Implementing an Our Practice Advisory (OPA) to provide clinical decision support for adjuvant CDK4/6 inhibitors in early-stage breast cancer: The Mayo Clinic Experience

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BACKGROUND

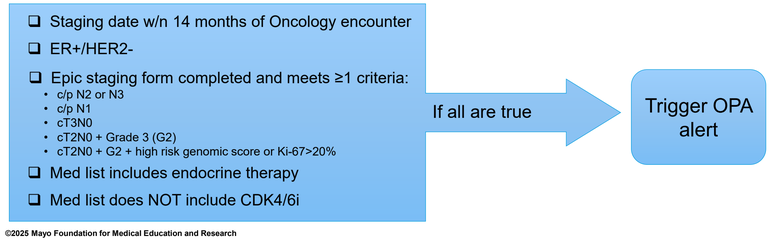
- An Our Practice Advisory (OPA; formerly known as Best Practice Advisory, BPA), is an electronic health record (EHR) tool. **OPAs** identify key parameters to **alert providers of potential interventions that could enhance quality of care**[1]. Such functionality is increasingly relevant given the rapid pace of new drug approvals.
- We previously identified that amongst Mayo Clinic patients (pts) meeting the MonarchE criteria, 28% of pts did not undergo a documented discussion with their provider regarding the role of adjuvant abemaciclib[2]. Further, a Flatiron study identified that **only 40% of eligible pts received abemaciclib**[3].
- To address this practice gap, in 2024 we began to implement EHR clinical decision support by creating an **OPA trigger for pts eligible for an adjuvant CDK 4/6 inhibitor** (CDK 4/6i).

OBJECTIVES

In this IRB-exempt QI project, we assess provider responses to CDK4/6i OPA alerts from January 10, 2025 to May 10, 2025.

METHODS

- The Mayo breast disease group designed an OPA prompting providers to discuss use of CDK4/6 inhibitors.
- This prompt targeted pts at an oncology encounter within 14 mo of clinical or pathologic diagnosis of high-risk, early-stage breast cancer. We leveraged structured data captured in Epic staging forms (Epic Systems) to identify pts eligible for adjuvant ribociclib or abemaciclib per FDA approvals who were not currently on a CDK4/6i. OPA trigger resulted in a hard stop, to select a preselected prompt and provide an optional free text comment.
- The OPA gathered limited details about whether adjuvant CDK4/6 inhibitors were discussed and whether the provider followed a link that resulted in prescribing one—considered an indicator of action taken.



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RESULTS

OPA rollout:

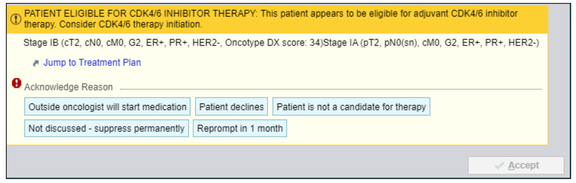
- OPA went live 01/10/2025
- Data collected over a 5-month period
- OPA trigger resulted in a hard stop, requiring providers to respond.

OPA results:

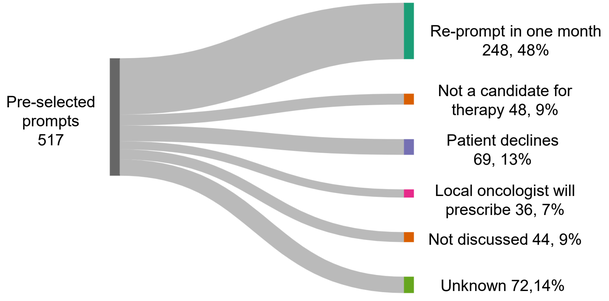
- **517 OPA alerts** were triggered
  - 332 unique patients
  - Median age 62.5 years
  - majority were female (97%)
- OPA prompt → provider action
  - **'Action taken' 12.6% of the time** (65/517) – prompting a hyperlink to start a treatment plan
  - **6%** (30) of 332 patients noted they **discussed or started therapy that day**
- OPA prompt → deferred action
  - Providers opted for a re-prompt in 1 month 48% of the time (248/517)
  - Providers opted to not discuss CDK4/6i 9% of the time (44/517)
- Median time for resolution of OPA 17.5 seconds (2-567 seconds)

OPA Trigger Accuracy

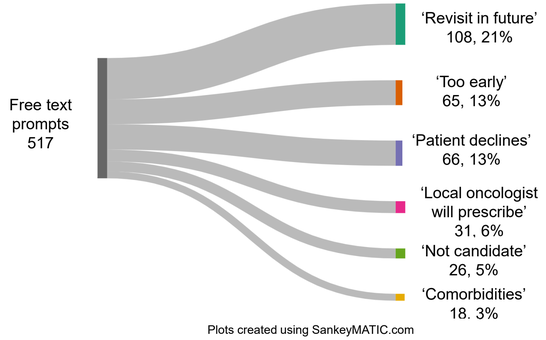
- Erroneous prompts:
  - Previous CDK 4/6i toxicity (n=14;3%)
  - Currently on CDK 4/6i (n=18; 3%)



Pre-selected prompts



Free-text responses



Plots created using SankeyMATIC.com

DISCUSSION

- Mayo Clinic was able to successfully implement a clinical decision-making tool based on real time data.
- This approach pairs real world decision making with improved data synthesis to pursue improved invasive disease-free survival (iDFS)[4,5] and overall survival (OS)[6] with use of adjuvant CDK 4/6i in appropriate patient populations.
- Understanding reasons for OPA re-prompts helps to refine this powerful tool and to further understand patterns in use of adjuvant CDK 4/6i.
- OPA fired erroneously at an infrequent rate, and efforts are underway to minimize this rate.

CONCLUSIONS

- The most common reasons selected on OPA prompts include asking for re-prompt, patient declined, patient not a candidate, and OPA firing too early.
- The OPA offered clinical decision support and ensured that clinicians considered prescribing CDK 4/6i in eligible pts.
- Refinements are needed to ensure appropriate timing of OPA and minimize erroneous firing.
- The OPA remains active and captures the reason for deferral of adjuvant CDK 4/6i prescription.

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