

Assessment of price reduction prediction based on the lasted reimbursement drug renewal rules in China

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Objective

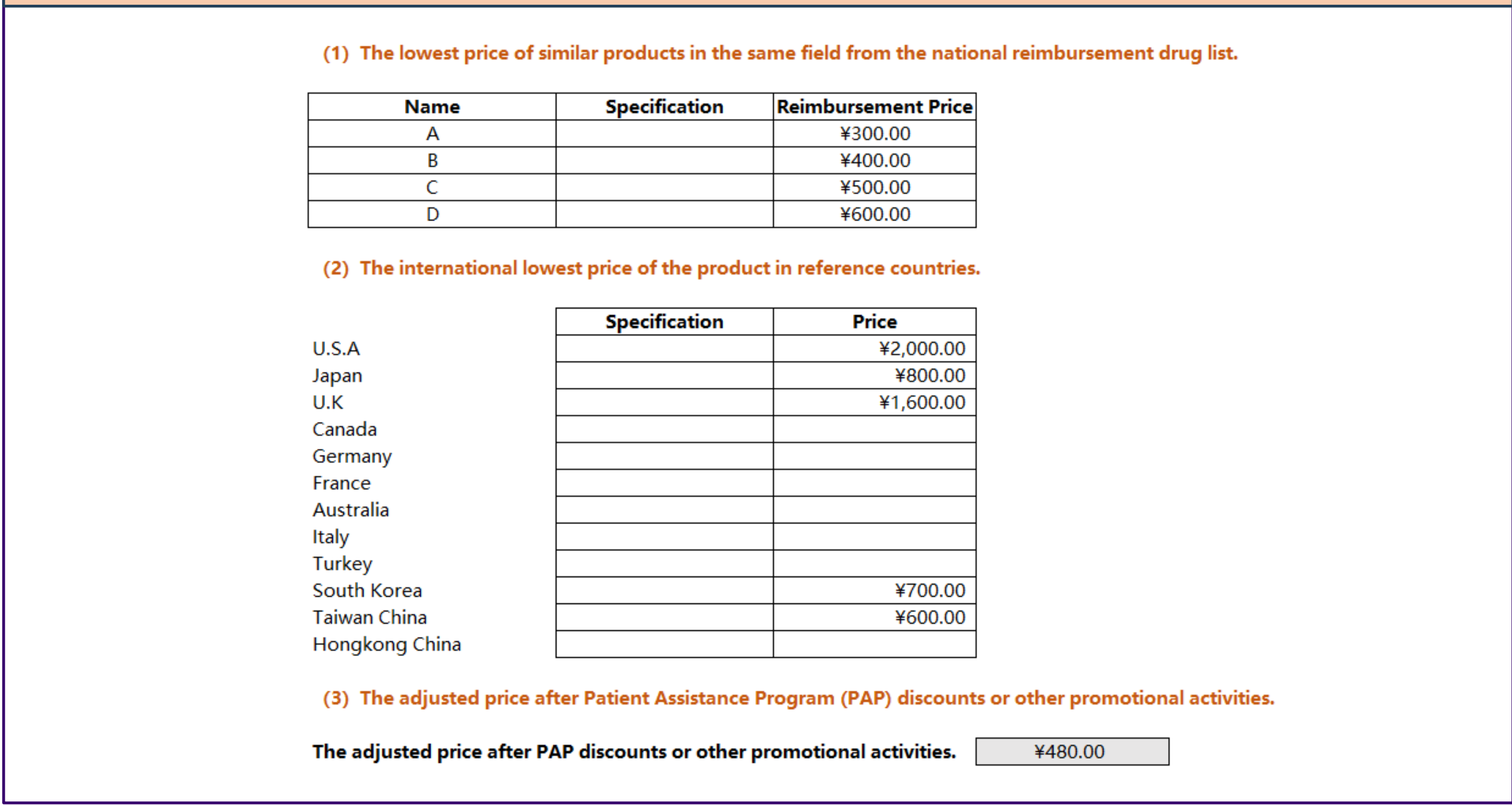
➤ In context of the latest reimbursement drug price renewal rules, the NRDL (National Reimbursement Drug List)-listed medicines will be faced with a price adjustment biannually. This study explores strategies for stakeholders to balance the market share and drug prices via an innovative toolkit.

