Kent and Medway Cancer Collaborative

Systemic Anti-Cancer Therapy Care Pathway

Extravasation

Pathway of Care

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1.0 INTRODUCTION

1.1 Extravasation is a major complication of the administration of Systemic Anti-Cancer Therapy (SACT). It can lead to pain, erythema, inflammation and great discomfort. Any delay in treatment of extravasation may have grave consequences possibly leading to necrosis.

1.2 It is important that Trusts delivering chemotherapy services have guidance on the management of extravasation. This should include actions to be taken to minimise risk (location of cannula and cannula size), consideration to patient characteristics (lymphoedema, diabetes, peripheral circulatory disease), individual SACT drugs and clear action to take in the event of an extravasation.

1.3 All incidents of extravasation must be reported via Datix and a green card is completed and returned to the national extravasation information service.

2.0 DEFINITION OF TERMS

2.1 Extravasation is the process by which any liquid (fluid or drug) accidentally leaks into the surrounding tissue. In terms of cancer therapy, extravasation refers to the inadvertent infiltration of chemotherapy into the subcutaneous or subdermal tissues surrounding the intravenous or intra-arterial administration site. (ESMO-EONS 2012)

2.2 Drug classification.

2.3 Drugs tend to be classified with regards to the degree to which they may cause necrosis. They are as follows:

2.4 Vesicants cause varying degrees of pain, oedema, erythema, blistering and necrosis may occur. Vesicants are further divided into two groups non-DNA binding and DNA binding (ESMO-EONS 2012). When extravasated, non-DNA binding agents (vinblastine, vinorelbine, vincristine) are inactivated or quickly metabolised and follow the normal healing process whereas DNA binding agents (epirubicin, mitomycin, doxorubicin, daunorubicin, idarubicin) remain in the tissues resulting in long-term injury.

2.5 Exfoliants are likely to cause inflammation and shedding of the skin, necrosis is generally unlikely.

2.6 Irritants cause inflammation and irritation but can still cause pain and aching and are less likely to cause tissue breakdown.

2.7 Inflammatory agents can affect the local tissue causing some degree of mild to moderate inflammation.

2.8 Neutrals tend to cause limited tissue damage.

3.0 PREVENTION OF EXTRAVASATION

The following groups of patients are at increased risk of extravasation and extra care should be taken:

3.1 Elderly, confused patients, patients with decreased sensitivity or agitated patients.

3.2 Vascular health, patients with fragile veins, peripheral vascular disease, Raynaud's phenomenon or lymph oedematous limbs.

3.3 Patients with thrombocytopenia.

3.4 Paediatric patients, or those with language barriers.

3.5 Patients who mobilise during infusions.

The following actions should be considered to prevent an extravasation.

3.6 Consider including where to avoid siting the vein. NEVER administer vesicants via the antecubital fossaIn the event of failure to cannulate you must escalate to the nurse in charge of the unit.

3.7 If unsuccessful first attempt need to ensure subsequent attempts are proximal to avoid leakage at distal sites. Adhere to Trust Policy regarding the number of attempts per nurse. Consider referral to the Vascular Access Team or equivalent.

3.8 Patients receiving vesicant drugs should be assessed for suitability for a central venous access device (CVAD). This should be done prior to commencement of treatment and assessed at each subsequent treatment.

3.9 Venous access should be assessed by a chemotherapy nurse for all patients requiring the systemic administration of cytotoxic drugs.

3.10 Patency established with 0.9% Saline.

3.11 Checking of blood return prior to administration.

3.12 Vesicants drugs should be administered before non-vesicant drugs to ensure the drugs most likely to cause damage are given when the vein integrity is at its best.

3.13 All bolus injections should be administered via a fast running drip and the nurse must check blood back flow every 3 mls-5 mls.

3.14 In response to the Intrathecal guidelines, vincristine must be administered via a mini bag and if this is peripherally then the nurse must observe the patient during the administration.

3.15 All vesicant chemotherapy should be administered between the core hours of the day. If the drug needs to be administered after 17.00hrs, escalation to a senior nurse must occur and consideration given to medical and nursing support for the duration of the administration.

3.16 Ambulatory Infusion pumps should only via a central venous catheter (e.g. PICC line or Hickman line). If a Portacath is to be considered, local risk assessment need to take place if this is not standard practice.

