Introduction

It is the purpose of this policy to provide clear guidelines that should be followed by all nursing staff working where cytotoxic chemotherapy is administered within the Lancashire and South Cumbria Cancer Network. The term “chemotherapy” refers to those systemic anti-cancer agents commonly understood and accepted as being covered by this term and includes other groups e.g. biological therapy. The policy intends to provide cohesive instructions to ensure that cytotoxic chemotherapy is administered safely and competently.

This policy covers the following areas prior to and during the administration of cytotoxic chemotherapy:

Handling
Storage
Practitioner’s responsibilities
Pregnancy
The environment
Consent
Patient Identification procedure
Checks required prior to Chemotherapy Administration
Patient assessment
Patient information
Chemotherapy delivery
Documentation

Handling

- Handling of oral and intravenous chemotherapy must be in accordance with NMC and Trust policies regarding administration of chemotherapy.

- When handling chemotherapy that has been removed from its packaging and is ready to use the practitioner should wear the appropriate protective clothing. This includes a plastic apron and non-sterile gloves. These should be changed immediately after the administration of the chemotherapy drugs.

- Handling of patient’s body waste following chemotherapy administration should mirror the precautions taken when handling the drugs as risk of exposure through body fluids is unknown.

Storage

- Storage of chemotherapy must conform to the Trust policy on storage of medicines.

- Storage of prepared chemotherapy must include storage in a manner that ensures the correct control and security, especially from children.

- Storage must also involve a method that does not increase the likelihood of incorrect patient identification or incorrect administration.
• Within the clinical area, the prepared chemotherapy that should be kept refrigerated will be stored in the designated chemotherapy refrigerator. Non-refrigerator items will be stored in the designated area within the clinical utility room.

• All chemotherapy drugs that have not been used will be returned to pharmacy at the earliest instance.

Practitioner’s Responsibilities

The practitioner must:

• Comply with the NMC Guidelines for the Administration of Medicines.

• Be competent on the administration of chemotherapy.

• Be competent in the route and technique required.

• Provide a final check on the dosage of chemotherapy before administering the drugs. The practitioner must be satisfied that the dose prescribed falls within the expected dose range for the patients. (Refer to specific chemotherapy regimen templates).

• Be aware of likely side effects.

• Ensure that medication such as anti-emetics and pre-medications are included.

Pregnancy

Pregnant staff or those trying to conceive are encouraged to:-

• Discuss plans for pregnancy with Matron/Line Manager in confidence.

• Inform Matron / Line Manager as soon as pregnancy is suspected or confirmed.

• Have an informed choice to work or not to work with cytotoxics during the first trimester.

• Staff may choose not to work with cytotoxics and if appropriate will be offered alternative duties.

• Safe handling procedures should be adhered to at all times.

• By adhering to safe handling procedures exposure to cytotoxics is minimised.
In view of the lack of evidence to ascertain whether nurses that are pregnant should be involved in the administration of chemotherapy, it is advised that they should not be involved in the delivery of chemotherapy. Nurses known to be pregnant may, if they wish, continue to administer chemotherapy; however, they do so at their own risk.

The Environment

- Chemotherapy must only be delivered in an environment considered appropriate to do so.

- For those patient’s or regimens that require an inpatient admission in order to receive the chemotherapy this must only be administered in a designated ward that has the facility to safely care for this group of patients.

- All areas should be private and safe and free of clutter. Emergency facilities and access to a telephone are imperative.

- All necessary equipment for the safe administration and disposal of the chemotherapy should be accessible at the time of chemotherapy delivery.

- Time should be allowed to administer the chemotherapy safely and where possible interruptions should be avoided.

Consent

- All patients treated with chemotherapy should have signed the appropriate chemotherapy consent form.

- It is the responsibility of the Clinician instigating the treatment to obtain the consent.

- The practitioner administering the first treatment should check that written consent has been given.

- It is advisable that the practitioner checks the patient’s understanding of the treatment and gains their verbal consent before continuing with the chemotherapy administration.

Patient Identification Procedure

- It is essential that the patient undergoing chemotherapy is correctly identified prior to delivery of the treatment.

- The patient identification verification/check should be made by a registered nurse who has undergone the relevant chemotherapy training and has been deemed competent to administer chemotherapy.
• The identity of the patient MUST be established to ensure that an active response is made by the patient and not a passive response, e.g. “please could you tell me your name and date of birth?” Not “is your name and date of birth……”

• The patient identification verification must be checked prior to the initiation of bolus or infusion chemotherapy. In those regimens that require longer and multiple infusions, this verification must be completed prior to each new chemotherapy drug.

• The patient check must match the chemotherapy prescription and the details on the chemotherapy that is to be administered.

• If the patient check, patient prescription and the chemotherapy drugs do not all match then the chemotherapy should NOT be administered. This should then be reported to the senior nurse in charge.

**Before chemotherapy is supplied for administration the following pharmacy checks should occur:**

• The chemotherapy is prescribed as per the treatment protocol

• The protocol is appropriate for use within the treatment algorithm.

• Any deviation from the correct treatment algorithm should be reported to the clinical chemotherapy group

• The chemotherapy prescribed is calculated at the correct dose

• Any diluents, dilution volumes and hydration are checked as correct

Prior to the chemotherapy administration the following nurse checks should occur:

• Any critical test results should be obtained and checked

• The regimen, prescription and individual drugs should be checked

• Any supportive medication should be given as per prescription

• The administration route and duration should be checked

• The cycle number should be noted

• The administration should be given as per the schedule within the cycle

• An assessment of treatment toxicities and complications from the previous cycle should be assessed and documented and if appropriate
reported to one of the medical team in order that the patient may be assessed and considered for dose delay or dose modification

- The minimum physical and investigative requirements have been met as per protocol
- The patient has been reviewed at the appropriate points in the treatment (as per treatment protocol) in order that an assessment of response has been made to ensure the appropriateness of administering the chemotherapy

**Patient Assessment**

Before the patient can receive chemotherapy the practitioner designated to administer the drug must make a satisfactory assessment of the patient.

