



Chemotherapy Administration Policy

“Quality and safety for every patient every time”

Document Control

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1. Introduction, Aim and Scope

- 1.1 This policy aims to provide step by step guidance to support administration and minimise the risks associated with the delivery of Systemic Anti Cancer Therapy (SACT) within the Cancer Alliance.
- 1.2 For the purposes of this policy the term The terms 'SACT' and 'chemotherapy' are used interchangeably to refer to systemic anti-cancer therapy, which includes monoclonal antibodies/targeted therapies, intravenous, subcutaneous, intrathecal and oral chemotherapy as well as topical treatments for bladder cancer. Hormonal treatments and Intrathecal cytotoxic chemotherapy (ITC) is excluded.
- 1.3 For the purposes of this policy adult patients are individuals over 18 years.

2. Limitations

- 2.1 This policy is intended to support best practice guidance for staff involved in administration and monitoring of patients, of any age, who are receiving SACT. It is designed to be complimentary to Trust Medicine Policies which will include drug administration and must be used alongside Trust Policy.
- 2.2 In the event of any variation between advice given in this policy and in Trust policy, readers are advised to follow their own Trust policy and bring the matter to the Alliance Chemotherapy Group to discuss.
- 2.3 This policy does cover the use of SACT for non- cancer treatment, consult local Trust policy. Note the Term Trust is used to describe any organisation within NCA where medicines are administered

3. Initiating Treatment and Prescribing

- 3.1 The Department of Health Chemotherapy Peer Review Measures for Chemotherapy (Adult) (available via the NHS England Quality Surveillance Programme) require that 'Clinical assessments and the decision to initiate the first cycle of a course of chemotherapy should be restricted to consultant medical staff, medical trainee staff (ST 3 and above) and also NCCG (Non Consultant Career Grade) medical staff who are assessed as competent for this by their approved training programme. Note this applies to medical oncology, clinical oncology and haemato-oncology only.' In accordance with Chemotherapy Standards, junior medical staff (i.e. F1, F2, ST1 and ST2) CANNOT prescribe SACT
- 3.2 Non-medical prescribers (NMPs) can only prescribe the first cycle of any chemotherapy regimen/drug after decision to initiate the specific chemotherapy regimen/drug has been made by the patient's doctor. E.g. NMP's cannot make the clinical decision on what course of chemotherapy to prescribe for the patient, but can prescribe first cycle once decision has been made. Consult local Trust Policies for advice on NMP prescribing.
- 3.3 Prescribers must ensure they have undertaken all appropriate checks prior to prescribing the each cycle of SACT, including the additional steps taken during initiation of treatments and obtaining informed consent according to local Trust prescribing and consent policies.
- 3.4 Written consent must be obtained for all prescribing of SACT.

- 3.5 All SACT must be prescribed in the context of an approved protocol and prescribed via electronic prescribing system. The Chemotherapy Peer Review Measures for Chemotherapy (Adult) (available via the NHS England Quality Surveillance Programme) recommends.

Electronic prescribing system

There should be a database driven, electronic prescribing platform in use which at least fulfils the following:

- it enables electronic prescribing using approved protocols;
- it should have replaced manual prescriptions as the default method for the CCS;
- it provides an auditable record of chemotherapy, prescribed and administered; the record encompassing the national mandatory chemotherapy dataset (SACT);
- it enables data extraction using Business Objects/Data Warehousing.

There should be local configuration of the electronic prescribing system to allow electronic interfacing between and integration of:

- patient demographics; laboratory test results; dispensing.

4. Protocols and Prescriptions

- 4.1 All Health Care Professionals must have access to written / on line regimen protocols for all approved SACT. Hard copy of approved protocols specific to that area should be available in the designated locations within the organisation. The BNF should **NOT** be used as a primary source of prescribing information for SACT.
- 4.2 The Northern Cancer Alliance(NCA) website chemotherapy pages (see link below) contain list of approved regimens and individual regimen protocols. <http://www.necn.nhs.uk/networks/cancer-network/expert-reference-groups/nccg-chemotherapy-group/chemotherapy-docs-protocols/>
- 4.3 The Alliance Site Specific Groups (NSSG) website pages contain treatment algorithms for SACT which are an integral part of each NSSG's clinical guidance documents.
- 4.4 All systemic SACT and anticancer medications must be prescribed on a named patient basis and using designated documentation. Prescriptions must be computer or electronically generated, controlled, documents which have been developed in accordance with Alliance or National guidance.
- 4.5 Systemic medication must not be hand written on a patient's fluid balance / intravenous therapy chart or within a standard hospital in patient medication chart. The prescription must be clearly written and contain the following information:
- a. Patient details (including height, weight, surface area as appropriate)
 - b. Protocol or regimen name
 - c. Medication names (generic), and doses (as mg/m²,AUC or per kg AND the actual / final calculated dose)
 - d. Frequency of administration

- e. Start date
 - f. Number of days or doses to be dispensed (expressed in words and figures e.g. for three (3) days – abbreviations MUST NOT be used)
 - g. If treatment is continuous or cyclical with duration of cycle
 - h. Review date
 - i. For repeat cycles details of the previous cycle should be available for reference
- 4.6 Prescribers who write oral anticancer medicine prescriptions for patients who will have their medicines administered in external organisations to acute Trusts, e.g. nursing homes, prisons, and children's homes MUST provide the external organisation with details of the specified regimen and protocol.

