

Real-world Management of Prurigo Nodularis: Epidemiological Data and Disease Burden in China

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INTRODUCTION

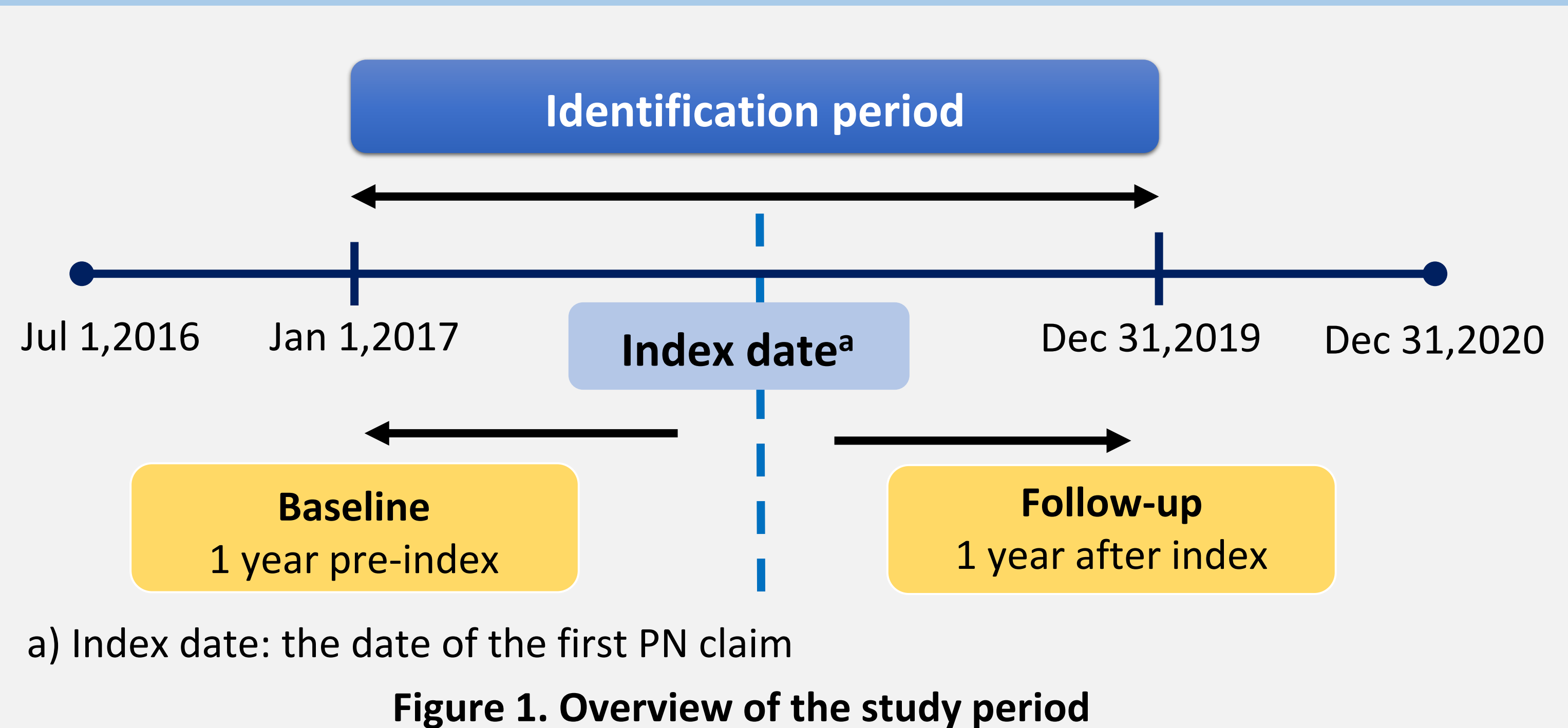
- Prurigo nodularis (PN) is a chronic dermatosis characterized by extraordinarily itchy nodules. PN patients often carry a significant disease burden with a higher risk of psychiatric disorders and systemic illnesses¹. The annual prevalence of PN was reported to be 6.52-72 per 100,100 people worldwide, respectively².
- However, the epidemiology and disease burden of PN were still unknown in China. Better understanding of the real-world clinical characteristics and economic burden of PN is important to improve the disease management in China.

