

*Stem cell TX and cellular therapy in
shiraz (activity in 1993-2023)
history to future direction*

*Mani Ramzi MD
Hematology research center*

- HSCT is complex and still associated with significant morbidity and mortality and remains an example of high-cost and highly specialized medicine.
- It requires extensive experience, significant infrastructure and a network of specialists from all fields of medicine.
- Despite the high cost and the complexity, the HSCT procedure has developed in our country as a developing country.

History of stem cell TX activity in Shiraz

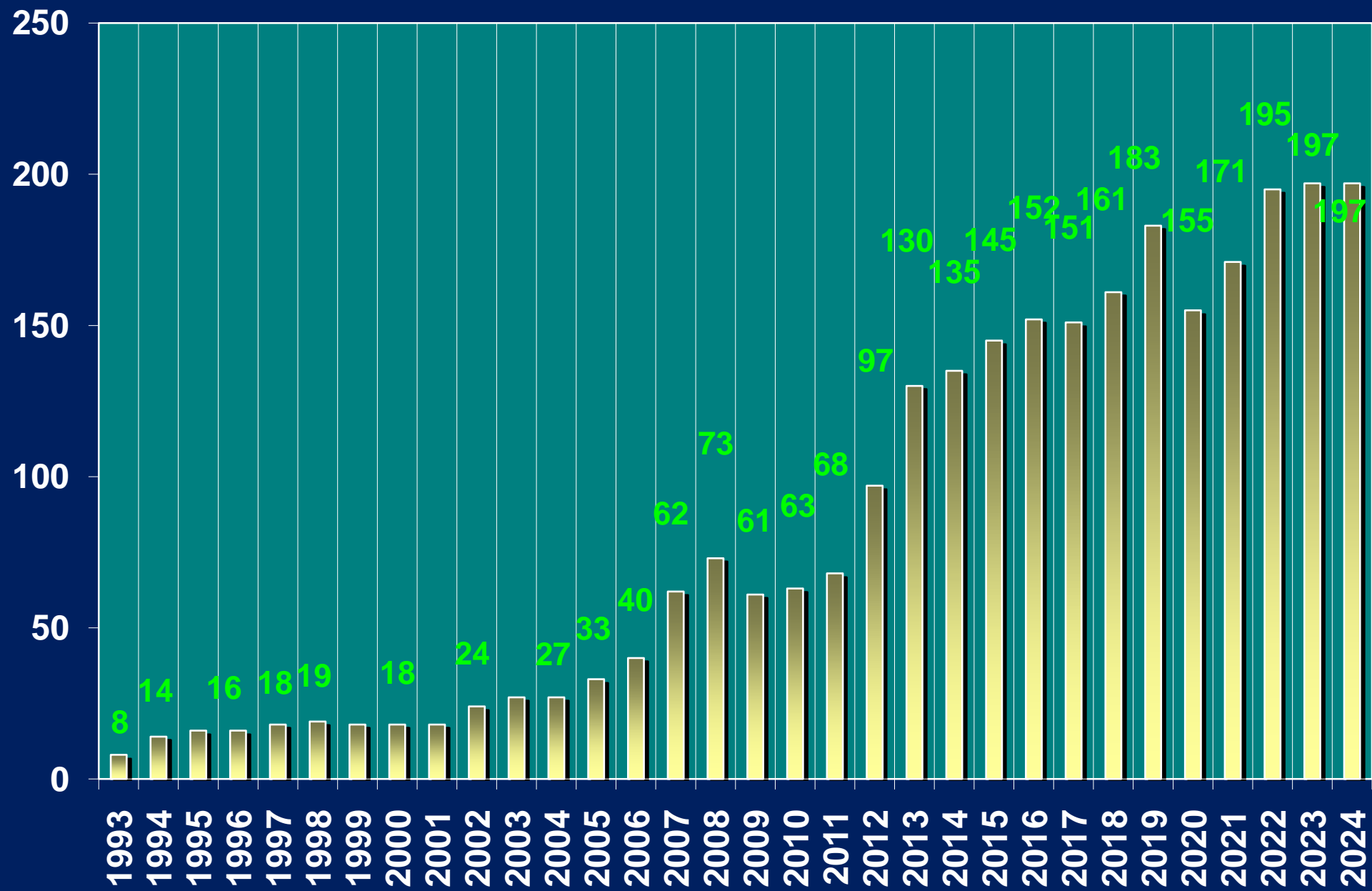
- Hematopoietic stem cell transplantation HSCT program was started at Shiraz University of Medical Sciences in May 1993(1372)
- The first bone marrow transplantation was performed in our center on 7th June 1993 in Namazee hospital as the second center of transplantation in Iran after Shariati hospital in Tehran.
- Now there is 20 transplant unit in Iran (2 in Shiraz)

- The first allogeneic bone marrow transplantation conducted on a thalassemic patient then immediately the second for hematologic malignancy (acute leukemia)
- We have started transplantation with 2 beds in our unit and 8 bone marrow transplant in first year.
- Now we have 20 bed for TX in Shiraz
we can perform 200 transplant per year in Shiraz.

- From June 1993 to Dec 2024, 2803 patients underwent hematopoietic stem cell transplantation in Shiraz.
- Source of hematopoietic stem cell were bone marrow and peripheral blood in these cases.

