362 – GUIDELINES FOR THE MANAGEMENT AND ADMINISTRATION OF SYSTEMIC ANTI-CANCER THERAPY

Broad Recommendations / Summary
The guidelines are to ensure the safe management of patients, relevant carers, healthcare professionals and the environment during the administration of systemic anti-cancer therapy (SACT). The guidelines have been adapted from the former North East Yorkshire and Humber Clinical Alliance (Cancer) NEYHCA CEG – Guidelines for the Management of Cytotoxic Administration in Adults, version 2.2 January (2011) - formally HYCCN. NEYHCA has since ceased to exist as has administration or version control facilitation. Therefore, the adapted, updated guidelines are to rebrand and publish directly onto the local HEY Trust Intranet Site and linked to the Queens Centre for Oncology and Haematology; Cancer Services and Chemotherapy CNS Team Website to ensure up to date best practice The guidelines have been based upon The Royal Marsden Hospital Handbook of Cancer Chemotherapy (2005) and The Department of Health: The Manual for Cancer Services (2011), The RCN Standards for Infusion Therapy, 3rd ed (2010), The RCN Administrating Subcutaneous Methotrexate for Inflammatory Arthritis: guidelines for nurses, 2nd ed, (2013), Health and Safety executive: Safe Handling of Cytotoxic Drugs (2003), Control Of Substances Hazardous to Health (2002) and adapted from NEYHCA CEG – Guidelines for the Management of Cytotoxic Administration, version 2.2 June 2013 Previous terminology relating to cytotoxic chemotherapy is now under the contemporary term of Chemobiological Systemic Anti-Cancer Therapy, referred to as SACT within the text and includes all classifications of intravenous anti-cancer agents including biological, immunological and hormone therapies in line with up to date evidence and classifications.

1. PURPOSE / LEGAL REQUIREMENTS / BACKGROUND

The purpose of this guideline is to inform all practitioners of their responsibility in the safe practice required during chemobiological administration to minimise the risks involved.
The potential for exposure exists during various tasks, e.g. drug reconstitution and mixing, dispensing/handling oral medication, connecting and disconnecting intravenous tubing, and disposing of waste equipment or patient waste.

It remains the responsibility of the practicing clinicians to interpret the application of the guidelines, taking account of local circumstances and the needs and wishes of individual patients.

In reviewing the summary guidelines, local clinicians and managers will be required to assess whether the guidance can be met, and if not what service developments need to be undertaken to achieve the 'ideal service' as defined by the available evidence.

2. POLICY / PROCEDURE / GUIDELINE DETAILS

Education

This section will cover the following areas:

- **Needs of the Healthcare Professional**

- **Needs of the Patient**
- **Principles of Safe Practice**

Responsibilities
All staff required to handle, administer or care for patients receiving systemic anti-cancer drugs must have access to appropriate information, education and training. The nurse administering chemobiological agents should have knowledge of the disease process, drug classification, indications, actions, side-effects, adverse reactions, method of administration, rate of delivery, treatment goal, drug properties and specific drug calculations of dose and volume relative to age and body surface area.

Only staff, recipients or carers who are able to demonstrate and understand basic principles of safe
practice should handle chemobiological drugs or its waste products.

Staff members must have access and be familiar with:

Local Trust Policies
- Correct Identification of Patients & Service Users
- Drug Policy
- Disposal & Waste Management
- Control of Substances Hazardous to Health – Health & Safety at Work Policy
- Resuscitation
- Spillage

NMC 2015 Standards for Medicines Management

NMC 2015 The Code: standards of conduct, performance and ethics for nurses and midwives

Qualified practitioners who are required to undertake the administration of chemobiological drugs must be able to demonstrate competence and experience using the correct techniques for less toxic drugs.

Yearly updates of continuing education, training and supervised practice will monitor that qualified professionals undertaking administration of systemic anti-cancer drugs have sufficient knowledge and experience to demonstrate competence in the administration of systemic anticancer therapies including:
- Drug names
- Short and long term side-effects
- Toxicity
- Complications
- Dose ranges related to different routes of administration
- Common regimens
- Particular health risks of handling specific drug

Nurses must demonstrate their competency on an annual basis and keep written records of their training and competency reviews.

Nurses who have direct patient contact will demonstrate skilled communication with the patient and family concerning:
- Aim of treatment.
- Relevant drugs and the regimen.
- Experience of receiving the specific drugs/regimen.
- Managing the short and long term effects, toxicity and complications.

