

OBJECTIVES

- The optimal treatment strategy after progression on endocrine therapy (ET) plus a cyclin-dependent kinase 4/6 inhibitor (CDK4/6i) **remains unclear in China and worldwide.**
- This study aimed to describe **real-world treatment patterns and disease burden** in patients with HR+/HER2- advanced breast cancer (ABC) **after CDK4/6i failure** in China.

METHODS

Data Sources

- This retrospective cohort study used a **multicenter hospital electronic medical record database** from nine representative hospitals across nine provinces with geographic and socioeconomic diversity, covering January 2020 to September 2024.

Study Population

- The identification period was from January 1, 2022 to September 30, 2023. The **index date was defined as the date of the first CDK4/6i failure** during the identification period.

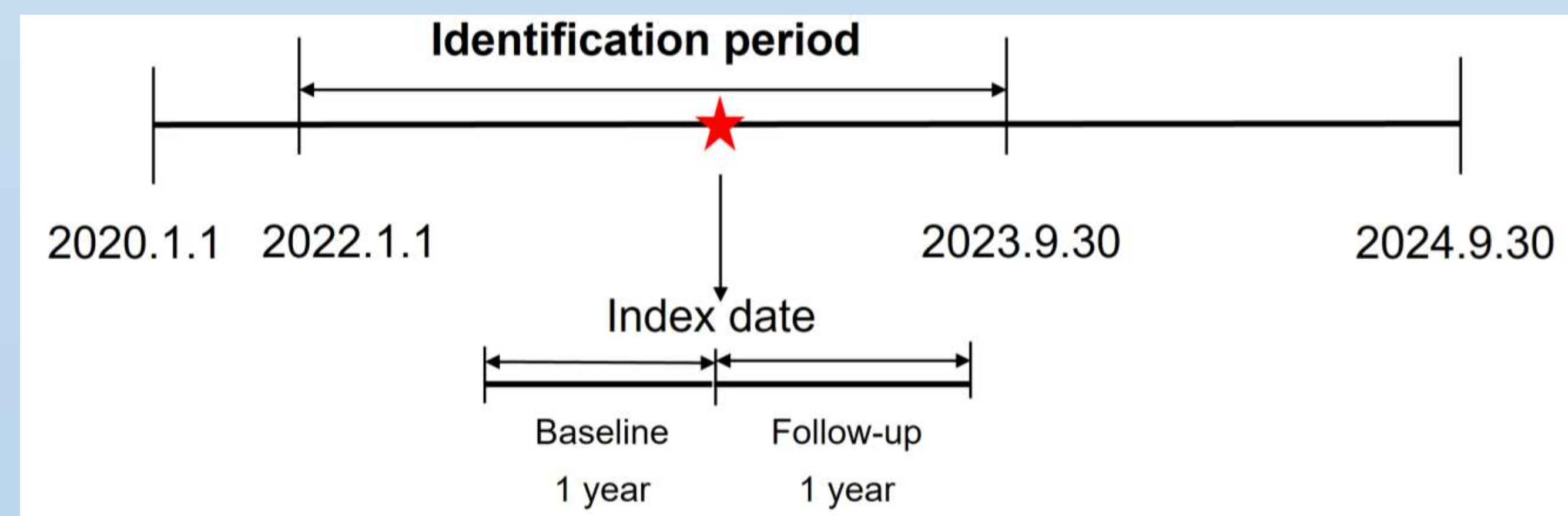


Figure 1. Overview of Study Period

Treatment Pattern Identification

- Eligible Regimens:** Analysis was restricted to **systemic anti-tumor therapies** (i.e., endocrine therapy, chemotherapy, or targeted therapy) for advanced or metastatic disease.
- First Subsequent Regimen:** The first regimen after CDK4/6i discontinuation was defined as all anti-tumor therapies initiated **within 30 days of the first new treatment.**
- Line of Therapy Change:** A new line of therapy was defined by: (a) introduction of a new drug class; (b) discontinuation of a single agent from a combination regimen; or (c) switching to another targeted therapy, regardless of mechanism of action.
- Combination Therapy:** Except for the initial regimen, combination therapy was defined as a **prescription overlap of ≥28 days.**

