

# Irritant and Vesicants – IV Administration Guidance

Drug	Vesicant vs Irritant	PIV	Midline	Central line	comments
<b>Adrenergic agent</b>					
Dobutamine	Vesicant	No(F)	No(A)	Yes	Time-dependent PIV (F)
Dopamine	Vesicant	No(F)	No(A)	Yes	
Epinephrine	Vesicant	No(F)	No(A)	Yes	
Norepinephrine	Vesicant	No(F)	No(A)	Yes	
Vasopressin	Vesicant	No(F)	No(A)	Yes	
Phenylephrine	Vesicant	No(F)	No(A)	Yes	
<b>Antiemetics</b>					
Promethazine	Vesicant	Yes	No(E)	Yes	For PIV: dilute & administer slowly and in a non-hand, non-wrist vein; or give IM
<b>Antimicrobials</b>					
Acyclovir	Irritant	Yes	Yes	Yes	
Amphotericin B (conventional formulation)	Irritant	Yes	Yes	Yes	Ambisome (lipid based) is not irritant
Ampicillin	Irritant	Yes*	Yes*	Yes	*For <u>continuous</u> infusions, central administration is preferred.
Doxycycline	Irritant	Yes	Yes	Yes	
Ganciclovir	Irritant	Yes	Yes	Yes	
Gentamycin	Irritant	Yes	Yes	Yes	
Metronidazole	Irritant	Yes	Yes	Yes	
Oxacillin	Irritant	Yes*	No(A)	Yes	*For continuous infusions, central administration is preferred.
Penicillin	Irritant	Yes*	No(A)	Yes	
Pentamidine	Irritant	Yes	Yes	Yes	
Piperacillin/Tazobactam	Irritant	Yes	Yes	Yes	
Vancomycin	Irritant	Yes	Yes	Yes	
<b>Cardiovascular drugs</b>					
Acetazolamide	Irritant	Yes	Yes	Yes	
Amiodarone	Vesicant	Yes	No(E,F)	Yes	See Epic orders for details on administration instructions. Undiluted bolus is for code situation only; concentrated drips

General recommendations for midline administration:

October 2020

- A. Avoid continuous vesicants or irritants (chemotherapy, vasopressors)
- B. Avoid parenteral nutrition containing >10% dextrose
- C. Check midline for high pressure injector status before administering radio contrast
- D. Avoid solutions with osmolality >900 mOsm/L
- E. Caution with intermittent vesicant administration as extravasation more difficult to detect
- F. In emergent situations, although not ideal, can be used instead of central line access

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					should only be administered via central line.
Chlorothiazide	Irritant	Yes	Yes	Yes	Give slowly
Digoxin	Vesicant	Yes	No(E,F)	Yes	
Esmolol	Irritant	Yes	No(A,F)	Yes	Use large peripheral vein; nicardipine – change PIV every 12 hours
Milrinone	Irritant	Yes	No(A)	Yes	
Nicardipine	Irritant	Yes	No(A,F)	Yes	
Nitroprusside	Irritant	Yes	Yes	Yes	Central line preferred
Tromethamine(THAM)	Vesicant	Yes	No(E)	Yes	In emergency: use largest vein, elevate extremity, and give slowly.
<b>Electrolyte</b>					
Mannitol 25 % bolus	Vesicant	Yes*	No(E,F)	Yes	*Central line preferred; in emergency, push slowly, monitor for extravasation
Mannitol 20%	Vesicant	Yes*	No(A,F)	Yes	
Dextrose 50% bolus	Vesicant	Yes*	No(F)	Yes	
Dextrose >10% infusion	Vesicant	No	No(A)	Yes	
Magnesium sulfate	Irritant	Yes	Yes	Yes	
Calcium chloride 10%	Vesicant	Yes*	No(E)	Yes	* Peripheral IVP in code situation only. If giving peripherally non-emergently, dilute in 100mL NS
Calcium gluconate 10%	Vesicant	Yes*	Yes	Yes	* Peripheral IVP emergent use only. Diluted (50-100 ml) may be given peripherally.
Sodium bicarb bolus (8.4%)	Irritant	Yes	Yes	Yes	Central line preferred, do not wait for central line if emergent
Sodium chloride 3%	Irritant	Yes	No(D)	Yes	
<b>Parenteral nutrition</b>					
TPN	Vesicant	No	No(B,D)	Yes	
PPN	Vesicant	Yes	No(A)	Yes	
Procalamine	Irritant	Yes	Yes	Yes	
<b>Sedatives/anesthetics</b>					
Diazepam	Vesicant	Yes	No(E)	Yes	
Etomidate	Irritant	Yes	Yes	Yes	
Propofol	Irritant	Yes	Yes	Yes	
Midazolam infusion	Irritant	Yes	No(A)	Yes	
Rocuronium infusion	Irritant	Yes	No(A)	Yes	
Thiopental	Irritant	Yes	Yes	Yes	
<b>Other agents</b>					

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Albumin	Irritant	Yes	Yes	Yes	
Aminophylline	Vesicant	Yes	No(A)	Yes	
Epoprostenol	Irritant	Yes	Yes	Yes	Long-term infusion should be given centrally. If access lost, may be given peripherally or via midline short-term
Mycophenolate	Irritant	Yes	Yes	Yes	Peripheral: over 2 hours
Phenytoin	Vesicant	Yes	No(E,F)	Yes	
<b>Chemotherapy/Oncology</b>					
Actinomycin D	Vesicant	No	No	Yes	
Amsacrine	Vesicant	No	No	Yes	
Carmustine	Vesicant	No	No	Yes	
Cabazitaxel	Vesicant	No	No	Yes	
Dacarbazine	Vesicant	No	No	Yes	
Daunorubicin (liposomal)	Vesicant	No	No	Yes	
Doxorubicin (liposomal)	Vesicant	No	No	Yes	
Epirubicin	Vesicant	No	No	Yes	
Idarubicin	Vesicant	No	No	Yes	
Mitomycin C	Vesicant	No	No	Yes	
Mitoxantrone	Vesicant	No	No	Yes	
Trabectedin	Vesicant	No	No	Yes	
Vinbalastine	Vesicant	No	No	Yes	
Vindesine	Vesicant	No	No	Yes	
Vincristine	Vesicant	No	No	Yes	
Vinorelbine	Vesicant	No	No	Yes	
Arsenic Trioxide	Irritant	Yes*	No	Yes	*May be given peripherally if authorized by ordering provider
Bendamustine	Irritant	Yes*	No	Yes	
Bleomycin	Irritant	Yes*	No	Yes	
Carboplatin	Irritant	Yes*	No	Yes	
Cladribine	Irritant	Yes*	No	Yes	
Dexasoxane	Irritant	Yes*	No	Yes	
Etoposide	Irritant	Yes*	No	Yes	
Pentostatin	Irritant	Yes*	No	Yes	
Teniposide	Irritant	Yes*	No	Yes	
Thiotepa	Irritant	Yes*	No	Yes	
Topotecan	Irritant	Yes*	No	Yes	
Aclacinomycin	Irritant	Yes*	No	Yes	

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Cisplatin	Irritant	Yes*	No	Yes	
Docetaxel	Irritant	Yes*	No	Yes	
Gemtuzumab	Irritant	Yes*	No	Yes	
Oxaliplatin	Irritant	Yes*	No	Yes	
Paclitaxel	Irritant	Yes*	No	Yes	

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