

# Healthcare costs and utilization of insured patients with myelodysplastic syndrome

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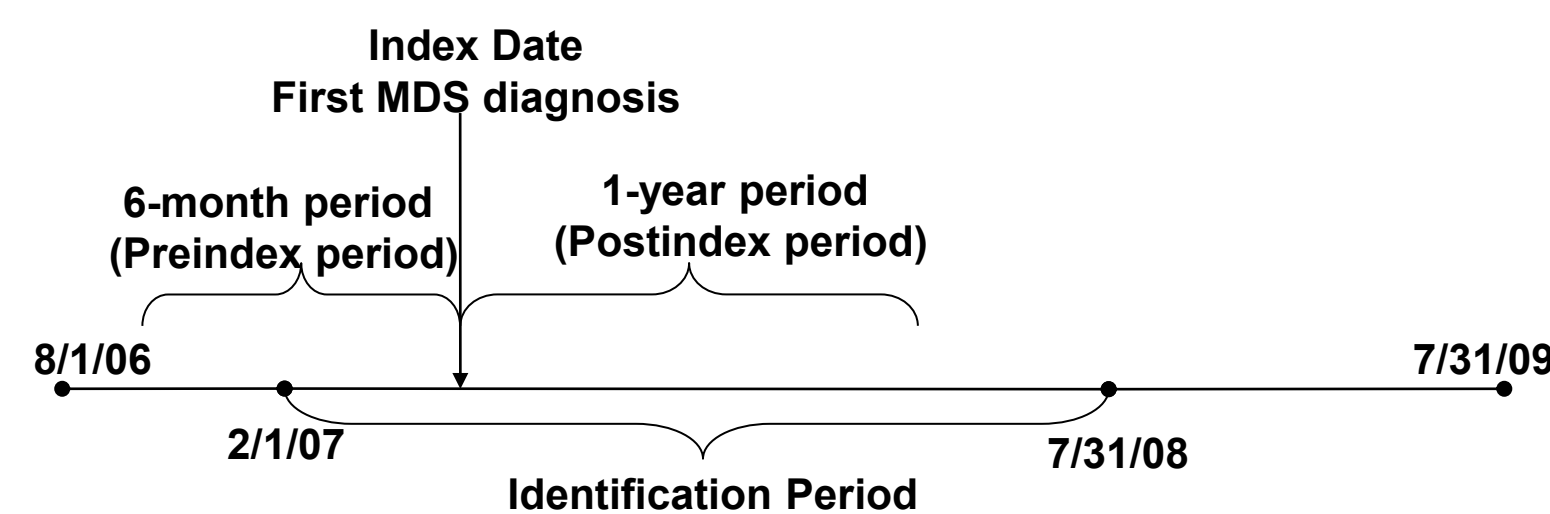
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## Background

- Myelodysplastic syndrome (MDS) affects about 1 in 10,000 individuals in the US each year and is largely a disease of the elderly. Survival ranges from 3 months to 6 years.<sup>1</sup>
- Hypomethylating agents (HMAs) and thalidomide analogues (TAs) are FDA approved to treat MDS.
- Many patients with MDS are not treated with disease-modifying therapies.
- This analysis describes the healthcare services utilized and the cost of these services among commercially insured patients ≥65 years old and newly diagnosed with MDS.

