

For your existing patients with HR+/HER2- mBC on 1L AI + CDK4/6i¹

Guide to *ESR1*m monitoring during 1L therapy

Learn more about monitoring
for *ESR1*m emergence



etcamahHCP.com/S6DLB

1L=first line; AI=aromatase inhibitor; CDK4/6i=cyclin-dependent kinase 4/6 inhibitor; *ESR1*m=estrogen receptor 1 gene mutation; FDA=Food and Drug Administration; HER2-=human epidermal growth factor receptor 2-negative; HR+=hormone receptor-positive; mBC=metastatic breast cancer.

INDICATION

ETCAMAH in combination with a CDK4/6 inhibitor (abemaciclib, palbociclib, or ribociclib) is indicated for the treatment of adult patients with hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative, locally advanced or metastatic breast cancer upon detection of *ESR1* mutation during aromatase inhibitor and CDK4/6 inhibitor therapy, based on an FDA-authorized test.

This indication is approved under accelerated approval based on progression-free survival as measured from detection of *ESR1* mutation. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial(s).

IMPORTANT SAFETY INFORMATION INCLUDING BOXED WARNING

WARNING: ARRHYTHMIA RISK WITH CONCOMITANT USE OF QTc INTERVAL PROLONGING DRUGS

ETCAMAH in combination with ribociclib, a QTc interval prolonging drug and a strong CYP3A inhibitor, or in combination with other QTc interval prolonging drugs, can increase the risk of Torsades de Pointes (TdP), other ventricular arrhythmias, and sudden death.

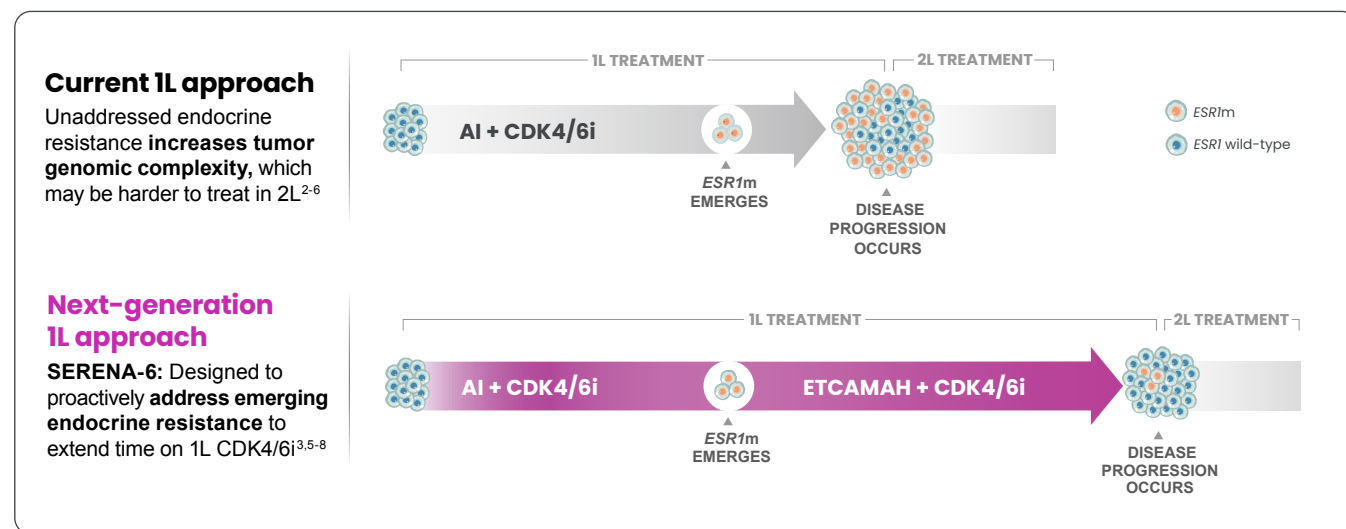
Avoid concomitant use of ETCAMAH with products (other than ribociclib) known to prolong the QTc interval and/or have a known risk of TdP. If concomitant use with other products cannot be avoided, monitor the QTc interval more frequently.

Obtain electrocardiogram (ECG) prior to initiation and monitor heart rate (HR) and QTc interval during treatment. Assess and correct electrolyte abnormalities prior to initiation and during treatment. Withhold ETCAMAH until resolution of QTc interval prolongation and resume or permanently discontinue ETCAMAH based on severity.