5 Pre Treatment Verification Process

- 5.1 The speciality specific nominated health care professional (doctor, nurse, pharmacist) administrator must holistically assess and review the patient prior to each cycle of treatment, and at designated times within the patient's pathway, as defined within the protocol. The individual undertaking pre-treatment checks must;
- a. Ensure that the patient's medical condition supports the proposed administration of their treatment. Note An active mode of enquiry should be adopted when questioning patients to assess their performance status and complications / toxicities.
 - b. Check results of all critical tests / investigations, blood parameters and specific drug calculations specified within the treatment protocol / local guidance
 - c. Check that any supportive medications have been administered in accordance with the patient's prescription e.g. anti-emetics, pre-medication, topical applications, etc.
- 5.2 There must be an agreed local validity period for all blood results, e.g. for patients starting first cycle blood tests must be no more than 7 days old, i.e. it is acceptable to use results from 1 week previously provided the patient's condition has not deteriorated since bloods taken, if so repeat blood counts.
- 5.3 The results of all critical tests / investigations, (including response assessment where appropriate), blood parameters, specific drug calculations (and any data required to support this e.g. height, weight) complications from previous cycles, dose modifications or delays consequent on complications / toxicities must be documented in the patient's medical notes).
- 5.4 A patient's performance status must also be assessed prior to every cycle of treatment. Any patient whose performance status has worsened to Common Toxicity Criteria (CTC) grade 3 or 4 must not be given treatment without being reviewed by a Consultant (Ongoing treatment decisions should be made in collaboration with the patient / carer and appropriate health care professionals e.g. palliative care).
- 5.5 History of complications and / or toxicity must also be assessed prior to every cycle of treatment and treatment must not be administered to patients with a CTC >2

without a medically led and agreed treatment plan e.g. prevention (e.g. dose reduction / growth factor support) or modified toxicity management plan (e.g. antiemetic ladder)

- 5.6 The following verification process must be performed together with those defined within the organisations medicines management procedures prior to administration:
- d. Patient identification as agreed / checked with the patient on that occasion, on the prescription chart and labelled medications
 - e. Critical test results (as defined by the protocol and outlined above)
 - f. Regimen and individual medication identification
 - g. Diluents, dilution volumes and any hydration
 - h. Administration route and duration
 - i. Cycle number
 - j. The administration, as per schedule, within the cycle
 - k. The minimum monitoring requirements by physical examination and by investigation are met
 - l. Response assessment according to the relevant regimen and treatment intention
- 5.7 In the absence of a defined written protocol which would support the administration, variances identified within the verification process must be discussed with the patient's treating clinician (Consultant / ST3 or above) before proceeding with the administration of treatment.

6. Transportation of SACT for Administration within Organisations

- 6.1 All SACT should be delivered to the clinical areas in a ready to use form or a suitable safe transfer device.
- 6.2 Medicines should be transported in a rigid, sealed, leak proof container to prevent or contain any spillage.
- 6.3 The containers should be marked "cytotoxic drugs" and should only be used for that purpose.
- 6.4 Once on the ward / department, it is the responsibility of the individual who has transported the SACT to hand over the container to a qualified member of the team who will store the medication according to local Trust Policy.

7 Safe Handling and Disposal of Cytotoxic Waste

- 7.1 Cytotoxic Medicines are hazardous substances, as defined by the Control of Substances Hazardous to Health Regulations 2002 (COSHH).
- 7.2 Under COSHH regulations each Trust has a legal duty to assess the risks from handling cytotoxic drugs for employees and anyone else affected by this type of work,

and to take suitable precautions to protect their health. Consult local Trust Policy for local arrangements for the risk assessment of hazardous substances.

- 7.3 Pregnant staff must avoid exposure to SACT. As a minimum a risk assessment must be undertaken if a pregnant member of staff works with SACT to assess their risk of exposure. As a minimum, pregnant staff must not handle or administer SACT if risk assessment undertaken following local Trust policy shows there is a risk of exposure.
- 7.4 All personnel involved in the handling of SACT within the Trust must be given appropriate training on health and safety issues related to SACT, including spillage and disposal of contaminated waste.
- 7.5 Personal protective equipment (PPE) must be worn when handling SACT. The choice of PPE must be linked to a risk assessment and must follow local Trust policy, for example, gloves must be worn at all times when handling SACT.
- 7.6 Each Trust must have local policy that describes how cytotoxic waste and cytotoxic spillages must be handled.

8. Administration Standards (Systemic SACT)

- 8.1 Administration of SACT must be undertaken on named wards / departments where it is agreed as part of the wards regular activity and to which patients are admitted in preference to other wards.
- 8.2 It is acknowledged that in some circumstances SACT may need to be administered outside the usual 'named ward / area'. This would apply to situations where the patient's requirement for specialist or intensive care, provided within a non-designated area, outweighs any potential risks associated with administering these medicines outside the 'named ward / area' or when patients who are having anticancer medication / chemotherapy are admitted to non-designated area for additional interventions e.g. elective surgery.
- 8.3 In these instances it is imperative that the non-designated area is supported by medical, nursing and pharmaceutical staff from the 'named ward / area' where the patient's treatment would usually be managed / administered.
- 8.4 Clinical staff in these areas must contact members of the patient's specialist team for specific information and advice regarding the prescribing (treatment plan / protocol), administration, safe handling and management / observation of the patient during treatment. Each Trust must include the named ward(s) in local policy.
- 8.5 Named wards / departments must, depending on the type of medication / route of administration, must have appropriate protocol documents and equipment for the management of anaphylactic shock, cardiac arrest, spillage and where appropriate extravasation e.g. areas only administering cytotoxic medications via a subcutaneous route will not need equipment for the management of extravasation.
- 8.6 SACT must be administered by a chemotherapy administrator (i.e. a doctor / qualified nurse who is competent in the appropriate medication administration route, has received specific training and is deemed competent in chemotherapy administration). These individual must also have been assessed by an accredited assessor, undertake an annual review of competence and their name must also appear on the local Trust's approved list of chemotherapy administrators.