4.0 EQUIPMENT SELECTION (APPENDIX 2)

4.1 Selection of appropriate choice of equipment/material is important when trying to reduce the risk of extravasation.

4.2 Cannula size or choices of central line are important considerations.

4.3 Insert the smallest gauge cannula into the largest vein possible.

4.4 As a rule a cannula choice should be made with a view to ensuring that it does not dislodge and allows good 'blood flow' or 'haemodynamic flow'.

4.5 Use a clear dressing which allows for constant inspection of the insertion site. Apply a dressing which fixates the device well and secures the cannula and reduce movement within the vessel.

4.6 Use a small bore cannula (1.2-1.5cms long) for example 24g cannula.

4.7 Avoid covering the cannula with a bandage – the insertion point must be visible.

5.0 CENTRAL VENOUS ACCESS

5.1 If a central venous access device (CVAD) is used (peripherally inserted central catheter (PICC), Portacath or skin tunnelled catheter) tip placement needs to be established either by chest X-ray or ECG placement. (NICE 2015) ECG confirmation is now considered to be more accurate. Lines inserted radiologically should be placed in the lower third of the superior vena cava. Ensure tip placement is documented in medical/nursing notes following from insertion and checked prior to accessing the first infusion.

6.0 TROUBLE SHOOTING

6.1 To establish patency refer to the algorithm or local Trust policy for CVAD access.

7.0 PATIENT EDUCATION

7.1 Patient education is essential in the early detection of a possible extravasation.

7.2 Patients must be informed of the risk of extravasation prior to administration (refer to patient information Appendix 3) and advised to report signs and symptoms of extravasation such as pain, burning sensation, swelling or leakage.

7.3 In the event of an extravasation all patients must receive information both verbal and written regarding follow up. (refer to Appendix 3)

8.0 NURSING REMIT AND TRAINING

8.1 Prior to administering ant SACT it is the nurses responsibility to ensure the extravasation kit is available, sealed and within date. A list of the contents of the extravasation kit can be found in appendix.

8.2 All nurses involved in the administration of Systemic Anti-Cancer Therapy have a responsibility to ensure they know how to manage extravasation.

8.3 They must attend theoretical training prior to administering any SACT. An example of this type of training can be found in Appendix.

8.4 Practical competencies must then be undertaken with an experienced competent chemotherapy nurse. The nurse **should not** be managing the extravasation independently without completing the competencies.

8.5 If any medication is administered it must be prescribed. Patient Group Directives should be considered to ensure the timely management of the extravasation. The nurse should attend local Trust Training.

8.6 Local training in the administration of any antidotes must take place for example Savene.

9.0 CLASSIFICATION OF DRUGS & TREATMENT

According to their potential to cause serious necrosis when administered outside of the vein, known as extravasation or infiltration.

Vesicants* Group 1	TX	Exfoliants* Group 2	TX	Irritants Group 3	TX	Inflammitants Group 4	TX	Neutrals Group 5	TX
Amsacrine	5A	Liposomal Daunorubicin	5B	Bendamustine	5A	Fluorouracil	5A	Alemtuzumab	5D
Cabazitaxel	5A	Docetaxel	5C	Carboplatin	5A	Methotrexate	5C ★	Asparaginase	5D
Carmustine	5A	Liposomal Doxorubicin	5C	Cisplatin (if extravasation has occurred during infusion)	5C	Raltitrexed	5A	Bevacizumab	5D
Cisplatin (If extravasation is noted post 24 hours)	5A	Mitoxantrone	5A	Dexrazoxane	5A			Bleomycin	5D
Dactinomycin	5A	Oxaliplatin	5C	Etoposide	5A			Bortezomib	5D
Daunorubicin	5B	Topotecan	5A	Irinotecan	5A			Cetuximab	5D
Doxorubicin	5B							Cladribine	5D
Epirubicin	5B							Cyclophosphamide	5D
Idarubicin	5B							Cytarabine	5D
Mitomycin	5A							Eribulin	5D
Paclitaxel	5C							Fludarabine	5D
Streptozocin								Gemcitabine	5D
Treosulfan								Ifosfamide	5D
Vinblastine	5C							Ipilimumab	5D
Vincristine	5C							Melphalan	5D
Vindesine	5C							Pemetrexed	5D
Vinflunine	5C							Pentostatin	5D
Vinorelbine	5C							Rituximab	5D
								Trastuzumab	5D

Definitions:	
***Vesicants**	Drugs which are capable of causing pain, inflammation and blistering of the local skin, underlying flesh and structures, leading to tissue death and necrosis.
***Exfoliants**	Drugs which are capable of causing inflammation and shedding of the skin, but less likely to cause tissue death.
Irritants	Drugs which are capable of causing inflammation, irritation or pain at site of extravasation, but rarely cause tissue breakdown.
Inflammitants	Drugs which are capable of causing mild to moderate inflammation and flare in local tissues.
Neutrals	Inert or neutral compounds that do not cause inflammation or damage.