Please see additional Important Safety Information throughout and full [Prescribing Information](#), including Boxed WARNING, and [Patient Information](#), for ETCAMAH.

ESR1m can emerge at any time during 1L, signaling the countdown to disease progression²⁻⁴

Up to 40% of patients on 1L AI + CDK4/6i develop *ESR1m*, tripling the risk of disease progression 6 months after emergence^{2,3}



For illustrative purposes

Stay proactive against progression: Intervene upon *ESR1m* detection for the opportunity to extend PFS on 1L CDK4/6i³

2L=second line; *ESR1*=estrogen receptor 1.

WARNINGS AND PRECAUTIONS

QTc Interval Prolongation: ETCAMAH in combination with a CDK4/6 inhibitor (CDK4/6i) is associated with QTc interval prolongation. When ETCAMAH is used in combination with ribociclib, a CDK4/6i, there is potential for increased risk of TdP, other ventricular arrhythmias, and sudden death. One Grade 4 case of TdP was observed in a dose-finding trial when ETCAMAH was used with ribociclib. In SERENA-6, QTc interval prolongation occurred in 2.6% of patients treated with ETCAMAH in combination with a CDK4/6i. QTc interval prolongation led to dose interruption in 0.6% of patients. No patients in SERENA-6 discontinued ETCAMAH due to QTc interval prolongation. ETCAMAH also causes bradycardia, which increases the risk of QTc interval prolongation.

Perform an ECG prior to initiating ETCAMAH, then every week for the first 2 weeks of treatment, and periodically during treatment as clinically indicated. Obtain serum electrolytes at baseline and during treatment as clinically indicated, and correct electrolyte abnormalities. Avoid concomitant use of ETCAMAH in combination with a CDK4/6i with products that cause QTc interval prolongation, are strong CYP3A inhibitors, and/or are drugs known to lower HR.

For QTc >500 msec or QTc >480 msec and prolongation from baseline >60 msec, withhold ETCAMAH. If other contributing causes are identified, then treat or correct the contributing causes. Resume ETCAMAH when QTc returns to <480 msec. Reassess ECGs weekly for the first 2 weeks of treatment, and periodically during treatment as clinically indicated. Permanently discontinue ETCAMAH if QTc interval prolongation is either >500 msec or >60 msec change from baseline AND associated with any: TdP, polymorphic ventricular tachycardia, syncope, or signs/symptoms of serious arrhythmia.

Bradycardia: ETCAMAH causes a decrease in HR. Bradycardia increases the risk for life-threatening arrhythmias and sudden death when concomitant QTc interval prolongation is present, such as when ETCAMAH is used in combination with ribociclib, both a QTc interval prolonging product and a strong CYP3A inhibitor. In SERENA-6, bradycardia occurred in 8% of patients. The mean HR decrease from baseline was approximately 13 beats per minute (bpm) with the maximum decrease observed on day 15. Median time to onset was 17 days (range 13 to 283) after starting ETCAMAH. No patients discontinued ETCAMAH due to bradycardia. Dose interruption occurred in 3.9% of patients. The safety of ETCAMAH has not been established in patients with a baseline resting HR <55 bpm as these patients were excluded from SERENA-6. Monitor HR more frequently during the first 30 days of treatment in patients with bradycardia (HR <60 bpm) at baseline and those on concomitant medications known to lower HR (eg, beta-blockers).

Following a ctDNA-guided switch in 1L,

SERENA-6 reported a delay in disease progression as well as obtained TTD results in GHS and QoL^{1,3}

After 23.1 months median time on AI + CDK4/6i:

mPFS from time of ctDNA-guided switch^{1,3}

16 months

ETCAMAH + CDK4/6i (95% CI: 12.7-18.2)¹

vs

9.2 months

AI + CDK4/6i (95% CI: 7.2-9.5)¹

(HR=0.44, 95% CI: 0.31-0.60; $P<0.00001$)¹

Median time to deterioration in GHS/QoL³

21 months

ETCAMAH + CDK4/6i (95% CI: 13.8-NC)³

and

6.4 months

AI + CDK4/6i (95% CI: 2.8-14)³

The EORTC QLQ-C30 is not all inclusive and does not include adequate assessment of all expected treatment-related symptoms. TTD in GHS/QoL may be confounded by multiple factors not related to disease/treatment and may be affected by assessment schedule or patient censoring.

