

## Introduction

- Pemphigus poses challenges in healthcare delivery.
- Previous cross-sectional studies of hospitalized pemphigus patients in the United States have demonstrated that Latino ethnicity, lower socioeconomic status, and high comorbidity burden are significantly associated with hospital admission (1).
- Differences in clinical outcomes and therapeutic management amongst pemphigus patients remain largely unexplored.

## Purpose

The purpose of this study is to compare demographics, insurance status, disease severity, and hospitalization rates in Latino versus Caucasian, non-Hispanic/Latino pemphigus patients seen at Duke University Hospitals 2012-2021.

## Methods

- Demographic and clinical data were collected retrospectively from electronic medical records of pemphigus patients seen at Duke Dermatology between 2012 and 2021.
- Insurance status was determined based on documented coverage, including Medicaid, Medicare, private insurance, or uninsured status.
- Disease severity was assessed using physician-graded criteria, categorizing patients as having severe disease based on predefined clinical indicators.
- Hospitalization rates were determined by reviewing records of emergency department visits and admissions related to pemphigus disease flares.
- Odds ratios were calculated using Caucasian, non-Hispanic/Latino patients as the reference group for comparison.

## References

1. Hsu DY, Brieva J, Sinha AA, Langan SM, Silverberg JI. Comorbidities and inpatient mortality for pemphigus in the U.S.A. *British Journal of Dermatology*. 2016;174(6):1290-1298. doi:10.1111/bjd.14463
2. Charlson, M., Szatrowski, T. P., Peterson, J., & Gold, J. (1994). Validation of a combined comorbidity index. *Journal of clinical epidemiology*, 47(11), 1245–1251. [https://doi.org/10.1016/0895-4356\(94\)90129-5](https://doi.org/10.1016/0895-4356(94)90129-5)

## Tables

**Table 1. Demographic data for Latino vs Caucasian patients**

Variable	Latino Patients (Number (%)) N=10	*Caucasian Patients (Number (%)) N=54
<b>Age</b>		
18-40	4 (40.0)	3 (5.6)
41+	6 (60.0)	51 (44.4)
<b>Sex</b>		
Male	7 (70.0)	28 (51.9)
Female	3 (30.0)	26 (48.1)
<b>Pemphigus Type</b>		
Pemphigus Vulgaris	7 (70.0)	37 (68.2)
Pemphigus Foliaceus	3 (30.0)	10 (18.5)
Pemphigus Paraneoplastic	0 (0)	2 (3.8)
IgA Pemphigus	1 (2.9)	1 (1.9)
Pemphigus Vegetates	0 (0)	1 (1.9)
Pemphigus Herpetiformis	0 (0)	1 (1.9)
Pemphigus Unspecified	1 (2.9)	2 (3.8)
Drug-Induced Pemphigus	1 (2.9)	0 (0)
<b>Insurance</b>		
Medicaid	0 (0)	0 (0)
Medicare	5 (50.0)	25 (46.3)
Private	2 (20.0)	25 (46.3)
Underinsured*	3 (30.0)	4 (7.4)

\*Caucasian specifically refers to Caucasian, non-Hispanic/Latino patients

**Table 2. Clinical outcomes in Latino vs Caucasian patients**

Variable	Latino Patients (Number (%)) N=10	*Caucasian Patients (Number (%)) N=54
<b>Charlson Comorbidity Index<sup>5</sup></b>		
0	6 (60.0)	41 (75.9)
1-2	1 (10.0)	5 (9.3)
3+	3 (30.0)	8 (14.8)
<b>Physician-graded Assessment<sup>†</sup></b>		
Clear to Almost Clear	1 (10.0)	12 (27.9)
Mild to Moderate	4 (40.0)	20 (46.5)
Moderate to Severe	1 (10.0)	6 (14.0)
Severe	4 (40.0)	5 (11.6)
<b>Medications</b>		
Topical Steroids Only	0 (0)	11 (20.4)
Oral Prednisone < 10mg Daily or NSAIDs**	1 (10.0)	8 (14.8)
Oral Prednisone ≥ 10mg Daily, Conventional Steroid-Sparing Agents ***	8 (80.0)	27 (50.0)
Rituximab, Other Biologics	1 (10.0)	8 (14.8)
<b>ED Visit</b>		
Yes	6 (17.1)	0 (0)
No	29 (82.9)	54 (100)
<b>Hospital Admission</b>		
Yes	4 (40.0)	1 (1.9)
No	6 (60.0)	53 (98.1)

All data from initial clinical visit with Duke Dermatology. Medications refer to any medications prescribed to patients during initial clinic visit. \*Caucasian specifically refers to Caucasian, non-Hispanic/Latino patients. \*\*Oral non-steroidal anti-inflammatories includes doxycycline, and dapsone. \*\*\*Conventional steroid-sparing agents includes azathioprine, mycophenolate, methotrexate, cyclosporine, and cyclophosphamide. †Physician-graded assessment (PGA) percentages are based on total number of patients who had a documented PGA (n=43 for Caucasian patients).

## Results

- A total of 10 Latino patients and 54 Caucasian, non-Hispanic/Latino patients were diagnosed with pemphigus as their primary condition.
- 80% of Latino patients had Medicaid, Medicare, or no insurance, compared to 53.7% of Caucasian, non-Hispanic/Latino patients.
- 40% of Latino patients versus 11.6% of Caucasian, non-Hispanic/Latino patients were graded as having severe disease
- 30% of Latino patients had a CCI of 3 or greater compared to only 14.8% of Caucasian, non-Hispanic/Latino patients, indicating a ten-year mortality relative risk of 4.2 compared to those with a CCI of zero<sup>2</sup>.
- 40% of Latino patients visited the emergency department (ED) for pemphigus flares, compared to 0% for Caucasian, non-Hispanic/Latino patients. OR= 75.5.
- 40% of Latino patients were admitted to the hospital for pemphigus flares, compared to 1.9% for Caucasian, non-Hispanic/Latino patients. OR= 35.3.

## Discussion

- A higher proportion of Latino patients in our study were underinsured compared to Caucasian, non-Hispanic/Latino patients.
- Physician-graded disease severity and comorbidity burden as indicated by the Charlson Comorbidity Index (CCI) are both higher for Latino patients as compared to Caucasian, non-Hispanic/Latino patients.
- Disease severity and comorbidity burden are associated with higher rates of hospitalization for pemphigus patients in the U.S. (1).
- Latino patients exhibit elevated rates of emergency department visits and hospitalizations for disease flares.
- Odds ratios emphasize the heightened risk of ED visits and hospitalizations for Latino pemphigus patients.
- The small sample size of Latino patients is a **limitation** that may introduce bias, limiting the generalizability of the findings.
- **Future research** should explore targeted interventions to improve disease outcomes and mitigate healthcare disparities among pemphigus patients, particularly those from high-risk ethnic and racial backgrounds.

# Disclosures

- Anne Marano, M.D.
  - Consultant for Immunovant, Inc.
  - Principal Investigator of clinical trials for Bristol Myers Squibb and Biogen
- No other authors have any disclosures