

Real-world Treatment Pattern and Direct Medical Costs of Atopic Dermatitis in China: A Retrospective Claims Analysis

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Atopic dermatitis (AD) is a chronic systemic skin disease characterized by recurrent dry skin, chronic eczematous lesions and pruritus¹. The incidence of AD among children and adults are reported to be 15-20% and 1%-3% worldwide, respectively².

The management of AD is suboptimal and recurrence remains a challenge, which leads to impaired productivity and increased economic burdens³.

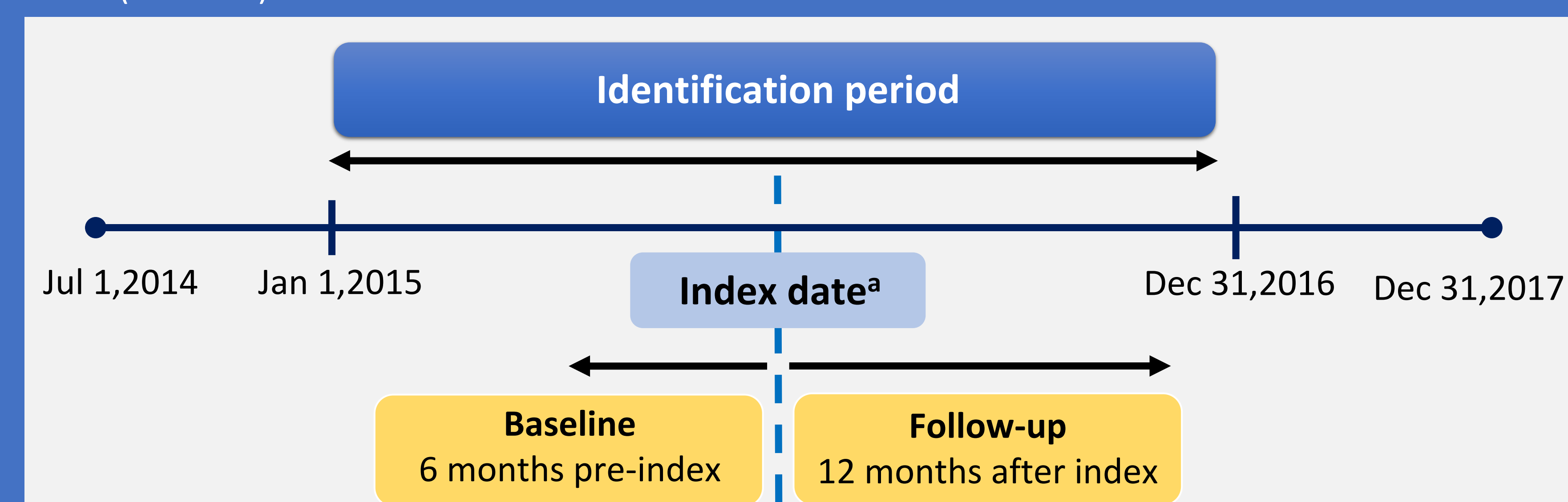
However, the treatment pattern and economic burden of AD were still unknown in China. Better understanding of the real-world treatment pattern and economic burden of AD is important to improve the disease management in China.

OBJECTIVES

- To investigate the real-world treatment pattern and direct medical costs among patients with atopic dermatitis (AD) in China.

METHODS

- Data were obtained from Tianjin Urban Employee Basic Medical Insurance database (2014-2017), which covered 5.33 million enrollees and represented 50.8% of registered Tianjin residents.
- Adult patients (age ≥ 18 years) with ≥1 claim with a primary diagnosis of AD (ICD-10 codes L20) supplemented with Chinese descriptions were identified between Jan 1, 2015 and Dec 31, 2016, and followed over 12 months (Fig 1).
 - Patients who experienced organ transplantation or identified as other autoimmune diseases during the study period were excluded.
 - Included patients were further divided into treatment-naïve and previously treated patients according to the presence of AD-related prescriptions during the 6-month pre-index (baseline).



a) Index date: the date of the first AD claim

Figure 1. Overview of the study period

- Treatment pattern was assessed by treatment rate, therapies used within 3-month intervals, and persistence duration calculated by time spent on therapy without a gap of ≥90 days.
- The discontinuation of treatment was described using Kaplan-Meier curve and compared between subgroups by log-rank test.
- AD-specific direct medical costs and their composition were estimated during the follow-up period.

RESULTS

- A total of 1,785 AD patients (908 in treatment-naïve cohort, 877 in previously-treated cohort) with mean age 46.4 years, 55.6% female were included.
- Topical treatment was the most common therapy (88.5%), followed by Chinese patent medicine (36.8%), systemic treatment (34.4%), wet therapy (18.9%) and phototherapy (3.6%).
- 96.4% patients received ≥1 AD-related prescriptions during the follow-up period, with treatment rate decreasing from 94.1% at 3 months to 30.4%, 24.9% and 22.9% at 6,9,12 months after index, respectively (Fig 2).