- ◆ Results are prespecified, exploratory in nature, and not tested for statistical significance. Data should be interpreted with caution⁹
- ◆ Clinically meaningful deterioration was defined as a decrease from baseline score ≥ 16.6 confirmed at a subsequent time point⁹



Early intervention with ETCAMAH extended PFS on 1L CDK4/6i by nearly 1.5 years, and time without deterioration in QoL was nearly 2 years^{1,3}

CI=confidence interval; ctDNA=circulating tumor DNA; EORTC QLQ-C30=European Organization for Research and Treatment of Cancer Quality of Life Questionnaire-Core 30; GHS=global health status; HR=hazard ratio; mPFS=median progression-free survival; NC=not calculable; QoL=quality of life; TTD=time to deterioration.

IMPORTANT SAFETY INFORMATION INCLUDING BOXED WARNING (cont'd)

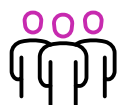
WARNINGS AND PRECAUTIONS (cont'd)

Bradycardia (cont'd): For symptomatic (Grade 2 or above) bradycardia, withhold ETCAMAH until symptoms resolve. Obtain ECG to evaluate etiology. If a contributing concomitant medication is identified, modify the dosage or discontinue this medication, as appropriate, until bradycardia symptoms resolve, then resume ETCAMAH. Consider reassessing the HR after restart. Permanently discontinue for persistent symptomatic bradycardia.

Embryo-Fetal Toxicity: Based on findings in animals and its mechanism of action, ETCAMAH can cause fetal harm when administered to a pregnant woman. Advise pregnant women and females of reproductive potential of the potential risk to a fetus. Advise females of reproductive potential to use effective non-hormonal contraception during treatment with ETCAMAH and for 4 weeks after the last dose. Advise male patients with female partners of reproductive potential to use effective contraception during treatment with ETCAMAH and for 1 week after the last dose.

Please see additional Important Safety Information throughout and full Prescribing Information, including Boxed WARNING, and Patient Information, for ETCAMAH.

Your existing patients on 1L AI + CDK4/6i may already have detectable *ESR1m* and be at risk of disease progression³



Who to monitor

- ◆ Patients with HR+/HER2- mBC on 1L AI + CDK4/6i for ≥6 months³



When to monitor

- ◆ Add *ESR1m* testing to routine bloodwork
- ◆ Repeat testing every 3 months¹



How to monitor

- ◆ Detect *ESR1m* with **ctDNA via liquid biopsy**, using an FDA-authorized test^{1,10,*}

NCCN Guidelines® Recommendation

NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) recommend evaluating *ESR1m* status with NGS or PCR, preferably with blood samples.¹¹

NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way.

*Guardant360® is an FDA-approved companion diagnostic test to identify *ESR1m* for patients who may be eligible for ETCAMAH.



~90% of patients in SERENA-6 had *ESR1m* detected within 5 tests^{12,†,‡}

[†]53.5% positive on first test; 36% positive after 2-5 tests; 10.5% positive after >5 tests.¹²

[‡]Data from the randomized cohort.¹²

NCCN=National Comprehensive Cancer Network® (NCCN®); NGS=next-generation sequencing; PCR=polymerase chain reaction.

IMPORTANT SAFETY INFORMATION INCLUDING BOXED WARNING (cont'd)

ADVERSE REACTIONS

The most common (≥20%) adverse reactions, including laboratory abnormalities, with ETCAMAH in combination with a CDK4/6i were decreased neutrophils (68%), decreased leukocytes (66%), decreased hemoglobin (47%), decreased lymphocytes (39%), decreased platelets (36%), visual disturbances (34%), and fatigue (23%).

