Utilization and Duration of Systemic Corticosteroid Exposure in Atopic Dermatitis Patients After the Introduction of Advanced Therapies: A Population-Based Study From the United States

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OBJECTIVE

To describe the real-world utilization and duration of systemic corticosteroid exposure among patients with atopic dermatitis in the United States following the introduction of advanced therapies into clinical practice

CONCLUSIONS

Despite clinical guidelines advising against the use of systemic corticosteroids for atopic dermatitis, they remain widely prescribed in the United States

Approximately 1 in 5 patients with atopic dermatitis is prescribed a systemic corticosteroid

Among patients with atopic dermatitis who are prescribed systemic corticosteroids, nearly one-quarter have long-term exposure (>90 days)

These findings highlight the pressing need for broader adoption of advanced therapies in patients with atopic dermatitis

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BACKGROUND

- Atopic dermatitis (AD) is a chronic, recurring, inflammatory skin condition characterized by eczematous lesions and intense itching¹
- Some patients with AD require systemic therapy to achieve adequate disease control and improve their quality of life²
- Food and Drug Administration-approved advanced systemic treatments, including injectable biologics and oral Janus kinase inhibitors, are available for moderate-to-severe AD²
- Systemic corticosteroids (SCS) have broad, non-specific immunosuppressive effects that do not target the immune pathways involved in AD, leading to a substantial risk of serious adverse events, even with short-term use²⁻⁴
- American Academy of Dermatology (AAD) guidelines and International Eczema Council (IEC) consensus recommend against the routine use of SCS due to their unfavorable benefit/risk profile; and their use should be limited to special circumstances such as when acute severe flare control is needed, when no other options are available, or when used as a short-term bridge to other systemic therapies^{2,5}
- While clinical guidelines recommend against the routine use of SCS for the management of AD,^{2,5} adherence to these guidelines is unclear

METHODS

Study Cohort

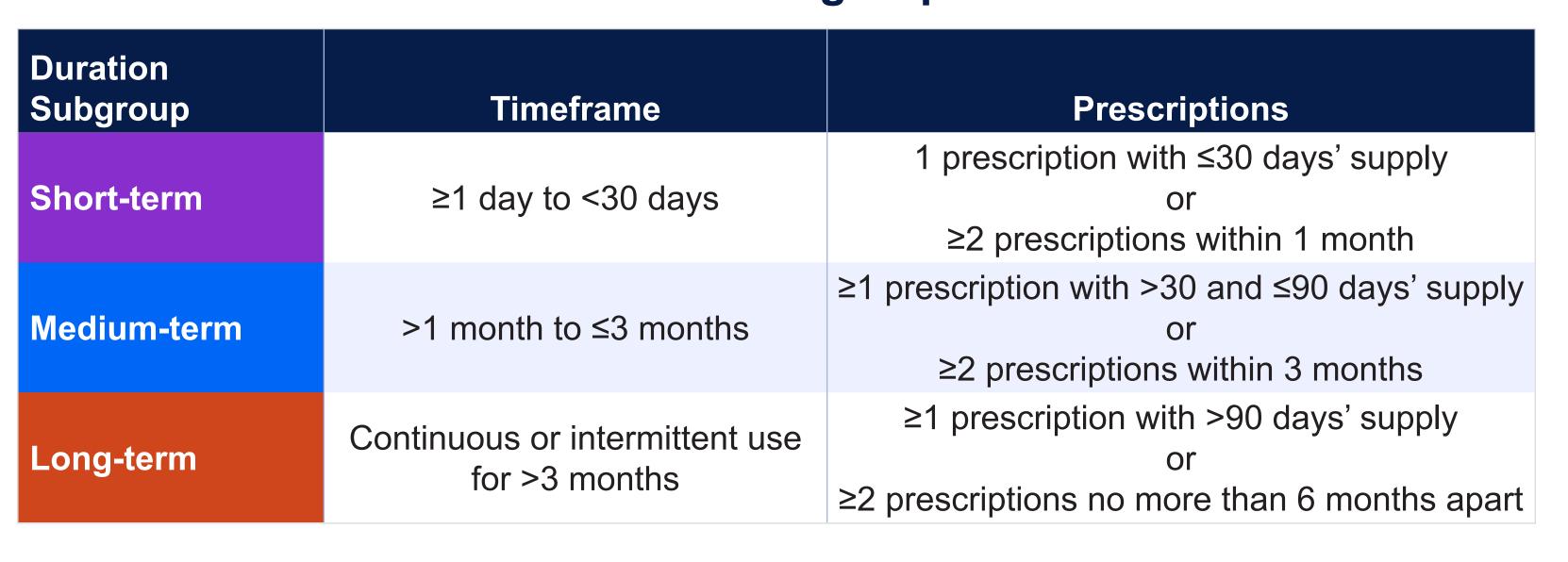
- This retrospective analysis evaluated administrative healthcare claims from the Optum[®] Clinformatics® Data Mart database in the United States from March 1, 2017 to March 31, 2024
- Eligible patients were aged ≥12 years, diagnosed with AD, had initiated oral or intramuscular SCS, and had continuous health insurance enrollment for ≥1 year before and after initiating SCS (index date)
- To increase the likelihood that the SCS treatment was related to AD, the cohort was limited to patients who met the following criteria:
- Had an AD diagnosis code in an inpatient setting or 2 AD diagnosis codes in an outpatient setting within the preceding 6 months
- Were without diagnosis codes for autoimmune diseases, asthma, osteoarthritis, dorsalgia, gout, bursitis, tendonitis, or carpal tunnel syndrome within the preceding 6 months
- Had no history of malignancies, organ transplant, or HIV/AIDS