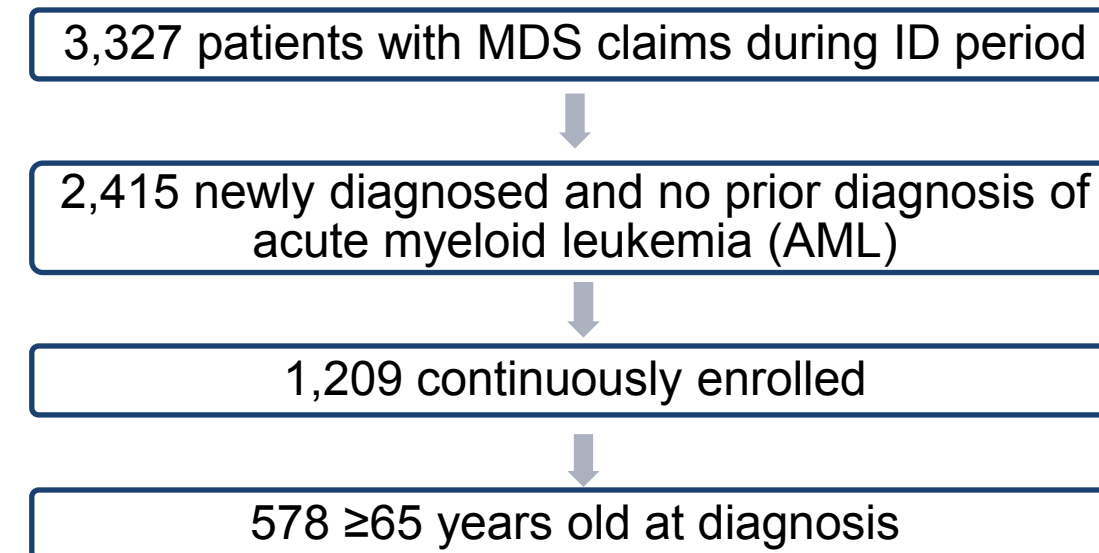
## Methods

- This was a descriptive cohort study using de-identified and HIPAA-compliant medical and pharmacy claims from a large US insurer.
- The study included patients who were ≥65 years old, who had a new MDS claim (ICD-9-CM 238.72-238.75) between 2/1/2007 and 7/31/2008, and who were continuously enrolled for 6 months before and 12 months after the index MDS claim.
- Complications, healthcare utilization, and costs were measured postindex.
- Claims-based definitions of complications were adapted from a published study.<sup>2</sup>
- Time frame and patient identification are shown below:



## Results

### Patient Identification

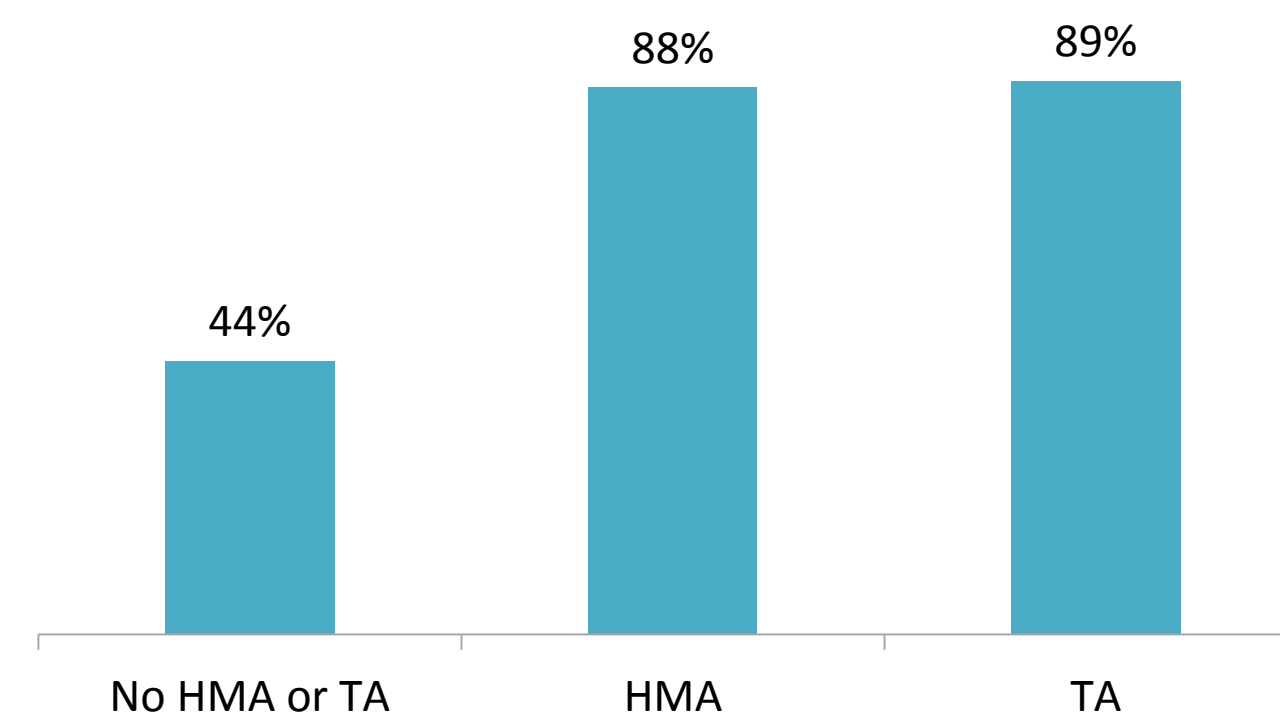


- Among 578 identified patients, 40% (n = 231) were 65-74 years old, 47% (n = 274) were 75-84, and 13% (n = 73) were ≥85.
- 44% of identified patients (n = 256) were female.
- Overall, 48% (n = 275) had a bone marrow biopsy.