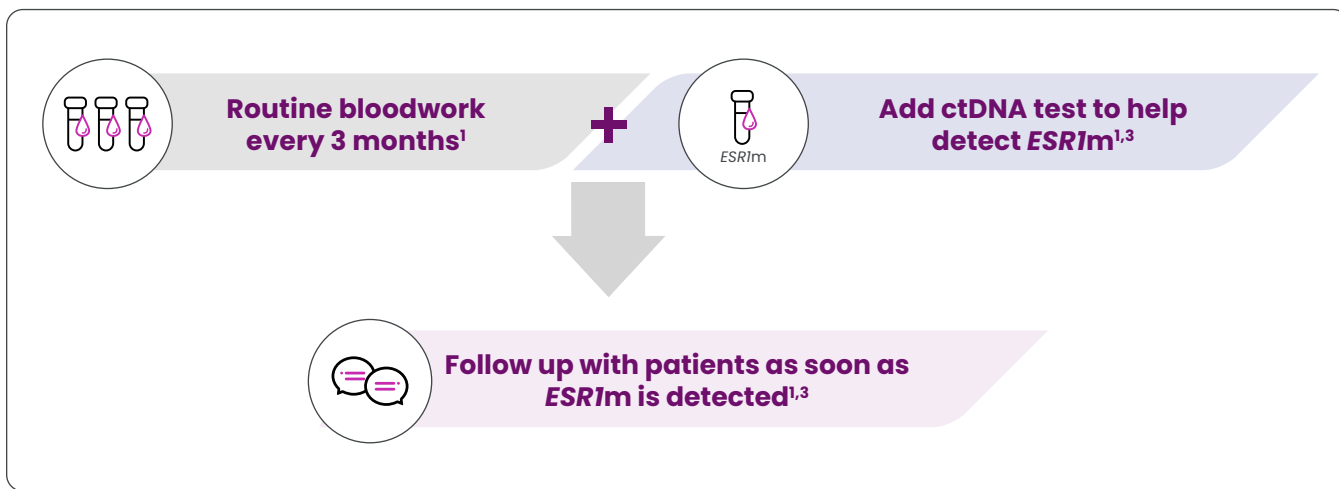
Permanent discontinuation due to adverse reactions occurred in 1.3% of patients. Adverse reactions that resulted in permanent discontinuation of ETCAMAH included gastroesophageal reflux disease, cholestasis and hepatic cytolysis (0.6% each). Dosage interruption of ETCAMAH due to adverse reactions occurred in 22% of patients.

Visual disturbances: For visual disturbances limiting instrumental ADLs (activities of daily living) (Grade 2) or above, withhold ETCAMAH until symptoms resolve to Grade 1 or below. Refer to an eye professional for an ophthalmic examination and treatment and reassess at the next visit.

For other Grade 3 or higher adverse reactions: Withhold ETCAMAH until resolution to Grade 2 or below, then resume. Permanently discontinue for recurrence of Grade 3 or higher adverse reactions.

For patients with HR+/HER2- mBC receiving AI + CDK4/6i ≥6 months,

Integrate *ESR1m* monitoring with routine bloodwork by adding a ctDNA test³



Simplify test ordering: Use an EHR order set for *ESR1m* monitoring



Download
resource here

EHR=electronic health record.

IMPORTANT SAFETY INFORMATION INCLUDING BOXED WARNING (cont'd)

