

Prevalence, Burden of Disease, and Treatment Patterns of Vitiligo Across European Countries

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Introduction

- Vitiligo is a chronic autoimmune skin disease that results in patches of skin depigmentation¹; there are limited studies in European countries on disease burden of patients and the healthcare system²
- This study summarizes recent European real-world data collection quantifying the prevalence, impact, and treatment of patients diagnosed with vitiligo





Objectives

- To assess the prevalence, burden of disease, and treatment patterns of vitiligo in patients across 3 European Countries

Methods

- We analysed results of 3 retrospective studies (varying study periods; 2010–2021) using electronic medical records (Spain, the United Kingdom [UK]) and claims data (Italy), and 1 epidemiologic study (Italy) in patients with vitiligo (**Table 1**)
- Incidence and prevalence were calculated annually for UK and Spain; Italian prevalence was estimated using an epidemiologic model
- Each study described patient demographics, clinical characteristics, comorbidities (including mental health disorders), and treatments
 - Vitiligo-related treatments were defined as topical corticosteroids, topical calcineurin inhibitors (eg, tacrolimus), oral steroids, and light/laser procedures

Table 1. Overview of the Studies, Sources, and Variables

	RWD UK 	RWD Spain 	RWD Italy 	Epi model Italy 
Data sources	CPRD Aurum EMR linked to HES	IQVIA LPD, EMR	ReS administrative database	Scientific publication, survey, and expert interviews
Coverage	National	National	National	National
	13,400,000	1,200,000	5,300,970	Estimate for the Italian population
	Representative of English population (ie, 19.9% of current UK population)	Represents ~3% of the Spanish population (from three regions)	Represents ~9% of the Italian population	Representative of Italian population using an epidemiologic model
Number of patients with vitiligo included	17,239 incident patients 66,217 prevalent patients	1400 incident patients 2286 prevalent patients	202 incident patients 2947 prevalent patients	–
Time period	2010–2019/2021 (incident/prevalent patients)	2015–2021	2014–2018	Lifetime prevalence
Target group	+12 years	+0 years	+0 years	+0 years
Demographics	✓ Age, gender, ethnicity, BMI, IMD	✓ Age, gender, BMI	✓ Age, gender	✓ Age, gender
Comorbidities	✓ Yes	✓ Yes	✓ Yes	–
Treatments	✓ Yes (including light/laser, antidepressants)	✓ Yes (vitiligo-related treatments, antidepressants)	✓ Yes (vitiligo-related treatments, antidepressants)	–
HCRU	✓ Hospitalization (vitiligo), outpatient contacts, GP contacts (vitiligo)	✓ GPs, dermatologist contacts (vitiligo), costs associated to treatments	✓ Hospitalization, pharmaceuticals, and specialist outpatient services	–

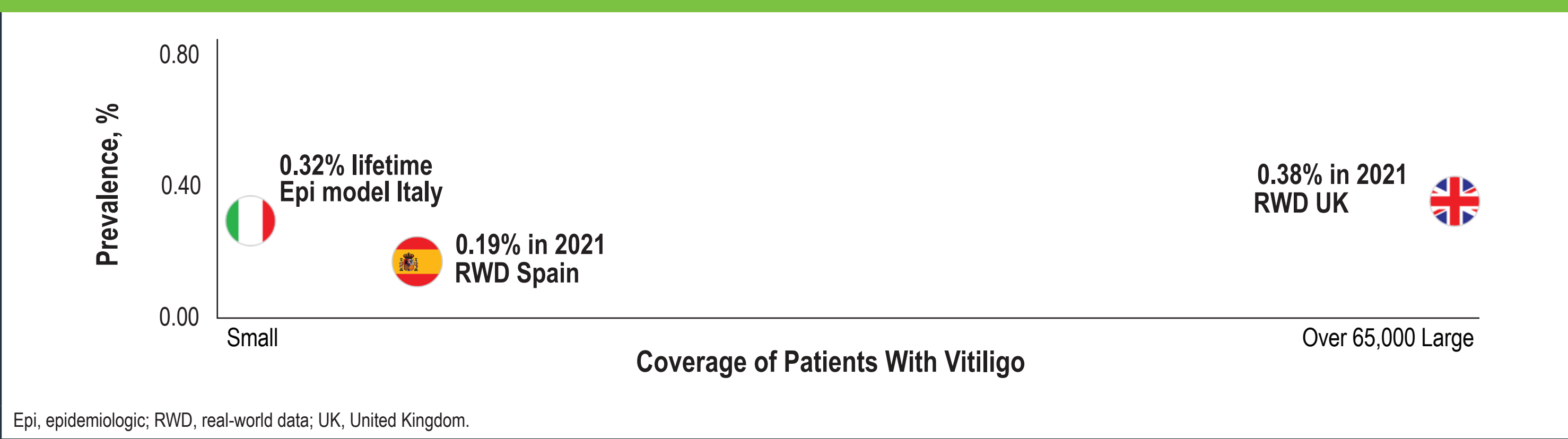
BMI, body mass index; CPRD, Clinical Practice Research Datalink; EMR, electronic medical records; Epi, epidemiologic; ES, Spain; GP, general practitioner; HCRU, healthcare resource utilization; HES, Hospital Episode Statistics; IMD, Index of Multiple Deprivation; IT, Italy; LPD, Longitudinal Patient Data; ReS, Ricerca e Salute (Research and Health Foundation); RWD, real-world data; UK, United Kingdom.