8.7 SACT must be administered during normal working hours. For the purpose of this document 'normal working hours' refers to the usual 'day time hours' when medical, nursing and support services are available to support the delivery of anticancer medications on the 'named ward / area'. Although it is practicable, in most cases, to commence treatment and administer 'bolus' / short infusions during 'normal working hours', it is acknowledged that in some Trusts for some groups of patients this may not be possible, Consult Local Trust Policy for further details.

8.8 Note good practice would be for appropriately qualified Health Care Professionals' e.g. chemotherapy administrators, oncology trained pharmacists and doctors to be available for advice for areas administering SACT, especially chemotherapy, outside 'normal working hours'.

8.9 Procedural Guidance for Administration via any route

- a. All medication must be checked in accordance with:
- b. The patient's prescription and protocol
- c. Trust's procedures / guidelines pertaining to the administration of medicines including those pertaining to the route of administration
- d. Professional guidelines

8.10 Prior to administering treatment the administrator must check that:

- a. The prescription has been written in accordance with their protocol and guidelines identified above and authorised by appropriate personnel.
- b. The patient is able to proceed with their treatment as outlined in the pre-treatment verification process (section 5).
- c. Confirm that the patient has received all the information they require to provide informed consent to treatment.
- d. Two qualified practitioners, one of whom should be a qualified chemotherapy administrator (who will take responsibility for the administration of the patient's medicine), are required to check and administer the patient's medicines. The following additional checks should be made.
- e. Details on the medication (container and contents) must correspond with the patient's prescription and this must reflect the treatment protocol.
- f. Medication containers / packaging must be inspected to ensure there is no leakage or spillage.

8.11 Patients requiring emergency 'out of hours' treatment

Organisations should discuss and agreed, in which patient's, emergency 'out of hours' treatment may be required.

9 Parenteral (intravenous) administration

- 9.1. The following guidance should be read in conjunction with local Trust procedures and Alliance Adult Venous Access Policy which included care and management of CVADs. Available at <http://www.nescn.nhs.uk/chemotherapy-documents/>
- 9.2. To protect the patient and practitioner from untoward contact with the drug's use Luer-Lok fittings on all syringes / intravenous giving sets and where practicable, use a needle-free system (Integral / Luer-Lok)
- 9.3. Commence an infusion of a compatible solution as prescribed. (In most cases this will be Sodium Chloride 0.9% which could be prescribed within the protocol or under a Patient Group Direction (PGD)).
- 9.4. Prepare any supplementary drugs / specific equipment for administration in accordance with the patient's prescription / treatment protocol e.g. antiemetics, ultraviolet protection / non PVC intravenous giving set etc.
- 9.5. Two qualified practitioners, one of whom must be a qualified chemotherapy administrator (i.e. a doctor or qualified nurse who is competent in intravenous drug administration, has received specific training and is deemed competent in chemotherapy administration and who will take responsibility for the administration of the patient's medicine), are required to check and administer the patient's medicines in accordance with the patient's prescription, protocol and organisational procedures / guidelines, including those pertaining to the administration of intravenous medication. (Nurses undergoing training can administer chemotherapy provided they are being supervised by a qualified chemotherapy administrator).
- 9.6. The patient's prescription must reflect their protocol and details on the syringe, intravenous bag / infusor, box or bottle **must** correspond with their prescription.
- 9.7. Wash hands and don latex gloves, eye protection and a plastic apron. (Members of staff with a latex allergy should use a synthetic alternative e.g. Nitrile)
- 9.8. Consult the patient regarding sensation around the vascular access insertion area and inspect the cannula / central line site / port for signs of displacement, swelling and local inflammation. (All information pertaining to vascular access, including the location and condition of the cannula / central line / port, must be documented in the patient's notes)
- 9.9. **Note.** Specific guidance regarding the care of Central Venous Catheters should be defined within local Trust Policy/Guidelines. Intravenous peripheral cannulation is however governed by best practice, which supports the use of the shortest cannula with the smallest bore i.e. 22 or 24 gauge, non-ported plastic cannula. Distal veins of the hand and arm should be used and the median cubital veins should be avoided.
- 9.10. Establish patency of the vascular access devices. This is usually confirmed by:
 - a. Confirming the vascular access device facilitates the free flow of intravenous fluids
 - b. Acquiring blood return either via aspiration or by stopping the infusion and via gravity acquiring blood return
- 9.11. **Note:** Uninterrupted observation of a patient, by a competent chemotherapy administrator must be maintained when a patient is having a vesicant administered peripherally in order to reduce the risks associated with a potential extravasation,

even if a medical device is being used. The administrator must stay with the patient throughout the infusion of their drug and if appropriate the defined flush volume of the intravenous giving set / appropriate section of the intravenous giving set.

10 Infusions

- 10.1. Change infusion bags at waist height over a plastic tray. (Infusion bags should never be changed while hanging from a drip stand).
- 10.2. Electronic devices should always be used to administer infusions and these should be set with low occlusion setting (See section below)
- 10.3. Regularly consult the patient about sensation around the venous access insertion site and observe / record the condition of the site before commencing an infusion bag and hourly during infusions.