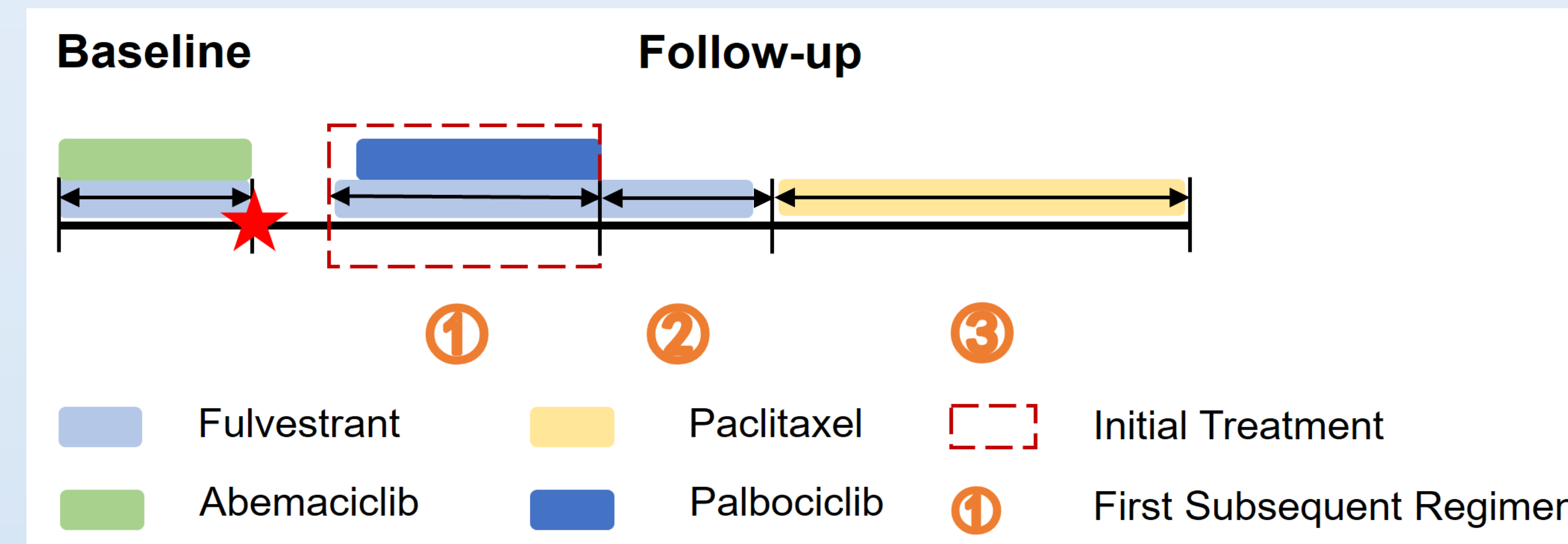


Figure 2. An illustrative example of treatment sequence

Research Measures

- Baseline characteristics:** Sociodemographic information and treatment history.
- Treatment pattern:** Use and regimen types of anti-tumor therapies, as well as treatment changes during follow-up.

Statistical Analysis

- Descriptive analyses were conducted for patient characteristics and treatment patterns.
- Continuous variables were reported as means and standard deviations, and categorical variables as frequencies and percentages.

RESULTS

Baseline Characteristics

- A total of **1,492 patients discontinued CDK4/6i**; 99.7% were female, with a mean age of 54.8 ± 14.6 years.
- The mean follow-up duration after CDK4/6i discontinuation was **315.9 ± 91.9** days.

Table 1. Baseline Characteristics

	Total Population (N=1,492)	Total Population (N=1,492)
Demographic Characteristics		Treatment History during the baseline period
Age(years)	54.8±14.6	Endocrine therapy 1492 (100.0%)
Female	1,488 (99.7%)	Chemotherapy 509 (34.1%)
Index year		Other targeted therapies 39 (2.6%)
2022	985 (66.0%)	Everolimus 18 (1.2%)
2023 (Jan-Sep)	507 (34.0%)	Chidamide 21 (1.4%)

Treatment Pattern

- Overall, **16.6% of patients (n=247) switched to another CDK4/6i**, and 9.6% (n=143) received other targeted therapies. In addition, 19.5% (n=291) received no further anti-tumor therapy.

Table 2. Anti-tumor Therapy Regimens after CDK4/6i Discontinuation
Total Population (Percentage)

Treatment category	Total Population (N=1,492)	Treatment category	Total Population (N=1,492)
CDK4/6i crossover use	247 (16.6%)	Other targeted therapies	143 (9.6%)
Abemaciclib	107 (7.2%)	Everolimus	65 (4.4%)
Dalpaciclib	103 (6.9%)	Chidamide	53 (3.6%)
Palbociclib	82 (5.5%)	Endocrine therapy	981 (65.8%)
Ribociclib	9 (0.6%)	Chemotherapy	472 (31.6%)

*Patients may have received more than one drug class or agent during follow-up. Excluding everolimus and chidamide, other targeted therapies were rarely used, each accounting for <1%.

