Relationship between age and healthcare utilization in patients with myelodysplastic syndrome receiving supportive care

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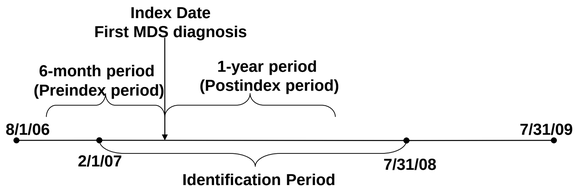
Background

- Myelodysplastic syndrome (MDS) affects about 1 in 10,000 individuals in the US per year.
- Less than 10% of patients are under age 50 at diagnosis.[1]
- Some data suggest younger MDS patients have less-aggressive disease and that they may be more likely to receive supportive care rather than treatment with hypomethylating agents (HMAs) or thalidomide analogues (TAs).[2,3]
- Using a large claims database, we compared clinical and economic outcomes between patients <50 years old and those ≥50 years old who received supportive care.

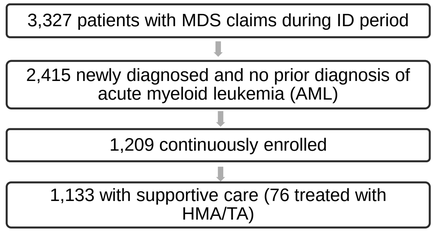
Methods

- Descriptive cohort study of newly diagnosed MDS patients treated with supportive care.
- Data from de-identified and HIPAA-compliant medical and pharmacy claims from a large US insurer.
- Inclusion criteria: initial MDS claim (ICD-9-CM 238.72-238.75) between 2/1/2007 and 7/31/2008 and continuously enrolled for 6 months before and 12 months after the index MDS claim.
- Exclusion criteria: treatment with HMAs or TAs.
- Patients were stratified into two age groups: <50 and ≥50
- Comorbidity variables and utilization/costs were calculated in the pre- and postindex period, respectively.



Results

Patient Identification

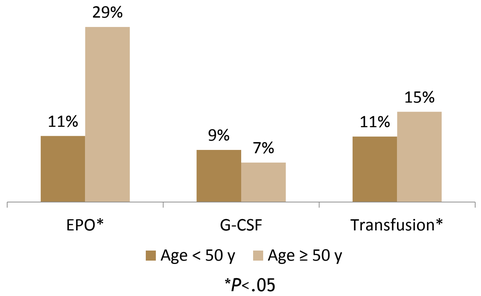


- Of 1,133 patients, 221 (19.5%) were <50 and 912 (80.5%) were ≥50.
- Women made up 62.0% of the <50 group and 52.5% of the ≥50 group (*P* = 0.011)
- Charlson comorbidity index was 1.2 in <50 group vs. 2.4 in ≥50 group (*P*<.001)
- 51.1% of those <50 had bone marrow biopsy vs. 45.3% of those ≥50 (*P* = 0.118)

Annual Healthcare Utilization and Charges in the Year After MDS Diagnosis, by Age <50 or ≥ 50 Years

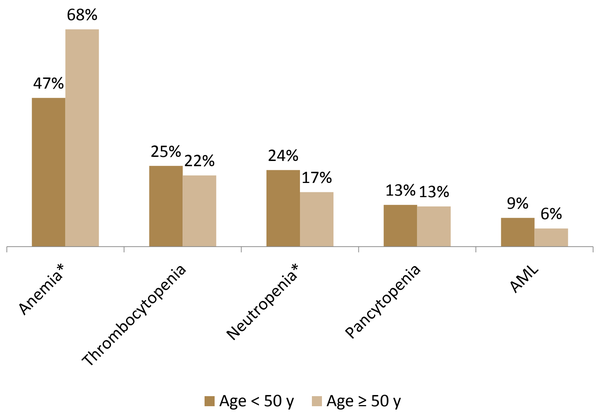
	All N = 1,133	Age <50 n = 221	Age ≥50 n = 912	*P* value
Office visits, mean (SD)	22.9 (16.6)	17.5 (16.9)	24.2 (16.3)	<.001
Hospitalizations, no. (%)				0.004
0	655 (57.8)	150 (67.9)	505 (55.4)	
1	225 (19.9)	37 (16.7)	188 (20.6)	
2	116 (10.2)	12 (5.4)	104 (11.4)	
3+	137 (12.1)	22 (10.0)	115 (12.6)	
Total charges, $	86,477	96,277	84,102	0.473
Non-Rx charges	81,113	91,435	78,612	0.443
Rx charges	5,363	4,841	5,490	0.311

Proportion Receiving Selected Treatments in the Year After MDS Diagnosis, by Age <50 or ≥50 Years



*P<.05

Proportion with Selected Hematologic Outcomes in the Year After MDS Diagnosis, by Age <50 or ≥50 Years



*P<.05

Conclusions

- Although MDS is usually considered a disease of the elderly, 19.5% of patients in this commercial plan population were <50 years old.
- Most patients received supportive care only.
- Only half of patients were diagnosed using bone marrow biopsy, despite guidelines recommending its use.[4]
- Hospitalizations were common and healthcare costs were high even in the <50 years population, which had a relatively low burden of comorbidities (as measured by Charlson index).
- There were no statistically significant differences in healthcare charges by age, although the small sample size limited our ability to detect differences.
- Anemia was more common in patients ≥50 than <50 years, as was the use of EPO and blood transfusion, and these differences were statistically significant.
- Further studies of the characteristics of patients with early-onset MDS are warranted.

Limitations

- Our study included patients with commercial insurance; different populations may have different outcomes.
- Healthcare claims are collected for billing purposes and lack detail on clinical factors (e.g., disease severity).
- Retrospective studies cannot establish causal relationships.

References

1. Germing Haematologica 2004
2. Kuendgen J Clin Oncol 2006
3. Cutler Blood 2004
4. NCCN Myelodysplastic Syndromes v2.2011

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