11 Bolus injection (including vesicants)

- 11.1. Administer bolus injections via the port / connector, which is situated approximately 4 inches from the end of the administration set.
 - a. Clean port / connector / rubber injection cap of the intravenous giving set using 2% Chlorhexidine in 70% Isopropyl Alcohol spray or impregnated swab / wipe (cleaning for 1 minute) and allowed to air dry just prior to accessing
 - b. When needle-free systems are not in use, immediately prior to administration, remove the blind hub from the syringe and place a short, small gauge needle on the Luer-Lok syringe. Place a gauze / waterproof pad or tray under the connector / rubber injection cap of the intravenous giving set, taking care not to touch the cleaned injection cap.
- 11.2. The speed of administration of a bolus injection will be influenced by a number of factors including the medication and the volume of the bolus to be infused, the route of administration i.e. peripheral or central, adult or paediatric) and patient characteristics. All bolus injections should be administered slowly, usually over a period of approximately 3-30 minutes, via a fast running infusion of a prescribed compatible fluid (in most cases this will be Sodium Chloride 0.9%). A fast running infusion of a compatible fluid **may not** be required when administering specific medications to paediatric patients who have a central venous access device.
- 11.3. Specific information pertaining to the administration of vesicant drugs :-
 - a. Where there are concerns regarding venous access consideration should be given to delivering intravenous medications via a central venous catheter.
 - b. Due to the risks associated with extravasation when administered peripherally these medications are usually administered by bolus injection. When administered peripherally and / or as a bolus injection they require uninterrupted observation of the patient and their administration site by a competent chemotherapy administrator throughout the infusion of the drug and the flush volume of the specific section of the intravenous giving set (i.e. the administrator must stay with the patient throughout the infusion of their drug and the associated flush).

- c. Patency of the vascular access devices should be assessed immediately before, during and after administering a vesicant drug.
- 11.4. Electronic devices can be used to administer bolus injections and these should be set with low occlusion setting.
 - 11.5. An intravenous 'flush' of a prescribed compatible solution should be administered between each drug and on completion of the patient's regimen. (In most cases this will be Sodium Chloride 0.9%). The 'flush' volume should equate to the number of millilitres required to prime the intravenous giving set (if administering consecutive intravenous infusions), or to prime the specific section of the intravenous giving set (when administering consecutive bolus injections).
 - 11.6. Observe and instruct the patient to inform staff of signs of local and systemic problems which can occur during, or immediately after, drug administration e.g. drug specific side effects, venous irritation, phlebitis, flare reaction, extravasation, hypersensitivity / anaphylaxis. These should be managed in accordance with local, regional and national procedures / guidelines.
 - 11.7. Dispose of all cytotoxic contaminated waste immediately.
 - 11.8. Record details of administration in the patient's medical notes and patient held records (if used) in accordance with the organisational and professional procedures / guidelines.
 - 11.9. Provide post procedural information / advice to the patient and carer / significant others (with the patient's agreement) including:
 - d. Home care instructions – toxicity management / health education
 - e. Review / Follow up arrangements
 - f. Pathway for self-referral including 'out of hours' contact information

12 Electronic Medical Devices

- 12.1. All chemotherapy trained staff using mechanical infusion devices should be trained in the use of this equipment as part of their induction programme, or at the introduction of new devices to the department.
- 12.2. Where chemotherapy or monoclonal antibodies are administered via an Intravenous infusion to ensure accurate infusion times vigilance must be maintained in the safe and appropriate use of these devices, a low-pressure device being the instrument of choice. (Within adults devices should usually be set to 200mmhg. Within paediatrics, maximum pressures are usually pre-set on devices prior to commencing the infusion).
- 12.3. The start and finish time of cytotoxic infusions should be documented, ideally on the prescription sheet, any significant discrepancies in the planned infusion time should be investigated and reported through trust risk management system, where problems are attributed to the infusion device itself, the device should be removed from use and this should be reported to local Electronics departments / Equipment libraries.

- 12.4. All chemotherapy infusions will be stopped when the patient is ambulant i.e. bathroom / toilet and restarted when they return to their seat/bed to prevent the risk of extravasation.
- 12.5. Other non electronic infusion delivery devices are regularly used to administer chemotherapy intravenously over longer periods of time, nursing staff should be familiar with any devices used within their organisation. Where there is repeated problems with shortened or lengthened infusion times over planned infusion times, particularly infusions that are taking too long to administer where this cannot be attributed to Hickman / PICC line complications, these incidents should be identified to the local cytotoxic pharmacist for investigation.

