Dana-Farber Cancer Institute

Tip Sheet

Laboratory Monitoring for Patients on Oral Chemotherapy or Oral Targeted Therapies

Based on a presentation given on July 8, 2024 by Caroline C. Block, MD
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CDK4/6 Inhibitors

Ribociclib

Complete blood count (CBC)

- Cycle 1, day 1 (baseline)
- Every 2 weeks for months 1-2
- Day 1 of every subsequent cycle or as clinically indicated

Comprehensive metabolic panel (CMP)

- Cycle 1, day 1 (baseline)
- Every 2 weeks for months 1-2
- Day 1 of every subsequent cycle or as clinically indicated

Electrocardiogram (ECG)

- Cycle 1, day 1 (baseline)
- Cycle 1, day 15
- Cycle 2, day 1
- If there is QTc prolongation at any time during treatment, ECGs should be monitored more frequently.

NOTE: Ribociclib is not approved for use with tamoxifen due to significant increase in QTc prolongation seen in the MONALEESA-7 trial.[1]

Abemaciclib and Palbociclib

CBC

- Cycle 1, day 1 (baseline)
- Every 2 weeks for months 1-2
- Every month for months 3-4
- Every 2 months from month 4 onward
    - Consider monthly monitoring for patients with significant laboratory abnormalities.

CMP

- Cycle 1, day 1 (baseline)
- Every 2 weeks for months 1-2
- Every month for months 3-4
- Every 2 months from month 4 onward
    - Consider monthly monitoring for patients with significant laboratory abnormalities.

PI3K/AKT/mTOR Pathway Inhibitors

Alpelisib

Before initiating alpelisib:

- Assess baseline fasting blood glucose (FBG) and HbA1c.
- Plan for glucose monitoring after treatment initiation.

After initiating alpelisib:

- Monitor FBG
    - At least weekly during the first 2 weeks
    - At least every 4 weeks thereafter
    - Additional FBG monitoring as clinically indicated
- Monitor HbA1c
    - Every 3 months
    - Additional HbA1c monitoring as clinically indicated

NOTE: Monitor FBG closely in diabetic and prediabetic patients. Alpelisib treatment may require intensified anti-hyperglycemic treatment. Counsel patients on lifestyle changes related to diet and exercise, as appropriate.

Capivasertib

Before initiating capivasertib:

- Assess baseline FBG and HbA1c.
- Plan for glucose monitoring after treatment initiation.

After initiating capivasertib:

- Monitor FBG
    - Once per week (between days 3-7 of the dosing week) during weeks 1-2
    - Every 2 weeks (between days 3-7 of the dosing week) during weeks 3-4
    - Once per month (between days 3-7 of the dosing week) from week 5 onward
- Monitor HbA1c
    - Every 3 months
    - Additional HbA1c checks as clinically indicated

Monitor FBG more often (including home testing) in patients with risk factors for hyperglycemia, including:

- BMI ≥ 30,
- FBG > 159 mg/dL
- HbA1c ≥ upper limit of normal
- Use of concomitant systemic corticosteroids
- Intercurrent infections

Patients taking capivasertib may evaluate FBG at home, particularly those with high-risk features. To facilitate this, a glucometer, testing strips, and lancets (with patient counseling regarding proper testing procedures) should be made available to the patient.

If a patient experiences hyperglycemia while taking capivasertib, monitor FBG as clinically indicated, and at least twice per week until FBG decreases to normal levels.

During treatment with anti-hyperglycemic medication, continue monitoring FBG at least once per week for 8 weeks, followed by once every 2 weeks and as clinically indicated.

Inavolisib

Monitor FBG

- Cycle 1, day 1 (baseline)
- Every 3 days during the first week
- Once per week during weeks 2-4
- Every 2 weeks during weeks 5-12
- Every 4 weeks thereafter

Monitor HbA1c

- Cycle 1, day 1 (baseline)
- Every 3 months from week 5 onward

CBC

- Cycle 1, day 1 (baseline)
- Every 4 weeks from week 5 onward

CMP

- Cycle 1, day 1 (baseline)
- Every 4 weeks from week 5 onward

Selective Estrogen Receptor Degraders

Elacestrant

Lipid monitoring:

- Cycle 1, day 1 (baseline)
- With the first restaging scan
- As clinically indicated

PARP Inhibitors

Olaparib and Talazoparib

CBC

- Cycle 1, day 1 (baseline)
- Every 2 weeks for the first 4 weeks
- Monthly for the subsequent 5 months
- After 6 months, monitoring should be personalized based on tolerance.

CMP

- Cycle 1, day 1 (baseline)
- Every 2 weeks for the first 4 weeks
- Monthly for the subsequent 5 months
- After 6 months, monitoring should be personalized based on tolerance.

Chemotherapy

Capecitabine

CBC

- Cycle 1, day 1 (baseline)
- Before each treatment cycle

CMP

- Cycle 1, day 1 (baseline)
- Before each treatment cycle

NOTE: CBC and CMP may be monitored every other cycle in patients with consistently stable values.

DPYD Mutation Testing

DPYD mutation testing is recommended prior to treatment initiation, unless patients had received prior capecitabine or 5-FU, or had the test performed elsewhere. The test is performed at the Mayo Clinic; results take 5-7 days. Dana-Farber patients are not charged if not covered by insurance. Approximately 4% of patients have mutations that require dose reductions; consult with a Dana-Farber pharmacy specialist for these cases.

References

1. Bardia, A., et al. Tamoxifen (TAM) or a non-steroidal aromatase inhibitor (NSAI) with ribociclib (RIB) in premenopausal patients (pts) with hormone receptor-positive (HR+), HER2-negative (HER2–) advanced breast cancer (ABC): MONALEESA-7 subgroup analysis. Annals of Oncology 29, viii106-viii107 (2018).