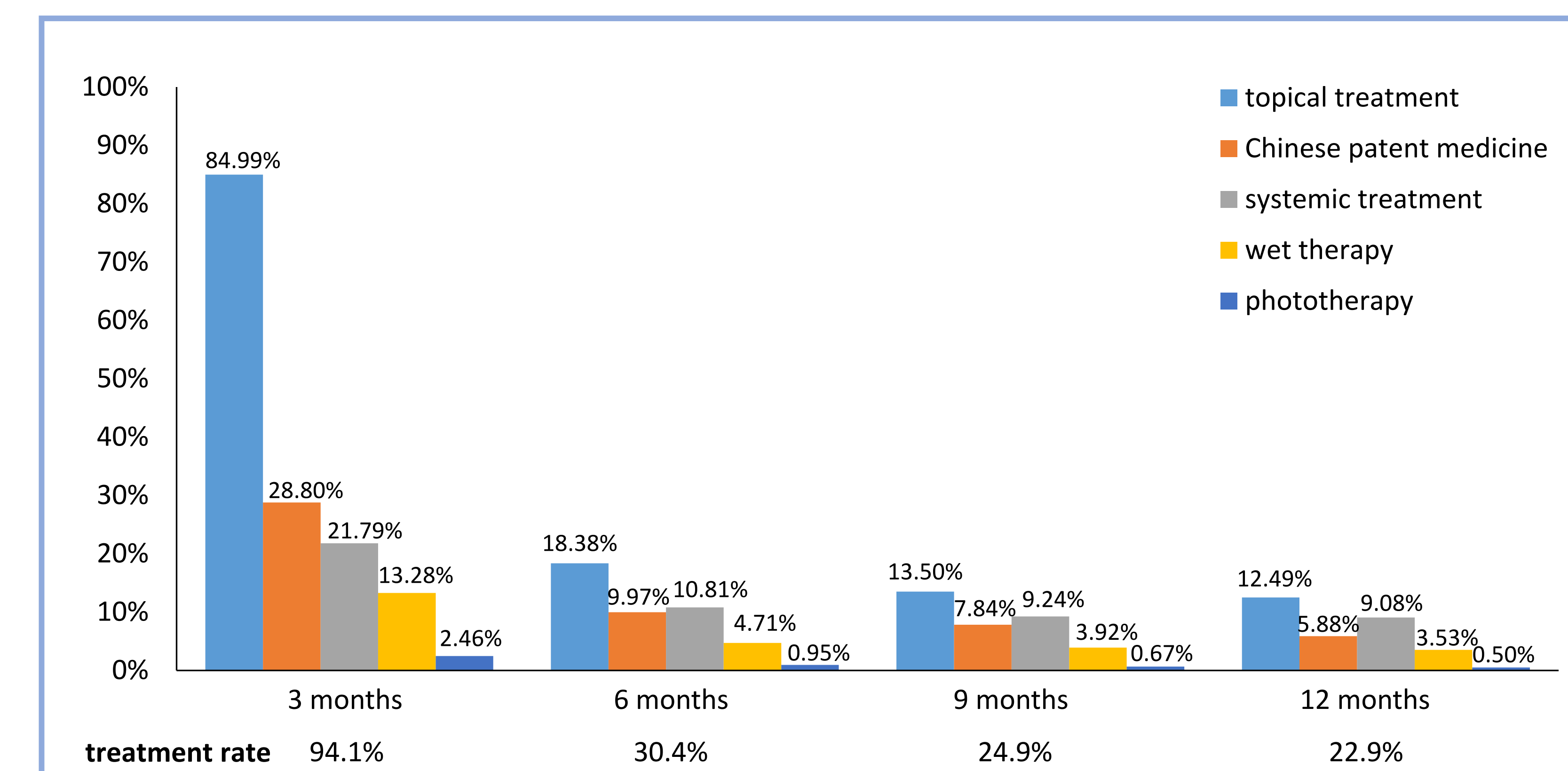


Figure 2. Proportion of patients using different treatment strategies

- 96% (N=1,713) patients discontinued treatment during follow-up period, with mean persistent duration of 51.9±72.3 days (Fig 3).
- Significant longer persistent duration was observed in previously-treated patients compared with treatment-naïve patients (65.4±82.6 vs. 38.8±57.6 days, P<0.001).

