**cyproterone** (sy-proe-terone)

**Indications**

Palliative treatment of advanced prostate cancer.

**Action**

Feminizing and progestational/antagonistic properties, resulting in blocked binding of the active metabolite of testosterone on the surface of prostatic cancer cells and decreased production of testicular testosterone. **Therapeutic Effects:** Decreased spread of prostate cancer.

**Pharmacokinetics**

**Absorption:** Completely absorbed following oral administration. Absorption after IM depot injection is delayed and prolonged.

**Distribution:** Unknown.

**Metabolism and Excretion:** Metabolized by the CYP3A enzyme system; excreted in feces (60%) and urine (33%) as unchanged drug and metabolites.

**Half-life:** PO—38 hr; IM—4 days.

**TIME/ACTION PROFILE (blood levels)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>unknown</td>
<td>3–4 hr</td>
<td>8–12 hr</td>
</tr>
<tr>
<td>IM (depot)</td>
<td>unknown</td>
<td>3–4 days</td>
<td>1–2 wk</td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**

**Contraindicated in:** Hypersensitivity; Liver disease/hepatic dysfunction/liver tumors (not due to prostate cancer); Dubin Johnson syndrome; Rotor syndrome; History of meningioma; Wasting diseases (not related to prostate cancer); Severe depression; Thrombocytopenia; OB: Not indicated for use in women; **Ped:** Not recommended for use in children <18 yr.

Use Cautiously in: History of cardiovascular disease; Renal impairment.

**Adverse Reactions/Side Effects**

**CNS:** Menin giomas, fatigue, weakness, depression. **Resp:** Cough, dyspnea, pulmonary edema, hypoxemia. **CV:** Thromboembolism, chest pain, dyspnea, heart failure, myocardial infarction, hypertension, syncope, edema, arrhythmias, vasomotor reactions. **GI:** Nausea, vomiting, anorexia, constipation, diarrhea, vomiting. **Derm:** Dry skin, hot flashes, sweating, patchy hair loss. **Endo:** Adrenal suppression, antiandrogen withdrawal syndrome, gynecomastia. **F and E:** Hypercalcemia. **GU:** Infertility, impotence. **Hemat:** Anemia, thrombocytopenia. **Metab:** Glucose intolerance, hyperlipidemia. **MS:** Osteoporosis (long term use).

**Interactions**

**Drug-Drug:** Antiandrogenic effect may be potentiated by alcohol. Effectiveness/long-term survival may be decreased by concurrent GnRH agonist treatment. Risk of myopathy with HMG CoA reductase inhibitors (statins). Blood levels and effects may be potentiated by concurrent use of other drugs that are substrates of the P450 enzymes. Blood levels and effectiveness may be increased by strong inhibitors of CYP3A including clarithromycin, itraconazole, ketoconazole, and ritonavir. Blood levels and effectiveness may be increased by inducers of CYP3A4 including phenytoin and rifampin. Use cautiously with other drugs that are substrates of the P450 enzymes.

**Drug-Natural Products:** Blood levels and effectiveness may be increased by St. John’s wort.

**Route/Dosage**

**PO (Adults):** 200–300 mg/day in 2–3 divided doses, not to exceed 300 mg/day; after orchiectomy—100–200 mg/day.

**IM (Adults):** 300 mg once weekly; after orchiectomy—300 mg every two weeks.

**NURSING IMPLICATIONS**

**Assessment:** Monitor patient for signs and symptoms of thromboembolism (chest pain, dyspnea, vital signs, level of consciousness). Discontinue therapy if symptoms occur.

**NURSE-FACED**

- Discontinued.
Monitor mood changes, especially during first 6-8 wks. Note degree to which these thoughts and behaviors interfere with daily functioning. Inform health care professional if patient demonstrates significant increase in anxiety, nervousness, or irritability.

Lab Test Considerations: Monitor PSA during therapy. May cause increase in PSA. If PSA increase occurs, discontinue therapy and monitor for 6 to 8 weeks for withdrawal response prior to any decision to proceed with other prostate cancer therapy.

Lab Test Considerations: May impair carbohydrate metabolism. Monitor fasting blood glucose and glucose tolerance tests periodically during therapy, especially in patients with diabetes. May require dose changes in insulin or oral antidiabetic agents.

Lab Test Considerations: Monitor CBC and platelet count periodically during therapy.

Lab Test Considerations: Monitor liver function tests prior to and periodically during therapy and if symptoms of hepatotoxicity occur. May develop several wks to months after therapy starts. Discontinue therapy if hepatotoxicity occurs.

Lab Test Considerations: Monitor adrenocortical function tests by serum cortisol assay periodically during therapy.

Potential Nursing Diagnoses
Disturbed body image

Implementation
PO: Take by mouth two or three times a day with or just after meals as directed. Dose is usually lower after orchietomy.

Patient/Family Teaching
Instruct patient to take cyproterone as directed. Take missed doses as soon as remembered, unless almost time for next dose, then skip missed dose and resume normal dosing schedule. Do not double dose.

Inform patient that benign breast lumps may occur; they generally subside 1 to 3 months after discontinuation of therapy and/or after dose reduction. Dose reduction should be weighed against the risk of inadequate tumor control.

Advise patient to avoid alcohol during therapy.

May cause fatigue and lassitude during first few wks of therapy; then diminishes. Caution patient to avoid driving and other activities requiring alertness until response to medication is known.

Inform patient that sperm count and volume of ejaculate decrease with therapy. Infertility is common but is reversible when therapy is discontinued.

Discuss with patient potential for patchy hair loss. Explore methods of coping.

Emphasize the importance of follow-up appointments and blood tests to monitor progression of treatment.

Evaluation/Desired Outcomes
Decreased spread of prostate cancer.

Why was this drug prescribed for your patient?