

Persistence and Adherence to Insulin Treatment in Chinese Patients with Type 2 Diabetes: A Real-World Study

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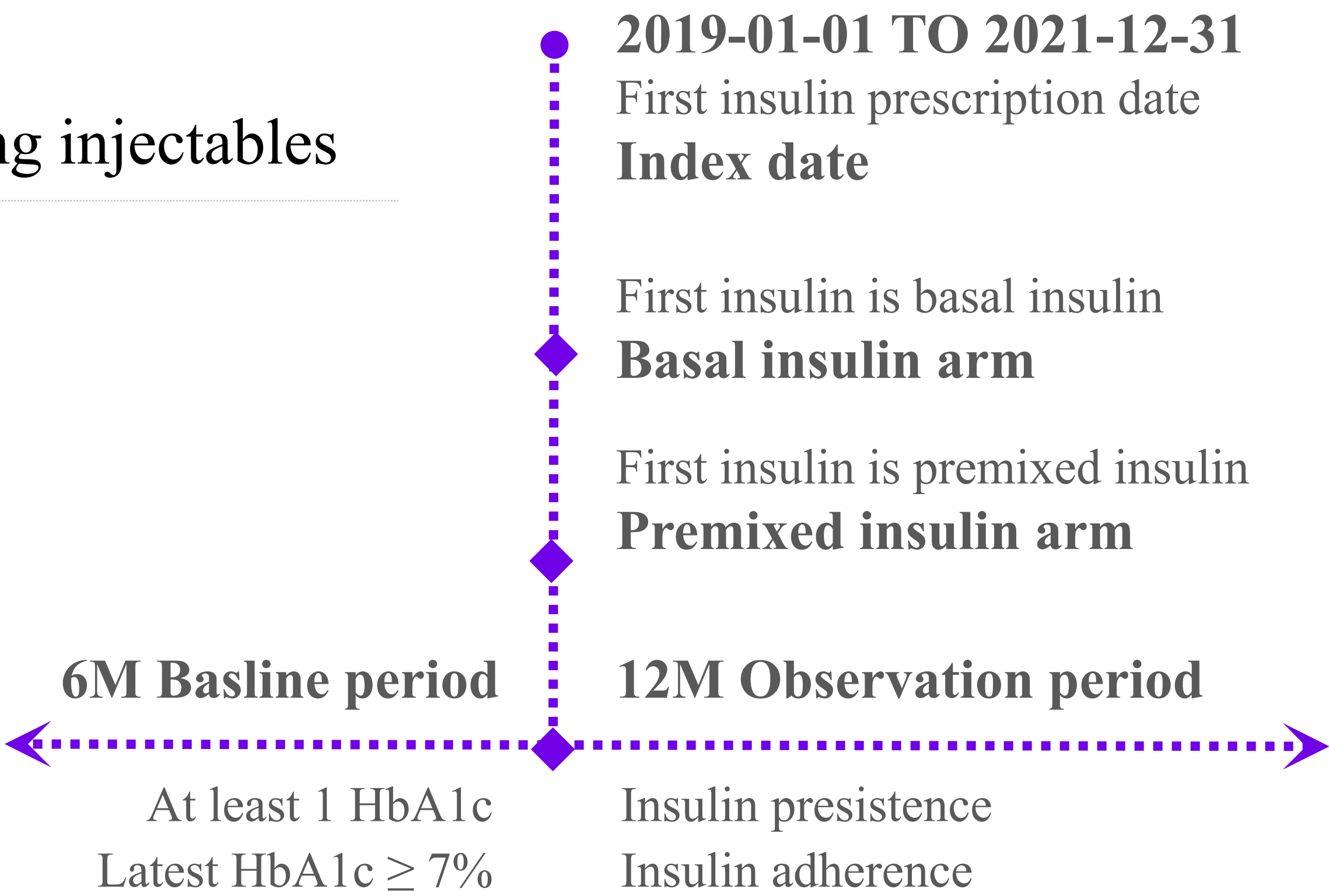
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Introduction

Insulin therapy is required in type 2 diabetes mellitus (T2DM) patients after the failure of oral antidiabetic drugs (OADs). Both treatment adherence and persistence are crucial for achieving glycemic control. We aimed to evaluate the real-world persistence and adherence of basal insulin and premixed insulin in Chinese patients with T2DM who were suboptimally controlled by OADs.