OBJECTIVES

- To investigate the epidemiology and disease burden among patients with Prurigo nodularis (PN) in China.

METHODS

- Data were obtained from Tianjin Urban Employee Basic Medical Insurance database (2016-2020), which covered 7.31 million enrollees and represented 52.7% of registered Tianjin residents.
- Adult patients (age ≥ 18 years) with ≥ 1 claim with a diagnosis of PN (ICD-10 codes L28.1) supplemented with Chinese descriptions were identified between Jan 1, 2017 and Dec 31, 2019, and followed over 12 months (Fig 1).
 - Patients were required continuously participate in insurance one year before and after the index date.

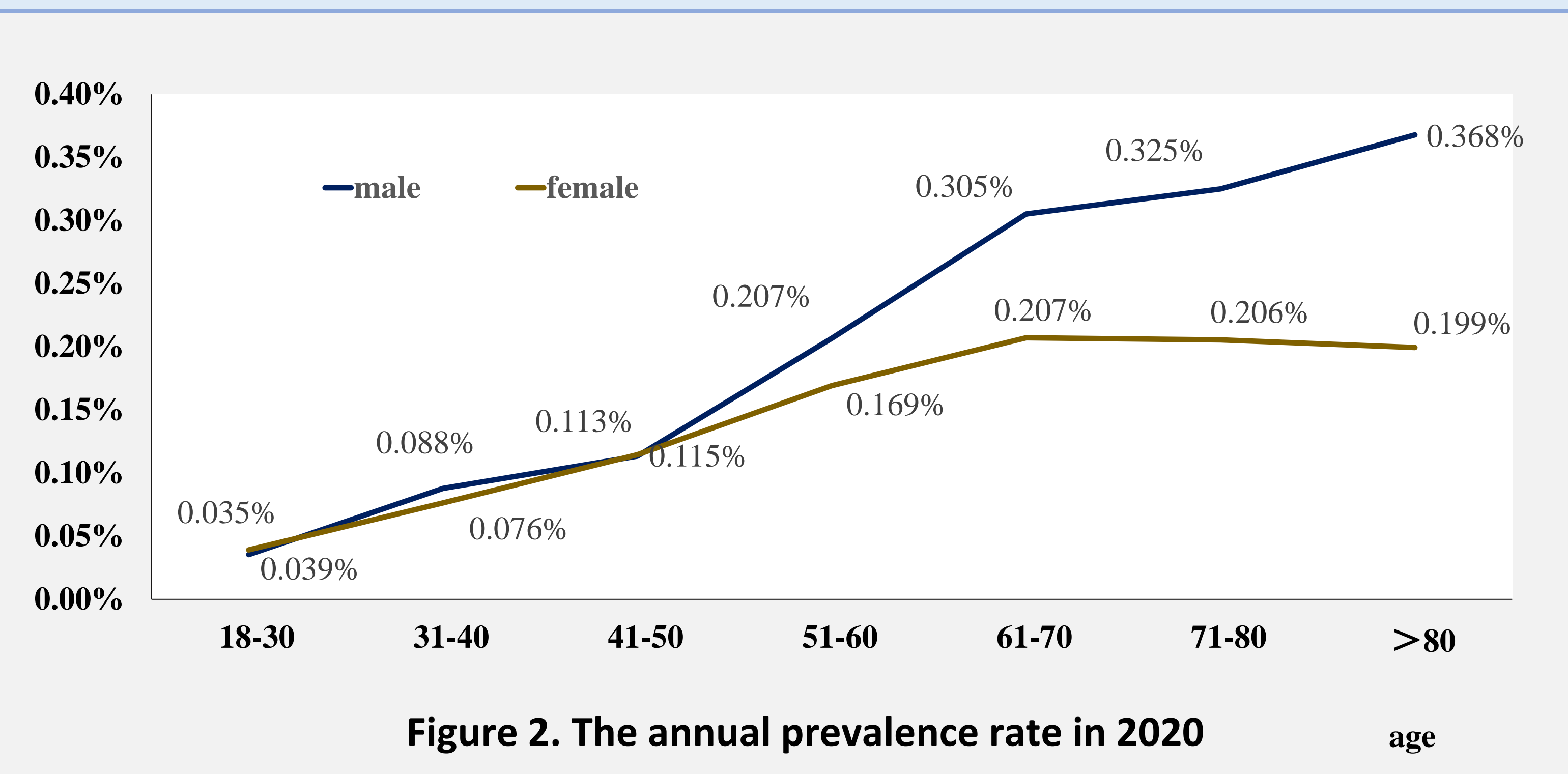


- Epidemiological characteristics were described by annual incidence rate, annual prevalence rate and clinic attendance rate.
- Patient demographics were recorded on the baseline period, with comorbidities selected based on associations with PN in previous literature and clinical experience.
- All-cause, dermatologic and PN-specific direct medical costs were estimated during the follow-up period..

RESULTS

1. Epidemiological characteristics

