Systemic mastocytosis (SM) is a rare hematologic disorder driven by the KIT D816V mutation in which mast cells accumulate in tissues or organs. The majority of patients with SM have non-advanced stage disease, which includes indolent SM (ISM). With no approved therapies, treatment is focused on symptom management.

To date, the economic burden of ISM has not been well-studied among Medicare patients. This retrospective study compared direct healthcare resource utilization and costs of Medicare fee for service beneficiaries with ISM and a matched cohort without SM.

**Introduction & Objective**

- Systemic mastocytosis (SM) is a rare hematologic disorder driven by the KIT D816V mutation in which mast cells accumulate in tissues or organs. The majority of patients with SM have non-advanced stage disease, which includes indolent SM (ISM).
- With no approved therapies, treatment is focused on symptom management.

**Methods**

This study used Centers for Medicare and Medicaid Services-issued 100% Medicare Fee for Service (FFS) claims data to identify newly diagnosed SM patients who had ≥2 medical claims for SM (ICD-10-CM codes: D47.02, C94.30, C94.31, C94.32, or C96.21) between 1/1/2017 and 12/31/2018. ISM patients were also direct matched (1:1) on age, sex, race, year of index, Medicare-Medicaid dual eligibility, and use of age- and comorbidity score in the cohort matching process. The index date was the date of first observed SM diagnosis. Continuous enrolment in Medicare Parts A and B for 12 months pre- and post-index was required.

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**Limitations**

- Medicare beneficiaries with SM were identified beginning January 1, 2017, but the ICD-10 diagnosis code for SM (D47.02) did not go into effect until October 1, 2017.
- Although we limited the ISM cohort to those with no evidence of SM in the 12-month pre-index period, patients may have been originally diagnosed outside of the observation period. Complete medical history was not available. Identification of patients may contribute to underenrollment of SM patients in the study sample. Future research may consider using a refined patient identification algorithm to identify patients who likely have ISM but are not yet diagnosed and to delineate between patients with ISM and smoldering SM.
- Use of age and comorbidity score in the cohort matching process resulted in a larger proportion of ISM and non-SM patients who qualified for Medicare due to pre-existing disability rather than age (as compared to the full Medicare population). The matching process did not fully account for the reason for disability and other comorbid factors which may underrate the true difference in HCUP and costs between ISM and non-SM patients.
- Results from this study may not be generalizable to populations who have less access to the US health care system and/or who are uninsured.

- This study cannot be used to determine cause and effect; claims data only capture those disease entities and variables that have their own specific billing codes. As such, temporality cannot be truly established with the use of claim data.

**Conclusions**

- Compared to a matched cohort of non-SM FFS Medicare patients, ISM Medicare patients had 26% higher mean per patient total healthcare expenditures ($21,096 vs. $16,731), driven by higher utilization of outpatient resources, specifically visits to oncologists/hematologists and allergists/immunologists, and prescription medications.
- Further research to understand the basis of the higher proportion of ISM patient in this analysis who were >65 years and qualified for Medicare with a disability (vs. 14% in all of Medicare), and the corresponding long-term medical costs among these patients is warranted.

**References**