★	Only if large volume of drug has extravasated
TX	Treatment

10.0 EXTRAVASATION TREATMENT ALGORITHM

10.1 If there is a suspected extravasation immediate action is required to ensure minimum damage is experienced to patient's tissue.

10.2 Every designated area that administers Cytotoxic drugs must have an extravasation kit containing all the necessary equipment and information needed to manage this emergency. Senior nursing and Medical staff should be immediately informed.

10.3 Withdraw as much of the drug as possible from the existing cannula or central venous access device (CVAD)

10.4 Remove the cannula but leave any CVAD in situ and order an x-ray to verify the tip of the device

10.5 V.L.T. (Volume, Location and Time of occurrence)

10.6 Estimate the **volume** of the drug extravasated, Table 1 below may help in conjunction with measurements of the area measured in Note B, the practitioner also needs to decide whether the volume is made up of a single drug or multiple drugs, and if so which drugs these are, and how much of the extravasated volume is made up of 'carrier solution'.

10.7 **Location** is important as certain areas are more able to accommodate larger volumes of fluid, e.g. the forearm, the more accommodating the compartment into which the extravasation has occurred, the more difficult it is to estimate the volume and the greater the risk of compartment syndrome developing.

10.8 **Time** of the incident relative to the time of detection give an estimation of how much 'natural' diffusion will have taken place, i.e. the longer the time the greater the diffusion the more difficult it is to treat. Therefore all extravasation injuries should be treated as soon as detected, to minimise damage and maximise the chance of a successful outcome (National Extravasation Guidance)

10.9 Mark the area of affected skin with an indelible pen and take a photograph of tissue damage as soon as possible. It is important to palpate the area and establish EITHER the size of the subcutaneous fluid pocket in a Type I extravasation; OR the boarders of the 'soggy, spongy' tissues in a Type II extravasation. These areas should be marked NOT the extent of the local reaction. (National Extravasation Website)

10.10 The classification of cytotoxic drugs table see figure will enable the professional to implement the algorithm below.

10.11 Refer to drug classification and follow the treatment for either warm or cold pack

10.12 Give prescribed analgesia if appropriate

Table 1: Approximate volume of material extravasated in relation to diameter of the injury and the level of intervention which may be appropriate

Volume	Approximate Diameter*	Management
0.1ml to 1.25ml	Up to 17mm	Watch and Wait
1.25ml to 2.5ml	17 to 30mm	Topical low impact interventions
Greater than 2.5ml	Greater than 30mm	Full blown no holes bared interventions
* If diameter is measured within 15minutes of the acute extravasation so that minimal tissue diffusion will have occurred. Measurement should not include the inflamed surrounding tissue see Note B. above		

Immediate action following an extravasation

Step 1

Stop and disconnect infusion. Leave the cannula in place

Step 2

Identify extravasated cytotoxic drug

Step 3

- Leaving the cannula in place, try to gently aspirate as much extravasated solution as possible and safely dispose of any aspirated cytotoxic drug.
- Record volume removed in patient records.
- Avoid manual pressure over the extravasated area.
- Remove cannula
- Mark with an indelible pen an outline of the extravasated area
- Take a photograph as soon as possible

Step 4

Notify medical staff. Start specific treatment plans as soon as possible

Step 5

<u>Please follow instructions on next page according to classification of drug 5:</u>
A, B, C or D please see Classification of drugs on attached page

Follow step 5 on next page before moving onto step 6

Step 6

Elevate the limb. Administer analgesia if necessary, document.

