Oncology Pharmacy Newsletter

Volume 1, Issue 2, May 15, 2015

The Oncology Pharmacy Newsletter is a bi-weekly publication dedicated to providing useful information for the staff treating patients who come to the Oncology Outpatient Pavilion.

We welcome questions and requests for topics.

References available upon request.

Susan, Chris, Lisa & Maria

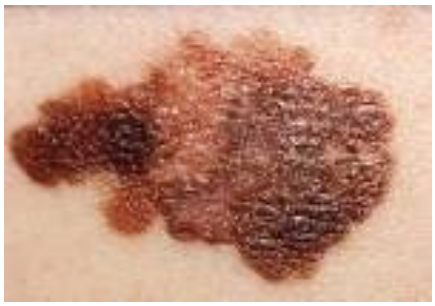
Since you asked....

Can patients have infusion reactions to Irinotecan?

While most of our patients have concerns with diarrhea with irinotecan, the same cholinergic actions of the drug can cause other distressing effects such as diaphoresis, flushing, lacrimation, salivation, and rhinitis. Atropine may help reverse these effects.

True anaphylactic reactions may also occur, but are seen in less than 1% of patients.

It's a "Mab, Mab" World! Nivolumab (Opdivo®)



Nivolumab is a monoclonal antibody indicated for unresectable or metastatic melanoma and metastatic squamous cell lung cancer. It was approved 6 months ago for metastatic melanoma, but has recently received FDA approval for use in metastatic squamous cell lung cancer patients who have failed platinum chemotherapy. It is a PD-1 (programmed death receptor-1) blocking monoclonal antibody.

Both indications use a 3mg/kg once every 14 days dose that is repeated until progression or toxicity.

It is mixed in 100ml of NS and infused over 60 minutes with a low protein binding 0.2-1.2 micrometer in-line filter. Do not shake the admixed product. Once mixed it is only stable for 4 hours, and must be infused within that time. The line should be flushed with NS when completed. No pre-medications are needed. Nivolumab must be infused by itself, with no other meds or fluids.

Nivolumab has been shown to cause immune mediated toxicities including colitis, hepatitis, pneumonitis, thyroid function abnormalities, and others, all of which may require the discontinuation of nivolumab.

Renal impairment that occurs DURING treatment requires dose withholding, but dosage reduction is not necessary if baseline renal impairment exists. However, if baseline renal function is impaired and then worsens on treatment, the dose does need to be withheld temporarily. Corticosteroid treatment may be necessary. If renal function does not improve or the elevation in creatinine is >6xULN, discontinue nivolumab.

Severe baseline hepatic impairment has not been studied, but moderate baseline hepatic dysfunction does not require modification. Similar to renal dysfunction, hepatic dysfunction during treatment requires the temporary or permanent withholding of the drug, depending on the severity of the reaction. If an immune mediated hepatitis occurs, corticosteroids are necessary.

About half of patients experience fatigue. Nausea, constipation, vomiting, fever, dyspnea, cough, pain, and decreased appetite are also common. Immune reactions can occur at any time during therapy or after discontinuation of therapy.

Patients should be monitored for and report any signs of thyroid (hyper (2%) or hypo (4%)) function changes, bronchitis (10%), pneumonitis (6%), diarrhea (18%) or colitis (20%), hepatitis (elevated LFTs in 12-16%), cardiac dysfunction (17%), rashes (16%), changes in urination (22% will have increased serum creatinine), or other severe reactions immediately.

Other immune mediated adverse reactions may also occur, and patients should be counseled to report symptoms, including adrenal insufficiency, neuropathies, pancreatitis, uveitis, and others. Severity of symptoms will impact the decision to hold or discontinue dose and whether or not corticosteroids are needed. Once symptoms are resolved and steroids are tapered off, the patient may be evaluated for continuation of therapy.

References: LexiComp and package information

http://news.bms.com/press-release/fda-approves-opdivo-nivolumab-treatment-patients-previously-treated-metastatic-squamou

Neulasta® (Pegfilgrastim) 6mg On-Body Injector

The Neulasta® (Pegfilgrastim) On-Body Injector was approved by P&T and added to the formulary in April, with a restriction for out-patient use only.

Pegfilgrastim is a leukocyte growth factor used to decrease the incidence of infection, as manifested by febrile neutropenia, in patients with non-myeloid malignancies receiving myelosuppressive chemotherapy. Pegfilgrastim is given 24 to 72 hours after the completion of chemotherapy. Patients often have to come back to the Cancer Center to receive this injection the following day after they have completed their chemotherapy.

The On-Body injector is filled with the pegfilgrastim (syringe provided in kit) by the nurse and placed on the patient, similar to a patch. The nurse has 3 minutes from the time the device is filled to place it on the patient. Once on the patient, the device inserts a small cannula into the patient. The device will deliver the patient's dose 27 hours after the pump is activated. The patient can then remove the device and place it in the provided bag and bring it back to the Cancer Center for disposal when they return for their next appointment.

This device is beneficial to many cancer patients because they often are frail or have difficulty obtaining transportation and will eliminate the need for them to return the following day after chemotherapy to receive their pegfilgrastim injection.

The pegfilgrastim On-Body Injector must be specifically ordered as such by the prescriber. It may appear in the 'Special Instructions" section, or the 'Growth Factors' section on the COS orders. It must be documented as the On-Body Injector on the MAR to ensure proper billing.

****Please note, the syringe in the On-Body Injector kit is not interchangeable with the standard pegfilgrastim 6 mg syringe. It is overfilled in order to properly fill the reservoir in the device.****

Emend Tripak - Information for Patients

Although pharmacists come to counsel patient to whom we dispense Emend® (aprepitant) Tripaks, many of our patients come armed with their own. Below are some information points that may help with questions. Always feel free to request that your pharmacist come speak with any patient who has medication questions.

- Aprepitant should always be given with palinosetron or ondansetron (or other 5-HT3 agonist) on day 1, and dexamethasone on days 1, 2 and 3.
- Aprepitant 80mg should be taken in the morning, or not more than 24hours after the 125mg dose, on days 2 and 3. It does not matter if it is given with or without food.
- Aprepitant is generally well tolerated. Most common side effects are fatigue, nausea, constipation, weakness and hiccoughs. Less commonly dizziness, diarrhea, increased LFTs, or dehydration may be experienced. It is difficult to determine if these effects are the result of chemotherapy or the aprepitant.
- Encourage patients to report inadequate coverage of nausea or vomiting so that it may be better managed. All patients should have breakthrough antiemetics available if their chemotherapy requires aprepitant.

From Our Billing Department: Fluorouracil Continuous Infusions

Fluorouracil continuous infusions can be confusing with the variety of ways they are written. Sometimes the orders indicate the total dose over the infusion period, but more often they show the daily dose for each day, leaving us to determine the total dose.

Please be sure to chart the **full** dose hung on the patient when charting the fluorouracil pump. For example, a dose of 1948mg/day for days 1 and 2 for a continuous infusion should be charted as a 3896mg infusion on the MAR. This is necessary to prevent rejection of the bill by the payors.

In the near future, there will be dose modification sheets provided by Pharmacy documenting the actual infused dose we are able to give taking into account the pump's limiting factors. This sheet will indicate the total dose to be infused and will make this easier to transcribe.

More to come on this dose modification sheet in the near future.