Methods

Model Structure

- ◆ We focused on NRDL-listed medicines with agreements expiring by December 31, 2026. Drug A, which indicates for type 2 diabetes (T2D) patients with BMI ≥ 25 and poorly controlled on oral hypoglycemics or insulin, was selected as an example. Firstly, the target population size was calculated with parameter obtained from published literature. The market share data was collected from public data. The annual usage was then estimated based on the package insert. Current payment criteria were retrieved and the annual amount of the NRDL reimbursement for drug A was predicted. Lastly, based on drug price renewal rules, estimate the maximum annual sales volume for Drug A at various price reduction points.
- ◆ For basic pricing information, we collected the following: 1.The lowest price of similar products in the same field from the national reimbursement drug list. 2.The international lowest price of the product in reference countries. 3.The adjusted price after Patient Assistance Program (PAP) discounts or other promotional activities.

Figure 1 | Basic pricing information



Product Position

- ◆ To accurately position the product, we first need to assess its value, then select the appropriate threshold range based on that value.
- ◆ Each product can be classified as high or low clinical value
- ◆ Product value positioning is assessed using the four-quadrant evaluation method. It is divided based on whether the product has high or low clinical value and whether there are substitute products in the national reimbursement drug list. The corresponding categories are: Breakthrough, Improvement, Comparable, and Inferior.

