

Budget Impact Analysis of Anaprazole for the Treatment of Duodenal Ulcer in China

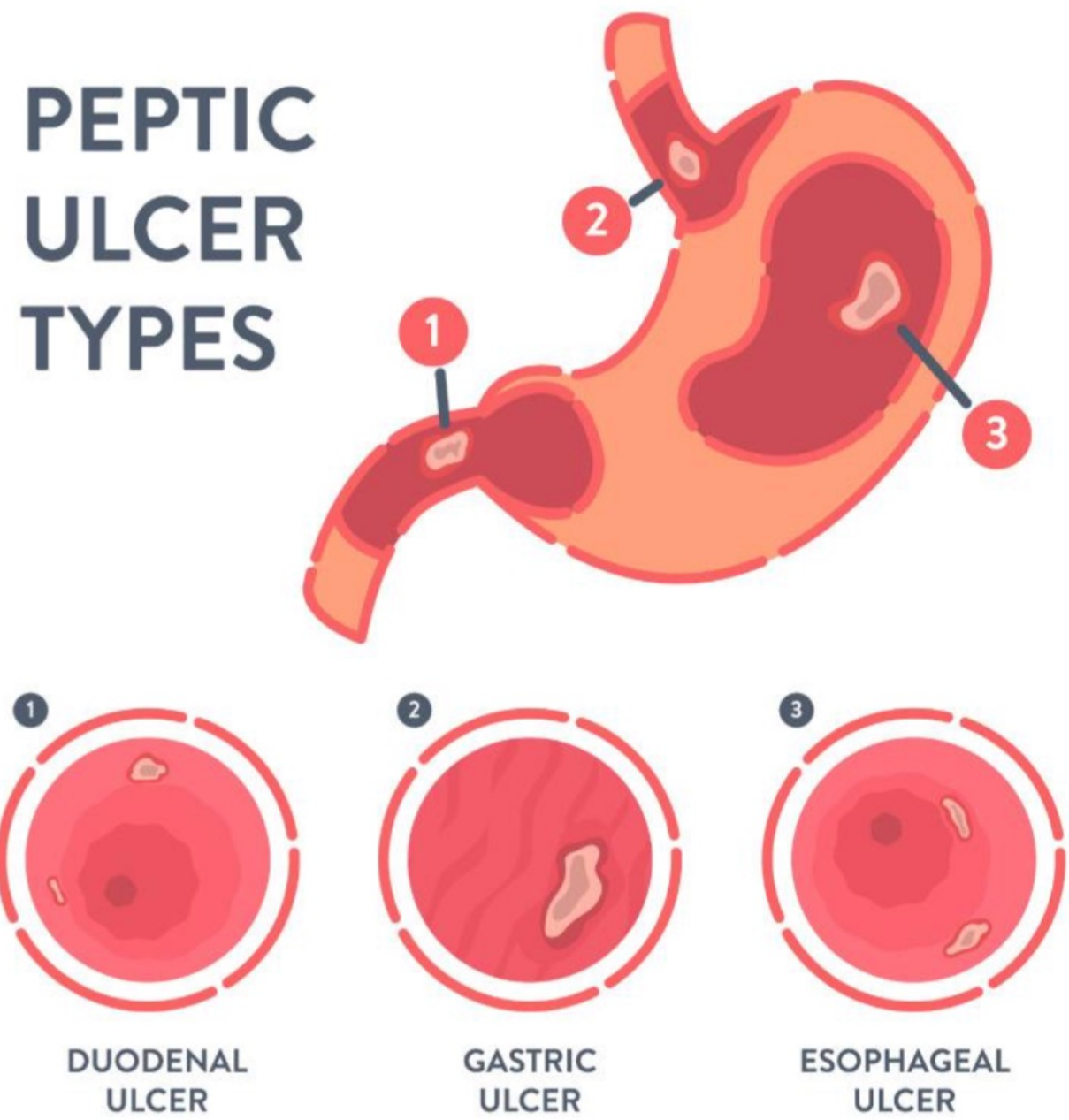
