Prescription Patterns and Treatment Persistence in Patients with Metastatic Breast Cancer on CDK4/6 Inhibitors

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BACKGROUND

- Since the FDA approval of the first CD4/6i in 2015, these agents have transformed the treatment landscape for breast cancer (BC).
- The combination of CDK4/6i with endocrine therapy now forms the cornerstone of the first-line treatment of HR+/HER2- metastatic BC (mBC).

SYSTEMIC THERAPY FOR ER- AND/OR PR-POSITIVE RECURRENT UNRESECTABLE (LOCAL OR REGIONAL) OR STAGE IV (M1) DISEASE[a]

NCCN

First-Line Therapy

Preferred Regimens

- Aromatase inhibitor + CDK4/6 inhibitor[b]
  - Aromatase inhibitor + ribociclib (category 1)[c]
  - Aromatase inhibitor + abemaciclib
  - Aromatase inhibitor + palbociclib

If disease progression on adjuvant endocrine therapy or relapse within 12 months of adjuvant endocrine therapy completion consider:

- Fulvestrant[d] + CDK4/6 inhibitor[b]
  - Fulvestrant + ribociclib (category 1)[e]
  - Fulvestrant + abemaciclib (category 1)[e]
  - Fulvestrant + palbociclib

- Choosing among the 3 approved CDK4/6i remains challenging, as each has a distinct side-effect profile and there are no head-to-head trial data comparing their therapeutic efficacy.

METHODS

- This study examines real-world prescription patterns and usage trends of CDK4/6i among patients with mBC.
- Utilizing the MarketScan health care claims database, we identified patients prescribed palbociclib, ribociclib, and/or abemaciclib from 2/2015 (post-FDA approval of palbociclib) until 12/2022 (prior to FDA approval for adjuvant use).
- We assessed changes in prescription rates for specific CDK4/6i over time and frequency of switches between these agents. To evaluate treatment duration, we analyzed cohorts of patients who received their first CDK4/6i prescription in 2015, 2016, and 2017, tracking ongoing prescriptions over subsequent years.

There is an increasing trend in younger and lower-income patients on Medicaid receiving CDK4/6i, likely reflecting improved access and coverage.

Oncologists showed a preference for newer agents such as ribociclib and abemaciclib post-approval.

The rarity of switching between CDK4/6i suggests good tolerability.

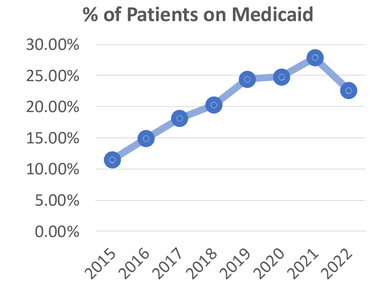
Over 10% of patients maintained long-term use of CDK4/6i into the third year after their initial prescription.

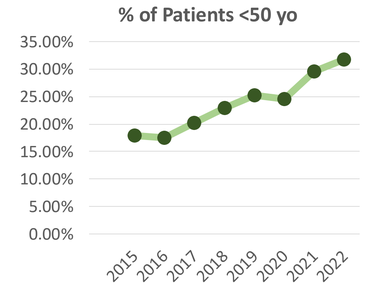
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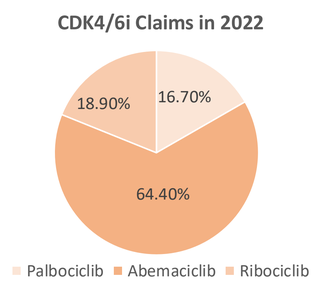
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RESULTS

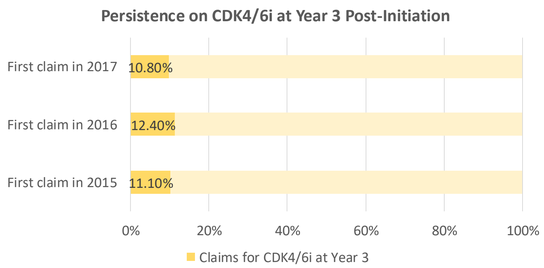
- A total of 13,514 patients were prescribed a CDK4/6i between 2/2015 and 12/2022 (98.2% female; 23.1% <50 yo, 14.9% >70 yo; 18.6% on Medicare, 19.9% on Medicaid).
- The percentage of patients < 50 yo and patients covered by Medicaid prescribed CDK4/6i increased over time, from 17.9% and 11.5% in 2015, to 31.8% and 22.6% in 2022, respectively. The proportion of patients > 70 yo and patients on Medicare decreased over time, from 16.9% and 24.9% in 2015, to 9.8% and 12.5% in 2022, respectively.







- In 2015-2016, all patients on CDK4/6i were prescribed palbocilcib. From 2017 to 2022, the proportion of patients on CDK4/6i prescribed ribociclib and abemaciclib increased each year. By 2022, among 2,682 patients with CDK4/6i claims, 1,726 (64.4%) were prescribed abemaciclib, 508 (18.9%) ribociclib, and 448 (16.7%) palbociclib.
- Switching between CDK4/6i was infrequent, with only 854 patients (6.3%) having claims for multiple distinct CDK4/6i. The most common switch was from palbociclib to abemaciclib (62.8% of patients with claims for at least 2 CDK4/6i).
- Among patients with a first claim for CDK4/6i in 2015-2017, long-term persistence was noted, with 11.1% of patients starting treatment in 2015 continuing into 2018, 12.4% of those starting in 2016 continuing into 2019, and 10.8% of those starting in 2017 continuing into 2020.



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