Figure 2 | WTP threshold

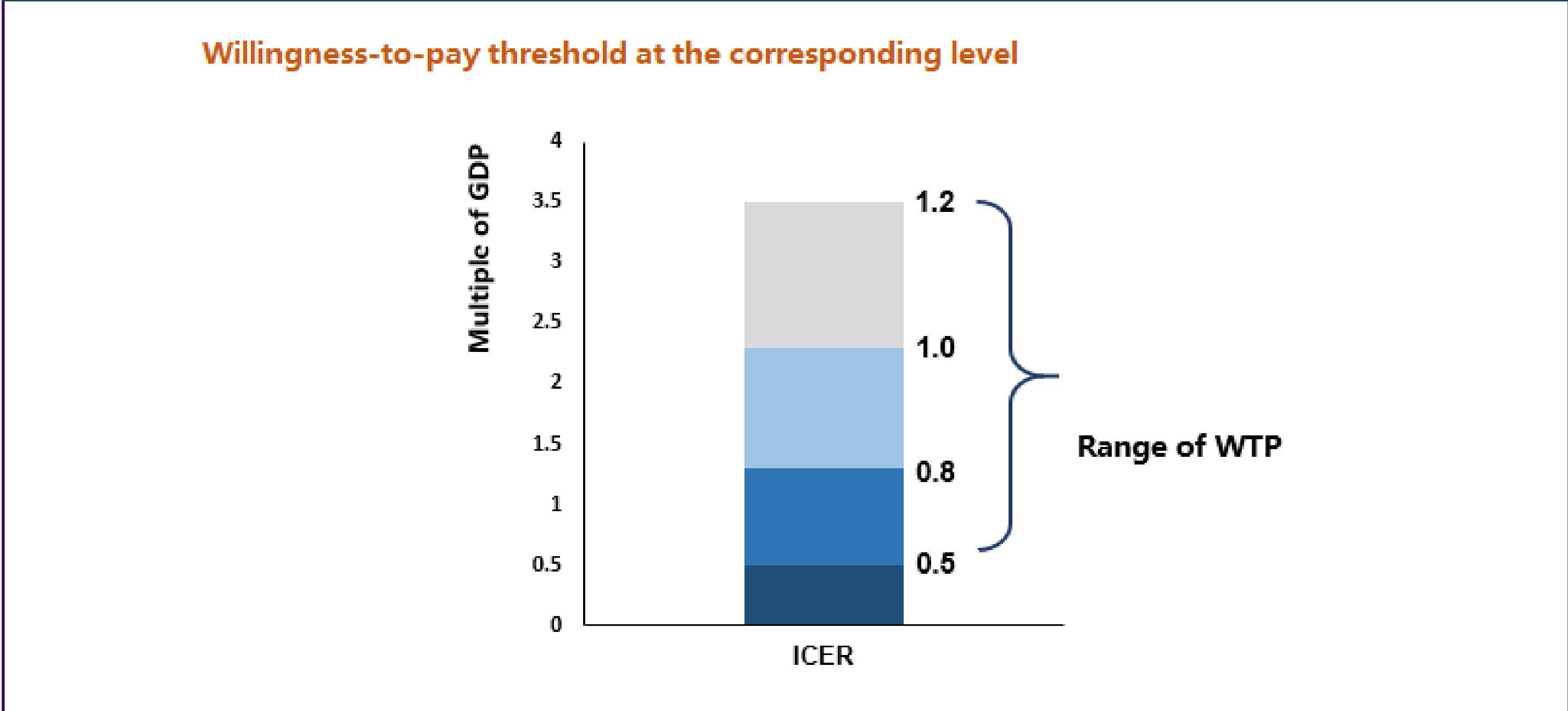
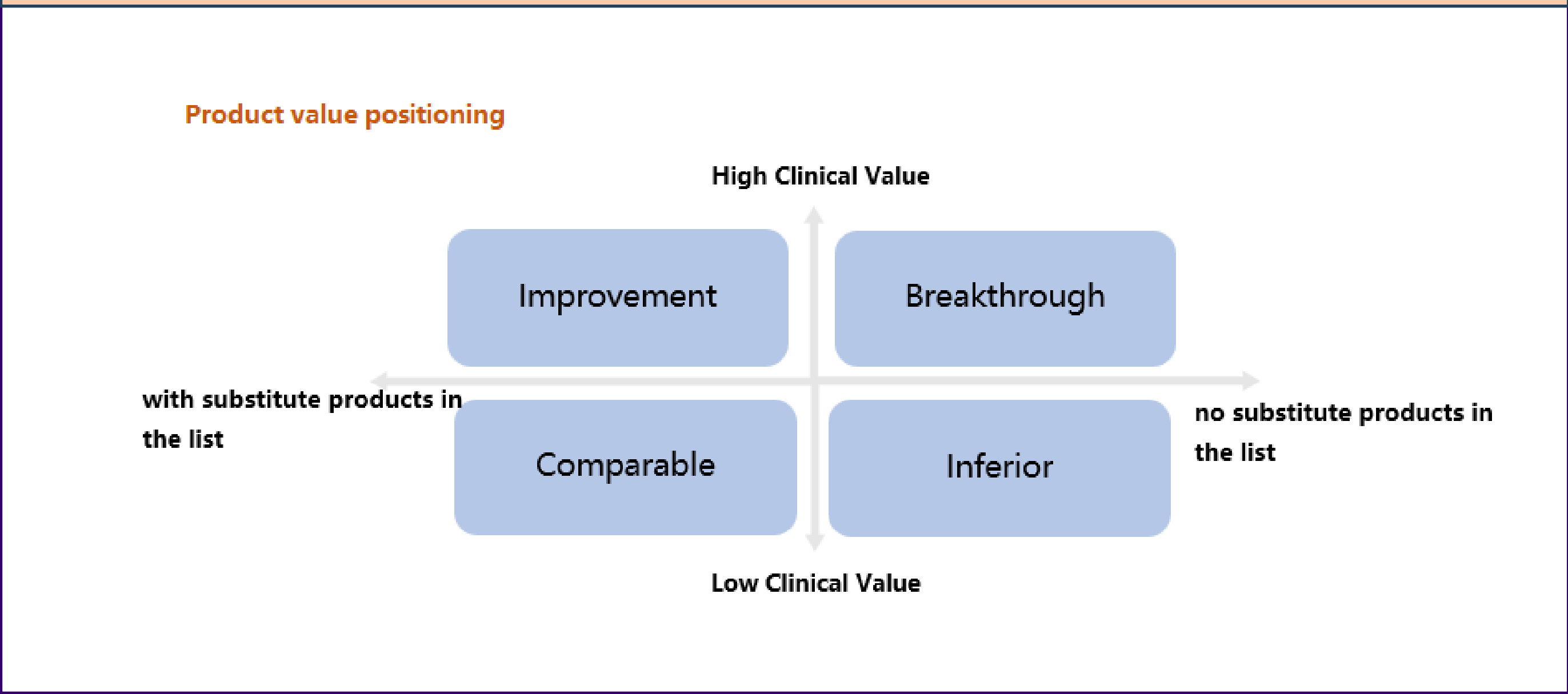