5) Vesicant or irritant:

Localise and neutralise

Agents included:

- Anthracyclines
- Antibiotics (Mitomycin / Dactinomycin)
- Alkylating agents
- *Cisplatin post 24 hours

LOCALISE AND NEUTRALISE

A) Localise; Cytotoxics requiring COLD pack

- Cold pack and DMSO (Avoid alcohol compress) Apply dry cold compress for 20 minutes 4 times daily for 1-2 days
- Apply a thin layer of 98% DMSO solution to extravasated area using applicator provided. Contact with skin should be minimised as can cause blistering of the skin. Once DMSO dries apply 1% hydrocortisone cream and 30 minutes cold compression. Should be repeated as above every 2 hours for the first 24 hours

OR

B) Neutralise; Anthracyclines requiring Savene

- Consider Savene (Dexrazoxane) for **Anthracyclines** **(Do not apply DMSO)**
- Inform patient the need to apply cold pack for 15-20 minutes 3-4 times daily for up to 3 days
- Give patient follow up leaflet

5) Vinca Alkaloids / Taxanes:

Disperse and dilute

Agents included:

- Vinka alkaloids
- Taxanes
- *Cisplatin within 24 hours

DILUTE AND DISPERSE

C) Cytotoxic's requiring WARM pack

- Inject 1500 iu hyaluronidase (in 1ml water for injection via pincushion s/c injections in 0.1 – 0.2ml volumes around the site
- Apply warm pack to aid absorption of hyaluronidase

Warm pack to remain in situ for 2-4 hours

5) Neutrals

D) Apply dry cold compression

*Please note that Cisplatin should be treated as an irritant immediately if extravasation has occurred during infusion. If extravasation is noted post 24 hours of infusion then treat as vesicant.

Please refer to local Dexrazoxane (Savene) Policy in addition to the algorithm above.

Do not use DMSO with Dexrazoxane (Savene)

For Adult Patients Only if treating with Dexrazoxane (Savene)

An extravasation has occurred?

Stop administering SACT immediately

Was it Doxorubicin; Epirubicin; Idarubicin or Daunorubicin?

Inform Senior Nurse / Sister

YES

NO

Follow extravasation process **5 B**

Follow extravasation process **5 A, C** or **D**

Is it within 6 hours of Anthracyline administration

NO

Refer to consultant/
Refer to Plastic/
Referral Pathway

YES

Discontinue all administration of chemotherapy

Apply cold pack to area

Do not apply DMSO

Refer patient for possible DEXRAZOXANE infusion

Considerations for prescriber

1. Dexrazoxane not recommended in patients with hepatic or renal impairment (CrCl<40ml/min) or in combination with live attenuated vaccines or with phenytoin
2. Discuss and explain to patient
   - **a)** Side effects of drug
   - **b)** Requirement for 3 days treatment
   - **c)** Need to re-treat with chemotherapy
3. Obtain patient's consent
4. Prescribe as follows:-
   Day 1: 1000mg/m²
   Day 2: 1000 mg/m²
   Day 3: 500 mg/m²

If BSA more than 2m², Day 1 and 2 doses should not exceed 2000mg;
Day 3 dose should not exceed 1000mg.

Considerations for person administering

a) Collect reconstituted Dexrazoxane from pharmacy

b) Stop cold pack 15 minutes prior to administration

c) Attempt to cannulate patient in opposite arm (if peripheral extravasation).
If evidence lymphoedema or unable to use opposite arm discuss with consultant

d) Initiate administration as soon as possible and within 6 hours of extravasation

e) If the patient is receiving scalp cooling consider continuing during Dexrazoxane infusion.

Post administration

- Do not administer any of the remaining chemotherapy
- Check Dexrazoxane infusion site for phlebitis or site pain
- Patient's own medical team to be informed
- Referral to plastic surgeon for assessment within one week of the event
- Monitor patient's FBC and U&E's

Patient Name:		**D.O.B:**	
Consultant:		**Hospital No:**	
Chemotherapy Regime:			
Address:			
Height		m	**Allergies:**
Weight		kg	
BSA		m^2	

	Drug	Dose	Route	Administration details	Prescriber sig. & date	Date given	Time given	Sig. of nurse
Day 1	***Ondansetron**	8mg	PO	***if not given prior to extravasation**				
	***Dexamethasone**	8mg	PO	***if not given prior to extravasation**				
	Dexrazoxane 1000mg/m² (Max 2000mg)	mg	IV	**In 500ml of buffered diluent (provided with Savene) Infused over 1-2 hours**				
Day 2	***Ondansetron**	8mg	PO	***if not given prior to extravasation**				
	***Dexamethasone**	8mg	PO	***if not given prior to extravasation**				
	Dexrazoxane 1000mg/m² (Max 2000mg)	mg	IV	**In 500ml of buffered diluent (provided with Savene) Infused over 1-2 hours**				
Day 3	***Ondansetron**	8mg	PO	***if not given prior to extravasation**				
	***Dexamethasone**	8mg	PO	***if not given prior to extravasation**				
	Dexrazoxane 1000mg/m² (Max 2000mg)	mg	IV	**In 500ml of buffered diluent (provided with Savene) Infused over 1-2 hours**				

Date		**Location:**	
Confirmed by:		**Pharmacist:**	

Vesicant Drugs

Extravasation of a vesicant drug is very serious as it can result in tissue necrosis and loss of limb function.