- Therapeutic approaches to managing the health and well-being of the patient.
- Recipient/carer education regarding agreed self-care activities, including handling systemic anticancer drugs and waste.

Use of mechanical or electronic devices must comply with Local Trust Policy. Staff must complete training in the use of mechanical intra-venous infusion devices and have their competency assessed and recorded.
The safe use of central lines should be set out within the local CVC guidelines for Oncology and Haematology. All staff involved in the care and management of these lines should undertake formal training and assessment in aseptic techniques.

All staff must demonstrate an ability to take responsibility for their own health and safety, and that of others. Staff members will also understand the consequences of their actions for themselves and others.

Nurses will need to demonstrate their ability to find further information and advice ensuring their own knowledge is up-to date including awareness of relevant legislation, of local and national codes of practice.

Only nursing staff that have completed the competency based chemotherapy training are involved in the training for the safe handling of intrathecal chemobiological drugs.

Medical staff who are expected to prescribe or administer chemobiological drugs should:
- Have a period of teaching and supervision facilitated by the Lead Clinician who will assess their competency to prescribe chemotherapy
- Medical staff who administer intrathecal chemotherapy must undergo training and assessment, facilitated by the Lead Clinician, and their name must appear on the intrathecal register

3. COMPETENCE

Competence must be related to demonstrating safe practice in the context of meeting individual patient's needs. This incorporates the tasks which an individual is expected to perform, and must include:
- Understanding of the rationale and principles of safe practice
- Use of appropriate handling techniques effectively
- Use of appropriate equipment effectively
- Handling mishaps and complications effectively
- Applying knowledge, skills and experience to give care appropriate to the individual patient.

Educators must be academically and clinically qualified, and demonstrate effective evidence based clinical expertise.

Staff who do not administer systemic anticancer therapy should have access to training in:
- Disposal of chemobiological waste, including bodily fluids
- The procedure for dealing with spillage
- Management of infusion devices
- Extravasation procedure

4. VERIFICATION PROCEDURE

Systemic anticancer therapy must be prescribed on ARIA. The prescription must be authorised by an appropriately qualified doctor i.e. Clinical Oncologist/Haematologist or senior specialist registrar specialising in Haematology or Oncology according to agreed protocols.

The prescription chart must contain the following information in addition to patient's identification and on all drugs labelled:

- Height
- Weight
- Body surface area
- Critical test results i.e. Haematology and biochemistry results
- Regimen and individual drug identification
- Diluents and dilution volumes, and any hydration
- Supportive drugs must be identified and given as per prescription
- Administration route and duration for each individual drug
- Cycle number
- The administration as per the schedule within the cycle
- Information on any modifications and cumulative doses should be identified on ARIA/prescription chart and in the patient's medical notes.

Further checks prior to administration should include a history of toxicities and complications from previous cycles, and clarification that the minimum physical and investigational requirements of the patient are being met.

Whenever possible all bolus chemotherapy and majority of chemotherapy infusions should be initiated Monday to Friday 9am to 5pm, when consultants, chemotherapy specialist nurses and pharmacists will be more readily available (for exceptions to the rule please see local chemotherapy service normal working hours agreement and local drug policy No CP026). **Intrathecal administration must only occur in normal working hours Monday to Friday 7am - 6.30pm, only by personnel on the intrathecal register (as per local protocol).**

When regimens take longer than 6 hours these should be commenced during normal working hours and chemotherapy trained nurses should be available for the whole of the planned duration of the regimen.

Chemobiological drugs given outside normal working hours are given in specific and exceptional circumstances. These are subject to discussion with the lead clinicians and would include 5-day regimens that fall over a public holiday period and acutely ill patients e.g. lymphoma, leukaemia and occasionally patients with other aggressive chemo-sensitive malignancies requiring emergency treatment at weekends. A trained chemotherapy nurse must administer the chemotherapy.

Before administration of chemobiological drugs they must be checked by a second registered nurse, pharmacist or registered medical practitioner. Both practitioners must check the following:

- Patient name and date of birth
- Patients HEY/NHS number
- Systemic anticancer regimen
- Expiry date and batch number of drug
- Dose and infusion rate

The results of investigations for the first cycle of treatment must be reviewed by the consultant/senior registrar specialising in Haematology/Oncology before treatment begins. Further cycles can be assessed by a designated nurse led service with agreement from their Lead Clinician, where recognised protocols/guidelines are in place.