Results

Prevalence

- Real-world data studies included a total of 71,591 prevalent and 18,841 incident patients diagnosed with vitiligo in the UK, Spain, and Italy between 2010–2021
- Annual prevalence in 2021 varied geographically, with 0.19% in Spain and 0.38% in the UK, and lifetime prevalence of 0.32% in Italy (**Figure 1**)
- Among incident patients, mean age varied between 40.7 years in Spain and 52.0 years in Italy; the majority were female (range, 52.2%–53.9% in the UK and Spain, respectively)

Figure 1. Mapping of Average Vitiligo Prevalence



Comorbidities

- The most common comorbidities among patients with vitiligo were eczema/atopic dermatitis (Spain, 20.8%; UK, 8.9%), followed by diabetes (UK, 19.4%; Italy, 8.4%; Spain, 6.4%) and thyroid disease (Italy, 13.0%; Spain, 9.1%; UK, 7.5%; **Figure 2**)
- The most common mental health disorders were depression (UK, 18.5%; Spain, 2.6%) and anxiety (UK, 16.0%; Spain, 10.9%; **Figure 3**)

Figure 2. Common Comorbidities Among Patients With Vitiligo*

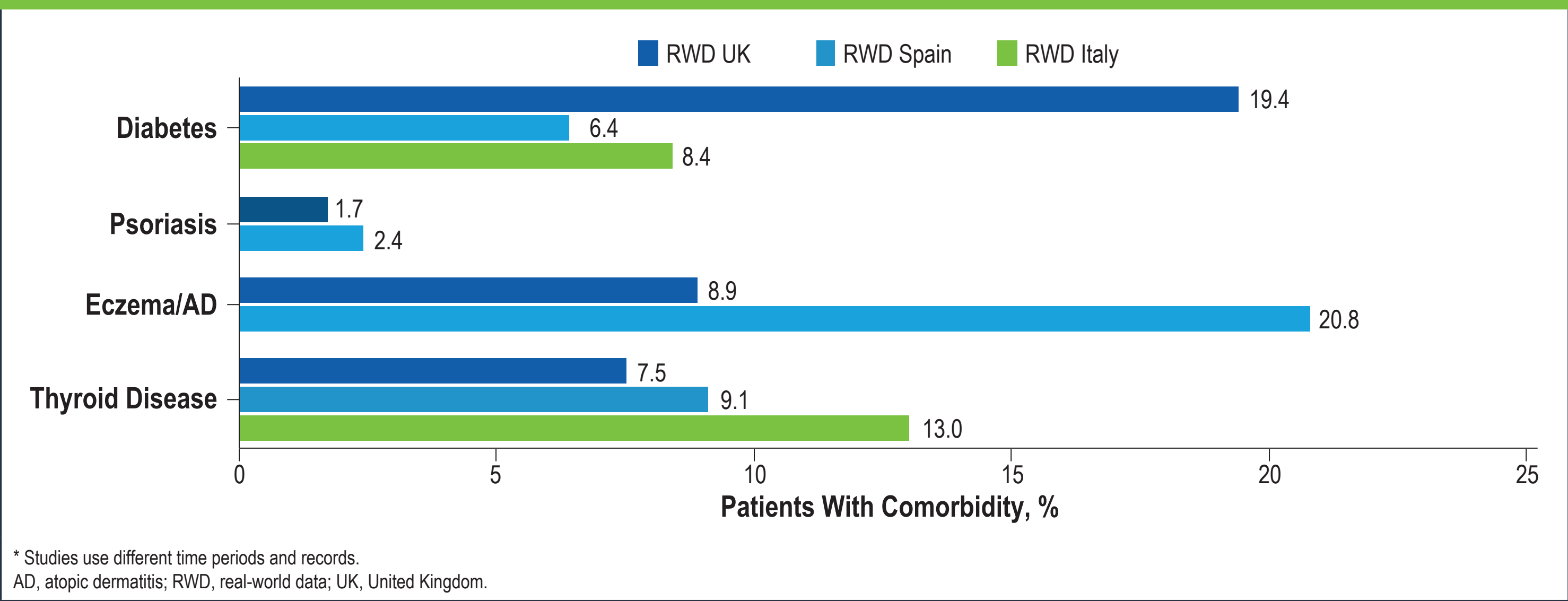
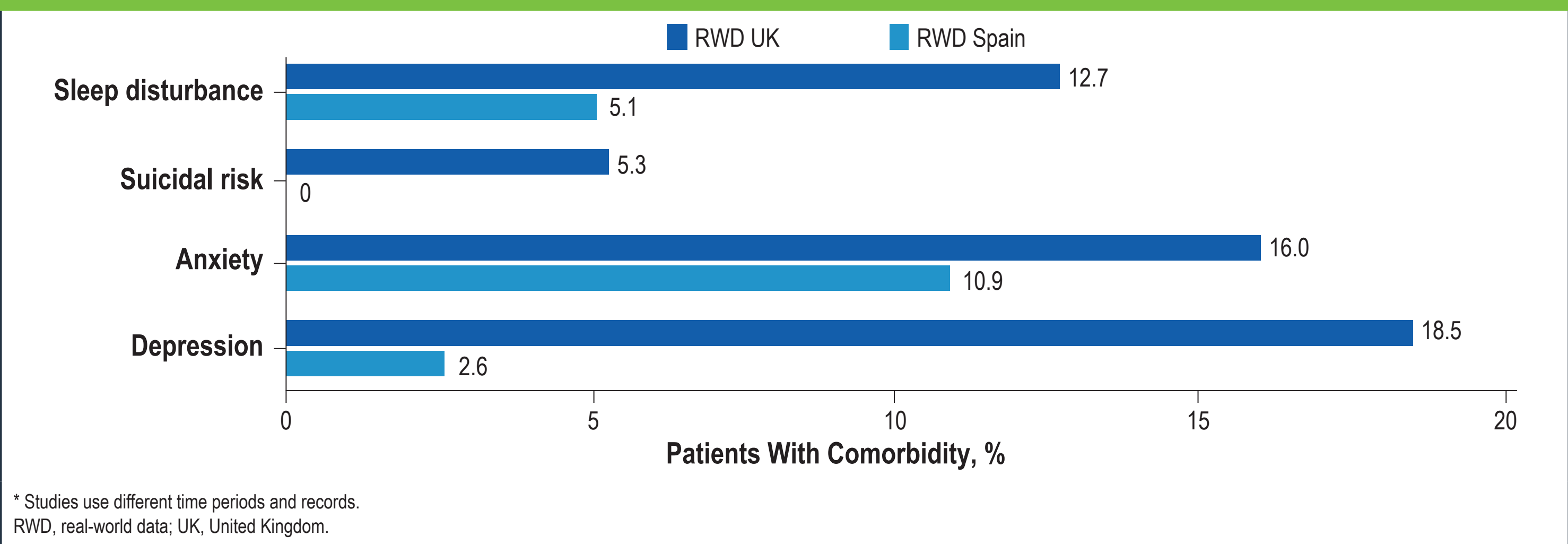