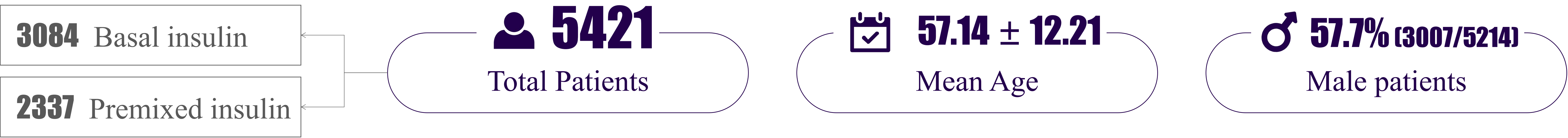
Study Design

Population	Adult T2DM patients uncontrolled on oral antidiabetics and initiating injectables
Setting	China regional electronic health records
Intervention	Basal insulin vs. Premixed insulin
Outcome	Persistence & Adherence



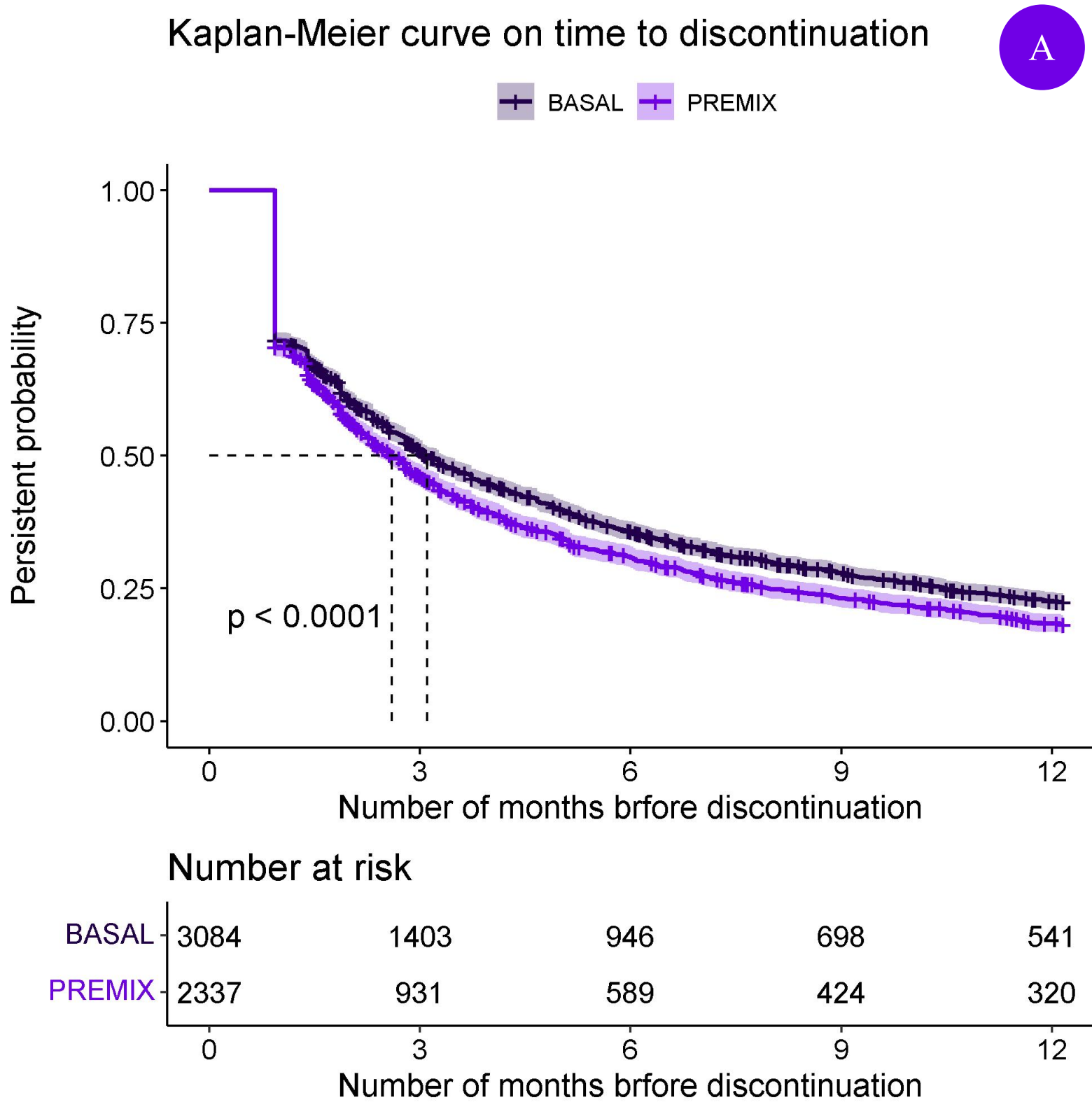
- Medication persistence days** were defined as the number of days on treatment without discontinuation.
- Medication possession days** were calculated as the total number of insulin prescription days during the 365-day follow-up period and were capped to 365 days for downstream analysis. **Medication possession ratios** were calculated by dividing the medication possession days by the total number of days (365 days) in the follow-up period.