Management of the extravasation of vesicant drugs is centred on minimising the damage caused by the drug as well as reducing any inflammation, pain and discomfort.

There is a lack of robust clinical evidence for the use of preventative plastic surgery intervention and topical / systemic administration of antidotes in treating extravasation injuries caused by vesicant drugs. The recommended treatment of such injuries as described in this policy is based on small clinical studies and the consensus of professional opinion and practice in this area.

11.0 PLASTIC SURGERY REFERRAL - EAST GRINSTEAD

11.1 The flush out technique is not routinely used in Kent

Please see Appendix 1 for referral process.

12.0 DOCUMENTATION

12.1 Complete local Trust incident reporting form.

12.2 Medical photograph must be taken.

12.3 Fully document the extravasation on SACT drug extravasation documentation form Part 1 and Part 2 (Appendix 4) and file the patient's notes. Attach to Datix form.

12.4 Complete green card.

12.5 If plastic referral taken place please ensure all relevant documentation is completed.

12.6 If required ensure patient has all follow up appointments and documentation.

12.7 All incidents will be discussed via the local trust chemotherapy governance meetings and shared across the Kent & Medway collaborative via the Chemotherapy Group meeting.

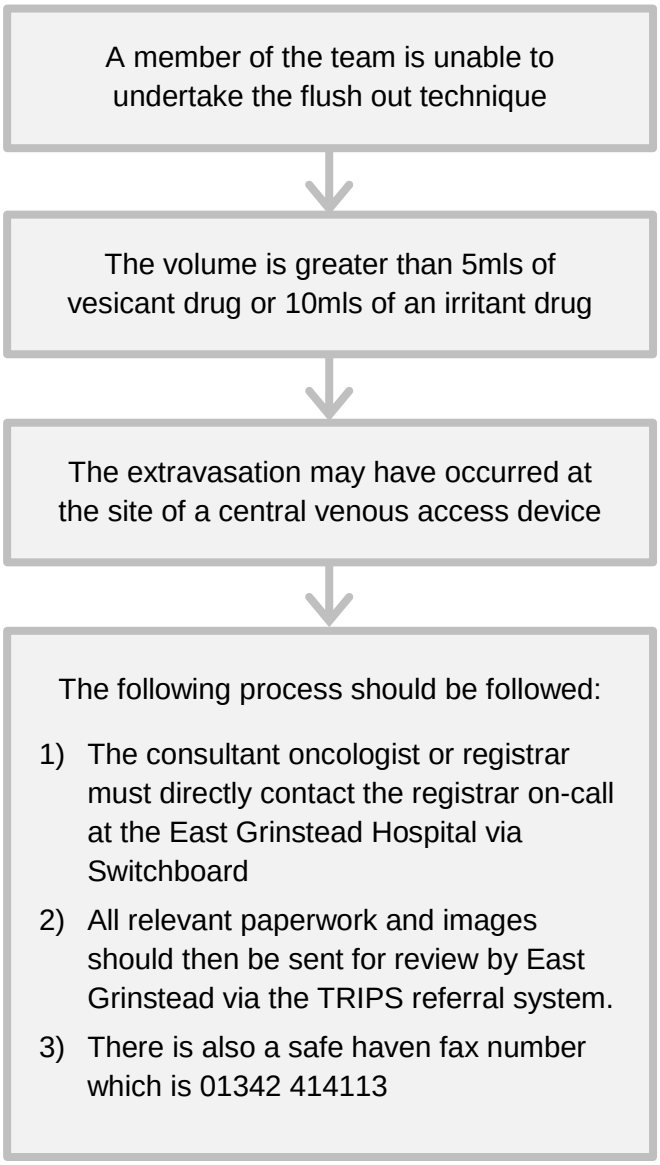
13.0 PATIENT FOLLOW UP / PATIENT INFORMATION

13.1 All patients should be provided with both verbal and written information following an extravasation Appendix 3

14.0 APPENDIX 1

Staff should liaise with their individual Trust to access local or national training.