Analysis

- Patients were followed up until the end of available data, health insurance discontinuation, or death
- Exposure duration was categorized as short-term, medium-term, or long-term and was informed by clinical expertise and observed data patterns (Table 1)

 Categorical and continuous variables are presented as numbers (percentages) or means (standard deviations), respectively

Table 1. Duration Subgroup Definitions



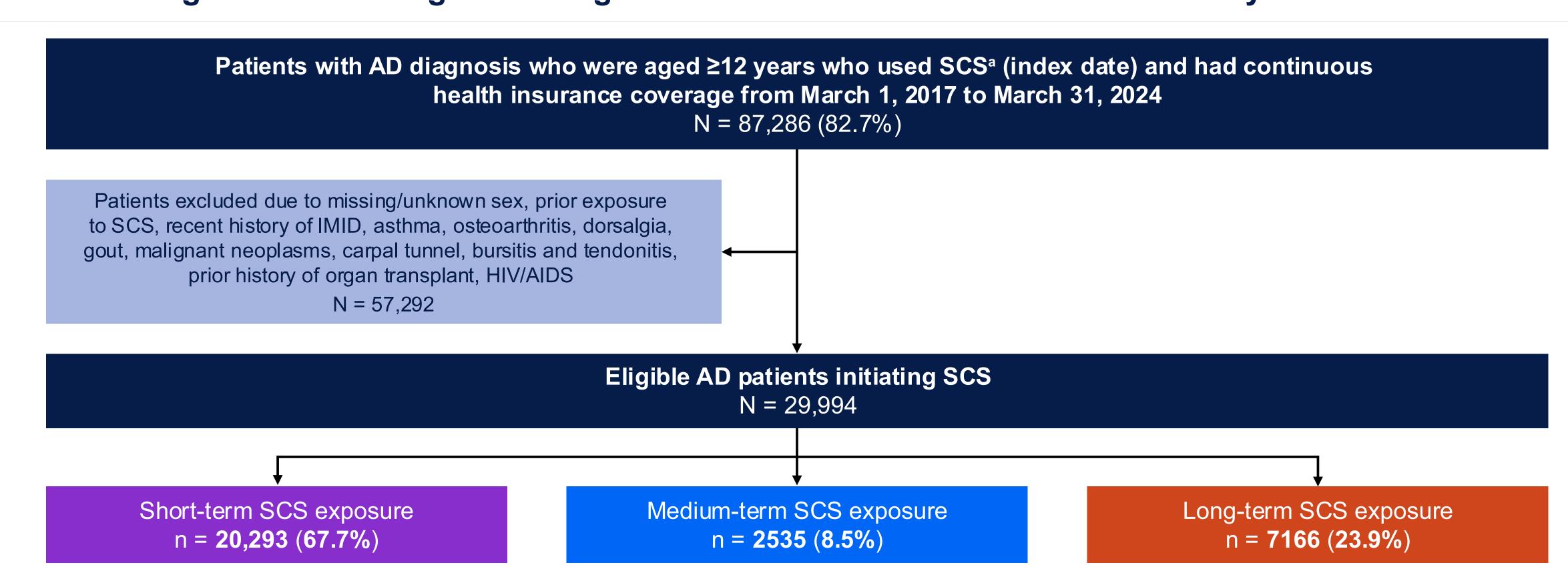
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RESULTS

