Immediate management of an extravasation

**STOP:** stop the injection or intravenous infusion immediately.

**LEAVE:** leave the venous access device (VAD) in place.

**ASPIRATE:** aspirate any residual drug from VAD.

**PLAN:** call for assistance; notify medical officer, pharmacist or senior nurse; collect extravasation kit; assess the affected area; trace with a marker pen; photograph the area; remove the IV cannula or port needle; do not apply pressure; initiate appropriate drug specific management measures as per flowchart below.

### Vesicant – DNA binding
- Amsacrine
- Dactinomycin (actinomycin D)
- Daunorubicin* 
- Doxorubicin* 
- Epirubicin* 
- Idarubicin* 
- Mitomycin

### Vesicant – non-DNA binding
- Vinblastine
- Vincristine
- Vindesine
- Vinflunine
- Vinorelbine

### Irritant with vesicant properties
- Bendamustine
- Cisplatin >0.5 mg/mL
- Docetaxel
- Doxorubicin
- Doxorubicin Liposomal
- Melphalan
- Mitoxantrone
- Nab-paclitaxel
- Paclitaxel*

### Irritant with vesicant properties
- Oxaliplatin

### Irrent
- Bortezomib
- Busulfan
- Cabazitaxel
- Carboplatin
- Carmustine
- Cisplatin ≤0.5 mg/mL
- Dacarbazine
- Etoposide
- Etoposide phosphate
- Fluorouracil
- Gemcitabine
- Ifosfamide
- Irinotecan
- Irinotecan nanoliposomal
- Romidepsin
- Teniposide
- Topotecan
- Trastuzumab emtansine*
- Zoledronic acid

**Disperse and dilute**
- Administer pain relief prior to starting if required
- Reconstitute hyaluronidase 1500 IU in 2.5 mL of sterile water or sodium chloride 0.9%
- Administer hyaluronidase solution subcutaneously in 0.2 to 0.4 mL volumes around the marked area using the “pin cushion” technique at “2 hourly intervals” on an imaginary “clock face”
- Gently massage area to facilitate dispersal
- Apply a WARM compress to affected area for 15 to 20 minutes every 6 hours for 48 hours
- Elevate limb

**Localise**
- Apply a COLD compress to the affected area for 15 to 20 minutes every 6 hours for 48 hours
- If there have been some clinical reports of positive outcomes with using hyaluronidase as an antidote for paclitaxel extravasation. If hyaluronidase is administered, no compress is recommended.

**Consider referral to plastic surgeon**
- Complete Antineoplastic Drug Extravasation Assessment Tool and incident form as per individual institutional guidelines
- Referral for an urgent surgical review should be discussed and organised if appropriate
- Educate patient and provide information with appropriate treatment guidelines including signs and symptoms to monitor for and when to present to emergency
- Arrange patient follow up appointments to ensure extravasation injury is reviewed regularly – ranging from hours to weekly – based upon agent extravasated and degree of extravasation
- Replace items in the extravasation kit including drugs from pharmacy if required
- Please refer to the Supporting Document – ID 157 Extravasation Management for a comprehensive list of the references used to develop this flow chart.

**Localise and neutralise**
- Neutralise by applying a thin layer of topical DMSO 99% solution to the marked area as soon as possible (ideally within 10 to 25 minutes) and continue every 6 hours for 7 days - use a cotton bud or swab stick that has been soaked in DMSO 99% solution OR - a glass dropper (4 drops of DMSO 99% solution per 10 cm² of affected area)
- Ensure skin is dry before applying DMSO 99% solution (to prevent blistering)
- Allow to air dry and do not cover with a dressing
- Apply a COLD compress to the affected area for 15 to 20 minutes every 6 hours for 48 hours
- Elevate limb

**No warm or cold compress recommended**

**Your nearest extravasation kit is located at:**
Cancer Institute NSW
cancer.nsw.gov.au

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