



A Teaching Affiliate  
of Harvard Medical School

# Oral Targeted Cancer Therapy: CDK4/6 Inhibitors



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# Center for Breast Cancer

## Topics to Discuss:

- What is oral targeted therapy?
- How does oral targeted therapy work?
- Reasons for taking oral targeted therapy
- How to take oral targeted therapy
- Side Effects & How to Manage
- Storage, Handling, and Disposal
- Drug Interactions
- Important Things to Know
- Supportive Care Resources
- Your Breast Cancer Team
- When to Call
- Important Phone Numbers



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# What is oral targeted cancer therapy?

Oral targeted therapy is oral cancer therapy that is taken by mouth and comes in a tablet or capsule form.

Oral targeted therapy may be prescribed along with other types of cancer therapies such as chemotherapy or hormone therapy.

# How does oral targeted therapy work?

- Targeted therapy “targets” the changes in cells that cause cancer.
- Targeted therapy can identify and attack certain types of cancer cells.
- Targeted therapy can impact the environment in which a cancer cell grows or it can target and alter cells that help cancer grow.

# Reasons for taking oral targeted therapy

- Personal history of either early stage or advanced breast cancer for which there is an oral targeted therapy treatment approved for use.
- We will talk with you about how long you will need to take this therapy.

## CDK4/6 Inhibitors are a type of oral targeted therapy

- How these work: CDK4/6 inhibitors block proteins known as CDK (cyclin-dependent kinase) 4 and 6. When activity of CDK 4 and 6 is increased, there is a loss of cell cycle control that leads to increased cell growth and division. By blocking CDK 4 and 6, CDK4/6 inhibitors disrupt breast cancer cell growth and slow tumor progression.
- These drugs are used in combination with either an aromatase inhibitor (anastrozole, exemestane, or letrozole) or fulvestrant to treat advanced or metastatic breast cancer.

# CDK4/6 Inhibitors

## Examples of CDK4/6 Inhibitors:

- abemaciclib (Verzenio)
- palbociclib (Ibrance)
- ribociclib (Kisqali)



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## abemaciclib (Verzenio)

- Taken either alone or in combination with an aromatase inhibitor (anastrozole, exemestane, or letrozole) or fulvestrant.
- Take abemaciclib tablets twice daily, about 12 hours apart.
- Take abemaciclib at around the same time each day.
- It may be taken with or without food.

# palbociclib (Ibrance)

- Taken in combination with either an aromatase inhibitor or fulvestrant.
  - An aromatase inhibitor should be taken every day throughout the 28-day cycle (no rest period) when used with Palbociclib.
  - Palbociclib may instead be combined with fulvestrant (Faslodex) injection.
- Take palbociclib once daily for 21 days. Do not take Palbociclib for the next 7 days (rest period). This is a 28-day cycle.
- Take with or without food.
- Take around the same time each day.



## ribociclib (Kisqali)

- Taken in combination with either an aromatase inhibitor or fulvestrant.
  - An aromatase inhibitor should be taken every day throughout the 28-day cycle (no rest period) when used with ribociclib.
  - Ribociclib may instead be combined with fulvestrant (Faslodex) injection.
- Take ribociclib once daily for 21 days. Do not take ribociclib for the next 7 days (rest period). This is a 28-day cycle.
  - Each tablet is 200mg. The number of tablets you take depends on the dose prescribed to you.
- Take with or without food.
- Take around the same time each day.



## How is oral targeted therapy taken?

- Take your medication as directed by your cancer team.
- Each oral targeted therapy has a specific schedule that should be followed for safety and efficacy.
- Your cancer team may modify the dose or schedule based on lab results or side effects.
- Your cancer team will tell you whether to take the oral therapy with or without food.
- Swallow whole with water and do not break, chew, or crush your tablet or capsule.
- If you miss a dose, skip the dose and continue your regular dosing schedule. **Do not** take 2 doses at the same time to make up for the missed dose.



