exemestane (ex-e-mes-tane)

**Therapeutic Class:** Antineoplastics

**Pharmacologic class:** Aromatase inhibitors

**Pregnancy Category:** X

**Indications**
- Adjuvant treatment of breast cancer in postmenopausal women who have estrogen-receptor positive early disease and who have already received 2–3 years of tamoxifen and are then switched to exemestane to complete a total of 5 yrs of adjuvant therapy.
- Treatment of advanced postmenopausal breast cancer that has progressed despite tamoxifen therapy.

**Action**
- Inhibits aromatase, an enzyme responsible for the conversion of androgen to estrogen. In post-menopausal women, the primary source of estrogen is androgen. Decreases circulating estrogen.

**Therapeutic Effects:**
- Decreased spread of estrogen-sensitive breast cancer.

**Pharmacokinetics**

**Absorption:**
- 42% absorbed following oral administration.

**Distribution:**
- Extensively distributed.

**Metabolism and Excretion:**
- Mostly metabolized by the liver (CYP3A4 enzyme system); metabolites are excreted in urine (40%) and feces (40%); 1% excreted unchanged in urine.
- Half-life: 24 hr.

**TIME/ACTION PROFILE (suppression of circulating estrogen)**

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<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
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<tbody>
<tr>
<td>PO</td>
<td>unknown</td>
<td>2–3 days</td>
<td>4–5 days</td>
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**Contraindications/Precautions**

- Hypersensitivity
- Premenopausal status
- OB: Pregnancy (may cause fetal harm). Lactation: Breast feeding should be avoided.
- Use cautiously in:
  - Pedi: safe and effective use not established.

**Adverse Reactions/Side Effects**

**CNS:** Fatigue, depression, insomnia.
**CV:** Thromboembolism, hypertension.
**GI:** Diarrhea, nausea.
**GU:** Endometrial hyperplasia, uterine polyps.
**Endo:** Visual disturbances.
**Derm:** Alopecia, hot flashes, increased sweating, dermatitis.
**MS:** Arthralgia, musculoskeletal pain, carpal tunnel syndrome, muscle cramps, osteoporosis.
**Respiratory:** Asthma, pneumonitis.

**Interactions**

- Drug-Drug: CYP3A4 inhibitors: including rifampin or phenytoin may reduce drug levels and effectiveness; daily dose to 50 mg once daily. Estrogens can interfere with action.

**Route/Dosage**

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<th>PO (Adults)</th>
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<td>25 mg once daily; Concurrent use with CYP3A4 inducers — 50 mg once daily.</td>
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**NURSING IMPLICATIONS**

**Assessment**

- Assess patient for pain and other side effects periodically during therapy.
- Lab Test Considerations:
  - May cause ↑ AST, ALT, alkaline phosphatase, bilirubin, and creatinine levels.
  - Assess 25-hydroxy vitamin D levels prior to starting therapy. Supplement vitamin D deficiency with vitamin D due to high prevalence of vitamin D deficiency in women with early breast cancer.

**Potential Nursing Diagnoses**
- Acute pain (Side Effects)

**Implementation**

- Take 1 tablet daily after a meal.

**Patient/Family Teaching**

- instruct patient to take exemestane as directed at the same time each day. Take missed doses as soon as remembered unless it is almost time for next dose. Do not double doses. Advise patients to read the patient information leaflet before starting and with each Rx refill. Changes may occur.
Advise patient not to take other estrogen-containing agents; may interfere with action of exemestane.

Inform patient that lower level of estrogen may lead to decreased bone mineral density over time and increased risk of osteoporosis and fracture.

Advise patient to notify health care professional immediately if chest pain or signs of heart failure or stroke occur.

Advise patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and to consult with health care professional before taking other medications.

Exemestane is teratogenic; advise female patients to use effective contraception during therapy and to avoid breast-feeding.

Explain need for follow-up blood tests to check liver and kidney function.

**Evaluation/Desired Outcomes**

- Slowing of disease progression in women with breast cancer.

**Why was this drug prescribed for your patient?**