

## 3.3 Extravasation Management

The information provided in the following sections is intended to guide safe practice in the POGO Satellite Program. It is not intended to replace your institutional policies and procedures. Please ensure all staff are aware of their own institutional policies and procedures and refer to them as their primary source.

Extravasation can occur with either peripheral intravenous (PIV) or central line intravenous administrations. The following procedures outline recommendations for the prevention and treatment of extravasation of chemotherapy agents. Chemotherapy should only be administered by [Association of Pediatric Hematology/Oncology Nurses \(APHON\)](#)-certified personnel with demonstrated knowledge of and clinical skills in the administration of chemotherapy. Maintain provider status as per APHON standards and skill competency as per institutional policy.

### Definitions

- **Extravasation** is the inadvertent leakage of vesicant drug or solution into the tissues surrounding an intravenous (IV) site.
- **Vesicant** is an agent that can cause blistering or tissue necrosis when extravasated.
- **Irritant** is an agent that can cause a local inflammatory reaction but does not cause tissue necrosis when extravasated.
- **None** refers to an agent that is considered not to be a vesicant or an irritant.

### Signs of Vesicant Extravasation

- Pain and/or burning in the infiltrated area or around the needle infusion site
- Swelling near the IV injection site or along venous tract
- Erythema in the infiltrated area
- Poor or absent blood return from the IV catheter
- Increase in IV pump pressures

### Signs of Irritant Extravasation

- Aching and tightness along vein
- Full length of vein may become erythematous and/or discoloured
- Swelling unlikely
- Usually able to get blood return

### Signs of Flare Reaction

- No pain
- Immediate blotches or streaks along vein which usually subside within 30 minutes with or without treatment
- Swelling unlikely, wheals may appear along vein line
- Usually able to get blood return



## Signs and Symptoms Associated with Vesicant Extravasation, Venous Irritation and Flare Reaction

SIGN/SYMPTOM	VESICANT	IRRITANT	FLARE
Pain	+	+	-
Swelling	+	-	-
Erythema	+	+	-
Pump pressure increase	+	-	-
Poor or absent blood return	+	+/-	-
Ulceration	+ (delayed)	-	-

Below is a list of antineoplastic vesicants and irritant drugs administered at the POGO Satellite Clinics and classified into the following categories. If you encounter a drug that is not on this list, expert sources should be consulted.

Vesicant	Nonvesicant	
	Irritant	None
Dactinomycin DAUNOrubicin (DAUNOmycin) DOXOrubicin (Adriamycin) VinBLASine VinCRISine Vinorelbine	Dacarbazine Etoposide (VP-16) Mesna (undiluted) Mitoxantrone	Arsenic trioxide Asparaginase Bleomycin CARBOplatin Cyclophosphamide Cytarabine Irinotecan Methotrexate Nelarabine Topotecan
Adapted from London Health Sciences Centre Formulary, Chemotherapy Extravasation Management Protocol. London, ON, Canada, Revised June 2015.		

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**Record of Updates**

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