It is recommended that the patient be referred for plastic surgery opinion and review if the following applies:



15.0 APPENDIX 2

Contents of Extravasation Kit

- Patient Information Sheet
- Extravasation Documentation Sheet
- Referral to plastic surgeon via consultant / registrar
- Hyaluronidase 1500 units (1 ampoule)
- Hydrocortisone Cream 1% labelled – apply as directed
- Sterile Water for injection 10mls x 2
- Sterets / Alcowipes x 4
- Syringe 3ml x 4
- Safety Needles: Green 21g x 4, Orange 25g (from ward), Blue 23g (from ward)
- Filters needles from Pharmacy if required
- Hot pack
- Cold pack
- Indelible marking pen

16.0 APPENDIX 3

Patient Information Sheet on Extravasation

What is Extravasation?
Extravasation is the leakage (or accidental infiltration) of drugs outside of the vein and into the surrounding tissues. This can lead to an immediate painful reaction and may, with some drugs, result in local tissue damage. You may have noticed pain, stinging, swelling or other changes to the skin at the site of drug administration, or the nurse may have noticed that the drug was not flowing in easily.

Why did this happen?
Extravasation is a rare but known complication of intravenous chemotherapy. It is impossible to prevent this even though we take all possible precautions. The important thing is that it has been detected and treated.

Why is Extravasation a problem?
It can lead to pain, stiffness and tissue damage.

What treatment have I received to prevent tissue damage?
The nurse has given you the recommended treatment for the extravasation. Although this will help to minimise the change of developing further problems, you will need to keep checking the area every day.

Checking the area
Once a day, check the area for the following:

- Has the area changed colour or increased in redness?
- Is the area blistering, peeling or flaking?
- Is the area more uncomfortable?
- Is the pain making it difficult for you to exercise the arm or hand?

What else do I need to do?

- Gently exercise the affected arm or hand.
- Take mild painkillers if required.
- Do not apply any other lotions, creams or ointments unless you have been instructed to do so by a doctor or nurse.
- Do not expose the area to strong sunlight.
- Avoid wearing tight clothing around the affected area.
- Protect the affected area when bathing (or having a shower) so that it does not get wet.

When should I contact you?
If you answered **YES** to any of the questions in the checklist above, or if you have any other concerns, then you should contact us.

Who should I contact?
If it is within hours…….. (each day unit document their outpatient times).

Contact Number ……
If it is outside of these hours (even at night time)
Contact Number …….

It is important that you contact the nurse if you have any of the above symptoms or feel the affected area has deteriorated. The nurse will provide advice and if necessary contact your doctor.

17.0 APPENDIX 4

Cytotoxic Drug Extravasation Documentation Form (Part 1)

Patient Name:	Date of Birth:	Patient Contact Number:
Ward:	Hospital Number:	Consultant:

Extravasation Details	
Date & Time:	Chemotherapy Regimen:
Name of Drug(s) Extravasated:	Approximate Volume Extravasated:
Description of Extravasation at Initial Evaluation	
IV Site appearance:	Diameter of Extravasation:
Venous access device used (and gauge):	Location of IV access:
Was a pump being used:	Patient complained of:
☐ Yes ☐ No	

Patient Signs Noted (Describe)		
Inflammation ☐	Lack of Blood Flow ☐	Flow Rate Slowing ☐
Swelling ☐	Pain ☐	Other ☐

Initial Treatment of Extravasation		
Describe Initial Treatment (i.e. cold/hot pack, antidote etc)		
Were other treatments prescribed (e.g. topical preparation, analgesia?)		
Doctor Informed:	By Whom:	Date & Time:

Further Additional Interventions			
Referral	**Date**	**Action**	
Surgical Referral			
Dermatology Referral			
Plastic Surgery Referral			
Photograph if required		Filed in:	

Patient Information			
Info sheet given and follow up plan explained		Date:	Nurse:

Extravasation Documentation			
Form Completed By:		Date:	
Trust Form Completed By:		Date:	

Cytotoxic Drug Extravasation Documentation Form (Part 2)

Follow Up Flow Chart for Suspected Extravasation

Patient Name:	Hospital Number:	Ward:
Date & Time of Extravasation:	Name of Drug Extravasated:	

Follow Up (To score, refer to grading scale below)									
***Day**	1	3	5	7	14	21	28	35	42
Date									
Call / Visit									
Skin Colour									
Skin Temperature									
Skin Integrity									
Oedema									
Mobility									
Pain									
Fever									
Nurse Initials									
May be omitted if signs and symptoms of extravasation resolved									