5. PROCEDURE FOR ADMINISTERING BOLUS AND INFUSIONAL SYSTEMIC ANTICANCER DRUGS

Prior to the administration, the intravenous access device must be assessed. The following must be checked:

- Patency and backflow of blood
- Patient free from pain at cannula site
- Cannula has not become dislodged
- Integrity and visibility of the site

Prior to the administration of treatment:

- Check the prescription is written clearly and is unambiguous. If necessary clarify with the prescribing doctor.
- Confirm that the prescribing doctor and administrating nurse have reviewed the full blood count, biochemical profile and other regimen relevant investigations, and that the results are within the parameters of the relevant policy.
- Check that the patient has signed the consent form (only necessary for the first course of treatment or if the regime changes during the course of treatment).
- Check that the appropriate anti-emetics have been prescribed and administered.
- When the protocol contains pre-medications or hydration, ensure that these are prescribed and administered.
- Check whether the drugs to be administered are vesicants or non-vesicants, and administer in the correct order i.e. vesicants first
- Explain and discuss the procedure with the patient.
- For each drug to be administered check the following:
  - The date of administration: chemobiological agents must be administered on the date stated on the prescription.
  - The name of the drug and infusion fluid: prescription and pharmacy label must be identical.
  - The drug dose: prescription and pharmacy label must be identical.
  - The volume of infusion fluid prescribed must correspond to the volume stated on the label.
  - For inpatients and outpatients, check the patient's hospital number and date of birth on the wristband corresponds to the prescription chart and to the label.

(If there are any discrepancies contact the chemotherapy pharmacist or the on call Pharmacist)

- Put on gloves and an apron before commencing the procedure
- Ensure correct infusion rate
- Observe the vein throughout the procedure for signs of infiltration and extravasation
- Flush the device with 0.9% sodium chloride (at least 50 mLs unless otherwise stated) between drugs and after administration
- Dispose of all used equipment according to local infection control and waste disposal policies
- Record details of the administration in the appropriate documents

NB: when operating a paperless workflow, chemotherapy schedule, treatment history and toxicity assessment should be checked and completed via ARIA oncology system and digital patient record and electronic documentation maintained.

The National Patient Safety Agency report August 2008 recommended that syringes should no longer be used to administer Vinca Alkaloids the prescribed dose should be supplied from the hospital pharmacy in a ready to administer 50ml Minibag of sodium chloride 0.9% and infused over 5 to 10 minutes and monitored throughout for signs of extravasation

6. ADMINISTRATION

6.1 Bolus

- Place all syringe(s) and any other equipment required on a clean trolley.
- Assess venous access.
- Ensure the correct administration rate to prevent speed shock and extra pressure and irritation within the vein.
- Always administer vesicant drugs through a side port of a fast running 0.9% sodium chloride infusion ensuring a fast free flow continues as the drug is administered.
- Monitor the patient's comfort throughout the procedure.
- Record details of the administration on the prescription chart and appropriate documentation.
- Dispose of all used equipment according to local infection control and waste disposal policies.

6.2 Intravenous infusions

- Place giving set(s) and any other required equipment on a trolley. If a special giving set or filter is required, use only those recommended by the manufactures.
- Prime the infusion line with 0.9 % sodium chloride or 5% glucose, dependent on drug compatibility.
- When putting up or changing an infusion bag containing cytotoxic drugs, ensure bag is not attached to drip stand and is at waist height.
- Ensure the correct administration rate to prevent speed shock and extra pressure irritating the vein.
- Monitor the condition and comfort of the patient throughout the procedure and compare these with the expected effects and ask the patient to report any sensations experienced.
- For inpatients, inform ward nurse caring for the patient that a chemobiological drug has been given or is being infused.
- Record details of the administration on the prescription chart and appropriate documents.
- Dispose of all used equipment according to local infection control and waste disposal policies.

6.3 Oral

All oral systemic anticancer treatments whether for in or out patients will be labelled by pharmacy and must include the name and strength of the preparation, full directions on how and when to take them and an indication as to the length of the treatment course. There must be Local Guidelines in place to safeguard the prescribing and dispensing of oral chemotherapy.

Strict adherence to a "no-touch" technique must be used when handling oral preparations of chemobiological drugs.
Under no circumstances should tablets be crushed or halved or the contents of the capsule opened.