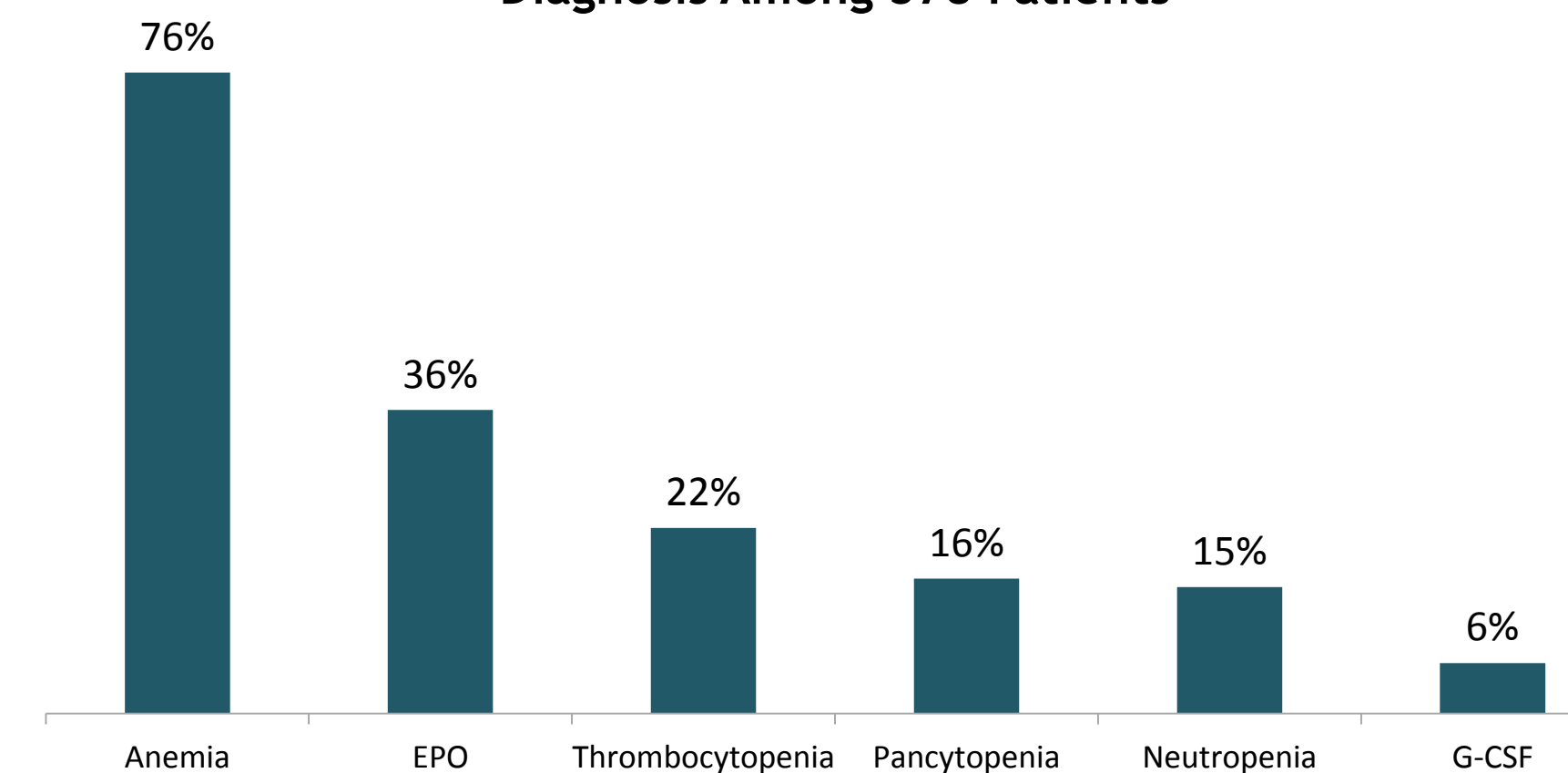
### Type of Treatment in the Year after MDS Diagnosis (N = 578)

No HMA or TA, no. (%)	536 (92.7)
HMA, no. (%)	33 (5.7)
TA, no. (%)	9 (1.6)

### Proportion of MDS Patients who had a Bone Marrow Biopsy, by Treatment



### Complications and Medication Use in the Year After MDS Diagnosis Among 578 Patients



### Health Service Use and Charges in the Year After MDS Diagnosis (N = 578)

Office visits, mean (SD)	27.6 (19.7)
No. of hospitalizations, no. (%)	
0	282 (48.8)
1	130 (22.5)
2	66 (11.4)
3+	100 (17.3)
Total healthcare charges, mean (SD), \$	84,628 (115,028)
Non-Rx charges	78,805 (112,643)
Rx charges	5,823 (10,754)

## Conclusions

- Although MDS is relatively rare, complications among patients diagnosed with the condition were common.
- Most patients with MDS were hospitalized at least once in the year after diagnosis and had office visits on a biweekly basis, leading to healthcare charges of almost \$85,000 annually.
- HMAs improve clinical outcomes and are recommended in the National Comprehensive Cancer Network treatment guidelines, yet only 7% of patients ≥65 years old with MDS were treated with a HMA or TA in the first year after diagnosis.<sup>3,4</sup>
- Bone marrow biopsy is recommended to determine whether to begin treatment for MDS.<sup>3</sup> Despite this, a biopsy was performed on only 48% of patients.
- Future studies should examine whether greater use of bone marrow biopsy influences treatment of MDS and results in better clinical or economic outcomes.

## Limitations

- A commercially insured population may not be representative of the entire US population.
- Claims do not include the clinical or cytogenetic data needed to group patients by risk of adverse outcomes.
- Miscoding of claims may affect interpretation.

## References

- Goldberg J Clin Oncol 2010
- De Roos Am J Hematol 2010
- NCCN Myelodysplastic Syndromes v2.2011
- Kantarjian Cancer 2006

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