Results

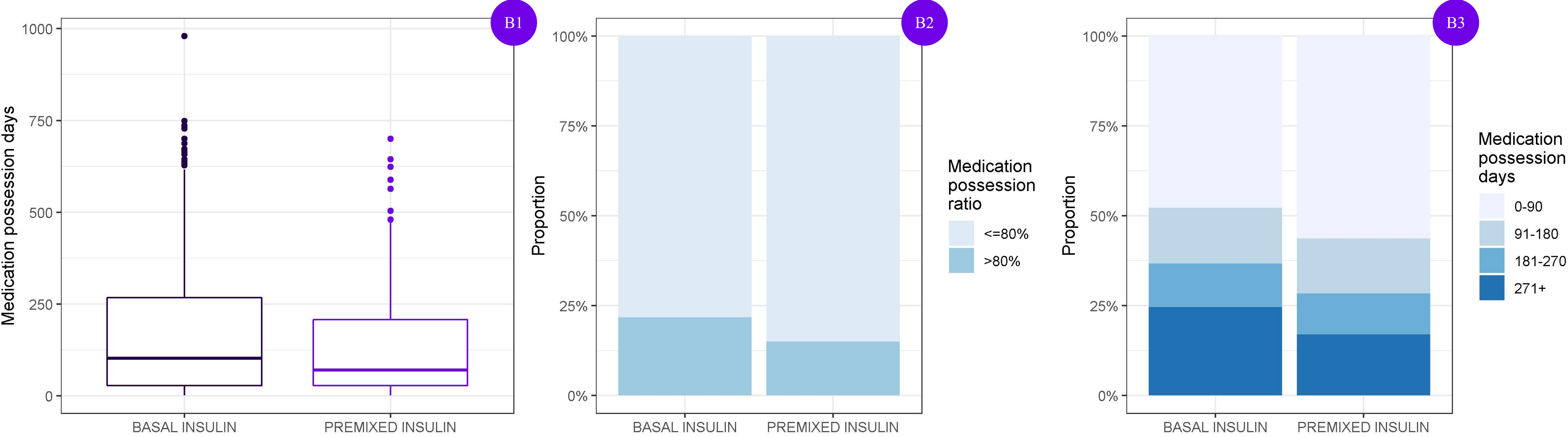


- The discontinuation rates within 12 months were 82.4% for basal insulin and 86.3% for premixed insulin (Figure A).
- The median persistence days (95% CI) were 93 (88, 101) for basal insulin and 78 (72, 84) for premixed insulin (log-rank $P < 0.0001$; Figure A).
- The median medication possession days (IQR) were 102 (28, 267) for basal insulin and 70 (28, 208) for premixed insulin (Wilcoxon $P < 0.0001$; Figure B1).
- 21.8% of patients initiating basal insulin and 15.0% of patients initiating premixed insulin had medication possession ratios $> 80\%$ (Chi-square $P < 0.0001$; Figure B2).
- The distribution of patients in the categories 271+, 181-270, 91-180, 0-90 days is 24.5%, 12.1%, 15.6%, 47.8% for basal insulin and 16.9%, 11.4%, 15.4%, 56.3% for premixed insulin (Chi-square $P < 0.0001$; Figure B3).

Persistence



Adherence



Conclusion

T2DM patients initiating injectable therapy with basal insulin have better treatment persistence and adherence compared to those initiating on premixed insulin. However, treatment adherence should be improved for both regimens.

Disclosures: Minlu Zhang and Xiaoping Xie are Sanofi employees, may hold shares and/or stock options in the company. Other authors have no conflict of interest.

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