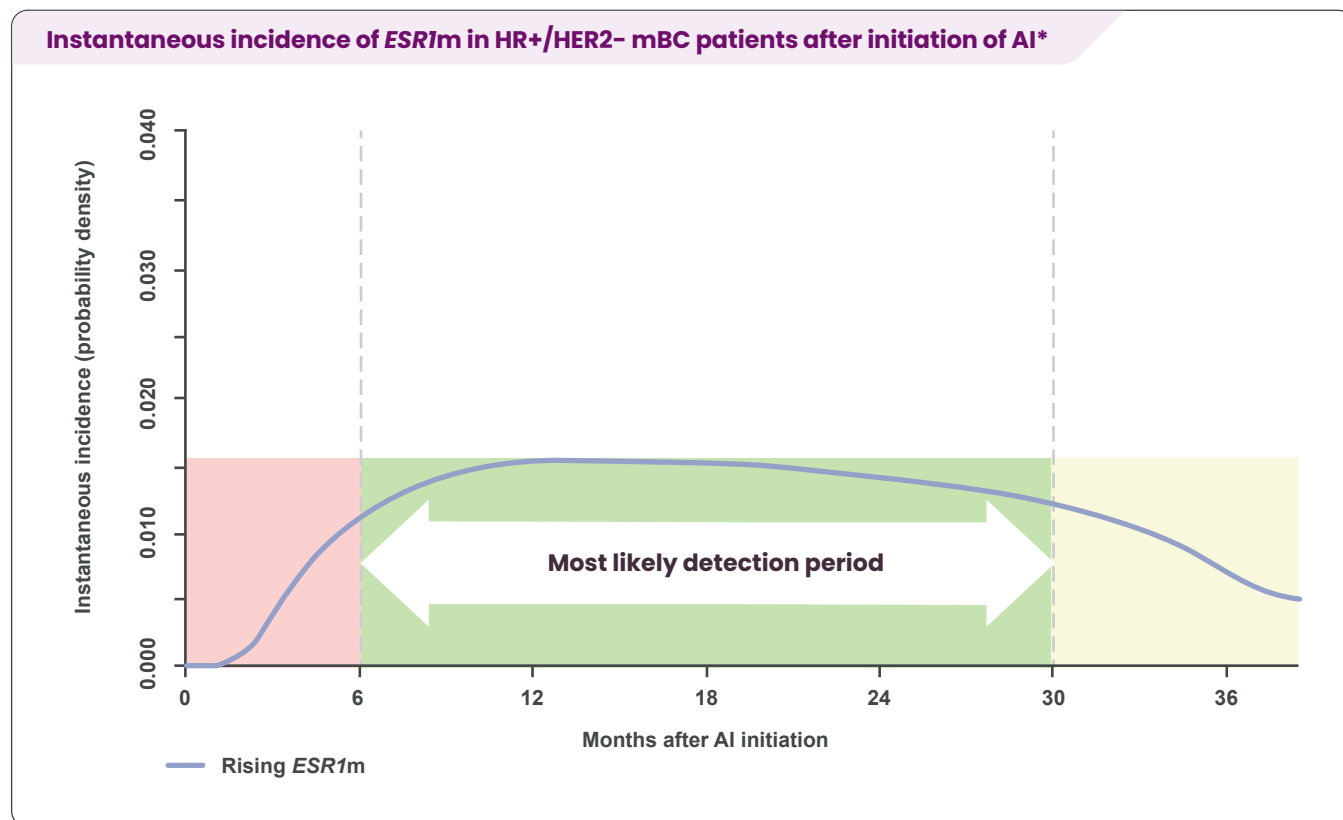
DRUG INTERACTIONS

- **Strong CYP3A Inhibitors:** Monitor for increased adverse reactions to ETCAMAH and modify the dosage as recommended
- **Strong and Moderate CYP3A Inducers:** Avoid the use of strong CYP3A inducers. Use caution with the co-administration of a moderate CYP3A inducer
 - Avoid concomitant use of moderate CYP3A inducers for patients who are receiving ETCAMAH in combination with abemaciclib or palbociclib. If concomitant use cannot be avoided, increase the ETCAMAH dosage from 75 mg once daily to 150 mg once daily. After the moderate CYP3A inducer has been discontinued for at least 14 days, resume the ETCAMAH dosage used prior to initiation of the moderate CYP3A inducer
 - For patients who are receiving ETCAMAH in combination with ribociclib concomitantly with a moderate CYP3A inducer, no ETCAMAH dosage modification is recommended
- **CYP2C9 and/or CYP2C19 Substrates:** Avoid concomitant use of ETCAMAH with CYP2C9 or CYP2C19 substrates during treatment with ETCAMAH and at least 2 weeks after the last dose of ETCAMAH, unless otherwise recommended in the Prescribing Information of the CYP2C9 or CYP2C19 substrate
- **Certain CYP3A Substrates:** Refer to the Prescribing Information for CYP3A substrates where minimal increases in the concentration may lead to serious adverse reactions

Please see additional Important Safety Information throughout and full Prescribing Information, including Boxed WARNING, and Patient Information, for ETCAMAH.

Monitor for detectable *ESR1m* during the critical window of opportunity

Highest incidence of *ESR1m* emergence occurs 6–30 months after initiation of AI during 1L⁵



*Instantaneous incidence refers to the incidence rate at a specific point in time.

