

NATIONAL TRENDS IN HEMATOPOIETIC CELL TRANSPLANTATION AMONG PATIENTS AGED >75 YEARS: A CIBMTR STUDY (2019–2023)

Authors: S. GOYAL¹, A. CALDERON¹, D. HERNANDEZ¹, S. KHAN², E. COBOS² and D. NGUYEN²

1. UTRGV-HCA IM Program, University of Texas Rio Grande Valley, McAllen, TX, USA
2. Department of Medicine and Oncology ISU, UTRGV School of Medicine, University of Texas Rio Grande Valley, Edinburg, TX, USA



INTRODUCTION

Hematopoietic cell transplantation (HCT) has historically been limited in older adults due to concerns regarding comorbidities, treatment-related toxicity, and non-relapse mortality. Advances in supportive care and reduced-intensity conditioning have expanded HCT eligibility, with studies demonstrating feasibility in carefully selected older patients.^{1,2} Autologous HCT has also shown favorable outcomes in selected patients aged ≥75 years with multiple myeloma.³ However, contemporary national patterns of HCT utilization among adults aged >75 years remain poorly characterized.

AIM

To evaluate contemporary trends in (HCT) utilization among adults aged ≥75 years and characterize changes in transplant type and disease indications from 2019–2023.

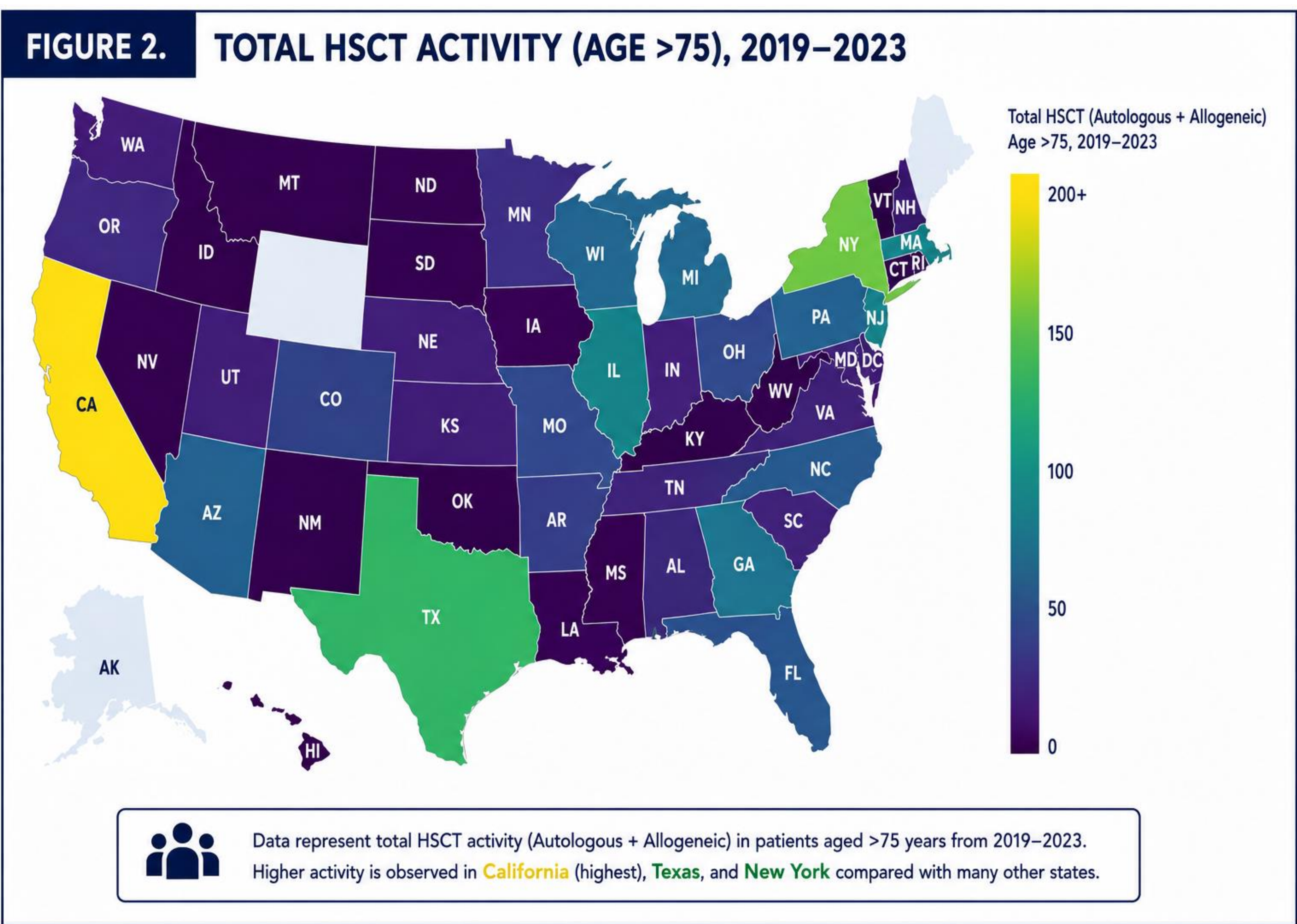
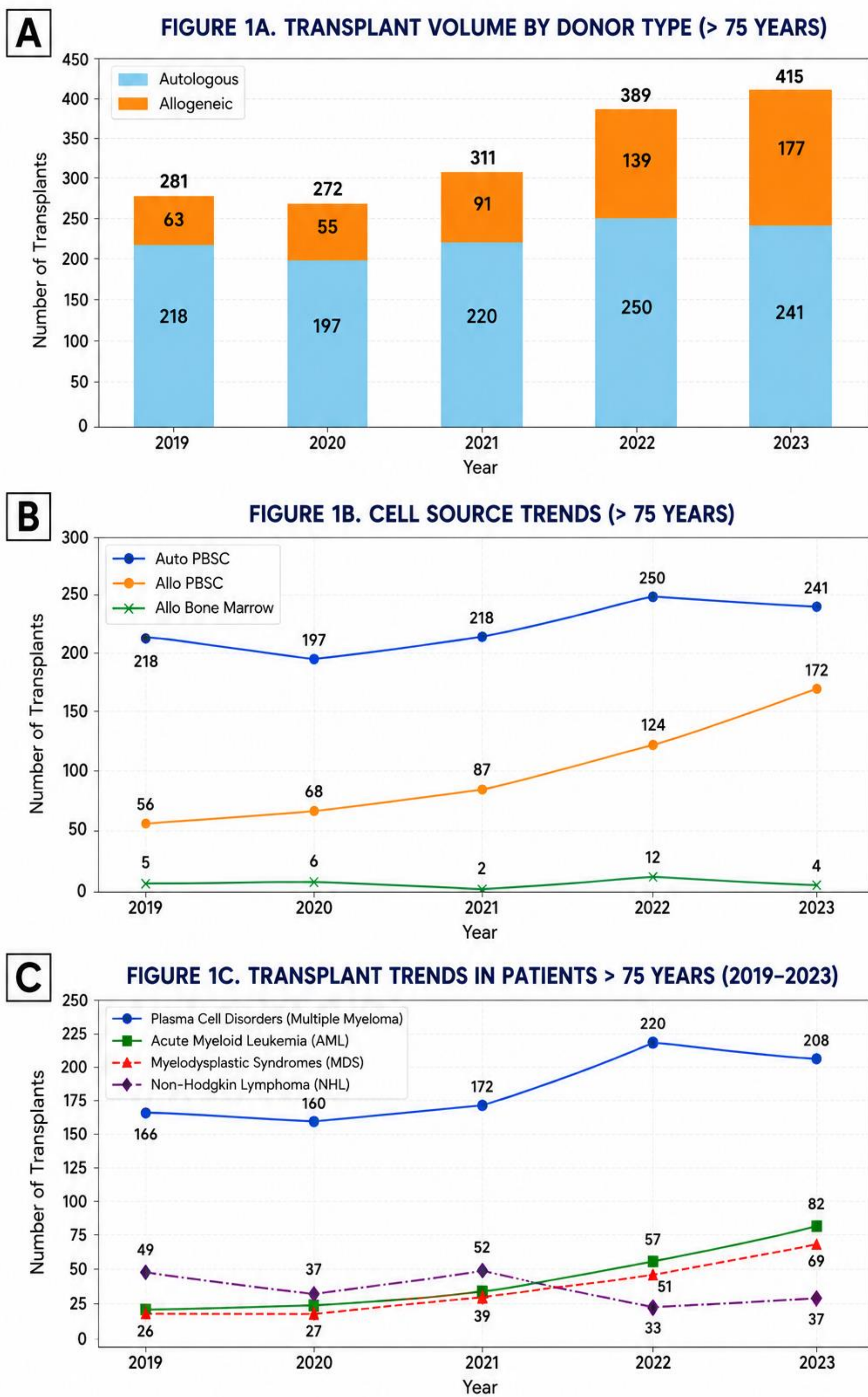
METHOD