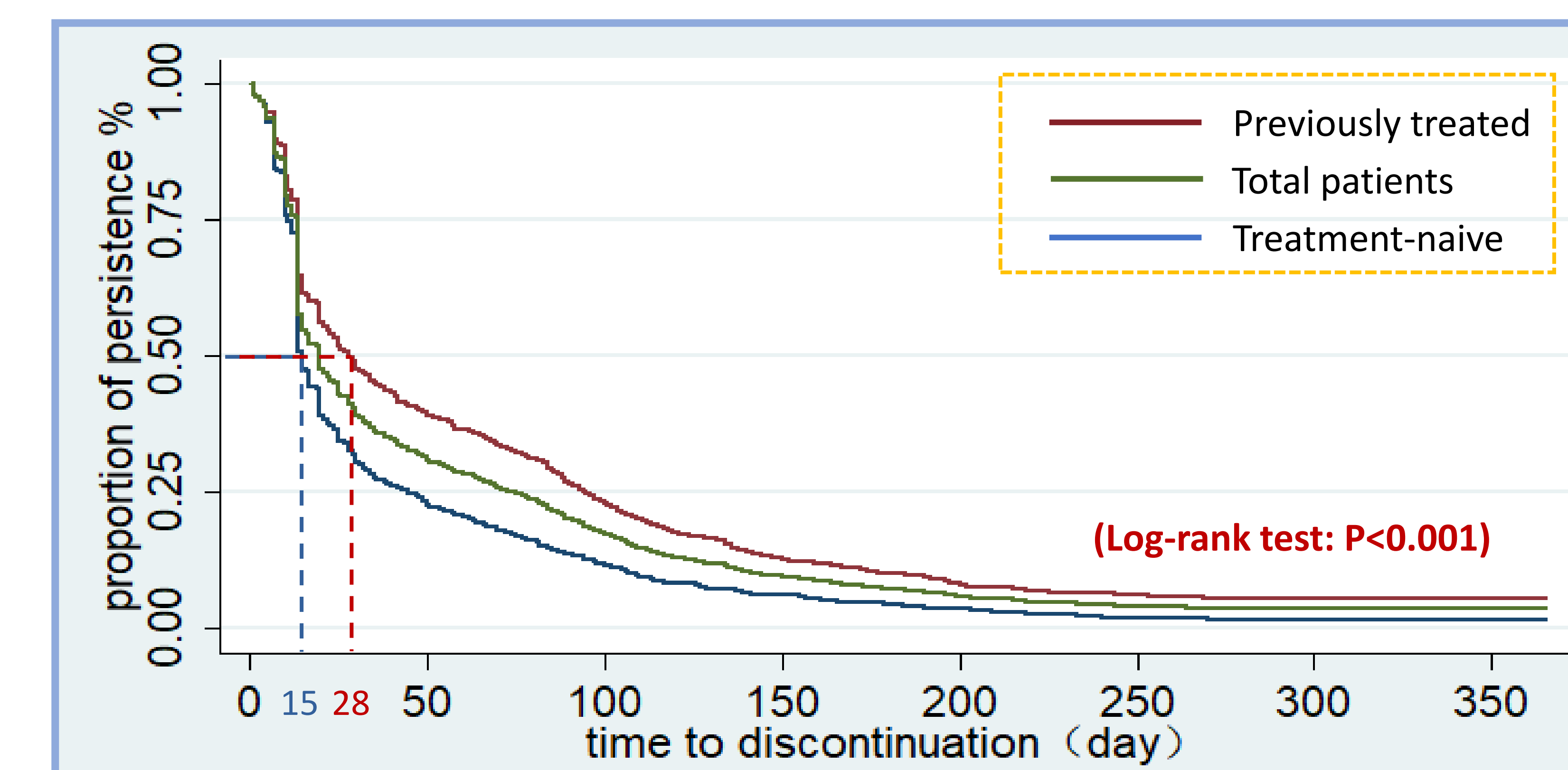


Figure 3. Kaplan-Meier curve of discontinuation

- AD-specific total direct medical cost was ¥1,212±3,551 per patient, and inpatient cost accounted for 67.8% of the total cost (¥822±¥3,599) (Tab 1).
- AD-specific total costs were higher for previously-treated patients compared to treatment-naïve patients (¥1,610±¥4,068 vs. ¥828±¥2,918, P<0.001), and the difference was mainly due to hospitalization.