IMPORTANT SAFETY INFORMATION INCLUDING BOXED WARNING (cont'd)

DRUG INTERACTIONS (cont'd)

- **Drugs that Prolong the QTc Interval:** ETCAMAH is indicated in combination with a CDK4/6i and there is increased risk of QTc interval prolongation with ribociclib, a strong CYP3A inhibitor that can prolong the QTc interval. Refer to the ribociclib Prescribing Information for dosage modifications. Avoid concomitant use of ETCAMAH with products (other than ribociclib) known to prolong the QTc interval and/or have a known risk of TdP. If concomitant use with other products cannot be avoided, monitor the QTc interval more frequently. ETCAMAH in combination with a CDK4/6i is associated with QTc interval prolongation
- **Drugs that Cause Bradycardia:** Avoid concomitant use of ETCAMAH with other products known to cause bradycardia. Monitor for signs and symptoms of bradycardia if concomitant use cannot be avoided. ETCAMAH causes decreases in HR that are dose and baseline HR dependent

Refer to the Prescribing Information for the co-administered CDK4/6i for dosage modification guidelines related to adverse reactions, organ impairment, and drug-drug interactions.

SPECIAL POPULATIONS

Pregnancy: Based on findings in animals and mechanism of action, ETCAMAH can cause fetal harm when administered to a pregnant woman. Advise pregnant women and females of reproductive potential of the potential risk to a fetus.

Patient discussion guide:

How to talk to your patients about *ESR1* mutation monitoring and what to expect after a positive test



When should you discuss with your patients?

- ◆ At an upcoming appointment for your existing patients already on their first hormone therapy (AI) + a CDK4/6 inhibitor¹
- ◆ When starting their first hormone therapy + a CDK4/6 inhibitor¹



What is an *ESR1* mutation (*ESR1m*)?

- ◆ During your first treatment for HR+/HER2-mBC with a hormone therapy and CDK4/6 inhibitor (palbociclib, ribociclib, or abemaciclib), cancer may change over time and become resistant to certain hormone therapies, like aromatase inhibitors (anastrozole, letrozole, or exemestane)
- ◆ *ESR1* mutations are signs that the cancer is changing and that your hormone therapy may not work as effectively as it did before^{2,3}
- ◆ About 40% of patients develop an *ESR1* mutation while on their first treatment for HR+/HER2- mBC, and it can develop at any time³



Why and how to monitor for *ESR1* mutations

- ◆ Monitoring for *ESR1* mutations is a proactive approach to identify early changes in cancer, providing an opportunity to adjust your treatment plan before progression³
- ◆ Monitoring is done with a blood test that can be performed along with your routine bloodwork approximately every 3 months^{2,3}



What does it mean if your patients test positive for an *ESR1* mutation?

- ◆ Catching the *ESR1* mutation early allows your care team to consider the most appropriate treatment for your type of mBC, which may include replacing the current hormone therapy with ETCAMAH and staying on your first CDK4/6 inhibitor for mBC^{2,3}

IMPORTANT SAFETY INFORMATION INCLUDING BOXED WARNING (cont'd)

SPECIAL POPULATIONS (cont'd)

Lactation: Because of the potential for serious adverse reactions in a breastfed child, advise women not to breastfeed during treatment with ETCAMAH and for 1 week after the last dose.

Females and Males of Reproductive Potential: ETCAMAH can cause fetal harm when administered to pregnant women. Verify pregnancy status of female patients of reproductive potential prior to initiating ETCAMAH. Advise female patients of reproductive potential to use effective non-hormonal contraception during treatment with ETCAMAH and for 4 weeks after the last dose. Advise male patients with female partners of reproductive potential to use effective contraception during treatment with ETCAMAH and for 1 week after the last dose.

Please see additional Important Safety Information throughout and full Prescribing Information, including Boxed WARNING, and Patient Information, for ETCAMAH.

Proactively monitor for *ESR1*m during 1L to help stay ahead of disease progression³

In SERENA-6, after 23 months median time on AI + CDK4/6i, mPFS from time of ctDNA-guided switch to ETCAMA was 16 months vs 9.2 months with AI + CDK4/6i.³



Who

Patients with HR+/HER2- mBC on **1L AI + CDK4/6i** for **≥6 months³**



When

Add *ESR1*m testing to **routine bloodwork** every 3 months¹



How

Detect *ESR1*m with ctDNA via **liquid biopsy**, using an FDA-authorized test^{1,10}

90% of patients in SERENA-6 had *ESR1*m detected within 5 tests¹²



Start monitoring your existing patients on AI + CDK4/6i—they may already have an *ESR1*m and be at risk of disease progression³