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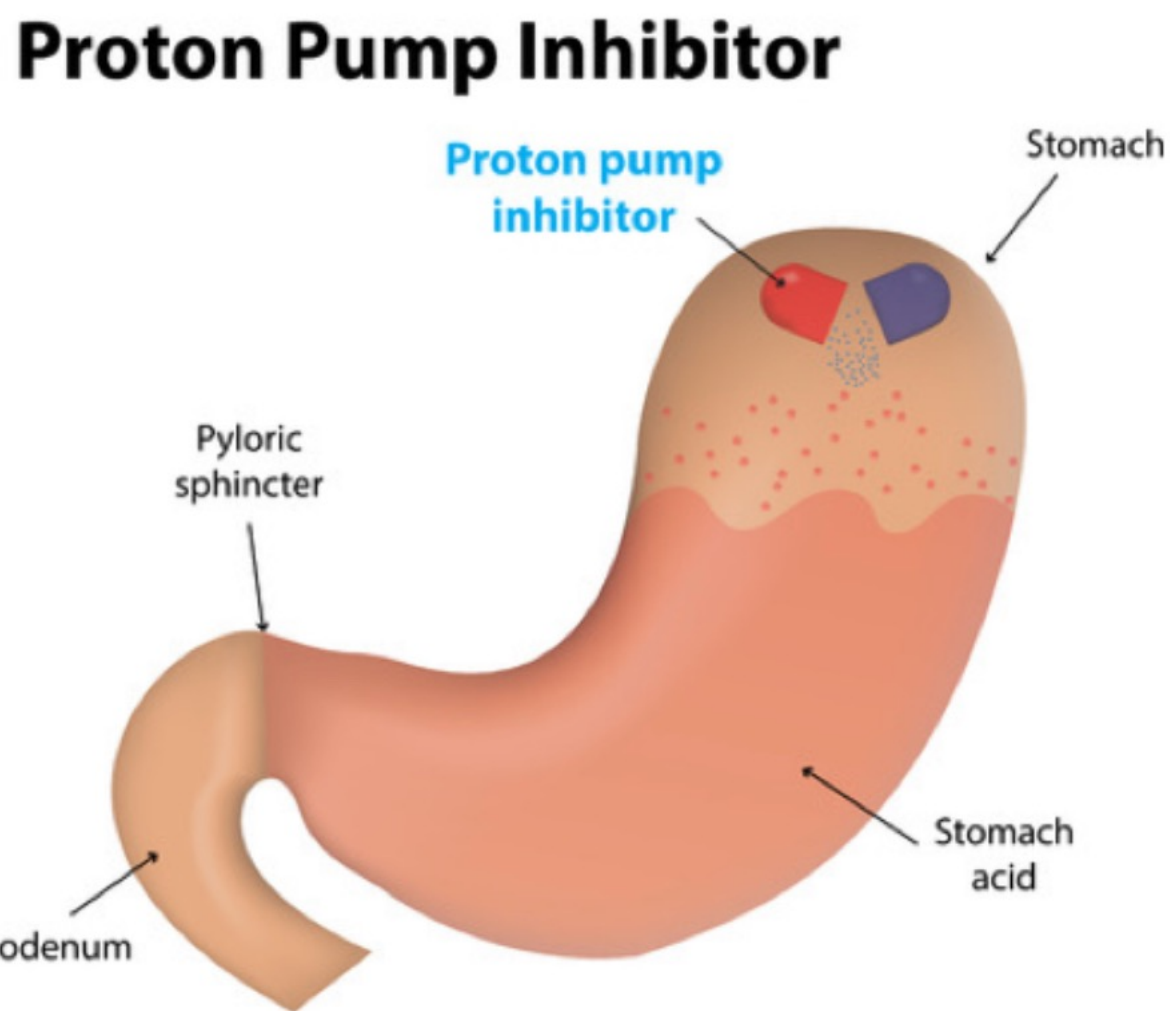
BACKGROUND

