HR+ Metastatic Breast Cancer Targeted Therapy Profiles

	CDK4/6 Inhibitors			mTOR Inhibitors
	Abemaciclib	**Palbociclib**	**Ribociclib**	**Everolimus**
Dosing	**(1)** Starting dose in combination with fulvestrant: 150 mg twice daily **(2)** Starting dose as monotherapy: 200 mg twice daily	Starting dose: 125 mg taken orally once daily for 21 consecutive days followed by 7 days off treatment	Starting dose: 600 mg orally (three 200 mg tablets) taken once daily for 21 consecutive days followed by 7 days off treatment	10 mg once daily, regardless of age, gender, or renal function; see package insert for oral suspension administration option if unable to swallow pill.
Administration	Can be taken with or without food.	Take orally with food. Take the dose at approximately the same time each day.	Can be taken orally with or without food.	Take either consistently with or consistently without food; swallow whole with a glass of water; take at the same time every day.
Adverse Reactions	Common adverse reactions (incidence ≥ 20%) are diarrhea, neutropenia, nausea, abdominal pain, infections, fatigue, anemia, leukopenia, decreased appetite, vomiting, headache, alopecia, and thrombocytopenia.	Common adverse reactions (incidence ≥ 10%) are neutropenia, infections, leukopenia, fatigue, nausea, stomatitis, anemia, alopecia, diarrhea, thrombocytopenia, rash, vomiting, decreased appetite, asthenia, dysgeusia, and pyrexia.	Common adverse reactions (incidence ≥ 20%) are neutropenia, nausea, infections, fatigue, diarrhea, leukopenia, vomiting, alopecia, headache, constipation, rash, and cough.	Common adverse reactions (incidence ≥ 30%) are stomatitis, infections, rash, fatigue, diarrhea, edema, abdominal pain, nausea, fever, asthenia, cough, headache, and decreased appetite.
Patient Considerations*	**Risk of developing:** **(1)** Diarrhea: At the first sign of loose stools, initiate antidiarrheal medication, increase oral fluids, and notify your healthcare provider. **(2)** Low white blood cells: Immediately report any signs of infection including fever. Monitor CBCs prior to the start of therapy, every two weeks for the first two months, monthly for the next two months, and as clinically indicated. **(3)** Liver injury: Perform LFTs before initiating treatment, every two weeks for the first two months, monthly for the next two months, and as clinically indicated. **(4)** Monitor for signs and symptoms of clots, which could include leg pain or swelling, shortness of breath, or chest pain. **(5)** Can cause fetal harm. Use effective contraception during treatment and at least three weeks after the last dose. **Avoid:** **(1)** Concurrent use with strong CYP3A inhibitors, like ketoconazole, and strong or moderate CYP3A inducers **(2)** Grapefruit and grapefruit juice **(3)** Breastfeeding	**Risk of developing:** **(1)** Low white blood cells: Monitor CBCs prior to starting therapy and at the beginning of each cycle, as well as on day 15 of the first two cycles. Immediately report any signs of infection including fever. **(2)** Can cause fetal harm: Women should use effective contraception during treatment and at least three weeks after the last dose. Males with female partners who can become pregnant should use effective contraception during treatment and for at least three months after the last dose. **(3)** May impair fertility in males of reproductive potential. **Avoid:** **(1)** Concurrent use with strong CYP3A inhibitors or inducers. Note, the dose of CYP3A substrates with a narrow therapeutic index being co-administered with palbociclib may require dose reduction. **(2)** Grapefruit and grapefruit juice **(3)** Breastfeeding	**Risk of developing:** **(1)** QT prolongation: Monitor electrocardiograms and electrolytes prior to initiation of treatment, approximately day 14 of the first cycle, at the beginning of the second cycle, and as needed. Electrolytes will also be monitored at the beginning of each cycle for six cycles and as needed. **(2)** Low white blood cells: Immediately report any signs of an infection, including fever. Monitor CBC before initiating therapy, every two weeks for the first two cycles, at the beginning of each subsequent four cycles, and as needed. **(3)** Liver injury: Report any signs or symptoms immediately. LFTs will be collected before initiating treatment and every two weeks for the first two cycles, at the beginning of each subsequent four cycles, and as needed. **(4)** Can cause fetal harm: Use effective contraception during treatment and for at least three weeks after the last dose. **Avoid:** **(1)** Concurrent use with strong CYP3A inhibitors, inducers, substrates with a narrow therapeutic index and drugs known to prolong the QT interval, such as anti-arrythmic medicines and tamoxifen. **(2)** Grapefruit and grapefruit juice **(3)** Breastfeeding	**Risk of developing:** **(1)** Noninfectious inflammation of the lung tissue: Immediately report any respiratory symptoms. **(2)** Infections: Immediately report any signs or symptoms of infections, such as fever. **(3)** Severe allergic reactions: Seek emergency care for signs of allergic reaction, including rash, itching, hives, difficulty breathing or swallowing, flushing, chest pain, or dizziness. **(4)** Mouth sores: Use alcohol-free mouthwashes during treatment. **(5)** Kidney failure: Monitor kidney function prior to and periodically during treatment. **(6)** Impaired wound healing or dehiscence during treatment. **(7)** Metabolic disorders: Monitor glucose and lipids periodically during therapy. **(8)** Bone marrow suppression leading to low blood counts: Monitor CBCs periodically during therapy. **(9)** Can cause fetal harm: Use proper contraception during treatment and eight weeks after the last dose. **(10)** Severe radiation reactions may occur. **Avoid:** **(1)** Live vaccines and close contact with those who have received live vaccines **(2)** Angiotensin converting enzyme inhibitors: Concomitant use may increase risk of swelling under the eyes. **(3)** Concurrent use of P-gp and strong CYP3A inhibitors **(4)** Grapefruit and grapefruit juice **(5)** Breastfeeding

*Refer to package insert for incidence of events in pivotal clinical trials.

Elli Lilly (2018). Verenzio (abemaciclib). {Package Insert}. Indianapolis, IN: Author.
Novartis (2021). Afinitor (Everolimus). [Package Insert]. East Hanover, NJ: Author
Pfizer (2019). Ibrance (Palbociclib). {Package Insert}. New York, NY: Author.

Funding for development of this activity was provided by an independent educational grant from Pfizer Inc.

Always refer to the package insert for the most up-to-date drug information.

last updated 06/29/21