References: 1. ETCAMA[®] (camizestrant) [prescribing information]. Wilmington, DE: AstraZeneca Pharmaceuticals LP; 2026. 2. Clatot F, Perdrix A, Beaussire L, et al. Risk of early progression according to circulating *ESR1* mutation, CA-15.3 and ctDNA increases under first-line anti-aromatase treatment in metastatic breast cancer. *Breast Cancer Res.* 2020;22(1):56. doi:10.1186/s13058-020-01290-x 3. Bidard FC, Mayer EL, Park YH, et al; SERENA-6 Study Group. First-line camizestrant for emerging *ESR1*-mutated advanced breast cancer. *N Engl J Med.* 2025;393(6):569-580. doi:10.1056/NEJMoa2502929 4. Grinshpun A, Chen V, Sandusky ZM, Fanning SW, Jeselsohn R. *ESR1* activating mutations: from structure to clinical application. *Biochim Biophys Acta Rev Cancer.* 2023;1878(1):188830. doi:10.1016/j.bbcan.2022.188830 5. Cabel L, Bachelot T, Hardy-Bessard AC, et al. 1O Kinetics and determinants of blood *ESR1* mutation under AI and palbociclib in HR+/HER2- metastatic breast cancer patients in the PADA-1 trial. Presented at: ESMO Breast Cancer Annual Congress; May 14-17, 2025; Munich, Germany. 6. Pejerrey SM, Dustin D, Kim JA, Gu G, Rechoum Y, Fuqua SAW. The impact of *ESR1* mutations on the treatment of metastatic breast cancer. *Horm Cancer.* 2018;9(4):215-228. doi:10.1007/s12672-017-0306-5 7. Oliveira M, Hamilton EP, Kulyaba Y, et al. Dynamics of *ESR1* mutation (*ESR1*m) circulating tumour DNA (ctDNA) in patients (pts) with estrogen receptor (ER)+ HER2- metastatic breast cancer (mBC) receiving camizestrant or fulvestrant: exploratory analyses from the SERENA-2 trial. Abstract presented at: ESMO Congress; September 13-17, 2024; Barcelona, Spain. 8. Data on File. US-112875. AstraZeneca Pharmaceuticals LP, 2026. 9. Mayer EL, Bidard FC, Park YH, et al. Patient-reported outcomes in the SERENA-6 trial of camizestrant plus CDK4/6 inhibitor in patients with advanced breast cancer and emergent *ESR1* mutations during first-line endocrine-based therapy. *Ann Oncol.* 2026;37(2):180-193. doi:10.1016/j.annonc.2025.10.006 10. Bidard FC, Mayer EL, Park YH, et al; SERENA-6 Study Group. First-line camizestrant for emerging *ESR1*-mutated advanced breast cancer. *N Engl J Med.* 2025;393(6)(suppl):1-18. doi:10.1056/NEJMoa2502929 11. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines[®]) for Breast Cancer V.3.2026. © National Comprehensive Cancer Network, Inc. 2026. All rights reserved. Accessed May 14, 2026. To view the most recent and complete version of the guideline, go online to NCCN.org. 12. Data on File. REF-297586. AstraZeneca Pharmaceuticals LP, 2026.

IMPORTANT SAFETY INFORMATION INCLUDING BOXED WARNING (cont'd)

SPECIAL POPULATIONS (cont'd)

Females and Males of Reproductive Potential (cont'd): Refer to the Prescribing Information of the CDK4/6i palbociclib, if used in combination with ETCAMA, for contraception information and use for the longest recommended post-treatment duration. ETCAMA may impair fertility in female and male patients.

Pediatric Use: Safety and effectiveness have not been established in pediatric patients.

Hepatic Impairment: In patients with severe (Child-Pugh C) hepatic impairment, when ETCAMA is combined with ribociclib, reduce the dosing frequency to every other day.

No dosage modifications are required in other patients with hepatic impairment of any level, or when ETCAMA is combined with abemaciclib or palbociclib, although patients with moderate or severe hepatic impairment (Child-Pugh B or C) should be monitored for increased adverse reactions and dosage modified as recommended.

Please see additional Important Safety Information throughout and full Prescribing Information, including Boxed WARNING, and Patient Information, for ETCAMA.

This product information is intended for US healthcare professionals

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