

# LAC+USC MEDICAL CENTER POLICY

Subject: <b>CHEMOTHERAPY AND BIOLOGIC MEDICATIONS - INFUSION RATES</b>	Original Issue Date: 5/18/18	Policy # <b>954</b>
	Supersedes: 5/18/18	Effective Date: 2/02/23
Policy Owner(s): Director of Pharmacy Executive Sponsor(s): Chief Medical Officer		
Department(s) & Committee Consulted: Pharmacy & Therapeutics Committee	Reviewed & Approved by: Pharmacy and Therapeutics Attending Staff Association Executive Committee	Approved by: (Signature on File) Chief Medical Officer
		(Signature on File) Chief Executive Officer

## PURPOSE

- A. Intravenous medication administration has a high incidence of error, with infusion rate being one of the most commonly reported sources of error.
- B. Chemotherapy and biologic medications are often subject to complex administration requirements that further increase the significance of infusion rate.
- C. This policy establishes procedures for determining appropriate infusion rate for ordering and administration of chemotherapy and biologic medications.

## POLICY

- A. All intravenous (IV) medications require a specific rate of administration entered into the Electronic Health Record (EHR).
- B. The nurse will administer IV medications according to the ordered rate of administration.
- C. Certain chemotherapy medications are better tolerated when the rate of administration is titrated. These medications should be administered according to standardized titration practices.

## DEFINITIONS

- Biologic medications: medications often derived from living systems and consisting of complex molecules or a mixture of molecules
- Chemotherapy: medication treatment intended to stop or slow the growth of malignant cells
- DLBCL: diffuse large B-cell lymphoma
- EHR: electronic health record
- FL: follicular lymphoma

## PROCEDURE

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- A. The pharmacist will determine the appropriate infusion rate based on medical literature, prescribing information, and the standard titrations shown in Addendum. The infusion rate will be entered into the EHR by the pharmacist.
- B. If unable to establish the appropriate infusion rate, then the pharmacist will contact the physician to clarify the infusion rate.
- C. If the nurse has concern that the infusion rate is not ideal for the patient, then the nurse may contact the pharmacist to discuss an alternate infusion rate. If consensus is reached, then the infusion rate will be entered into the EHR. If consensus is not reached, then the pharmacist will contact the physician to clarify the infusion rate.

**B. When an infusion rate has been specified in the medication order:**

- A. For the medications which are noted in Addendum for adult patients, the pharmacist will *automatically* amend the ordered infusion rate using the recommendations in Addendum. The physician may write, "Do not change the ordered rate of administration."
- B. For all other chemotherapy medication orders, if the pharmacist has concern that the infusion rate is not ideal for the patient, then the pharmacist will contact the physician to discuss an alternate infusion rate. If consensus is reached, then the infusion rate will be entered into the EHR. If consensus is not reached, then the pharmacist will escalate the issue to the direct pharmacy supervisor for review.
- C. If the nurse has concern that the infusion rate is not ideal for the patient, then the nurse may contact the pharmacist or the physician to discuss an alternate infusion rate. If consensus is reached, then the infusion rate will be entered into the EHR. If consensus is not reached, then the nurse will contact the pharmacist and nursing supervisor for further action.

**C. Titrated infusion rates:**

- A. IV medications requiring titration must include the following components:
  - 1. Starting rate of administration
  - 2. Patient-specific parameters defining when titration may occur
  - 3. Increments of titration
  - 4. Maximum rate of administration subject to the titration, beyond which the physician will be contacted.

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- B. The physician is encouraged to write orders for IV medications requiring titration either:
- As “titrated per protocol,” or,
  - Specifically defining the required titration parameters.
- C. The pharmacist will enter the titration parameters into the EHR.
- D. For all infusion rate concerns, the pharmacist or nurse will contact the physician to clarify the infusion rate.

**D. Hypersensitivity and infusion reactions:**

- A. If a hypersensitivity or infusion reaction occurs or is suspected, then the registered nurse will immediately interrupt the medication infusion and administer rescue medications according to the physician-ordered hypersensitivity protocol. The physician will be notified of the reaction and prompted for additional orders for management of the reaction.
- B. If symptoms resolve within 60 minutes, then the physician will be prompted for an order for resuming or re-challenging the medication administration. Such an order must include specific direction for additional or repeat premedications and to either continue the previously ordered titration instructions or to follow updated titration instructions.
- C. If symptoms do not resolve within 60 minutes, then the physician will be notified of the persistent reaction and prompted for additional direction.

**RESPONSIBILITY**

Pharmacy Department  
Nursing Department

**REFERENCES**

- Daratumumab (Darzalex) prescribing information. Janssen Biotech Inc. Updated August 4, 2017.
- Doxorubicin liposomal (Doxil) prescribing information. Janssen Products LP. Updated November 3, 2017.
- Elotuzumab (Empliciti) prescribing information. E.R. Squibb & Sons LLC. Updated May 11, 2017.

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- Immune globulin (Gammagard) prescribing information. Baxalta US Inc. Updated September 11, 2017.
- Immune globulin (Gammagard S/D) prescribing information. Baxalta US Inc. Updated October 5, 2016.
- Infliximab (Remicade) prescribing information. Janssen Biotech Inc. Updated October 31, 2017.
- Rituximab (Rituxan) prescribing information. Genentech Inc. Updated April 26, 2016.
- Schnock KO, Dykes PC, Albert J, et al. The frequency of intravenous medication administration errors related to smart infusion pumps: a multihospital observational study. BMJ Qual Saf. 2017;26:131-40.
- Westbrook JI, Rob MI, Woods A, et al. Errors in the administration of intravenous medications in hospital and the role of correct procedures and nurse experience. BMJ Qual Saf. 2011;20:1027-34.

### **ATTACHMENTS**

Appendix A – Chemotherapy and Biologic Medications Infusion Rates

### **REVISION DATES**

February 2, 2023