Study Cohort

- During the study period (March 1, 2017 to March 31, 2024), a total of 29,994 patients who met all eligibility criteria initiated SCS (Figure 1)
- The prevalence of SCS use among patients with AD was 34.4%, but decreased to 20.0% when all eligibility criteria were applied, particularly when limiting the cohort to patients with no other conditions that most frequently trigger the use of SCS
- Most patients were female (59.7%), and the mean patient age was 50.4 (22.4) years (Table 2)

Figure 1. Flow Diagram of Eligible Patients With AD Included in the Analytical Cohort



^aAny SCS procedure records with CPT codes 20610 or 20611 (intraarticular injections) or intravenous (CPT 96374) on the same date are excluded to remove intramuscular SCS

Table 2. Baseline Demographics and Characteristics

Characteristics	Total (N = 29,994)	Short-Term SCS Use (n = 20,293)	Medium-Term SCS Use (n = 2535)	Long-Term SCS Use (n = 7166)
Age at index, years, mean (SD)	50.4 (22.4)	48.4 (22.7)	52.2 (21.7)	55.3 (21.0)
Age category, years, n (%)			· · · ·	· ·
12–17	2772 (9.2)	2233 (11.0)	162 (6.4)	377 (5.3)
18–29	4402 (14.7)	3288 (16.2)	337 (13.3)	777 (10.8)
30–39	3301 (11.0)	2362 (11.6)	292 (11.5)	647 (9.0)
40–49	3431 (11.4)	2300 (11.3)	311 (12.3)	820 (11.4)
50–59	3705 (12.4)	2437 (12.0)	335 (13.2)	933 (13.0)
60–69	4383 (14.6)	2736 (13.5)	379 (15.0)	1268 (17.7)
70–79	5535 (18.5)	3438 (16.9)	481 (19.0)	1616 (22.6)
>80	2465 (8.2)	1499 (7.4)	238 (9.4)	728 (10.2)
Sex, n (%)				
Female	17,913 (59.7)	12,122 (59.7)	1466 (57.8)	4325 (60.4)
Male	12,081 (40.3)	8171 (40.3)	1069 (42.2)	2841 (39.7)
Race, n (%)				
White	9800 (32.7)	6622 (32.6)	808 (31.9)	2370 (33.1)
Black	1701 (5.7)	1132 (5.6)	152 (6.0)	417 (5.8)
Asian	687 (2.3)	474 (2.3)	68 (2.7)	145 (2.0)
Unknown/missing	17,806 (59.4)	12,065 (59.5)	1507 (59.5)	4234 (59.1)
Enrollment, years, mean (SD)				
Pre-index	5.5 (4.1)	5.5 (4.2)	5.5 (4.2)	5.4 (4.1)
Post-index	2.8 (1.5)	2.7 (1.4)	2.7 (1.5)	2.9 (1.5)
SCS type, n (%)				
Oral	23,979 (80.0)	15,926 (78.5)	2222 (87.7)	5831 (81.4)
IM	6015 (20.0)	4367 (21.5)	313 (12.4)	1335 (18.6)
Other baseline medication use, n (%)				
Topical corticosteroids	13,009 (43.4)	8396 (41.4)	1200 (47.3)	3413 (47.6)
Biologics ^a	830 (2.8)	512 (2.5)	80 (3.2)	238 (3.3)
Dupilumab	816 (2.7)	505 (2.5)	79 (3.1)	232 (3.2)
Omalizumab	14 (<0.1)	7 (<0.1)	1 (<0.1)	6 (<0.1)
Rituximab	0	0	0	0
Conventional systemic immunosuppressants ^b	485 (1.6)	251 (1.2)	48 (1.9)	186 (2.6)
NSAIDs	4509 (15.0)	2746 (13.5)	384 (15.2)	1379 (19.2)
Dermatologist visit with 365 days of baseline, n (%)	9048 (30.2)	5882 (29.0)	858 (33.9)	2308 (32.2)

