Impact of nilotinib reimbursement coverage on the use of tyrosine kinase inhibitors for chronic myeloid leukemia in Chinese tertiary care hospitals: a retrospective analysis of hospital procurement data

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INTRODUCTION

- Rapid surge in expenditure posed a serious threat to the sustainability of the Chinese public health insurance system.
- The Chinese National Healthcare Security Administration (CNHSA) has established a reimbursement framework for the National Reimbursement Drug List (NRDL) to optimize health care resource allocation and sustain universal health coverage in China.
- In January 2019, nilotinib was included in the NRDL as a treatment option for chronic myeloid leukemia (CML), and the impact of nilotinib reimbursement listing on the tyrosine kinase inhibitors (TKI) treatment landscape remains unclear.

OBJECTIVES

- To describe changes in the use of TKIs for CML after nilotinib was listed by NRDL for reimbursement.

METHODS

Data source

- Hospital procurement database of Chinese Pharmaceutical Society Medicine Information Network was used to estimate the utilization of TKIs per chemical and brand names in the enrolled hospitals from May 2017 to April 2021.

Data collection

- Information regarding 947 hospitals enrolled: hospital rank (tier IIIA: 60.7%, tier IIIB: 7.5%, tier IIB: 18.5%), hospital type (general hospital: 97.1%, specialized hospital: 2.9%), and geographic location (first tier city: 37.1%, second tier city: 17.2%, third tier city: 17.1%, fourth tier city: 13.8%).
- Procurement information of TKIs: procurement date, chemical name of drug, brand name of drug, drug specifications, and procurement quantity.

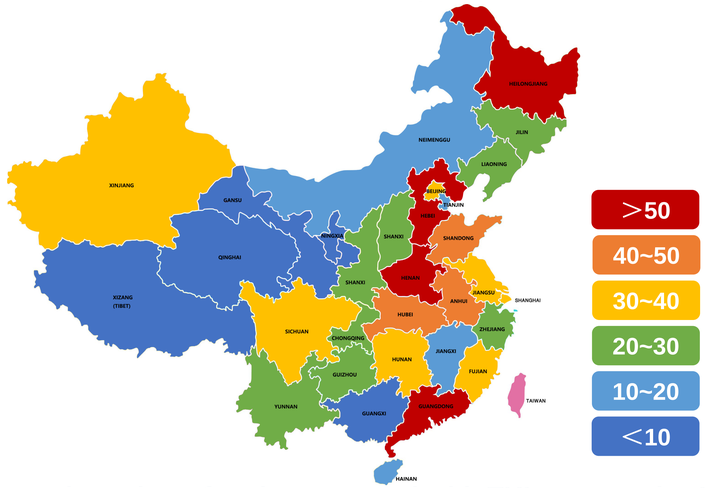
Data statistical analysis

- The utilizations and distributions of TKIs before and after implementing nilotinib reimbursement policy were compared using descriptive statistical methods.

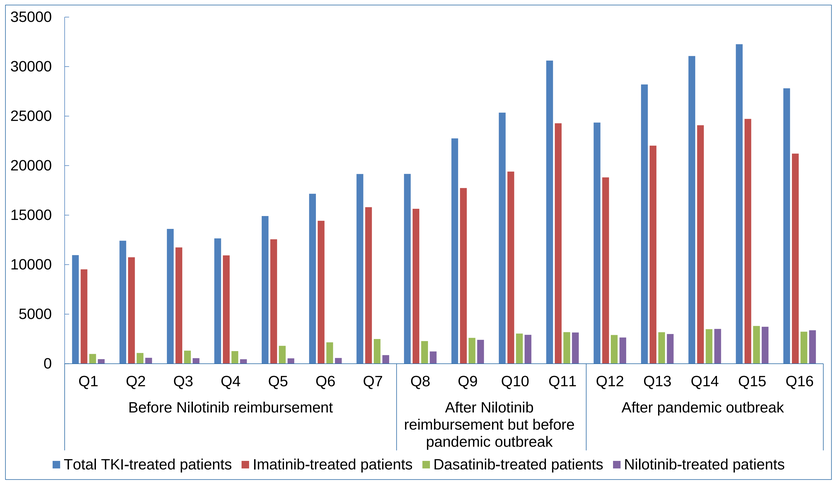
RESULTS

1. Number of the enrolled hospitals by geographic locations

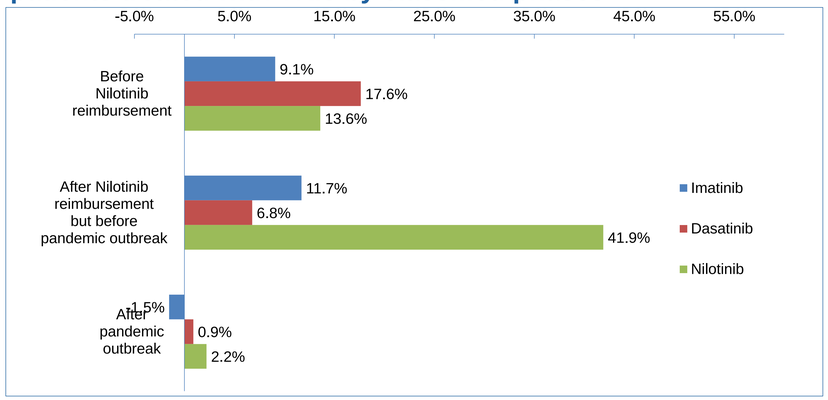
Total number of enrolled hospitals: 947



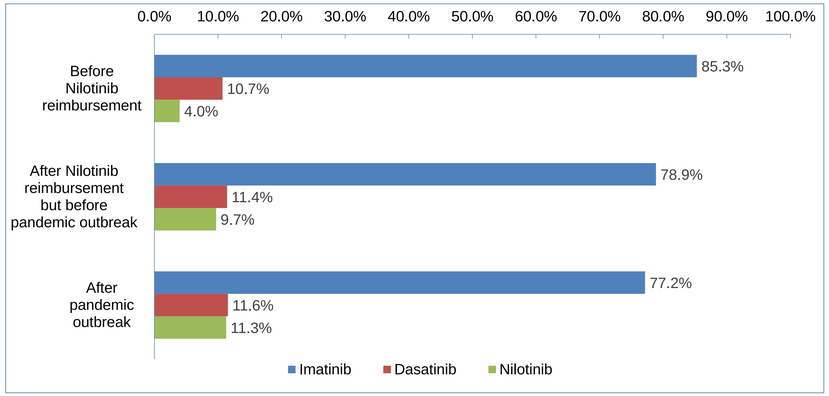
2. Estimated number of patients treated with TKIs across the 16 divided quarters from May 2017 to April 2021



3. Average quarterly change (percentage) for the number of patients treated with TKIs by classified phases



4. Pooled distributions of TKI utilization per chemical names and classified phases



CONCLUSIONS

- Reimbursing nilotinib substantially augmented the use of nilotinib in Chinese hospitals.
- Nilotinib reimbursement policy did not reduce the market volume of existing TKIs with reimbursement coverage (imatinib and dasatinib) but slightly reduced their market shares.

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