SORafenib (so-ra-fe-nib)
NexAVAR

Classification
Therapeutic: antineoplastics
Pharmacologic: kinase inhibitors

Pregnancy Category D

Indications
Advanced renal cell carcinoma. Unresectable hepatocellular carcinoma. Locally resectable or metastatic, progressive, differentiated thyroid carcinoma (DTC) refractory to radioactive iodine therapy.

Action
Inhibits tumor growth by inhibiting multikinase enzyme, some of which are involved in angiogenesis.

Therapeutic Effects:
Decreased growth and spread of advanced renal cell carcinoma, hepatocellular carcinoma and DTC.

Pharmacokinetics
Absorption: 38–49% absorbed following oral administration; absorption decreased by high fat meals.
Distribution: Unknown.
Protein Binding: 99.5% bound to plasma proteins.
Metabolism and Excretion: Mostly metabolized by the liver (CYP3A4 and UGT1A9 systems), some metabolites are pharmacologically active. Absorbed drug is eliminated in feces (51%); of absorbed drug, 77% is excreted in feces and 19% is renally eliminated.
Half-life: 25–48 hr.

TIME/ACTION PROFILE (blood levels)
ROUTE ONSET PEAK DURATION
PO unknown 3 hr 12 hr

Contraindications/Precautions
Contraindicated in: Hypersensitivity; Concurrent use with carboplatin and paclitaxel in patients with squamous cell lung cancer; Congenital long QT syndrome; OB, Lactation: Pregnancy or lactation.
Use Cautiously in: History of cardiovascular disease; Drugs that affect the CYP3A4 or UGT1A9 systems; may result in significant interactions. Heart failure, bradycardia, concurrent use of QT-interval prolonging drugs, or electrolyte abnormalities (risk of QT interval prolongation); GI: Childbeariing potential. Pedi: Safety not established.

Adverse Reactions/Side Effects

Interactions
Drug-Drug: May ↑ risk of bleeding with warfarin. Metabolized by CYP systems; may be induced by and blood levels p by inducers of CYP3A4 including rifampin, phenytoin, phenobarbital, carbamazepine, and dexamethasone. May affect QTc; avoid with irinotecan, docetaxel, and doxorubicin.
Drug-Natural Products: Metabolism is q by and blood levels p by St. John’s wort.

Route/Dosage
PO (Adults): 400 mg twice daily; dose ↑ recommended for skin toxicity and/or neuropathy.

NURSING IMPLICATIONS
Assessment
● Monitor BP weekly during first 6 wks and then periodically during therapy. May cause hypertension. If hypertension is unresponsive to antihypertensives, may require temporary or permanent discontinuation of sorafenib.
● Monitor K/G in patients with SE. Headache/botulism, drugs known to prolong the QT interval, and electrolyte abnormalities.

NURSING CONSIDERATIONS
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Adverse Reactions/Side Effects
Assess for dermatologic toxicities. Treat any occurrence of Grade 1 (numbness, dysesthesia, parasthesia, tingling, painless swelling, erythema or discomfort of hands or feet which does not disrupt patient’s normal activities) with topical symptomatic therapy. Treat the first occurrence of Grade 2 (painful erythema and swelling of hands or feet and/or discomfort affecting patient’s normal activities) with topical symptomatic therapy. If no improvement in 7 days or 2nd or 3rd occurrence, interrupt sorafenib therapy until resolved to Grade 0–1. Resume treatment with decreasing dose by one level. If 4th occurrence, discontinue sorafenib therapy. If Grade 3 toxicity (moist desquamation, ulceration, blistering or severe pain of the hands or feet, or severe discomfort that causes the patient to be unable to work or perform activities of daily living) occurs for 2nd or 3rd occurrence, interrupt sorafenib therapy until resolved to Grade 0–1. Resume therapy by decreasing dose by one level. If 4th occurrence, discontinue sorafenib therapy.

Monitor for bleeding. If any bleeding requires medical intervention, consider permanent discontinuation of sorafenib.

Assess for chest pain. Consider temporary or permanent discontinuation in patients who develop cardiac ischemia and/or infarction.

Monitor for signs and symptoms of interstitial lung disease (dyspnea, cough).

Lab Test Considerations: Monitor serum magnesium, potassium, calcium periodically in patients with HF, bradyarrhythmias and drugs known to prolong QT interval. May cause hypocalcemia and hypokalemia.

May ↑ TSH in patients with DTC. Monitor TSH levels monthly.

Commonly causes hypophosphatemia, ↑ serum lipase and amylase. Pancreatitis rarely occurs.

Potential Nursing Diagnoses
Risk for impaired skin integrity (Adverse Reactions)

Implementation

Do not confuse Nexavar (sorafenib) with Nexium (esomeprazole). Do not confuse sorafenib with sunitinib.

PO: Administer 2 tablets (400 mg) twice daily on an empty stomach, at least 1 hr before or 2 hr after eating. Tablets should be swallowed whole and taken with water; do not crush, break or chew.

If dose reduction is necessary due to adverse reactions, reduce to 400 mg once daily. If additional dose reduction is required, reduce to 400 mg every other day.

Patient/Family Teaching

Instruct patient to take sorafenib as directed. If a dose is missed, skip dose and take next dose at regular time; do not double dose. Do not share medication with others; may be harmful.

Inform patient of risk of hand-foot skin reactions, hypertension and requirement for monitoring, risk of bleeding and cardiac ischemia. Advise patient to notify health care professional promptly if bleeding or chest pain occurs.

Advise patient to notify health care professional immediately if signs and symptoms of hepatotoxicity (yellow skin or white part of eyes, dark “tea-colored” urine, light-colored bowel movements, worsening nausea, worsening vomiting, abdominal pain), rash, blistering or peeling of skin or inside of mouth, shortness or breath, cough, dizziness, fainting, or fever occur.

Advise patient to notify health care professional of therapy prior to treatment, dental procedure, or surgery. Sorafenib therapy should be interrupted in patients undergoing major surgery.

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.

Discuss with patient the possibility of hair loss. Explore coping strategies.

May cause fatigue. Advise both male and female patients to use effective contraception during and for at least 2 wks after stopping therapy. Advise female patients to avoid breast feeding during therapy.

Evaluation/Desired Outcomes

Decreased growth and spread of advanced renal cell, hepatocellular, and thyroid carcinomas.

Why was this drug prescribed for your patient?