- In 2020, 2338 PN patients were identified with 413 of them were newly diagnosed, corresponding to annual prevalence rate of 0.13% and annual incidence rate of 0.02%. The average clinic attendance rate was estimated as 28.6%.
- The prevalence was higher among males than females (0.15% vs. 0.12%, $p < 0.001$), and a positive correlation was seen between prevalence and age ($R = 0.95$, $p = 0.0003$).



2. Demographics and comorbidities

- A total of 1,503 PN patients with mean age 54.4 years, 61.1% male were included during the identification period (2017-2019).
- The mental health disorders, atopic and allergic diseases and cardio- and cerebrovascular diseases are common comorbidities among patients with PN.

Table 1. Associated Comorbidities in Prurigo Nodularis

	PN patients (n=1503)
Dermatologic/allergic, n (%)	
Atopic dermatitis	21 (1.5%)
Urticaria	166 (11.5%)
Asthma	138 (9.5%)
Allergic rhinitis	117 (8.1%)
COPD	27 (1.9%)
Mental health, n (%)	
Sleep disorder	330 (22.8%)
Anxiety disorder	108 (7.5%)
Depression	67 (4.6%)
Other systemic illness, n (%)	
Hypertension	799 (55.1%)
Coronary heart disease	738 (50.9%)
Lipid disorders	559 (38.6%)
Type 2 diabetes	316 (21.8%)