6.4 AMBULATORY CHEMOTHERAPY

Connecting the Infuser

- The infuser pump and all the required equipment must be placed upon a trolley.
- Ensure the infuser pump is at room temperature and is intact and not damaged in any way.
- Using an aseptic technique check the central venous access device for patency and flush with
  10mls 0.9% sodium chloride.
- Remove the winged luer lock cap from the end of the infuser tubing.
- Check to make sure that liquid (tear drop) has moved to the end of the tubing.

- Connect the infuser tubing to the central line with a quarter clockwise turn.
- Place the infuser in its carrying bag and pin it to clothing or put it in a pocket where it will not fall out or get damaged.
- Record details of the administration on the prescription chart and appropriate documentation.

Disconnecting the Infuser.

- Disconnect the infuser pump at the end of the infusion using an aseptic technique.
- Cap off the infuser pump and dispose of the pump according to the infection control and waste disposal policy.
- Flush the central line as per local central venous access device policy and apply a new sterile closed, needle free IV access system (change as per manufacturer's instructions).
- Record details of the administration on the prescription chart and appropriate documentation

6.5 Subcutaneous (SC) and Intramuscular Injection (IM)

Only a few cytotoxic drugs can be administered via these routes due to a number of factors:

- The irritant nature of the drugs and/or tissue damage
- Incomplete absorption
- Bleeding as a result of thrombocytopenia
- Discomfort of regular injections

Sites should be rotated to prevent local irritation. It is recommended to prepare the skin with an alcohol-impregnated swab, leave for 30 seconds to allow skin to dry before injection.
When a subcutaneous or intramuscular injection has been given the puncture site must be covered with a waterproof dressing.

6.5a Subcutaneous Injections

It is recommended that subcutaneous administration should be carried out using.

- 26 gauge needle
- length should be 3/8th inch or 8mm
- a pinch technique
- an angle of 90 degrees to the skin
- aspiration is not required prior to injection

6.6 Intrapleural

The instillation of chemobiological drugs into the pleural cavity

- Explain and discuss the procedure with the patient
- Administer premedication to the patient if prescribed
- Prepare the equipment
- Assist the doctor with instillation of the chemobiological drug and provide support for the patient
- At the end of the procedure clamp the drainage tube and leave for the desired period
- Turn the patient in the following rotation:
  Left side
  Supine Right side Prone
- Carry out the rotations as instructed
- Observe regularly for patient's comfort. Administer analgesia as prescribed
- Record the patient's respirations and colour at least every 15 minutes for 1 hour, then every
  hour until stable, then 4 hourly, or as frequently as the patient's condition dictates. Record
  temperature at least 4 hourly.

- Unclamp the chest tube
- Maintain the underwater seal until a volume of less than 50ml is drained during 24
  hours for 2 consecutive days or for a maximum of 7 days, or in consultation with medical
  staff
- Record the colour and amount of fluid drained on the appropriate documents

6.7 Intrathecal

Intrathecal doses must be separated from other forms of cytotoxic administration. Refer to local policy on prescribing, dispensing, administration, checking and supply of intrathecal chemotherapy and national guidance on the safe administration of intrathecal chemotherapy by the Department of Health 2001.

6.8 Intravesicular

The instillation of chemobiological drugs directly into the bladder via a urinary catheter

- Explain and discuss the procedure with the patient.
- Request the patient to empty their bladder
- Catheterise the patient using an aseptic technique
- Instill the prescribed drug via the urethral catheter allow gravity to instill the chemobiological drug into bladder. Goggles must be worn since flash back can occur.
- Withdraw the catheter from the patient's bladder without disconnecting the syringe or if long terrn catheter then clamp the catheter.
- Turn the patient according to local procedure; allow chemobiological drugs to dwell for 1 hour.
- Record details of the administration on the prescription chart and appropriate documents.
- Dispose of all used equipment according to infection control and disposal of waste policies.
- At the end of the dwell period the patient should be asked to empty their bladder or release clamp and connect a new drainage bag

7. HEALTH & SAFETY

Prior to administering systemic anticancer therapy all clinical and environmental risks should be identified & minimised to ensure the safety of both patients and practitioners. This section highlights factors to consider in managing acute clinical complications and the environment when preparing and administering systemic anticancer therapy.

