

# Patient Characteristics and Social Determinants of Health in a Large Real-World Cohort of Vitiligo Patients in the U.S.



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## Background

- Vitiligo, an autoimmune dermatologic condition characterized by the selective loss of melanocytes and pigment dilution, typically in the face and acral regions, can have a substantial impact on quality of life.
- Males and females are equally affected, although women (and girls) typically seek care more frequently, possibly due to the potentially greater social impact (Bergqvist, 2020)
- A recent cross-sectional study including patient self-report, suggests that approximately 40% of adult vitiligo in the US may be undiagnosed / not managed by dermatologists (Gandhi, 2022)
- With the introduction of novel therapies to treat vitiligo, a better understanding of patients and their management is needed.

## Objective

- To characterize a representative population of patients managed by dermatologists for vitiligo in the U.S.
- To explore differences in age, sex, and treatment in patients, by race

## Methods

- Data were derived from the OM1 Dermatology Network (OM1, Inc; Boston, MA), a multi-source real-world data (RWD) network with deterministically-linked healthcare claims, patient-level social determinants of health (SDoH), and electronic medical records data for U.S. patients managed by dermatologists.
- Index date was set by the first encounter with a vitiligo diagnosis code during the study period (01/2013 - 07/2022).
- Patient demographics, education, credit risk score and household income were assessed at index. Obesity was determined by BMI
- Major depressive disorder (MDD) and generalized anxiety disorder (GAD) were defined by the presence of at least 2 outpatient diagnosis codes  $\geq 30$  days apart or one inpatient diagnosis code
- Medications were identified by prescriptions, administrations and/or fills and procedures by procedure codes.

