Disparities in First-Line Treatment Initiation Among US Medicare Beneficiaries With Myelodysplastic Syndromes

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BACKGROUND

- Patients with myelodysplastic syndromes (MDS), characterized by dysplastic bone marrow cell production, have a median survival of 1.5 years.

- Treatment options include:
  - Off-label use of erythropoiesis-stimulating agents (ESA)
  - Use of intravenous immune globulin (IVIG)
  - Use of cytotoxic chemotherapy for specific subtypes
  - Allogeneic hematopoietic cell transplantation

- Treatment with lenalidomide (LEN) or hypomethylating agents (HMAs) can reduce the need for intensive blood transfusions used in MDS-related anemia.

- Objective of this study: To determine patient or disease characteristics associated with first-line treatment initiation.

METHODS

- Study Design and Data Source:
  - A retrospective matched cohort study using 2008–2013 data from the linked Medicare Provider-Supplier (P-S) and Religious Congregation–Medical Service (RMS) files.
  - The SEER registry collects clinical, demographic, and cause-of-death information for patients with cancer; cancer diagnoses are confirmed through pathology reports from hospitals and medical record review.
  - Medicare claims cover health-care services received from the time of Medicare eligibility until death.

- Patient Identification:
  - Patients with newly diagnosed MDS between January 1, 2009 and December 31, 2013 who initiated active treatment for MDS.

- Data in this study are limited because they are based on a sample of Medicare beneficiaries, however, our findings are consistent with studies that show age and income disparities in the treatment of other conditions, such as depression.

- To measure current use of first-line treatments for MDS, we included patients who were enrolled in a Medicare plan (FFS Part A/B, and Part D claims for HMA/LEN).

- Study Measures:
  - Baseline demographic and clinical characteristics: Age, sex, race/ethnicity, education, Medicare use, income, Charlson Comorbidity Index (CCI), SMMRS score, del(5q) syndrome.

RESULTS (cont.)

- Predictors of first-line treatment initiation with HMA or LEN:
  - Older age (85 vs. 65–69 years: P = 0.001, 20–40% vs. < 20% income: P = 0.004)
  - Del(5q) syndrome (yes vs. no: P = 0.001)
  - Prior use of a hematopoiesis-stimulating agent (HSA) (yes vs. no: P = 0.006)

- DISCUSSION:
  - These treatments are determined predominantly by clinical factors, such as blood transfusion requirement, prior HSA use, and the presence of del(5q) syndrome, yet we found evidence of disparities in first-line treatment among MDS patients based on age and income.

- ACKNOWLEDGEMENTS

- This work was supported by Celgene Corporation, Inc., USA. The authors received no assistance and granting support in the preparation of this manuscript. The authors are solely responsible for the content and editorial decisions.

REFERENCES


POSTER MDS-175

Presented at the 6th Annual Meeting of the Society of Hematologic Oncology (SOHO); September 12–15, 2018; Houston, TX, USA.

METHODS (cont.)

- Baseline and index characteristics:
  - Age, sex, race/ethnicity, education, Medicare use, income, CCI, SMMRS score, del(5q) syndrome.

- RESULTS:
  - Median income, per USD 5,000 increase (census-tract level): 1.02 (95% CI: 0.93–1.12), Median family size: 3.0 (95% CI: 2.9–3.1).

- DISCUSSION (cont.)

- These findings are consistent with studies that show age and income disparities in the treatment of other conditions, such as depression.

- Our observational study may affect clinician treatment decisions about advancing treatment approaches.

- Treatment decisions may also be based on patient preferences. Patient-centered outcomes research into this topic would be useful.

- CONCLUSION

- Data in this study are limited because they are based on a sample of Medicare beneficiaries, however, our findings are consistent with studies that show age and income disparities in the treatment of other conditions, such as depression.