13. Subcutaneous and Intramuscular administration

- 13.1. Open the bag directly onto the injection tray.
- 13.2. Wash hands; don latex gloves and a plastic apron. (Members of staff with a latex allergy should use a synthetic alternative e.g. Nitrile)
- 13.3. Choose a suitable site for the injection and prepare the skin as per organisational policy.
- 13.4. Where appropriate carefully remove the connector top from the Luer-lock syringe and securely attach sterile needle to minimise risk of spillage on the skin. Administer in accordance with organisation and national guidance (RCN2004). (Subcutaneous 26 or 30 gauge needle / ≤ 12 mm length, Intramuscular needle 23g/30mm or 21g/40mm).
 - a. Subcutaneous - Using a pinch technique, administer the injection (in adults a bolus injection up to the volume of 1.5mls could be administered via this route depending on patient comfort). Although the needle angle will be dependent on the needle length, manufacturer's instructions and the age of the patient, in the majority of instances this will be 90o angle.
 - b. Intramuscular - Administer the intramuscular injection, (in adults a bolus injection up to the volume of 3mls could be administered via this route depending on patient comfort), using the Z track technique which involves displacing the skin and the subcutaneous layer in relation to the underlying so that the needle track is sealed off before the needle is withdrawn, therefore minimising reflux.
- 13.5. **N.B.** The small amount of air that may be present in a leur lock pre-filled system does not need to be expelled and aspiration is not required prior to the injection.
- 13.6. Remove the syringe and needle, covering the site with sterile gauze and ensuring there is no leakage from the site.
- 13.7. Wash hands thoroughly after the procedure.
- 13.8. Observe and instruct the patient to inform staff of signs of local and systemic problems which can occur during, or immediately after, drug administration e.g. drug specific side effects, hypersensitivity / anaphylaxis. These should be managed in accordance with local procedures / guidelines.
- 13.9. If further injections are required, rotate the site of administration.
- 13.10. Dispose of all cytotoxic contaminated waste immediately.

- 13.11. Record details of administration in the patient's medical notes and patient held records (if used) in accordance with the organisational and professional procedures / guidelines.
- 13.12. Provide post procedural information / advice to the patient and carer / significant others (with the patient's agreement) including:
 - a. Home care instructions – toxicity management / health education
 - b. Review / Follow up arrangements
 - c. Pathway for self-referral including 'out of hours' contact information

14 Intravesical Instillation

- 14.1. Mitomycin, BCG and Epirubicin can be given by the intravesicular route. Treatment should not be administered to a patient with heavy haematuria, a urinary tract infection or if there is any risk of them being immuno-suppressed e.g. steroids. In these instances advice should be sought from the patient's consultant or Uro-oncology Clinical Nurse Specialist.
- 14.2. Where appropriate catheterise the patient in accordance with organisational policy. Treatment must not be administered if there is trauma associated with the catheterisation.
- 14.3. Provide the patient with a gown and assist the patient to assume a recumbent or semi-recumbent position and expose the catheter.
- 14.4. Lay an incontinence pad under the catheter and over the thighs.
- 14.5. Wash hands and don plastic apron. Open and assemble the sterile products and don one pair of sterile latex gloves. (Members of staff with a latex allergy should use a synthetic alternative e.g. Nitrile, consult local Trust Policy)
- 14.6. If an irrigation bag is in use, disconnect the fluid and spigot the catheter inlet. Clamp the catheter.
- 14.7. If necessary, disconnect the drainage bag from the catheter. Document the volume of urine to ensure an accurate fluid balance is recorded. Put the catheter valve in a closed position to provide a means of blocking the catheter and to facilitate drainage after the recommended time.
- 14.8. Connect the bladder syringe or Mito-in connector / Urotainer securely to the catheter, release the clamp and instill the drug slowly into the bladder. Rapid instillation can be painful, especially if the bladder wall is scarred from previous surgery.
- 14.9. Carefully check that there are no signs of leakage of drug around the catheter site.
- 14.10. Reclamp the catheter. Disconnect the syringe or Mito-in connector / Urotainer from the valve using a sterile gauze swab to absorb any drops left on the end of the valve.
- 14.11. Wash hands thoroughly after the procedure.
- 14.12. Dispose of all waste, including cytotoxic contaminated waste immediately.

14.13. Observe and instruct the patient to inform staff of signs of local and systemic problems which can occur during, or immediately after, drug administration e.g. drug specific side effects, hypersensitivity / anaphylaxis. These should be managed in accordance with local procedures / guidelines.

If catheter is to remain in situ

- 14.14. If a drainage bag is being used, connect this to the flip flow valve but do not open the valve, to allow retention of the drug within the bladder for at least one hour.
- 14.15. Ensure the comfort of the patient, assisting him/her to reposition themselves and ensure they have easy access to a call bell.
- 14.16. Reinforce to the patient the need to retain the drug for one hour if possible. If the patient has an urge to void, or if the catheter is bypassing, it will be necessary to open the valve before the allotted time.
- 14.17. After one hour: Wash hands and don latex gloves and a plastic apron. (Members of staff with a latex allergy should use a synthetic alternative e.g. Nitrile)
- 14.18. Attach a urine drainage bag. Release the flip flow valve and allow drainage of the bladder contents into the drainage bag for 15 minutes.
- 14.19. Remove the drainage bag and connect a new one if the catheter is to remain in situ, as per local policy.
- 14.20. If the catheter is to be removed attach a syringe to the balloon inlet of catheter. Once correct balloon inflation volume has been removed with syringe, gently remove the catheter completely, ensuring disposable sheet under meatus of urethra.
- 14.21. The contents of the drainage bag (drug and urine) should be emptied into a sluice followed by two flushes. Urine from patients who have received BCG treatment should be emptied into the sluice, bleach based detergent applied and then left for 15 minutes with appropriate safety signage in position, prior to flushing.
- 14.22. The bag should then be disposed of as cytotoxic waste and hands washed thoroughly after the procedure.