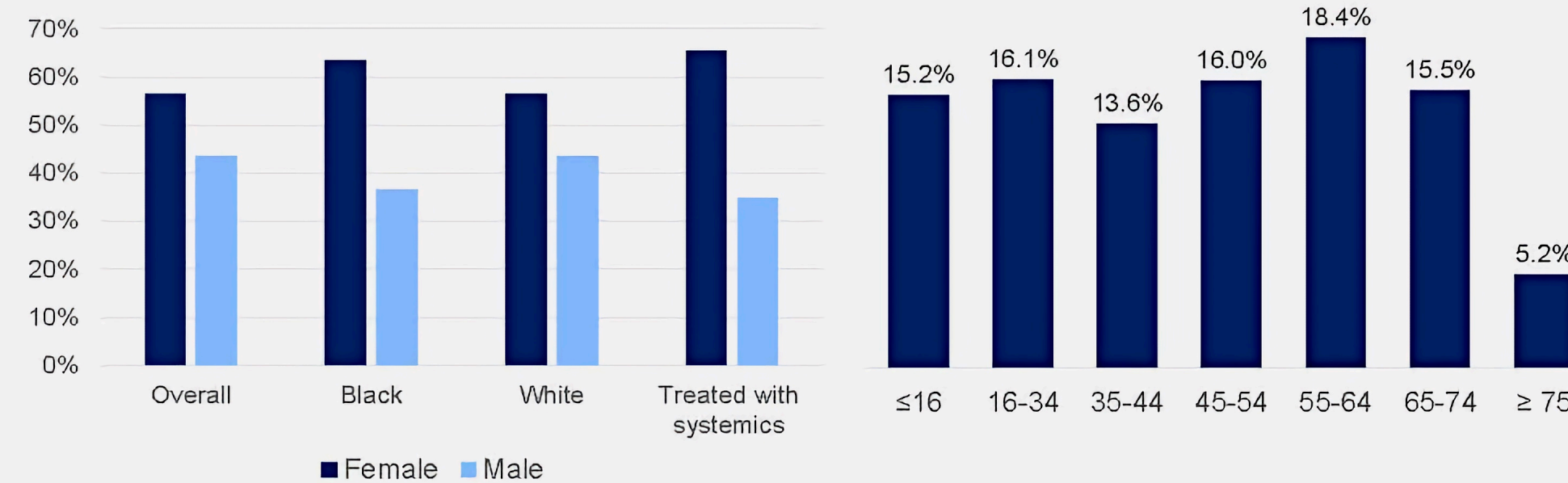


Figure 1. Patient Sex

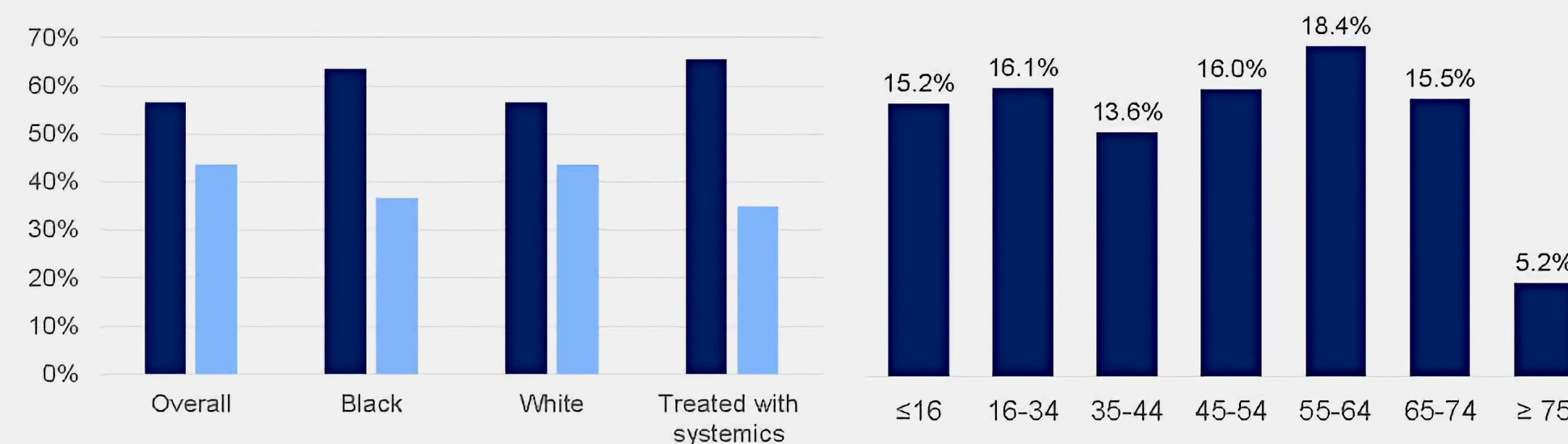


Figure 2. Patient Age (overall) at Start of Follow-up

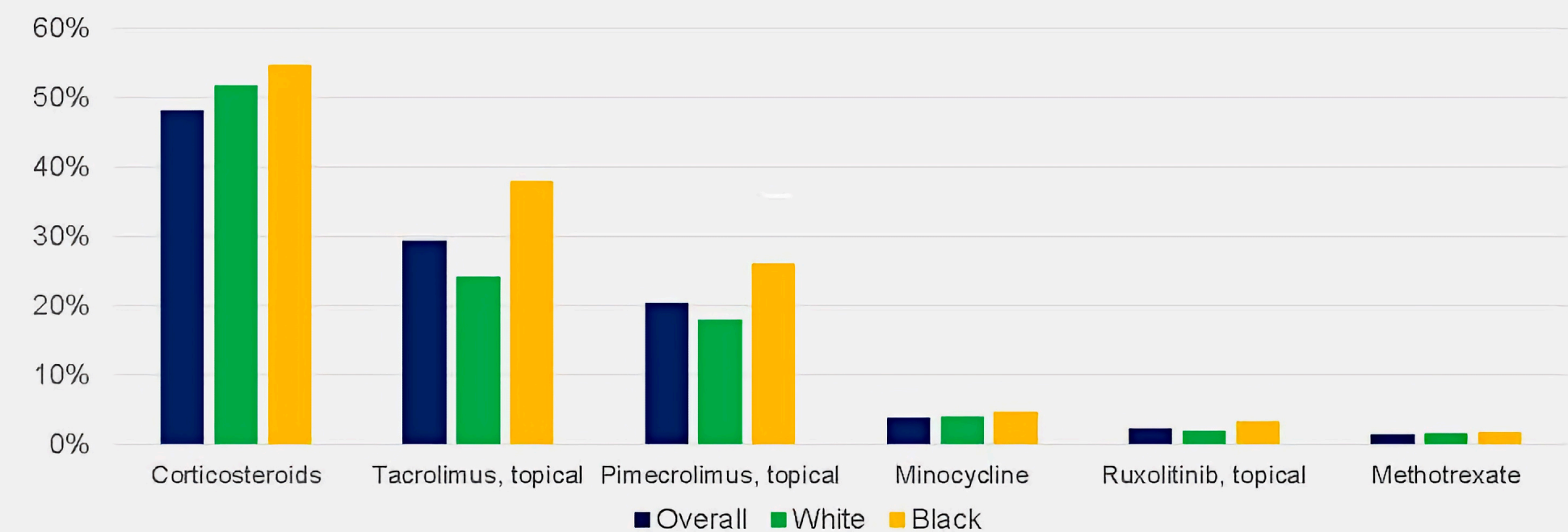


Figure 3. Proportion of Patients on Select Medications, by race

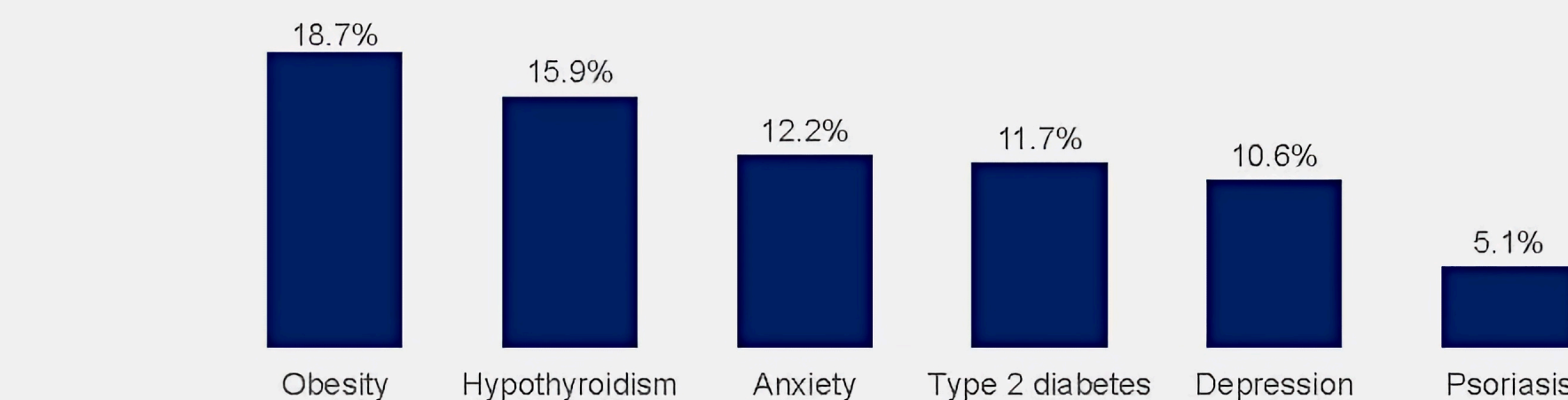


Figure 4. Select Comorbidities (Overall cohort)

## Results

- The study included 26,016 patients, 12,859 (49%) of whom had linked SDoH
- The proportion of female and male patients was 56% and 44%, respectively. A higher proportion of black patients were female (63%), compared to white patients (56%). (Figure 1). In addition, a higher proportion of patients treated with non-corticosteroid systemics were female (65%).
- Mean age at start of follow-up was 50.1 years [standard deviation (SD) 21.4] (Figure 2), which was similar amongst black and white patients [49.6 (16.5) versus 51.1 (18.2) years, respectively]
- Of the 77% of patients with race available, the breakdown was 78% white, 11% black, 6% asian and 5% other.
- Most common treatments were corticosteroids (48%), topical tacrolimus (29%), topical pimecrolimus (21%), UVB phototherapy (17%), excimer laser (10%), minocycline (4%) and topical ruxolitinib (2%) (Figure 3).
- Proportion of patients with diagnosed with any depression and/or anxiety were 10.6% and 12.2%, with 5.1% and 9.1% specifically diagnosed with major depressive disorder (MDD) and generalized anxiety disorder (GAD), respectively.
