

The Graduate School of Biomedical Sciences

Clinical & Population Health Research Program

Announces the PhD Thesis Defense of

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**The Role of a Monoclonal Gammopathy of Undetermined Significance Diagnosis in Healthcare Utilization**

Thursday, May 13, 2021 at 11 a.m. via Zoom Meeting

Background: Monoclonal Gammopathy of Undetermined Significance (MGUS) is an understudied precursor of multiple myeloma (MM), the second most prevalent hematologic malignancy in the United States. This dissertation was designed to: (1) Describe the trajectories of serum biomarkers over time in patients with an MGUS diagnosis, (2) Determine if an MGUS diagnosis is associated with changes in healthcare service utilization, and (3) explore the patient- and provider-level drivers of healthcare utilization in patients with MGUS.

Methods: Data sources include health claims and electronic health records from a community-based population of patients seeking care in central Massachusetts and primary qualitative data collected from providers and patients’ interviews. The analyses included descriptive statistics, group-based trajectory modeling, conditional Poisson regression, and qualitative data analyses.

Results: (1) Three distinct multi-trajectory groups of creatinine and hemoglobin were identified. (2) The rates of emergency room, hospital, and outpatient visits were higher for patients with MGUS than patients without MGUS. (3) Patients have a basic understanding of MGUS, however, some patients feel anxiety, which may affect other aspects of their lives. Patients primarily see hematologists for follow-up care; other providers have less knowledge about MGUS.

Conclusions: Biomarker trajectories characterize specific subpopulations of patients with MGUS over time. We found that an MGUS diagnosis is associated with higher healthcare utilization, especially during the months surrounding the diagnosis date. Finally, our study suggests that some patients with MGUS may need psychosocial support services and identifies a gap in knowledge around caring for MGUS patients among primary care providers.

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