If catheter is to be removed

- 14.23. Remove the catheter and attached Urotainer / or syringe.
- 14.24. Advise the patient of the need to retain the drug for one hour if possible.
- 14.25. After one hour: Advise the patient to go to the bathroom to void urine into toilet. Men must void sitting down to minimise splashing. The toilet should be flushed twice, with the lid down (again to minimise splashing).
- 14.26. Advise the patient to
- a. Wash their genitalia thoroughly with copious amounts of soap and water and wash their hands afterwards, to minimise potential skin problems following contact with cytotoxic drugs.
 - b. Maintain hygiene as normal after the initial emptying of their bladder.
 - c. Pour strong bleach based detergent into the toilet after voiding if they have received BCG treatment, and leave for 15 minutes prior to flushing.

- d. If any cytotoxic drug comes in contact with the patient's skin, refer to the appropriate section of this document.
 - e. Record details of administration in the patient's medical notes and patient held records (if used) in accordance with the organisational and professional procedures / guidelines.
- 14.26 Provide post procedural information / advice to the patient and carer / significant others (with the patient's agreement) including:
- a. Home care instructions – toxicity management / health education
 - b. Review / Follow up arrangements
 - c. Pathway for self-referral including 'out of hours' contact information

15. Administration of Topical Chemotherapy

- 15.1. Cytotoxic drugs for topical administration may come in a number of different formulations, including creams, ointments, gels and solutions e.g. Efudix (Fluorouracil) cream for actinic keratosis, and Lmiquimod cream for actinic keratosis, Bowen's disease and superficial spreading Basal Cell Carcinoma.
- 15.2. The preparation should be checked by an appropriately qualified and experienced registered nurse and medical practitioner (the former will take responsibility for the administration of the patient's medicine). These individuals are required to check the patient's medicines in accordance with the patient's prescription, protocol and organisational procedures / guidelines.
- 15.3. The patient's prescription must reflect their protocol and details on the creams, ointments, gels and solutions **must** correspond with their prescription.
- 15.4. Wash the affected area on the skin with mild soap and dry thoroughly before the application.
- 15.5. Wash hands; don latex gloves and a plastic apron. (Members of staff with a latex allergy should use a synthetic alternative e.g. Nitrile)
- 15.6. Apply the preparation (cream, ointment or gel) using gloved fingertips, cotton wool or cotton tipped applicators. Solutions should be gently, but generously, using cotton wool or cotton tipped applicators
- 15.7. Unless directed otherwise, apply the cytotoxic preparation to the affected area only.
- 15.8. Avoid contact with the eyes, nose, mouth or areas close to mucous membranes. If the preparation comes into contact with unaffected skin, wipe the area with gauze and warm soapy water.
- 15.9. If the preparation is to be applied to the entire body, use gauze. Apply the preparation more lightly to the groin, armpits, inside bends of elbows, and backs of knees because of the increased risk of dermatitis.
- 15.10. Do not cover the skin with a dressing, unless specifically advised to do so.
- 15.11. If necessary, after the required contact time, the preparation should be rinsed off the area carefully. If the preparation has been applied to a large area, the patient should be advised to have a shower, rather than a bath, to ensure that they do not sit in bath water that contains drug residue. Once the drug has been showered off, the patient can have a bath if desired.

- 15.12. Once the application is completed, dispose of all cytotoxic contaminated waste immediately.
- 15.13. Observe and instruct the patient to inform staff of signs of local acute skin reactions (i.e. severe burning or rashes) or systemic problems (which are unlikely unless the majority of the body is being treated) that can occur during, or immediately after, drug administration e.g. drug specific side effects, hypersensitivity / anaphylaxis. These should be managed in accordance with local procedures / guidelines. If acute skin reactions occur the prescriber must be notified as the drug dose or frequency, may need to be reduced on subsequent applications. Some cytotoxic drugs (e.g. fluorouracil) may cause redness, soreness, scaling and peeling of the affected skin after one or two weeks of use. This effect may last for several weeks after the treatment is stopped.
- 15.14. Record details of administration in the patient's medical notes and patient held records (if used) in accordance with the organisational and professional procedures / guidelines.
- 15.15. Provide post procedural information / advice to the patient and carer / significant others (with the patient's agreement) including:
 - a. Home care instructions – toxicity management / health education
 - b. Review / Follow up arrangements
 - c. Pathway for self-referral including 'out of hours' contact information
- 15.16. **Note** If treatment is to be continued at home, appropriate information concerning the application of the preparation, handling, disposal instructions and details of obtaining further medicine supplies if needed.

16. Administration of Eye Treatment(s)

- 16.1. Solutions of cytotoxic drugs (such as Fluorouracil (5-FU) and Mitomycin) may be administered postoperatively as subconjunctival 5-FU injections in eyes that had undergone prior cataract surgery or failed filtering surgery. Cytotoxic drugs may also be used intraoperatively using a cellulose sponge soaked in the cytotoxic solution or as subconjunctival injection. This should be done in specialist centres only.
- 16.2. The preparation should be checked by an appropriately qualified and experienced registered nurse and medical practitioner (the former will take responsibility for the administration of the patient's medicine). These individuals are required to check the patient's medicines in accordance with the patient's prescription, protocol and organisational procedures / guidelines.
- 16.3. The patient's prescription must reflect their protocol and details on the eye preparation **must** correspond with their prescription.
- 16.4. Consider applying a prescribed lubricating eye ointment on the inferior eyelid to minimise skin contact with the cytotoxic drug.
- 16.5. Wash hands and don latex gloves (Members of staff with a latex allergy should use a synthetic alternative e.g. Nitrile)
- 16.6. Tilt the patient's head back, and gently pull the lower eyelid down.