- Among patients who continued treatment during follow-up, the mean number of treatment changes was **1.56**.
- The **most common first subsequent therapy was ET (57.2%)**, followed by chemotherapy (26.9%) and switching to a different CDK4/6i (9.7%).

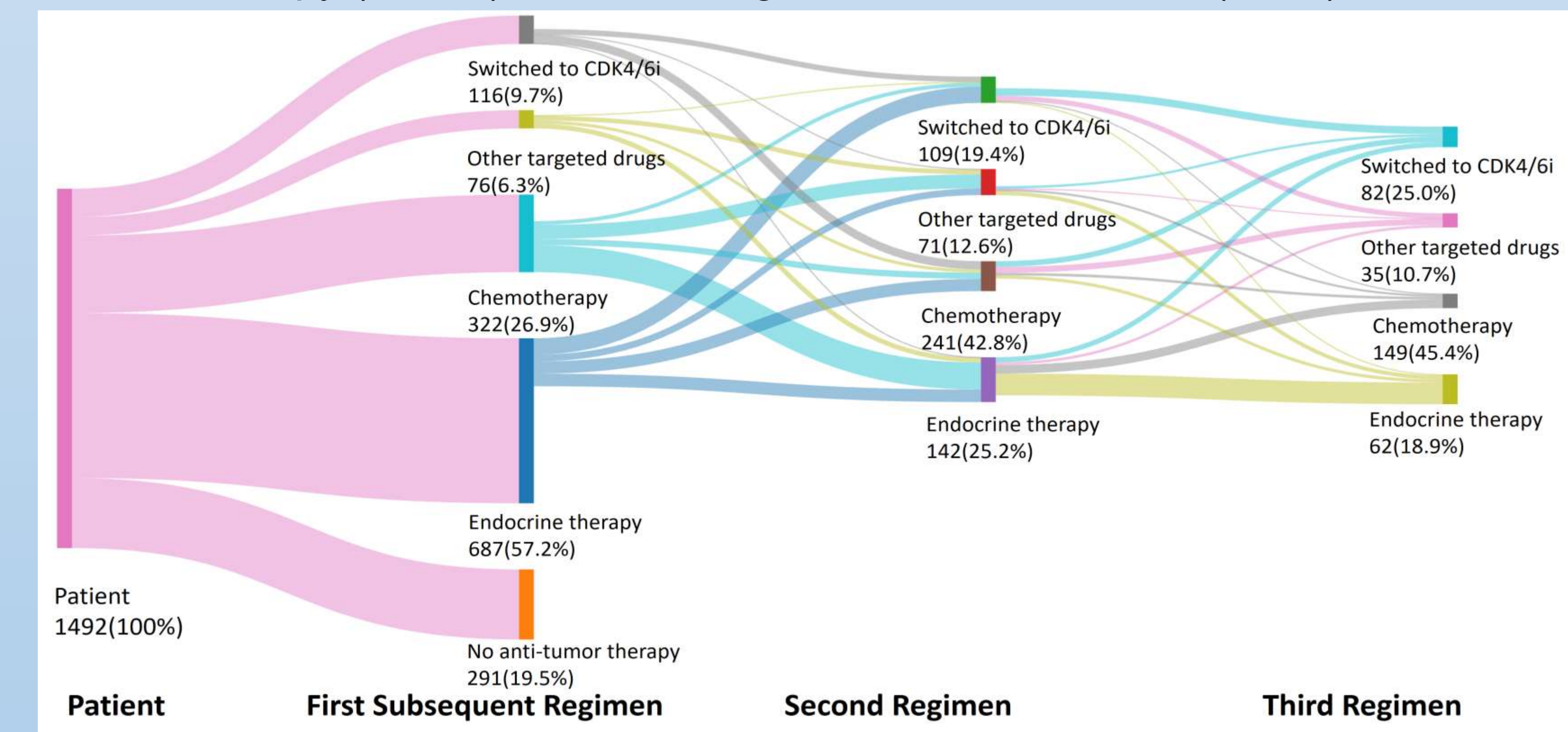


Figure 3. Anti-tumor Therapy Regimens after CDK4/6i Discontinuation

CONCLUSIONS

- In real-world practice, treatment choices after CDK4/6i failure **appeared to deviate from guideline-recommended sequencing**, with substantial reliance on conventional ET or chemotherapy.
- Around **one-fifth of patients received no further anti-tumor therapy**, suggesting limited feasible options.
- Current strategies may **not adequately address unmet needs**, highlighting the **need for more accessible and effective targeted therapies** to improve long-term outcomes.