1. Data source and Population : Center for International Blood and Marrow Transplant Research (CIBMTR), 2019–2023 & adults ≥75 years undergoing HCT. as autologous or allogeneic transplantation.
2. Transplant utilization was evaluated by calendar year, HCT type, and underlying disease indication.
3. Temporal trends in annual transplant volume were assessed using Poisson regression.
4. Incidence rate ratios (IRRs) with 95% confidence intervals (CIs) were calculated to quantify changes over time.
5. Analyses were performed using R statistical software.

CONCLUSIONS

- HCT utilization in adults aged >75 years is rapidly expanding, driven by allogeneic HCT and increasing transplantation for AML and MDS.
- However, 31% of HCTs occurred in just three states, highlighting geographic concentration and the need to improve equitable access to transplantation.

RESULTS



- 1,670 HCTs were performed in adults aged >75 years from 2019–2023.
- Autologous HCT remained the predominant modality (n=1,127; 67%) but increased only 10.6%, whereas allogeneic HCT increased 181% (63 → 177) (Figure 1A)
- Peripheral Blood Stem Cells (PBSC) predominated as the graft source, accounting for 98.8% of HCTs in 2023, alongside a marked rise in allogeneic PBSC use (Figure 1B).
- Plasma cell disorders remained the leading indication (n=922; 55%) and increased 25.3% (166 → 208) (Figure 1C).
- The greatest expansion occurred in myeloid malignancies, with HCT for AML increasing 256.5% (23 → 82) and MDS increasing 155.6% (27 → 69) (Figure 1C).
- HCT activity was geographically concentrated, with California, New York, and Texas accounting for 31% of all transplants during the study period (Figure 2).

ACKNOWLEDGEMENTS

We thank the **Center for International Blood and Marrow Transplant Research (CIBMTR)** and participating transplant centers for providing the data used in this study..

CONTACT INFORMATION

Shubhank Goyal, MD
Email ID: shubhank.goyal@utrgv.edu

REFERENCES

1. **McClune BL et al.** Effect of age on outcome of reduced-intensity hematopoietic cell transplantation for older patients with acute myeloid leukemia in first complete remission or with myelodysplastic syndrome. *J Clin Oncol* 2010; 28: 1878–87.
2. **Sorror ML et al.** Long-term outcomes among older patients following nonmyeloablative conditioning and allogeneic hematopoietic cell transplantation for advanced hematologic malignancies. *JAMA* 2011; 306: 1874–83.
3. **Munshi PN et al.** Outcomes of upfront autologous hematopoietic cell transplantation in patients with multiple myeloma who are 75 years old or older. *Cancer* 2021; 127: 3805–14.