Grading Scale	0	1	2	3	4
Skin Colour	Normal	Pink	Red	Blanched area surrounded by red	Blackened
Skin Integrity	Unbroken	Blistered	Superficial skin loss	Tissue loss & exposed subcut tissue	Tissue loss & exposed bone/muscle with necrosis crater
Skin Temperature	Normal	Warm	Hot		
Oedema	Absent	Non-pitting	Pitting		
Mobility	Full	Slightly limited	Very limited	Immobile	
Pain	Grade using a scale of 0-10; where 0 = no pain and 10 = worst pain				
Fever	Normal	Elevated			

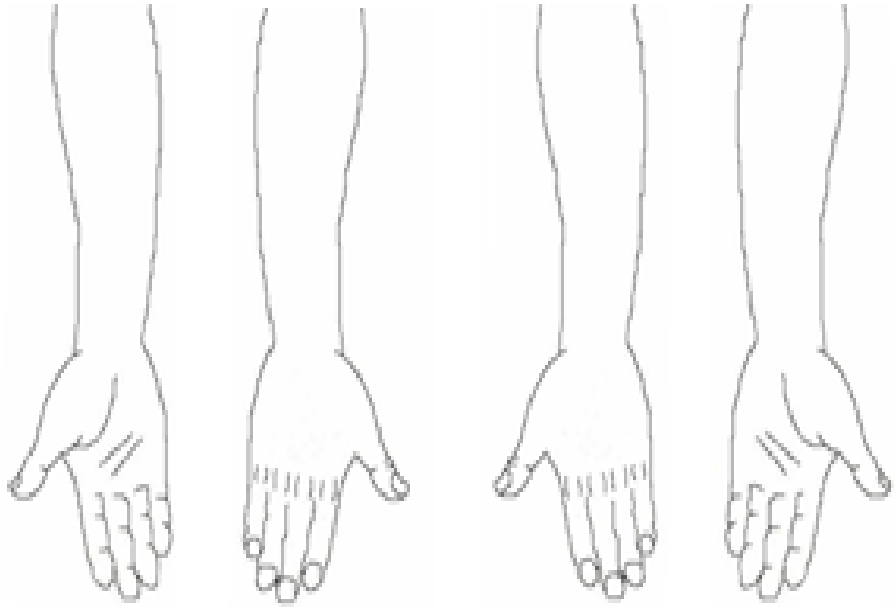
***The days for follow-up are a guide only and do not substitute professional assessment and judgement. They will vary depending on the severity of the extravasation. The first 48hrs were the most important**

To be used in conjunction with the nursing and medical notes.

Site of Extravasation

Please mark the location of the extravasation with an X

HANDS AND FOREARM



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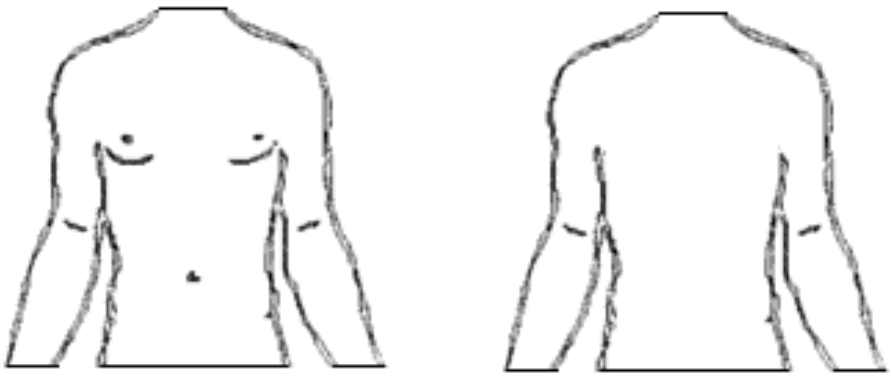

18.0 REFERENCES

- http://bopawebsite.org/publications/view/national-extravastion-protocol-for-cancer-chemotherapy 30.08.12
- SELCN Cytotoxic Extravasation Guidelines version 3.1 2012
- The Sherlock 3CG Tip confirmation system for placement of peripherally inserted central catheter (MTG24)
- The Royal Surrey Website www.royalsurrey.nhs.uk/chemo-extravasation