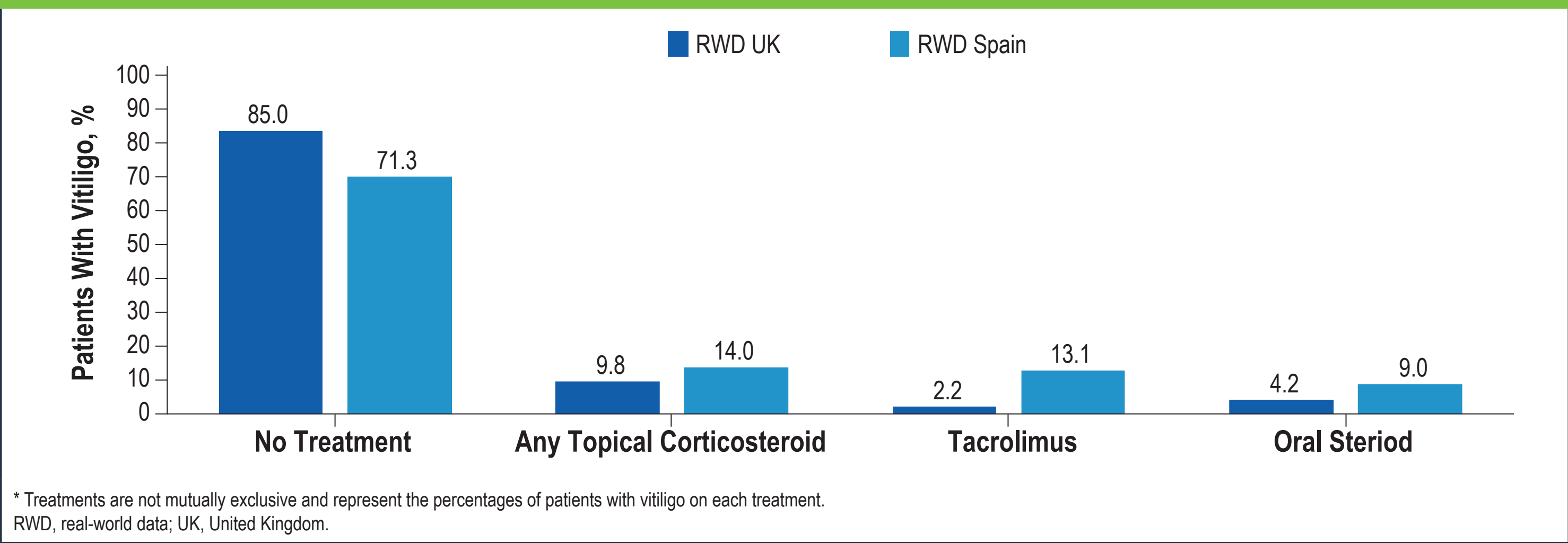
Figure 3. Common Mental Health Disorders Among Patients With Vitiligo*



Treatment

- In 2019, between 71.3% (Spain) and 85.0% (UK) of prevalent patients were not on any vitiligo-related treatment (**Figure 4**)
- The most prescribed vitiligo-related treatments were the topical calcineurin inhibitor tacrolimus and topical corticosteroids