- Approximately 5%-10% of the global population suffers from peptic ulcer disease(PUD), with an annual incidence rate of about 0.1%-0.3%. PUD in China has a higher incidence rate, mortality, and Disability-Adjusted Life Years (DALYs).



- There are three common types of PUDs, which are Gastric Ulcers, Duodenal ulcers (DU) and gastric ulcers (GU). Among them, DU is a common chronic disease characterized by defects in the mucosal and muscular layers of the duodenum.

- Gastric acid plays a crucial role in the pathogenesis of DU. Therefore, acid suppression therapy is an important component of the current treatment plan for DU. **Proton pump inhibitors (PPIs)** are recommended as the first-line treatment for acid suppression by clinical guidelines such as “Evidence-based Clinical Practice Guidelines for Peptic Ulcers (2020)”.



OBJECTIVES

This study evaluates the potential impact of Anaprazole on the health insurance fund from the perspective of health insurance administrators and decision-making departments in the next three years after Anaprazole is included in **China National Reimbursement Drug List (NRDL)**, using 2023 as the baseline year.

METHODS

Estimate Increment Users

- The target population = *Total population of China for the year* × *Insurance coverage rate* × *Incidence rate of duodenal ulcers* × *Consultation rate* × *Proportion of duodenal ulcer patients using PPIs*.
- The parameters are sourced from public data including the official website of the National Healthcare Security Administration of China, epidemiological literature on peptic ulcers, and the Chinese population census report.

Selection of competitive drugs and market share prediction

- Referring to relevant clinical practice guidelines, such as the Clinical Application Guidelines for Proton Pump Inhibitors (2020), and the list of proton pump inhibitors included in the NRDL, six competitive drugs were ultimately selected: **Omeprazole, Lansoprazole, Esomeprazole, Pantoprazole, Rabeprazole, and Ilaprazole**.
- The market share data are sourced from the *National Chemical Drug Terminal Monitoring System* in **MENET**, which is a professional website in China that provides information on the pharmaceutical industry’s policies and market.

RESULTS

In Scenario 1, Anaprazole was not included in the NRDL, and the Annual medical insurance budget expenditure for the treatment of duodenal ulcers from 2024 to 2026 were ¥228.771million/year, ¥226.274million/year and ¥238.034million/year, respectively.

Scenario 1	Anaprazole is not included in (NRDL)		
	Annual medical insurance budget expenditure (ten thousand yuan)		
	2024	2025	2026
Omeprazole	1323.6	1073.1	951.8
Lansoprazole	2239.9	2127.7	2211.2
Ilaprazole	4266.5	4586.2	5393.6
Pantoprazole	1360.3	1831.9	1717.6
Rabeprazole	10193.1	9772.1	10249.5
Esomeprazole	3493.7	3236.3	3279.8
Total PPIs	22877.1	22627.4	23803.4

RESULT

- In Scenario 2, when Anaprazole is included in the NRDL, the annual medical insurance budget expenditures would be **¥228.771million/year, ¥226.274 million/year, and ¥238.034million/year**, respectively.
- The increased expenditure on health insurance accounted for **0.001957%, 0.003205%** and **0.005247%**. Sensitivity analysis showed that parameters such as **consultation rate, prevalence of duodenal ulcer patients, and market share** of PPI drugs would have some influence on the results.

Scenario 2	Anaprazole is included in (NRDL)		
	Annual medical insurance budget expenditure (ten thousand yuan)		
	2024	2025	2026
Anaprazole	7041.7	15050.5	23012.6
Omeprazole	1230.9	1386.3	1122.3
Lansoprazole	2083.1	1374.4	1303.7
Ilaprazole	3967.8	2962.5	3180.1
Pantoprazole	1265.1	1183.4	1012.7
Rabeprazole	9479.6	9778.6	9361.5
Esomeprazole	3249.2	2090.5	1933.8
Total PPIs	28317.4	33826.3	40926.8
Increment of expenditure	5440.3	11198.8	17123.3

CONCLUSION

When Anaprazole is included in the NRDL, it has less impact on the total expenditure of health insurance, and the impact on the health insurance fund can be reduced by negotiating price reductions of health insurance drugs in exchange for volume.

CONTRACT INFORMATION

Please contact Jiaqi Shi (shijiaqi000326@163.com) or corresponding author Naitong Zhou (znt@scu.edu.cn) with any questions regarding this study. We are more than happy to discuss!

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