- Venous access should be assessed. Choice of IV access should be made and if necessary referral for a central line made. Venous access must be patent and the choice of vein appropriate for the agent being administered.
- The practitioner should assess the patient for any problems that they may have been experiencing or any changes in condition since they were last seen.
- No chemotherapy should be administered without the patient being asked if they have any questions. Instructions should be given at all stages.
- The practitioner must ensure that the prescribing clinician has prescribed the drug in the full knowledge of the patient’s condition.

**Patient Information**

- A pre-chemotherapy assessment will be offered to all patients receiving chemotherapy.
- All patients should be given written and verbal information prior to the delivery of their first chemotherapy treatment.
- Patients should be given contact numbers for whom they should ring if they develop any problems following their chemotherapy. This information may be held within the Patient Held Record. Referrals for home support should also be made at this time.
- The Clinician, prior to obtaining the patient’s consent must give verbal information. This should be re-iterated by the Chemotherapy Nurse prior to chemotherapy administration.
Chemotherapy Delivery

- Routine chemotherapy should be commenced during the working hours of the designated area.

- Chemotherapy will not be administered outside of these hours with the exception of infusional chemotherapy over 24 hours that has been initiated during the day. There will be exceptions to this for example in the case of an oncological or haematological emergency. Also some haematological regimens have an extended schedule that will need to be administered over 7 to 10 days. It is the responsibility of the practitioner to undertake a risk assessment in these circumstances and act within the NMC code of conduct.

- All designated units should have an agreed pathway for emergency care of patients receiving chemotherapy.

- Prior to commencing treatment the practitioner must check the patient’s blood results. Refer to the individual chemotherapy protocols for specific investigations prior to use and the safe values.

- The chemotherapy should be checked against the prescription (either electronic or hand written).

Intravenous therapy

- For intravenous chemotherapy, patency of the IV access must be confirmed prior to initiating chemotherapy administration.

- If using central lines patency must be established by aspirating blood prior to commencing the treatment. In the absence of being able to withdraw blood, refer to the local central line policy.

- If using a peripheral cannula an appropriate size and position of should be chosen. The general rule is to use the smallest cannula into the largest vein possible.

- All bolus chemotherapy must be administered concurrently with a fast running infusion.

N.B Sodium Chloride 0.9% would generally be used but it is important to be aware of potential drug interactions. If the chemotherapy is not compatible with sodium chloride 0.9% a dextrose infusion should be used as an alternative.

- The following checks should be made throughout bolus chemotherapy administration:
  - There is no pain or swelling at the exit site
  - There is a good “flashback” into the hub of the cannula
  - There is a fast flow of the infusion
  - There is no resistance on the plunger of the syringe
If there is an absence of any of these checks, administration should stop and alternative IV access should be gained.

If extravasation is suspected refer to the Lancashire and South Cumbria Cancer Network policy for the management of extravasation for further management.

**Vinca Alkaloids**

These will only be supplied to adult services in the form of minibags and the following points apply:

- The prescribed dose of vinca alkaloids should be supplied ready to administer in a 50ml minibag of sodium chloride 0.9% (for some brands of vinorelbine glucose 5% solution for injection may be used instead of sodium chloride 0.9%).

- The following warning should be prominently displayed on the label of ALL vinca alkaloid doses “**For Intravenous Use Only- Fatal If Administered by Other Routes**”.

- There should be judicious use of colour and design on the label, outer packaging and delivery bags to further differentiate minibags containing vinca alkaloids from other minibag infusions.

- The vinca minibag should be administered intravenously over 5-10 minutes and the patient closely monitored for signs of extravasation. If extravasation is suspected refer to the Lancashire and South Cumbria Network policy for the management of extravasation for further management.

**Intrathecal chemotherapy**

If Intrathecal Chemotherapy is to be administered refer to the appropriate individual Trust policy for intrathecal administration

**Oral chemotherapy**

It is the nurse’s responsibility to:

- Comply with the NMC Guidelines for the Administration of Medicines.

- Be competent on the administration of chemotherapy to the level required (see policy for chemotherapy training).

- Be competent in the route and technique required.
- Provide a final check on the dosage of chemotherapy before administering the drugs. The practitioner must be satisfied that the dose prescribed falls within the expected dose range for the patients.

- Be aware of likely side effects.

- Ensure that medication such as anti-emetics and anti-diarrhoea tablets are included.

Prior to issuing the tablets the practitioner should:

- The practitioner must check the patient’s blood results. Refer to the individual chemotherapy protocols for specific investigations prior to use and the safe values.

- Check patient details ensuring it is the correct patient receiving the correct drug

- Give written and verbal information including advice about who to contact in the event of any complications

- Ensure the patient understands how and when the medication should be taken

- Confirm the quantity of tablets and the dosage of the medication with the patient.

- Document that the medication has been issued in the nursing notes and sign the prescription.

**Documentation**

Prior to commencing administration the practitioner will check the patient’s details to verify they are correct.

Following the administration of chemotherapy it is essential that good record keeping be performed. This includes:

- The practitioner administering the chemotherapy must sign the prescription either written or electronic) to confirm that the chemotherapy has been given.

- A documentation entry must be made in the nursing or electronic notes for both inpatients and outpatients. Any problems or deviations from the protocols should be documented here.