Figure 4. Treatment Use* Among Prevalent Patients in 2019



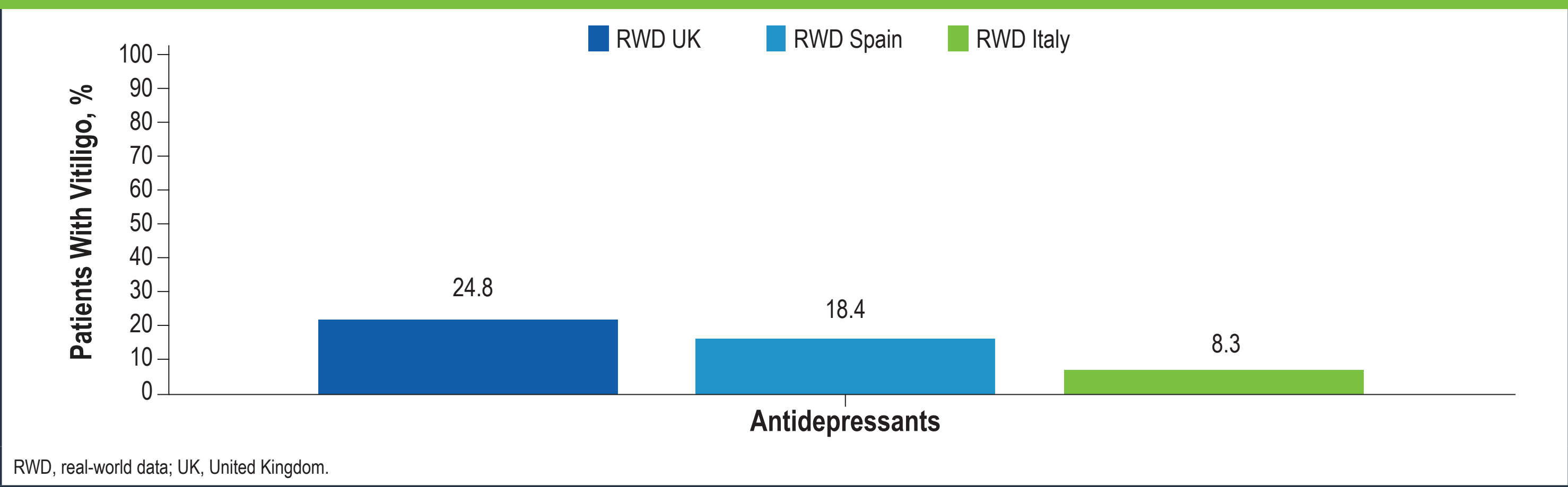
Treatment Patterns

- In the first year after diagnosis in the UK, 10,177/16,741 (60.8%) of incident patients did not receive any vitiligo-related treatments, which increased to ≥82.0% from the second year onwards
 - 8679/16,741 (51.8%) received ≥1 vitiligo-related treatment during follow-up
 - The median time from diagnosis to the start of first vitiligo-related treatment was 34.0 months (95% CI, 31.6–36.4 months)

Mental Health Treatment

- The most common mental health treatments used were antidepressants; use ranged between 8.3% (Italy) and 24.8% (UK; **Figure 5**)

Figure 5. Mental Health Treatment Use in Prevalent Patients Over Time



Discussion

- In these 3 retrospective studies, prevalence estimates for diagnosed vitiligo were in the lower range of previous European estimates, which vary with country and methodologic differences (0.2%–0.8%); however, they do align with recent studies using German claims data (0.2% in 2020) and a UK population-based study from the Optimum Patient Care Research Database (0.3% in 2020)^{3–8}
- Evidence suggests that while there is an awareness of vitiligo in the population and among health professionals, there is limited awareness of the real-world psychosocial impact of vitiligo on patients and its burden on healthcare systems
- Mental health disorders in both Spain and the UK are aligned with other published data, notably sleep disturbance and suicidal risk^{9,10}
- The median time to the first vitiligo-related treatment after diagnosis was nearly 3 years (34 months), despite recommendations for early treatment ensuring better outcomes¹¹
- Current treatment patterns reveal that many patients are not on vitiligo-related therapy, which could indicate an unmet medical need, dissatisfaction with treatment, or lack of treatment effectiveness

Conclusions

- This analysis of real-world studies demonstrates that diagnosed vitiligo prevalence estimates fall in the lower range of previous European estimates and underlines the psychosocial impact of vitiligo on patients and healthcare systems**
- New effective treatment options and mental health interventions are needed to reduce the vitiligo burden, as highlighted by the percentage of patients who are not on vitiligo-related treatment**
- Additional systematic studies on vitiligo are needed to further assess the real-world disease burden and improve patient outcomes**

Disclosures

CD, SF, and AAK are employees and shareholders of Incyte Biosciences International. CMG-M is an employee and shareholder of Incyte Biosciences Iberia SL. VR is an employee and shareholder of Incyte Biosciences Italy Srl. VE is a consultant for AbbVie, Incyte Corporation, and Pfizer. ART has received honorarium and/or support with academic work over the last 12 months from Incyte, Pfizer, SALTs, and UCB; and is a scientific advisor to the UK Vitiligo Society and a Trustee of the charity Changing Faces. J.L.E. has participated in advisory boards for AbbVie, Janssen, Galderma, Incyte, Bioderma, Isdin, Novartis, and UCB. FSM has participated in advisory boards for Incyte. AP has served as a consultant for Incyte. IL and LG-R are employees of IQVIA.

References

- Rodrigues M, et al. *J Am Acad Dermatol*. 2017;77(1):1-13.
- Delattre C, et al. *Value Health*. 2022;25(12):S458.
- Bergqvist C, Ezzedine K. *Dermatology*. 2020;236(6):571-592.
- Augustin M, et al. Prevalence and comorbidity of individuals with vitiligo in Germany. Presented at: Deutschen Dermatologischen Gesellschaft (DDG, German Dermatological Society) April 26-29, 2023; Berlin, Germany.
- Zhang Y, et al. *PLoS One*. 2016;11(9):e0163806.
- Ezzedine K, et al. *J Eur Acad Dermatol Venereol*. 2023;doi: 10.1111/jdv.19447 [Epub].
- Bibeau K, et al. *J Eur Acad Dermatol Venereol*. 2022;36(10):1831-1844.
- Nesnas J, et al. The association between mental health conditions and vitiligo: a population-based cohort study in the UK. Presented at: Vitiligo International Symposium; December 4-5, 2021.
- Phan K, et al. *Pigment International*. 2022;9(2).
- Ezzedine K, et al. *J Am Acad Dermatol*. 2015;73(5):883-885.
- Eleftheriadou V, et al. *Br J Dermatol*. 2022;186(1):18-29.



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