- 16.7. Hold the dropper above the eye and squeeze one drop inside the lower eyelid. Ensure that the dropper tip does not come into contact with the eye, eyelashes or any other surface. Let go of the eyelid and instruct the patient to blink a few times to spread the drop over the whole eye surface. If more than one drop is prescribed, wait for at least two minutes before putting the second drop into the eye. Repeat the procedure for the other eye, if the medication is prescribed for both eyes.
- 16.8. If the preparation comes into contact with unaffected skin, gently blot any liquid and then wipe the area with gauze and warm soapy water.
- 16.9. If applied intraoperatively using a cellulose sponge soaked in the cytotoxic solution or as subconjunctival injection, once the application is complete rinse eyes copiously.
- 16.10. Once the application is completed, dispose of all cytotoxic contaminated waste immediately.
- 16.11. Wash hands thoroughly after the procedure.
- 16.12. Record details of administration in the patient's medical notes and patient held records (if used) in accordance with the organisational and professional procedures / guidelines.
- 16.13. Provide post procedural information / advice to the patient and carer / significant others (with the patient's agreement) including:
 - a. Home care instructions – toxicity management / health education
 - b. Review / Follow up arrangements
 - c. Pathway for self-referral including 'out of hours' contact information
- 16.14. **N.B.** If treatment is to be continued at home, appropriate information concerning the administration of the eye drops, handling, disposal instructions and details of obtaining further medicine supplies if needed.

17 Administration of Oral medication

The overarching principle for the administration of oral SACT is that administration is carried out and monitored to the same standards as for parenteral (IV) chemotherapy. See NECN Oral SACT Policy. Available at: <http://www.necn.nhs.uk/networks/cancer-network/expert-reference-groups/nccg-chemotherapy-group/chemotherapy-docs-protocols/>

17.1 'Outpatient' administration of oral medication within designated / defined areas

- 17.1.1 Prior to giving the patient a supply of their medicine to take home the administrator must check all information defined within the administration procedural guidance and that compliance can be achieved.
- 17.1.2 **N.B.** Patients and staff must not break, halve or crush tablets and capsules must not be opened. Queries about difficulties in taking oral medicines should be directed to the appropriately qualified pharmacist. If an oral liquid formulation is not commercially available, the Pharmacy Department may be able to prepare an alternative liquid form. In such cases, doses may be extemporaneously prepared in an appropriate controlled environment to give a suitable form ready for administration to the patient.

- 17.1.3 The use of multi-compartment compliance aids or monitored dose systems are not recommended. If the patient requires this type of aid then a full risk assessment must be undertaken and documented in the patient's medical notes.
- 17.1.4 Oral medication must be administered in accordance with organisation procedures with specific attention given to checking the drug labelling to ensure the following information is noted on the box / bottle:
- a. Patient name
 - b. Generic drug name
 - c. Strength of tablets or capsules, or concentration of oral liquid
 - d. The number of tablets / capsules in the container, or volume of liquid
 - e. Administration instructions
 - f. Length of treatment, including start and stop date(s) as appropriate
 - g. Storage instructions /conditions
 - h. Caution: Cytotoxic Drug (as appropriate)
 - i. Name and address of pharmacy department
- 17.1.5 Provide information / advice to the patient and carer / significant others (with the patient's agreement) including:
- a. How and when to take their medication
 - b. What to do in the event of missing one or more doses
 - c. What to do in case of vomiting after taking a dose
 - d. Likely adverse effects and what to do about them (i.e. toxicity management / health education)
 - e. Any need for and how to obtain further supplies
 - f. The role their GP is expected to play in their treatment
 - g. The need to inform their health care team if they are taking any over the counter medications/ supplements.
 - h. Principles of safe handling, storage and disposal
 - i. Written information
 - j. Manufacturers patient information leaflet and drug specific information
 - k. Review / follow up arrangements
 - l. Pathway for self-referral including 'out of hours' contact information
- 17.1.6 Record details of administration in the patient's medical notes and patient held records (if used) in accordance with organisational and professional procedures / guidelines.

17.2 Oral medication - Administered to 'in-patients' within designated / defined areas'

- 17.2.1 It is acknowledged that in some instances oral anticancer medication may need to be administered to patients who are admitted to organisations. A detailed medical / medication history and holistic assessment of the patient must be undertaken on admission and medication must only be prescribed and administered when it is confirmed that it is clinically appropriate and safe to do so. Consult local Trust Policy. The assessment must include:
- a. ensuring that the patient's medical condition and blood parameters support ongoing treatment.
 - b. checking results of all investigations, blood parameters and specific drug calculations specified within the treatment protocol / local guidelines.
 - c. documenting the administration of the medicine(s) in the patient's medical notes and patient held records (if used).
- 17.2.2 In the case of inpatients receiving their medications over a period of days the above checks must be done before the first dose is given in hospital and then regularly during treatment according to the parameters specified in the written protocol.
- 17.2.3 Clinical staff administering oral SACT on non oncology/ haematology wards to in patients must contact members of the patient's specialist team for information and advice about the oral anticancer medicine
- 17.2.4 Any supplementary drugs should be administered in accordance with the patient's prescription / treatment protocol e.g. antiemetics.
- 17.2.5 The patient's prescription must reflect their protocol and the details on the patient's medication box / bottle.
- 17.2.6 Where possible, the patient's own medication should be utilised for the remainder of the cycle to minimise the risks associated with prescribing inappropriate / incorrect dose or duration of treatment. If the patient's own medication is not available, a patient specific supply should be issued.
- 17.2.7 In some instances patients, and or carers, can self administer their medicines in accordance with organisational procedures. In this situation the responsibility for administration lies with the patient with the Health Care Professional's role being one of assessment, monitoring and support. Patients must remember to wash their hands thoroughly before and after handling their medication and carers should wear gloves.
- 17.2.8 If the patient / carer are not self medicating then two qualified practitioners are required to check and administer oral SACT in accordance with organisational policies. The administering nurse is responsible for assessing and monitoring the patient's condition and promptly reporting any treatment related toxicities to the patient's specialist team.
- 17.2.9 Nurses who administer oral anticancer medications should avoid direct contact with these drugs. If the tablet or capsule are within a blister or foil packed, the required number of dose units should be cut from the dispensed strip and put in a medicine pot. The medication can then be taken to the patient's bedside where it can be pushed through the blister / foil wrapping by the patient or nurse, either onto the patient's hand or into their medicine pot / cup for administration.