Figure 3 | Four-quadrant evaluation



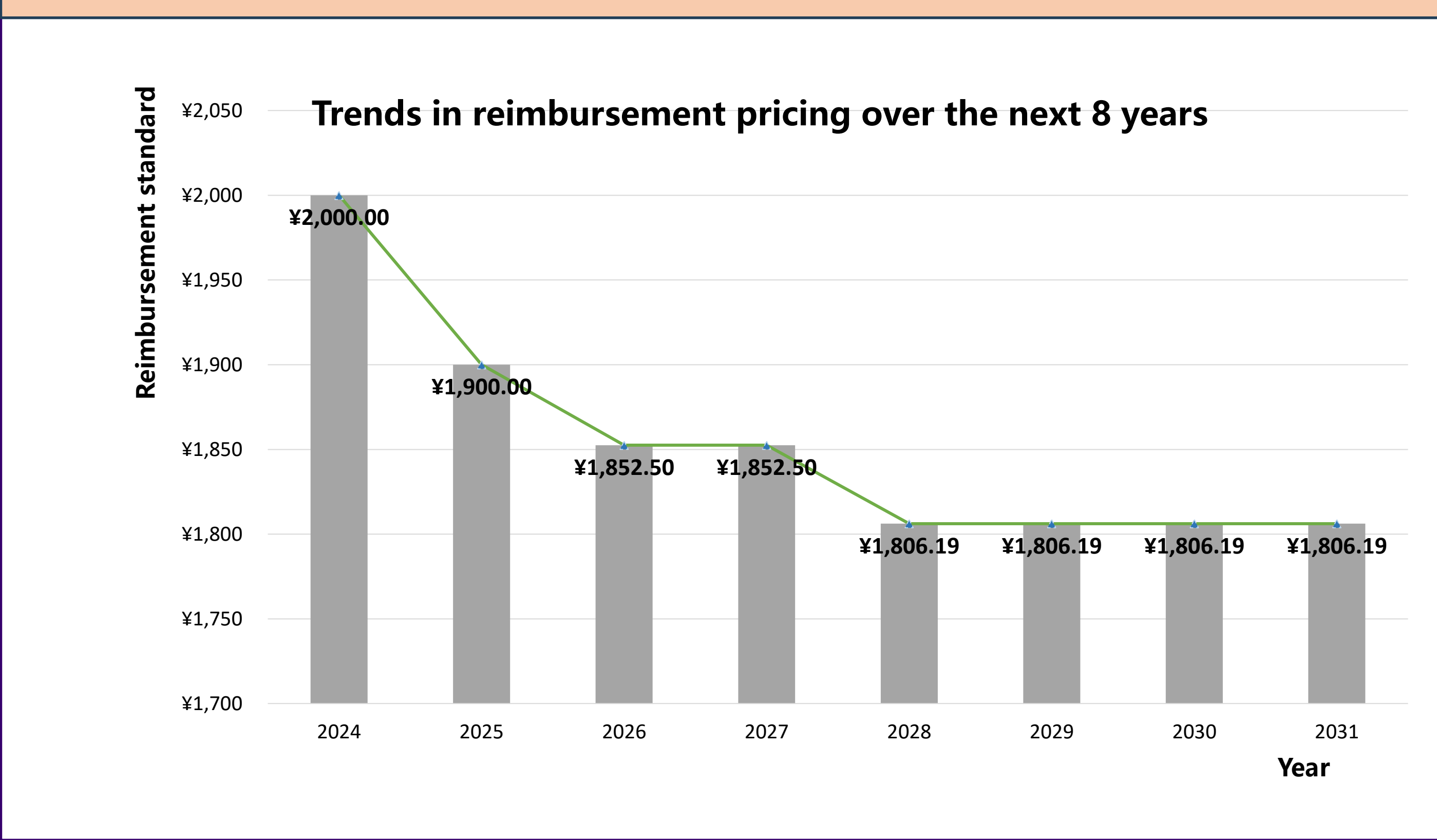
Value Points Under Key Dimensions

- ◆ Each product will be evaluated under five key dimensions which are Effectiveness, Safety, Innovation, Efficacy, and Equity.
- ◆ Each product can be classified as high or low clinical value, whether or not has substitute products in the national drug list
- ◆ Product value positioning is assessed using the four-quadrant evaluation method. It is divided based on whether the product has high or low clinical value and whether there are substitute products in the national reimbursement drug list. The corresponding categories are: Breakthrough, Improvement, Comparable, and Inferior.

Results

- ◆ The target population size in 2025 and 2026 is 707,610 and 710,369 respectively, corresponding to 18,996,298 and 19,070,384 units usage of drug A. With the current NRDL price of CNY 110 and the reimbursement rate of 65%, the potential price reduction is predicted to range between 0-21% in the next renewal cycle. The annual sales volume should be controlled within 20,936,676 units if no price reduction is expected.

Figure 4 | Final result



Conclusion

- The price reduction in the next renewal cycle hinge on the target population size and the current reimbursement criteria. For products with large patient size, significant discrepancies between predicted and actual sales can lead to substantial price reductions or renewal failure. Stakeholders must carefully forecast market dynamics to effectively manage expectations and regulatory compliance.