Table 1. AD-specific direct medical costs of AD patients

Characteristics	total patients	Treatment-naïve	Previously treated	P value
	N=1785	N=908	N=877	
AD-specific costs per patient [mean±SD]				
Total costs	1,212.2±3,551.1	827.9±2,918.2	1,610.1±4,068.5	<0.001
Inpatient costs	822.0±3,599.3	471.2±2,938.5	1,185.2±4,145.2	<0.001
Outpatient costs	390.2±999.2	356.7±1,179.4	424.9±769.6	0.386
Inpatient costs among hospitalized patients				
Per patient	12,870.7±6,933.6	14,754.5±7,838.6	12,228.0±6,522.9	0.09
Per hospitalization	14,959.0±8,821.6	17,535.0±9,669.7	13,976.5±8,319.6	0.036
Outpatient costs among outpatient patients				
Per patient	452.1±1,025.4	416.5±1,195.2	491.6±794.6	0.134
Per outpatient visit	285.2±236.3	267.5±227.3	302.9±243.7	<0.001

- Medication cost was the most important cost component of total costs for total AD patients (56%), followed by treatment (18%) and examination costs (18%) (Fig 4).
- The annual total direct medical costs in both subgroups were quite consistently driven by the cost of medication, treatment and examinations. While treatment-naïve patients had higher proportion of medical costs (61% vs. 54%) and less treatment costs (17% vs. 19%) than previously treated patients.

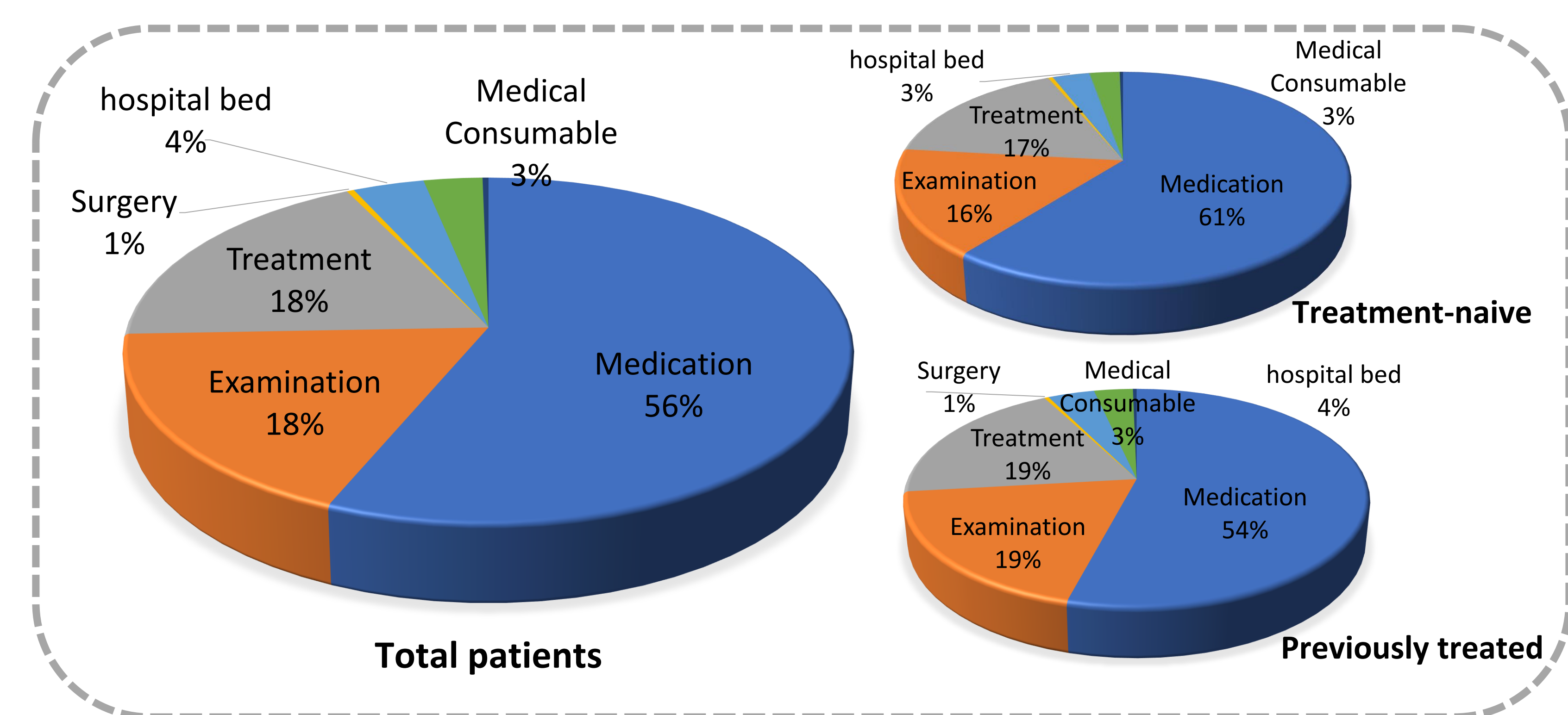


Figure 4. Decomposition of total direct medical costs among AD patients

CONCLUSIONS

Poor treatment persistence and declined treatment rates were observed among Chinese patients with AD, which indicates that effective strategies are needed for better long-term management of AD.

References

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