term trending instead of Bone marrow transplant (BMT), full form being Peripheral Blood Stem Cells.

### What is PBSC harvest ?

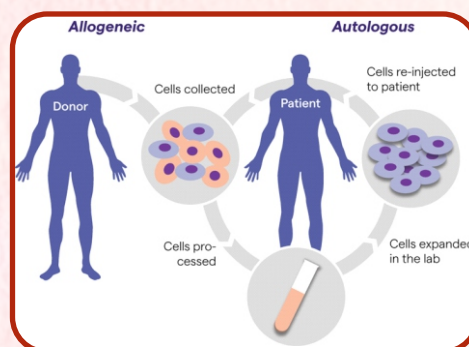
- ▶ PBSC harvesting by single or multiple leukapheresis procurements avoids the risks associated with multiple marrow aspirations and general anesthesia and shortens donor recovery time. PBSCs are mobilized in the donor using G-CSF for several days before peripheral blood collection.



### Potential beneficiaries

- ▶ Leukemia
- ▶ Lymphoma
- ▶ Multiple Myeloma
- ▶ Myelodysplastic Syndromes
- ▶ Neuroblastoma
- ▶ Thalassemia
- ▶ Germ cell tumours
- ▶ Testicular carcinoma

### Basic Difference Between Allogenic & Autologous Transplantation:



## Pearl points on Autologous Transplantation:

- ▶ In autologous stem cell transplantation, the procedure uses the patient's own stem cells for the transplant.
- ▶ The stem cells are collected from the patient in advance and are frozen.
- ▶ After the patient undergoes high doses of chemotherapy, either with or without radiation therapy, the stem cells are then returned to the body.
- ▶ This type of transplant is often used to treat blood cancers such as Hodgkin lymphoma, non-Hodgkin lymphoma and myeloma.

## Advantages:

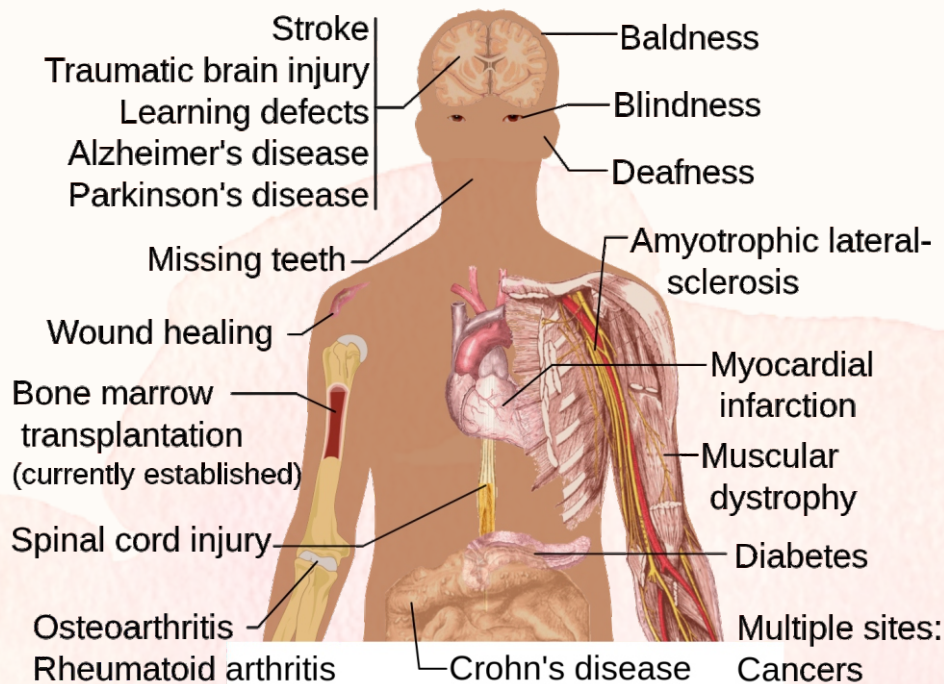
- ▶ No risk of GVHD or graft rejection.
- ▶ Immune reconstitution is more rapid than allogenic transplant.
- ▶ Less requirement of high dose immunosuppression post transplant.
- ▶ Lower risk of opportunistic infections.

## What is the future?

### Many degenerative diseases like

- ▶ Parkinson's
- ▶ Multiple sclerosis
- ▶ Stroke
- ▶ Spinal cord injuries.....can be cured through regenerative medicine.

## Potential uses of Stem cells



**If POWER is defined as the ability to do anything and create anything, then the STEM CELLS is the MOST powerful "known" life source.**

**NAT & X-Ray Irradiated Blood Units Available at Life Blood Centre**

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**Life Blood Centre**  
Committed to Care

(Formerly known as Rajkot Voluntary Blood Bank & Research Centre)  
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