17.2.10 N.B. If a patient's oral medication is suspended on admission and then restarted by the patient's specialist team, during their admission or on discharge, specific details regarding the revision in the duration / timing of cyclical treatment must be recorded within the patient's inpatient medication chart and within their medical notes. The specialist pharmacist should be consulted prior to the patients discharge to ensure that they are discharged with the correct amount of appropriately labelled drugs.

18 Admission of a patient who is receiving systemic anticancer medication

18.1 Unplanned / emergency admission of patients to a non-designated area

18.1.1 All patients who are receiving chemotherapy are at risk of neutropenia and the risk of this complication should be assessed and managed immediately in accordance with local organisation guidance.

18.1.2 A member of the patient's anticancer medication team must be contacted within 24 hours of an emergency admission to undertake a detailed medical / medication history and holistic assessment of the patient:

- a. Indication for therapy
- b. Drug(s) and dose(s), route and frequency of administration, e.g. daily, weekly, continuous or cyclical
- c. Intended start date, duration of treatment, intended stop
- d. If appropriate date for each cycle of treatment and date of next cycle
- e. Any supportive medications, e.g. anti-emetics
- f. Toxicity assessment

18.1.3 Where possible a copy of the original prescription should be obtained

18.1.4 A senior doctor (Consultant/ Specialist Staff Grade / ST3 or above) from the patient's oncology / chemotherapy team (or a designated senior deputy identified by one of these individual) **MUST** be contacted to:

- a. Confirm the patient's medication history
- b. Assess the patient's suitability for continued treatment
- c. Acquire specific regime / protocol details
- d. Prescribe the patients treatment in the patient's inpatient Medication treatment chart (Paediatric oncology and adult haemato-oncology) OR confirm and countersign (in the case of adult solid tumour oncology patients), the patient's inpatient prescription / Medication treatment chart.
- e. Identify and initiate an assessment / review pathway during admission and for discharge (including any requirement for discharge medication)

18.1.5 **Note** Oral anticancer medicine **MUST NOT** be prescribed or administered until it is confirmed that it is clinically appropriate and safe to do so. The patient's drugs should only be prescribed by appropriate personnel. If a patient's oral medication is suspended on admission and then restarted by the patient's specialist team, during their admission or on discharge, specific details regarding the revision in the duration / timing of cyclical treatment must be recorded within the patient's inpatient medication chart and within their medical notes.

18.2 Planned admission of a patient to a non-designated area OR a patient requiring treatment in a non designated area

18.2.1 The Consultant responsible for the anticancer medicine management of the patient should be contacted by the treating clinician / ward / department and, having undertaken a risk assessment, decide if administering these medicines outside of the 'named ward / area' would be appropriate. The consultant must:

- a. Provide the treating clinician and the ward with details pertaining to the patient treatment protocol.
- b. In advance, inform the treating ward of the patient's pending admission in order to enable them to consult with the patient's treating team as outlined below.
- c. In the case of parenteral administration, document in the patient's medical notes the rationale for administering chemotherapy outside the usual 'named ward / area'.

18.2.2 The sister / designated deputy of the treating ward / department should contact a senior member of the patient's SACT nursing team (e.g. ward sister, named nurse, CNS, matron) to acquire specific information and support: This individual will, where appropriate:

- a. Provide verbal and written information regarding the nursing management / observation of the patient during / post treatment focusing on minimising side effects, maintaining safety and 24-hour contact numbers for information / support.
- b. Ensure that the non-designated area has the relevant equipment for the management of anaphylactic shock, cardiac arrest, spillage and extravasation. (The chemotherapy administrator may be required to collect and transport the extravasation pack, spillage kit, cytotoxic sharps bin and personal protective equipment to the non-designated area).
- c. Establish transport arrangements for the patient's therapy.
- d. Facilitate the appropriate verification and pre treatment assessment to be completed.
- e. Confirm arrangements for the SACT review of the patient.

19. Guidelines Development / Review

This Guidance document was developed in consultation with senior oncology medical, nursing and pharmacy staff within the North of England Cancer Alliance. Acknowledgements to M. Vincent, D Blake and members of the Newcastle Hospitals NHS FT Trust Chemotherapy Committee, H Roe Cumberland Infirmary and the Alliance Chemotherapy Nurse Group, the Alliance Chemotherapy group and Alliance Pharmacy group.

Comments on content / implementation should be directed to Steve Williamson Chair of the Chemotherapy Group North of England Cancer Alliance

The document has been reviewed and ratified by the Alliance Chemotherapy nurses Group and the North of England Cancer Alliance Chemotherapy Group.