

BACKGROUND

Breast cancer (BC) has become the most prevalence cancer among Chinese women, and more reasonable medical quality control is urgently needed. Oncology Professional Quality Control Indicators (2023 edition) has been published by the National Health Commission of China, no study has yet verified its feasibility in real-world settings.

OBJECTIVES

To assess the feasibility of BC quality indicators from the Oncology Professional Quality Control Indicators (2023 edition) using real-word data in China.

METHODS

A retrospective study was conducted utilizing data collected from the Electronic Medical Records (EMR) of BC patients across more than 10 hospitals in Northern, Eastern, and Central China from 2022 to 2023. A set of 12 quality indicators were calculated, including 5 diagnostic-related indicators and 7 treatment-related indicators.

RESULTS

A total of 17,402 BC patients were identified in the study. For treatment quality indicators, 89.74% of patients with advanced metastatic BC received first-time systemic treatment, 50.11% of hormone receptor-positive BC patients received adjuvant endocrine therapy post-surgery. Only 22.05% of BC patients receiving anti-HER-2 targeted therapy were confirmed to be HER-2 positive. The percentage of BC patients receiving radiotherapy after breast-conserving surgery and modified radical mastectomy were both below 25%. Three quality indicators related to BC diagnosis were all below 50%, indicating that there may be inconsistencies in diagnostic practices and limited availability of detailed medical record data in China. Additionally, four indicators could not be reasonably calculated based on the available data.

CONCLUSIONS

In real-world BC medical quality control practices in China, some treatment-related indicators are feasible, but there remains considerable potential for improvement in compliance with many indicators, particularly at the diagnosis level. More work should be done in the future including enhancing the standardization of diagnosis and treatment for BC patients and optimization of data collection methods for particular indicators.

Oncology Professional Quality Control Indicators (2023 edition)

No.	Indicators	Definition
1	The clinical TNM staging diagnosis rate before the first treatment	The proportion of BC patients who completed clinical TNM staging diagnosis before their first treatment among the total number of BC patients receiving their first treatment.
2	The compliance rate of clinical TNM staging examination and evaluation strategies before the first treatment.	The proportion of BC patients whose clinical TNM staging examination and evaluation complied with the strategy before their first treatment, among the total number of BC patients receiving their first treatment.
3	The pathological diagnosis rate before non-surgical treatment	The proportion of BC patients who completed a pathological diagnosis before their first non-surgical treatment among the total number of BC patients receiving their first non-surgical treatment.
4	The rate of sentinel lymph node biopsy (SLNB) in early-stage BC patients	The proportion of early-stage BC patients who underwent sentinel lymph node biopsy (SLNB) surgery among the total number of early-stage BC patients who had surgery.
5	The rate of radiotherapy after breast-conserving surgery/modified radical mastectomy	The proportion of BC patients who received postoperative radiotherapy after breast-conserving surgery/modified radical mastectomy among the total number of patients who underwent breast-conserving surgery/modified radical mastectomy.
6	The rate of neoadjuvant therapy in patients with locally advanced b	The proportion of patients with locally advanced BC who receive neoadjuvant therapy out of the total number of patients with locally advanced BC.
7	The rate of initial systemic therapy in patients with metastatic (advanced) BC	The proportion of patients with metastatic (advanced) BC who receive systemic therapy as their first treatment out of the total number of patients with metastatic breast cancer who start any form of first treatment.
8	The rate of adjuvant endocrine therapy among hormone receptor-positive BC patients after surgery.	The proportion of hormone receptor-positive (HR+) BC patients who receive adjuvant endocrine therapy after surgery out of the total number of HR+ BC patients who undergo surgery.
9	The proportion of HER-2 positive patients among those receiving anti-HER-2 targeted therapy for breast cancer.	The proportion of HER-2 positive BC patients among those receiving anti-HER-2 targeted therapy.