# Side Effects of CDK4/6 Inhibitors

- Fatigue or tiredness
- Nausea, vomiting
- Diarrhea
- Headache
- Hair thinning or hair loss
- Rash
- Cough
- Infections
- Effects on heart function (called QT prolongation)
- Low blood counts:
  - Decrease in white blood cells that fight infection
  - Decrease in red blood cells that deliver oxygen throughout the body
  - Decrease in platelets that help blood to clot

# How to keep track of your oral targeted therapy schedule?

- Create a medicine calendar either on paper or in your tablet or phone to keep track of your doses.
- Share the calendar with your cancer treatment team at visits.
- Pill boxes can be used to keep track of your oral targeted therapy doses. Do **not** mix other pills in the box you use for your oral targeted therapy.



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# How to keep track of your oral targeted therapy schedule?

- [https://www.ibrance.com/sites/default/files/dosing\\_tracker\\_for\\_ibrance\\_and\\_an\\_aromatase\\_inhibitor.pdf](https://www.ibrance.com/sites/default/files/dosing_tracker_for_ibrance_and_an_aromatase_inhibitor.pdf)

## Your Dosing Tracker

For IBRANCE® (palbociclib) + Aromatase Inhibitor\*

My IBRANCE start date this cycle: \_\_\_\_\_  
month | day | year

My IBRANCE dose: \_\_\_\_\_

Record your start date and mark every day you take your therapy.

Here's your checklist:

- Record the day you start taking IBRANCE and tell your healthcare team your start date.
- Weeks 1-3, take IBRANCE + an aromatase inhibitor. Week 4, take an aromatase inhibitor only. Be sure to follow your dosing schedule exactly as your healthcare team prescribes.
- Check off your daily doses.
- Print out a new tracker every time you start a cycle and record any dosage changes.
- Remember to refill your prescription on time and always follow your healthcare team's instructions.

\*Aromatase inhibitor is a class of therapy that includes: letrozole, anastrozole, and exemestane.

DAY OF THE WEEK							
<b>WEEK ONE</b> IBRANCE + AROMATASE INHIBITOR							
<b>WEEK TWO</b> IBRANCE + AROMATASE INHIBITOR							
<b>WEEK THREE</b> IBRANCE + AROMATASE INHIBITOR							
<b>WEEK FOUR</b> AROMATASE INHIBITOR ONLY							

Please see Indication and Important Safety Information on page 2.  
Click for the [Full Prescribing Information](#) and [Patient Information](#) or visit [IBRANCE.com](http://IBRANCE.com).

**IBRANCE**  
palbociclib



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# How to keep track of your oral targeted therapy schedule?

- [https://www.ibrance.com/sites/default/files/dosing\\_tracker\\_for\\_ibrance\\_and\\_fulvestrant.pdf](https://www.ibrance.com/sites/default/files/dosing_tracker_for_ibrance_and_fulvestrant.pdf)

## Your Dosing Tracker

For IBRANCE® (palbociclib) + Fulvestrant

My IBRANCE start date this cycle: \_\_\_\_\_

month | day | year

My IBRANCE dose: \_\_\_\_\_

Record your start date and mark every day you take your therapy.

Here's your checklist:

- Record the day you start taking IBRANCE and tell your healthcare team your start date.
- Weeks 1-3 (Days 1-21), take IBRANCE. Week 4 (Days 22-28), don't take IBRANCE. Be sure to follow your dosing schedule exactly as your healthcare team prescribes.
- Check off your daily IBRANCE doses.
- Record the days you receive your fulvestrant injections.
- Print out a new tracker every time you start a cycle and record any dosage changes.
- Remember to refill your IBRANCE prescription on time and always follow your healthcare team's instructions.

DAY OF THE WEEK							
<b>WEEK ONE</b> IBRANCE							
<b>WEEK TWO</b> IBRANCE							
<b>WEEK THREE</b> IBRANCE							
<b>WEEK FOUR</b>							
NO IBRANCE							

Please see Indication and Important Safety Information on page 2.  
Click for the [Full Prescribing Information](#) and [Patient Information](#) or visit [IBRANCE.com](http://IBRANCE.com).

