SUNITINIB (su-ni-ti-nib) Sutent

**Classification**
Therapeutic: antineoplastics
Pharmacologic: kinase inhibitors

**Pregnancy Category D**

**Indications**
Gastrointestinal stromal tumor (GIST) that has progressed or intolerance to imatinib. Advanced renal cell carcinoma (RCC). Advanced pancreatic neuroendocrine tumors (pNET).

**Action**
Inhibits multiple receptor tyrosine kinases, which are enzymes implicated in tumor growth, abnormal vascular growth, and tumor metastases. **Therapeutic Effects:** Decreased tumor spread.

**Pharmacokinetics**
**Absorption:** Well absorbed following oral administration.
**Distribution:** Unknown.
**Protein Binding:** Sunitinib—95%; primary active metabolite—90%.
**Metabolism and Excretion:** Metabolized by the CYP3A4 enzyme system to its primary active metabolite. This metabolite is further metabolized by CYP3A4. Excretion is primarily fecal.
**Half-life:** Sunitinib—40–60 hr; primary active metabolite—80–110 hr.

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

<table>
<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>6–12 hr</td>
<td>24 hr</td>
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**Contraindications/Precautions**
Contraindicated in: Hypersensitivity; OB, Lactation: Pregnancy, lactation; Concurrent use of ketoconazole or St. John's wort.

Use Cautiously in: Hepatic/renal impairment; Concurrent use of bisphosphonates or a history of dental disease (may q risk of jaw osteonecrosis); OB: Childbearing potential; Pedi: Safety not established.

- [ ] Generic Implication
- [ ]rop: Safety not established.

**Interactions**
**Drug-Drug:** Ketoconazole and other inhibitors of the CYP3A4 enzyme system may q levels and the risk of toxicity; p dose to 37.5 mg daily (for GIST and RCC) or 25 mg daily (for pNET); avoid these strong inhibitors, if possible. Rifampin and other inducers of the CYP3A4 enzyme system may p levels and effectiveness; q dose to 87.5 mg daily (for GIST and RCC) or 62.5 mg daily (for pNET); avoid these strong inducers, if possible. Concurrent use with alendronate, etidronate, ibandronate, pamidronate, risedronate, tiludronate, or zoledronic acid may q risk of osteonecrosis; q risk of microangiopathic hemolytic anemia when used with bevacizumb (concurrent use not recommended). Drug-Natural Products: St. John's wort may q levels and effectiveness; avoid concurrent use.

**Drug-Food:** Blood levels and effects are q by grapefruit juice; concurrent use should be avoided.

**Route/Dosage**
**GIST and RCC**
PO (Adults): 50 mg once daily for 4 wk, followed by 2-wk rest; alteration of dose is based on safety/tolerability and is made in 12.5-mg increments/decrements.

**pNET**
PO (Adults): 37.5 mg once daily

**Adverse Reactions/Side Effects**
**CNS:** Reversible posterior leukoencephalopathy syndrome, fatigue, headache.
**CV:** CHF, hypertension, peripheral edema, QT interval prolongation, thromboembolic events.
**EENT:** Epistaxis.
**GI:** Diarrhea, dyspepsia, anorexia.
**Hemat:** Hemorrhage, anemia, thrombocytopenia, neutropenia, lymphopenia, neutropenia, thrombocytopenia, hemorrhage, anemia, thrombocytopenia.
**MS:** Arthritis, back pain, limb pain, myalgia, osteonecrosis (primarily of jaw).
**Misc:** Tumor lysis syndrome.

**Drug/Food:** Blood levels and effects are q by grapefruit juice; concurrent use should be avoided.
NURSING IMPLICATIONS

Assessment

- Monitor for signs of HF (dyspnea, edema, jugular venous distention) during therapy. Assess left ventricular ejection fraction (LVEF) at baseline and periodically during therapy in patients with cardiac events in the previous 12 mo and a baseline ejection fraction in patients without cardiovascular risk factors. Discontinue sunitinib if HF occurs.
- Monitor for hypertension and treat with standard antihypertensive therapy. If severe hypertension occurs, may discontinue sunitinib and reevaluate.
- Monitor ECG and electrolytes periodically during therapy; may cause QT prolongation and torsades de pointes.

Lab Test Considerations:

- Monitor CBC with platelet count and serum chemistries including phosphate at the beginning of each treatment cycle. May cause neutropenia, lymphopenia, anemia, and thrombocytopenia. May cause q creatinine, hypokalemia, hyperuricemia, and q uric acid.
- Monitor ALT, AST, and bilirubin before starting therapy, during each cycle of treatment, and as clinically indicated. Stop therapy if Grade 3 or 4 drug-related hepatic adverse events occur and discontinue if there is no resolution. Do not restart sunitinib if patients subsequently experience severe changes in liver function tests or have other signs and symptoms of liver failure. May cause q AST, ALT, alkaline phosphatase, total and indirect bilirubin, amylase, and lipase.
- Monitor thyroid function at baseline and in patients with symptoms of hypothyroidism or hyperthyroidism. May be treated with standard medical practice.

Potential Nursing Diagnoses

- Diarrhea (Adverse Reactions)
- Nausea (Adverse Reactions)

Implementation

- Do not confuse sunitinib with sorafenib.
- PO: Administer once daily with or without food.

Patient/Family Teaching

- Instruct patient to take sunitinib as directed. Take missed doses as soon as remembered, but not just before next dose. Take next dose at regular time. Do not take more than 1 dose at a time. Tell your health care professional about the missed dose.
- Advise patients to avoid grapefruit juice or grapefruit products during therapy.
- Instruct patient to notify health care professional promptly if signs of liver failure (itching, yellow eyes or skin, dark urine, pain or discomfort in the right upper stomach area) or tumor lysis syndrome (nausea, shortness of breath, irregular heartbeat, clouding of urine, tiredness) occur.
- Advise patient that GI disorders (diarrhea, vomiting) are common and may require antidiarrheal medications.
- Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and consult health care professional before taking any new medications.
- Advise women of childbearing potential to avoid becoming pregnant while receiving sunitinib.

Evaluation/Desired Outcomes

- Decrease in tumor spread.

Why was this drug prescribed for your patient?