Bone marrow Transplant : n=202

Peripheral blood stem cell: n=2601

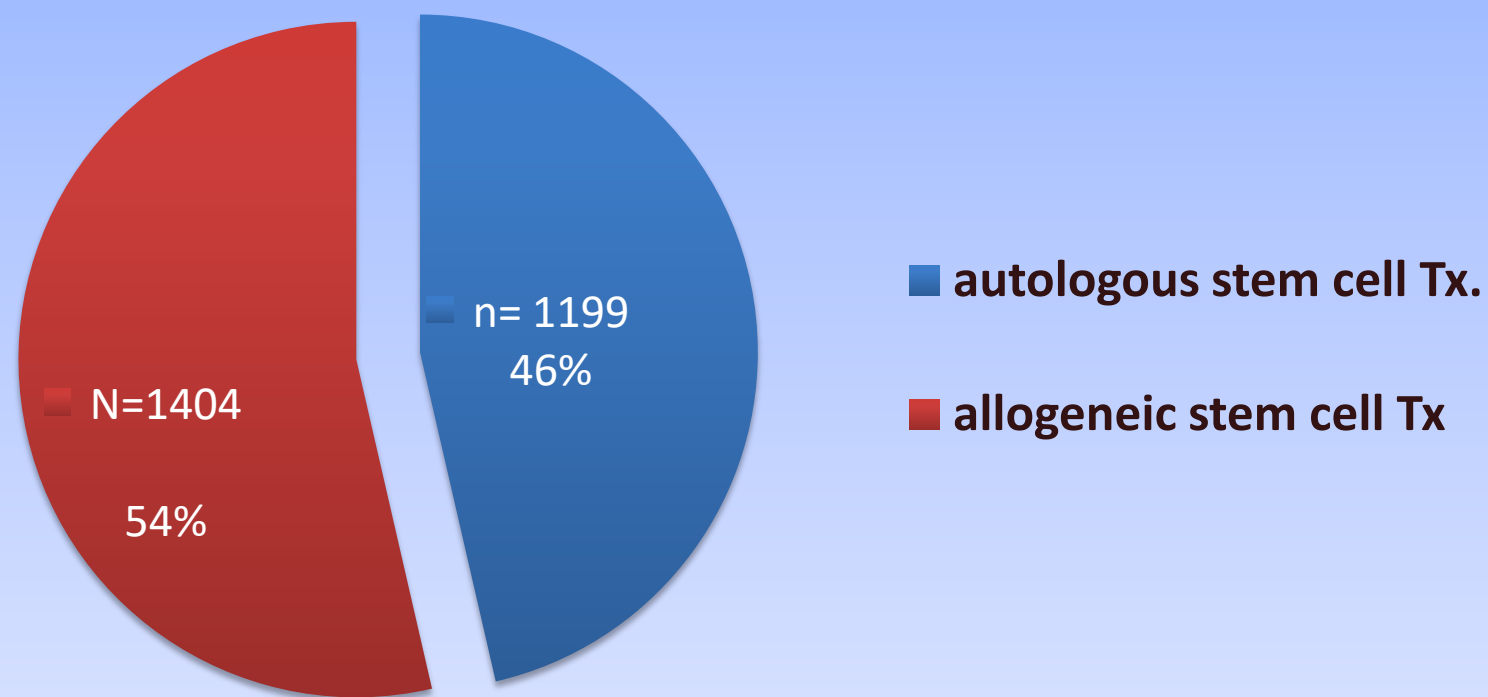


HSCT activity in Shiraz 1993-2023

HSC Transplant in Shiraz

- 2022= total 195 TX
- 2023= total 197 TX
- 2024=total 197 TX (121 adult in namazee
- Total adult $121+51=172$ / total ped $21+4=25$;total shiraz 197
- In 1402 total number of transplant reached to 1407 patients per year in Iran in 20 center.
-

HSCT in Shiraz 1993-2023 (2603 patients)



indication

- Most common indication for allogeneic transplantation in 2012-2016 in our center was AML 134 of 304 (44%)patients .
- In 2017-2022 was again AML %43.7 (164 of 375)
- In EBMT activity survey in 2021 most common indication for allogeneic transplant was reported AML =38% .

- The second most common indication for allogeneic HSCT in our center was ALL, between 2012-2016 26.6%(80 of 304) of allo transplant patients in our center were ALL and between 2017-2022 27.8% (109 of 375).
- In EBMT activity survey in 2021 second most common indication for allogeneic transplant was reported ALL=17%
- Our results in Acute leukemia and allo TX that are similar and comparable to EBMT activity shows high disease burden of acute leukemia AML and ALL in our center; Fars(south of IRAN) and indications is comparable with survey report of EBMT in 2021.

- **MM** was the most common indication for autologous transplant in shiraz.
- During 2012-2016, 52.7% and between 2017-2022 (348 of 641) 54.3% of our auto transplant patients were Multiple myeloma which is very similar to EBMT group report in 2013 activity survey 49% (Ref BMT journal April 2015) and 55% in their activity survey report of 2021.

- The second most common indication for auto transplant in our center is HD .
- 166 of 641=25.8% between 2017-2022 which is different from EBMT report, in 2021 EBMT group reported NHL as second most common cause with 26% and HD was the third most common indication with only 9%.
- This significant variation is suggestive of higher incidence of HD in our younger population in comparison to European studies.

SHIRAZ BMT Center 1993