**IBRANCE**  
palbociclib



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# Storage and Handling of Oral Targeted Therapy

- Keep this medicine in its original bottle or separate pill box – do **not** mix other medications into the pill box.
- Store at room temperature in a dry location away from direct light.
- Keep this medicine out of reach from children and pets.
- Wash your hands before and after handling this medicine.

# Disposal of Oral Targeted Therapy

- If you have unused medication, do not throw it in the trash and do not flush it down the sink/toilet.
- You may dispose of this medication by:
  1. Calling your city or county's trash and recycling service for information on hazardous drug take-back programs in your community
  2. Bringing unused oral targeted therapy to MGH Boston and disposing in the blue drug take-back receptacles located outside of the Main Lobby Yawkey elevators or near the retail pharmacy in the Wang building
  3. Asking your treatment team or pharmacist for more information



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# Oral targeted therapies may have drug interactions

- Some drugs or supplements should not be taken at the same time as other drugs because they can cause side effects or cause the drug to not work well. This is called a drug interaction.
- Tell your treatment team of all prescription and over-the-counter medications (this includes vitamins and herbal products).
- Some common drug interactions include:
  - Black Cohosh
  - Ginseng supplements
  - Red Clover
  - St John's Wort
  - Grapefruit, grapefruit juice, star fruit
- Talk with your treatment team or pharmacist before starting any new medications or supplements



# Important Things to Know

- You will have regular blood tests and other exams to check for side effects.
- Take all medications as directed by your treatment team. This includes anti-nausea and anti-diarrhea medications.
- Do not breastfeed during treatment and for at least 3 weeks after receiving the last dose of a CDK4/6 inhibitor. This is to protect your infant from exposure through breast milk.

# Important Things to Know: Sex and Birth Control

- It is fine to be sexually active while receiving a CDK4/6 inhibitor.
- **CDK4/6 inhibitors can harm a developing baby.** You should not get pregnant or get someone pregnant while on a CDK4/6 inhibitor.
  - Use a reliable birth control during treatment and for at least 3 weeks after receiving the last dose of a CDK4/6 inhibitor.
  - Use a protective barrier such as a condom throughout CDK4/6 inhibitor treatment. This is also to protect your partner from exposure through body fluids.

# Important Things to Know: Fertility

- Infertility means you cannot become pregnant or make someone pregnant. Infertility can be temporary or permanent.
- CDK4/6 inhibitors may affect fertility in men.
- CDK4/6 inhibitors have not been shown to affect fertility in women.
- Before starting treatment, talk with your treatment team about your fertility and what you can do.
  - Sperm banking for men and egg harvesting for women may be options before starting treatment.
  - Women can still get pregnant even if their menstrual period changes or stops. Always use a reliable form of birth control.



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# Supportive Care Resources

- Yoga
- Acupuncture / Acupressure
- Massage
- Support groups
- Survivorship programs
- Workshops
- Music therapy, Art therapy
- To learn more about Supportive Care offerings log onto: [cancercenterpx.org](http://cancercenterpx.org)



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# Your Breast Cancer Team

- Oncologist
- Nurse Practitioner
- Pharmacist
- Oncology Social Worker
- Practice Nurse
- Infusion Nurse

# When to Call

- Signs of infection: fever of 100.4 degrees or higher, chills or a very bad sore throat
- Signs of bleeding: black, tarry or bloody stool; throwing up blood (may look like coffee grounds)
- Fast or irregular heartbeats, feeling dizzy or faint
- Symptoms of liver problems: dark urine, yellowing of skin or eyes, loss of appetite, pain on the upper right side of your abdomen
- Diarrhea: more than 4 loose bowel movements in a day; diarrhea along with weakness, dizziness, or fever



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# Contact Information

- Phone Numbers
  - Boston: 617-726-6500
  - Waltham: 781-487-6100
  - Danvers: 978-882-6060
- Patient Portal:
  - [patientgateway.org](http://patientgateway.org)



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