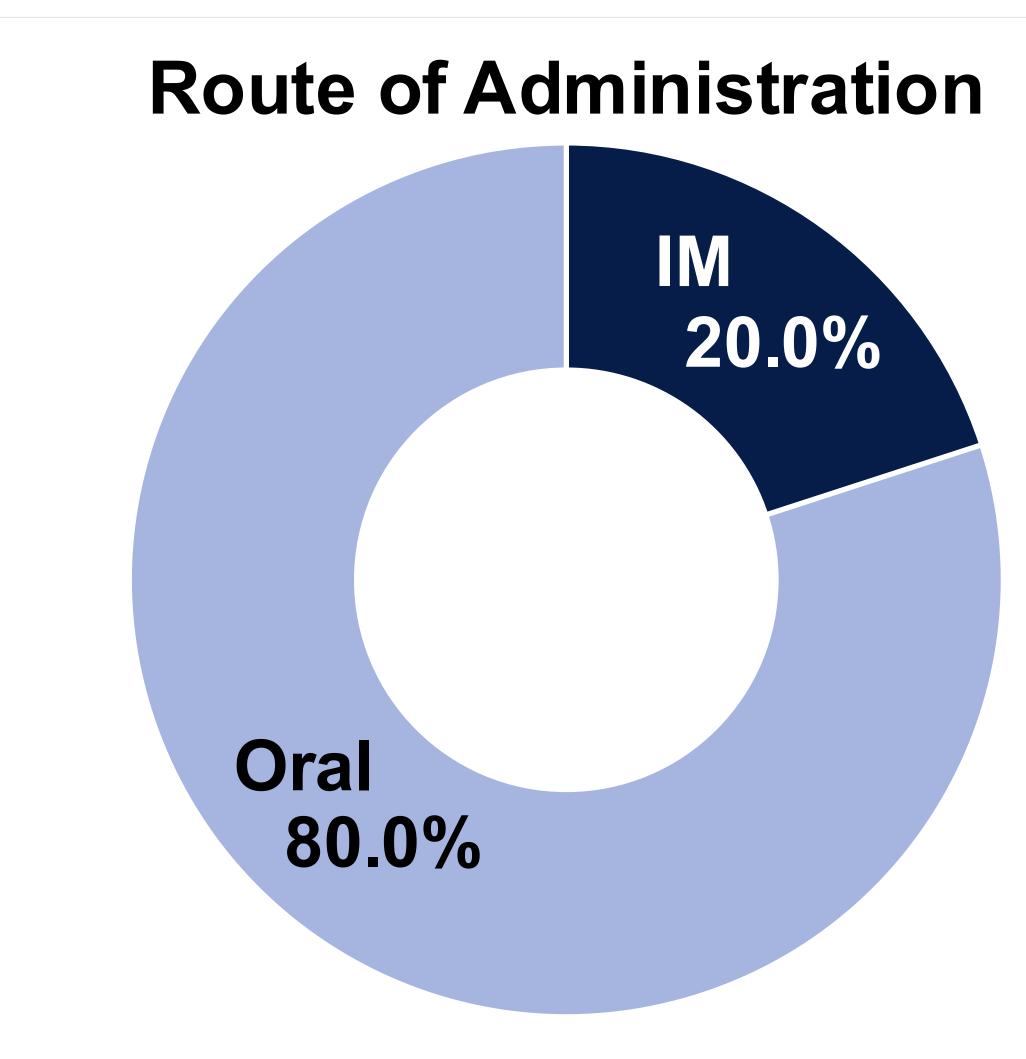
Systemic Corticosteroid Use

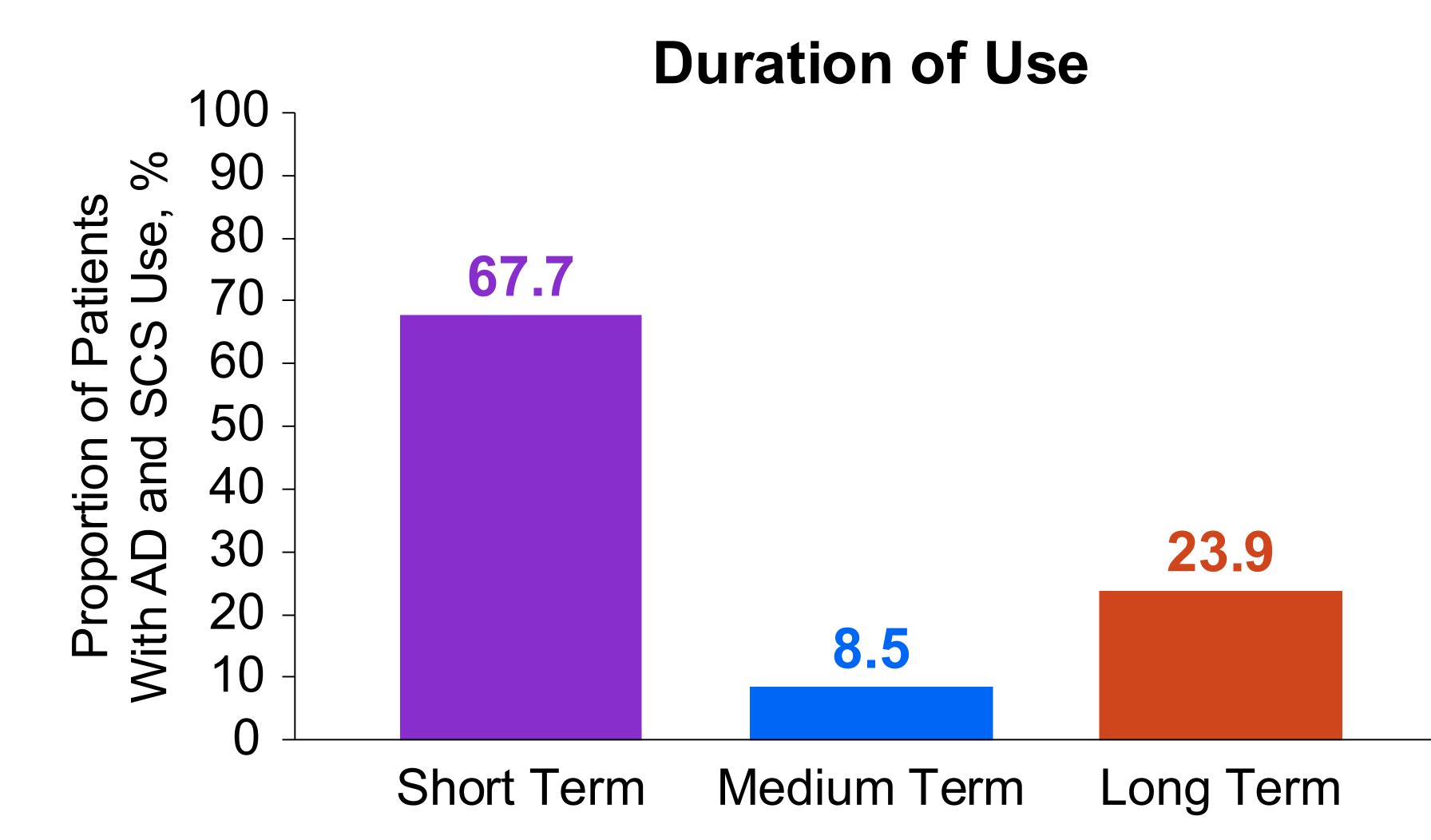
- Oral SCS accounted for 80.0% of all SCS prescriptions (Figure 2)
- Among patients who were prescribed SCS, 67.7% had short-term use, 8.5% had medium-term use, and 23.9% had long-term use
- A higher percentage of long-term SCS users were aged >30 years (83.9%) compared with medium-term (80.3%) and short-term (72.8%) SCS users (Table 2)

- Long-term SCS users had higher rates of biologic and conventional systemic immunosuppressant use compared with medium- and short-term SCS users (3.3% vs 3.2%, 2.5%, respectively; 2.6% vs 1.9%,1.2%, respectively)

- The percentage of patients having a dermatology visit was similar among the 3 groups

Figure 2. SCS Use by Duration and Route of Administration Among Patients With AD and SCS Use





IM, intramuscular; NSAID, nonsteroidal anti-inflammatory drug; SCS, systemic corticosteroid. AD, atopic dermatitis; IM, intramuscular; SCS, systemic corticosteroid ^aDupilumab, omalizumab, or rituximab. ^bAzathioprine, cyclosporine, mycophenolate mofetil, or methotrexate