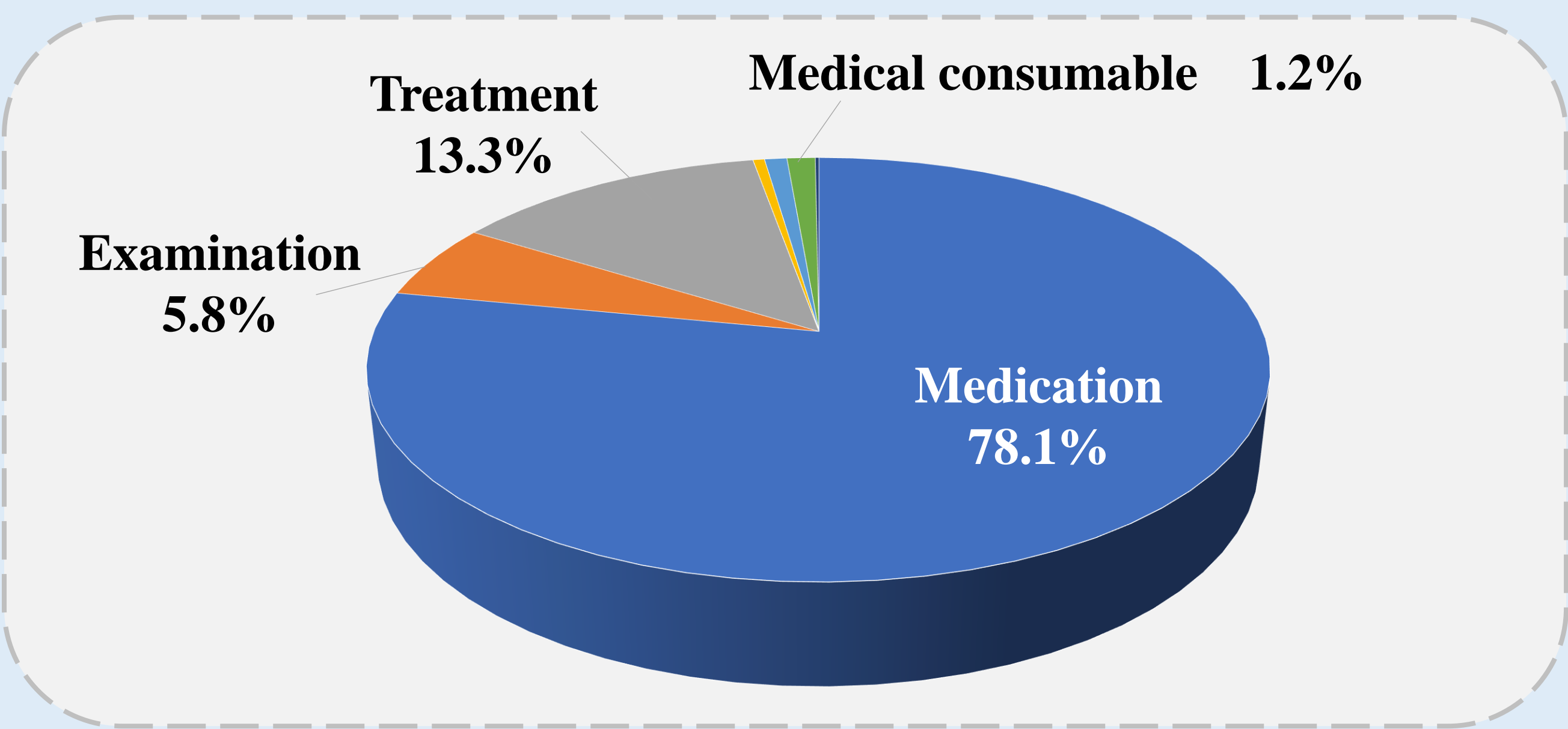
3. Economic burden

- All-cause total direct medical cost of PN was ¥12,437.5 \pm 21,766.2 per patient, and dermatologic direct medical cost of PN was 2,402.9 \pm 4,742.3 per patient.(**Tab 2**).
- PN-specific total direct medical cost was ¥812.0 \pm 1,681.3 per patient, and inpatient cost accounted for 95.6% of the total cost (¥776.3 \pm 1,565.0).

Table 2. Direct medical costs of PN patients

Characteristics	All-cause cost	Dermatologic cost	PN-specific cost
Costs per patient [mean \pm SD]			
Total costs	12,437.5 \pm 21,766.2	2,402.9 \pm 4,742.3	812.0 \pm 1,681.3
Inpatient costs	8,167.6 \pm 12,893.3	1,788.5 \pm 2,090.7	776.3 \pm 1,565.0
Outpatient costs	4,269.9 \pm 15,711.9	614.4 \pm 3,967.5	106.3 \pm 1,382.8
Inpatient costs among hospitalized patients			
Per patient	26,964.7 \pm 30,821.6	18,745.4 \pm 11,957.3	15,972.5 \pm 6,127
Per hospitalization	14,855.6 \pm 15,079.6	13,507.7 \pm 8,453.4	15,780.9 \pm 5,847.2
Outpatient costs among outpatient patients			
Per patient	8,173.1 \pm 12,895.9	1,790.9 \pm 2,091.1	787.3 \pm 1,573.3
Per outpatient visit	303.3 \pm 403.1	317.3 \pm 288.4	363.5 \pm 290.9

- Medication cost was the most important cost component of PN-specific total costs for PN patients (78.1%), followed by treatment (13.3%) and examination costs (5.8%) (Fig 3).



CONCLUSION

- PN is a severe, pruritic disease with increased comorbidities and economic burden, which indicates that effective strategies are needed for better long-term management of PN.

References

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