- Diagnosed depression was similar in white and black patients (12.0%); a higher proportion of white patients had diagnosed anxiety (14.0% vs. 11.7% black)
- Proportion of patients with diagnosed depression (18.8%) and anxiety (17.9%) was higher in patients treated with systemic therapies other than corticosteroids [defined as methotrexate, azathioprine, mycophenolate mofetil, cyclosporine, janus kinase inhibitors (JAKi), N=655], compared to patients overall
- Amongst the patients with SDoH data available, the proportion of patients with some higher education (i.e., post-high school) was slightly higher in white patients (67% vs. 57% black) and male patients had a higher median income and credit risk scores compared to female patients (data not shown).

## Conclusions

- As there is greater appreciation of vitiligo as more than a cosmetic concern, and new approaches to treatment emerge, understanding the unmet need of patients across demographic and socio-economic strata will be required
- Psychological comorbidity burden in vitiligo patients is substantial which may have implications for successful management. Differences in depression by race was not observed.

## References

- Bergqvist C, Ezzedine K. Vitiligo: A Review. *Dermatology* 2020;236:571-592.
- Gandhi K, Ezzedine K, Anastassopoulos K et al. Prevalence of Vitiligo Among Adults in the United States. *JAMA Dermatol.* 2022 Jan 1;158(1):43-50.