



Oncology Pharmacy Newsletter

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The Oncology Pharmacy Newsletter is 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.

New Indication for Pembrolizumab (Keytruda®)

Pembrolizumab earned FDA approval for use in PD-L1 expressing metastatic non small cell lung cancer earlier this month. It is dosed as 2mg/kg every 3 weeks until toxicity or disease progression. This is the same dose that has previously been approved for unresectable or metastatic melanoma.

Side effects of pembrolizumab include many immune mediated reactions, including colitis, hypophysitis (pituitary), hypo- or hyperthyroidism, nephritis, pneumonitis and rash. Peripheral edema, hyperglycemia, electrolyte abnormalities, elevations in LFTs, arthralgia, cough, nausea, constipation, diarrhea, and infusion reactions may also occur. Use of Pembrolizumab should be discontinued for any grade 3 or 4 reaction. Grade 2 colitis, hypophysitis, nephritis, or pneumonitis, require withholding of treatment, and life-threatening or severe reactions that do not rapidly improve require permanent discontinuation of Pembrolizumab.

It mixed in 50ml sodium chloride and infused over 30 minutes through a 0.2 micron filter and must be infused within 4 hours.

The Time is Here! Rituximab is Changing to Fixed Volume

As reviewed in the last few newsletters, Pharmacy will soon be providing all rituximab doses in a fixed volume of 500ml NS, with the exception of doses below 500mg, which will be provided in volumes to keep the concentration of rituximab between 1-4mg/ml. These smaller doses are most typically seen with split doses used when high tumor burden is present in the first cycle of treatment.

During the first week of November, Chris Niemann will be updating all of the protocols in COS to reflect this new admixture. All doses administered on or after Monday, November 9th, should be written for the 500ml total volume. Orders for a cycle written before that date can be completed as written for that cycle, but subsequent cycles should be written from the new order set and not as a "daughter" to avoid continuing the old administration method forward.

The Alaris Guardrails will be adjusted to

include an option of rituximab ____mg / ____ml that will allow the RN to program in the specific dose being infused. There will also be a dose calculator on the UConn Health Pharmacy Webpage which the Pharmacists will print out to aid the RN in programming the titration on the pump. This will be provided along with the rituximab bag, specific for each patient.

In-servicing on the new rituximab infusion method and the rate calculator will occur during the next two weeks, prior to initiation of the new administration method. The reviews in the last two Oncology Pharmacy Newsletters may also be of interest. The Oncology Pharmacists are happy to help you individually with questions. Just ask!



Dose Rounding of Chemotherapy Orders

Soon Pharmacy will begin dose rounding of chemotherapy orders in order to reduce waste. Patients who have doses that are just above a whole vial size are candidates to have their doses modified by $\leq 5\%$ and will have an order written to document the change. The MAR should reflect the actual dose administered, not the original ordered dose. Occasionally, patients may have doses of very high cost items rounded 5-10% on a verbal/electronic/telephone order.

All orders that are changed will have a Chemotherapy Order Dose Rounding form completed by the Pharmacist. This will be sent along with the chemo and should be placed in the patient chart by the Nurse. The Pharmacists will also be verifying the patient's weight on the day of administration to be sure any weight changes are taken into account. The Prescriber may indicate "Do Not Round" for any patient for whom dose rounding would be inappropriate. More to follow soon.

Sample Rituximab Rate Calculator Print Out

Enter Dose Ordered 640 mg in 500mL NS Conc. = 1.28 mg/mL

Titration for 50mg/hr for initial infusion

Initial rate x 30 minutes	50 mg/hr	= 39.06 mL/hr
After 30 minutes increase to	100 mg/hr	= 78.13 mL/hr
After 30 minutes increase to	150 mg/hr	= 117.19mL/hr
After 30 minutes increase to	200 mg/hr	= 156.25mL/hr
After 30 minutes increase to	250 mg/hr	= 195.31mL/hr
After 30 minutes increase to	300 mg/hr	= 234.38mL/hr
After 30 minutes increase to	350 mg/hr	= 273.44mL/hr
After 30 minutes increase to	*400mg/hr	= 312.50mL/hr
*400 mg/hr = maximum rate		

Titration for 100mg/hr for subsiquent infusions

Initial rate x 30 minutes	100 mg/hr	= 78.13 mL/hr
After 30 minutes increase to	200 mg/hr	= 156.25mL/hr
After 30 minutes increase to	300 mg/hr	= 234.38mL/hr
After 30 minutes increase to	*400 mg/hr	= 312.50mL/hr
*400 mg/hr = maximum rate		