19.0 GLOSSARY

Acronyms in common usage throughout KMCC documentation

BNF	British National Formulary
BOPA	British Oncology Pharmacist Association
CNB	Cancer Network Board
COSHH	Control of substances hazardous to health regulations.
CYP	Children & Young People (in relation to the IOG)
DCCAG	Diagnostic Cross Cutting Advisory Group
DOG	Disease Orientated Group (NSSG/TSSG/TWG)
DVH	Darent Valley Hospital
DGT	Dartford and Gravesham NHS Trust
EK	East Kent
EKHUFT	East Kent Hospitals University Foundation Trust
EPS	Electronic Prescribing System
FP10(HNC)	Prescriptions issued by hospital doctors for dispensing in the community
GP	General Practitioner
HoP	High Level Operational Policy
IOSC	Improving Outcomes: A Strategy for Cancer
IV	Intravenous
K&C	Kent & Canterbury Hospital, Canterbury, (EKHUFT)
KMCC	Kent & Medway Cancer Collaborative
KMCRN	Kent & Medway Cancer Research Network
KOMS	Kent Oncology Management System
LSESN	London & South East Sarcoma Network
MFT	Medway Foundation Trust
MTW	Maidstone & Tunbridge Wells NHS Trust
NHS	National Health Service
NMP	Non-medical prescriber
NPSA	National Patient Safety agency
NOG	Non Surgical Oncology Group *(Permanent oncologist sub group of the DOGs with a specific responsibility for*

	chemo/rad pathways and advice to the DOG, Network and GEOGRAPHICAL LOCATIONs on new drugs)
PoC	Pathway of Care *(Network agreed disease site specific clinical guidelines)*
QEQM	Queen Elizabeth the Queen Mother Hospital, Margate (EKHUFT)
QoL	Quality of life
QSIS	Quality service information system
QST	Quality Surveillance Team
RAT	Research and Trial Group *(Permanent sub-group of the DOGs with a specific responsibility for taking forward the clinical trials agenda)*
RMH	Royal Marsden Hospital
RNOH	Royal National Orthopaedic Hospital
SACT	Systemic Anti-Cancer therapy
SACT regimen	Systemic Anti-cancer prescription on the electronic prescribing system
SACT protocol	Systemic Anti-cancer protocol on KMCC website
TTO	Treatment to take home
QVH	Queen Victoria Foundation Trust Hospital East Grinstead
UCLH	University College Hospital London
WHH	William Harvey Hospital, Ashford (EKHUFT)
WK	West Kent

20.0 DOCUMENT ADMINISTRATION

Document Title	Systemic Anti-Cancer Therapy Care Pathway – Extravasation Pathway of Care
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Agreed as "Fit for Publication" by	Members of the KMCC Chemotherapy forum and Nursing Sub Group

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Date of Next Review:	February 2023

Revision History

Date of revision	New Version Number	Nature of Revision	Confirmation of Accuracy by
23/01/09	V0.1	Re-written Network guidelines	Sabah Boulebadd
26/02/09	V0.2	Inclusion of DMSO agreed by Nursing/Pharmacy Sub-group	Bryony Neame
08/04/09	V0.3	Words 'chemotherapy, cytotoxic, monoclonal' etc. changed to 'systemic anti-cancer therapy' to reflect NCEPOD report	Bryony Neame
11/05/09	V0.4	Amendments as suggested by Dr. Waters	Bryony Neame

01/06/09	V1	Wording changes made as suggested by Kent Oncology Centre systemic anti-cancer therapy staff. No operational changes	Bryony Neame
09/2011	V2	Document reviewed and updated by group to reflect latest national guidance and recent advances in antidotes.	Network Chemotherapy Nursing group
31/07/2013	V3	Replaced links as not working – document not reviewed	Network Chemotherapy Nursing group
2016	V4	Complete revision – new guidance written	Charlotte Wadey and members of the KMCC Chemotherapy Group & Nursing Sub- Group.
Jan-May 2018	V4.1-v4.2	Review by KMCC Nursing Group – treatment algorithm and instructions for nurses (p1-0-11) simplified. Additions to classification of drugs list p12. Page number added One of drug classification tables removed (duplicated) – table with treatment included. Appendix 3 added to 13.1 Appendix 1 – remove reference to UKONs and replace with comment about Trust / national training	Principal autrhors: R O'Brien, C Wadey, C Maynard, E Parry
June 2018	V5	Published following consultation via email with KMCC chemotherapy group	
Feb 2021	V5.1 -5.1.1	Reviewed by Jan Christie and discussed at chemo group 11.02.21 V5.1.1 glossary updated by M.Archer Reformatted by R Patel	Updated by J. Christie
April 2021	V6	Published following Chemo group meeting and virtual consultation period.	C.Waters, J.Christie