All areas, in which chemobiological drugs are administered, should contain the following equipment and guidelines that should be regularly checked, easily accessed & displayed within the treatment area:

- Emergency assistance alarm/bell.
- Resuscitation trolley & drugs.
- Anaphylaxis kit or equivalent.
- Extravasation kit
- Spillage Kits & eyewash.
- Cytotoxic disposal bags/bins.
- Eye protection should be available in all areas where chemotherapy is administered, and is recommended during administration when there is a risk of spraying, splashing or aerosols.

Protective clothing must always be worn during all types of chemobiological drug handling. There are minimum requirements for the type and degree of protective clothing which are based on possible exposure and type of environment.

7.1 Gloves

Disposable gloves must be worn at all times when handling chemobiological drugs. Wash hands thoroughly before and after using gloves. The key points to consider when selecting gloves are thickness and integrity, as the main factors which affect permeation rates include glove thickness, lipophilicity, the nature of the solvent in which the chemobiological drug is dissolved and glove material composition.

Non-latex and powder free gloves should be worn to reduce the risk of potential allergic reactions. Gloves should be changed every one to two hours, after each patient administration or immediately if contaminated with chemobiological agents or punctured. Double gloving is unnecessary and only required in the case of dealing with a spillage.

7.2 Gowns

Protective water resistant disposable aprons must be worn when administering chemobiological treatment. Disposable plastic aprons will provide limited immediate protection and prevent absorption into clothing when used where splashing or spraying is possible. The apron should be worn for a single procedure and then discarded and disposed of as clinical waste.

7.3 Pregnancy in Staff Handling systemic anticancer therapy

1.Identification of those at risk of occupational exposure to chemobiological drugs through:

- Preparation / reconstitution of chemobiological agents
- Administration of chemobiological drugs
- Handling cytotoxic waste
- Handling patient excreta / body fluids
- Receipt, storage and transportation of chemobiological drugs

2. COSHH (Control of substances Hazardous to Health) assessments should be carried out for each activity involving the handling of chemobiological drugs to assess the level of risk and the adequacy of control measures in place.

3. All staff should be fully informed of the reproductive hazards by:

- Receiving verbal and written information upon induction
- Having access to relevant literature
- Providing opportunity for discussion of any concerns

4. Staff Choice:

Pregnant staff or those trying to conceive should:

- Always be offered alternative duties if they choose not to work with chemobiological drugs at this time.
- Managers should have consideration for their staff's perception of the risk of exposure to chemobiological drugs.

5. Reducing the risk:

- As some pregnancies are unplanned, or staff are unwilling to discuss plans for conception, the emphasis should be on clear guidelines to reduce exposure to all staff at all times.
- Staff should be encouraged to discuss plans for pregnancy with their manager in confidence.
- Staff should be advised to inform their manager as soon as a pregnancy is suspected / confirmed.
- Staff who chose not to work with chemobiological drugs at this time must be offered alternative duties.
- To comply with HSE guidance all pregnant staff or those trying to conceive should be removed from duties involving the preparation of chemobiological drugs and a risk assessment completed (HSE 2003).

- Areas with a perceived high risk of occupational exposure, may wish to consider moving all pregnant staff or those trying to conceive from handling chemobiological drugs.
- A comprehensive documented method of staff education and assessment in safe handling of chemobiological drugs must be in place.
- Safe handling procedures must be audited and documented on a regular basis to ensure staff compliance.

7.4 Safe Handling of Chemobiological therapies in the Home Setting

Scope of use; oral, IV, IV bolus, SC, IM, ambulatory infusion including non-oncology/haematology patients (e.g. Methotrexate in Rheumatoid Arthritis).

Chemotherapy managed by patients, carers and healthcare professionals.

Increased trend towards home treatment with ambulatory chemotherapy and, more recently, oral systemic anticancer therapy.

These developments have introduced issues concerning safe handling in the home during treatment. Patients and/or carers must be given sufficient education, training and guidance to enable them to
handle systemic anticancer therapy safely in the home setting. Verbal and written information should be available.
Overall responsibility for the patient should normally be with the specialist team or prescribing specialist. Community healthcare staff should receive training and be able to demonstrate competency, to manage chemotherapy in the home setting. This competency should be documented.

A. Transport of systemic anticancer therapy to patient's home:
- Oral systemic anticancer therapy: collected by patient.
- Methotrexate: collected by patient

If carried by car, medicines should be transported securely in the boot. A cytotoxic spillage kit should be carried by all transport cars/vans. Where appropriate, the transport system must be fully validated to ensure maintenance of refrigerated conditions.
For the unfortunate occurrence of any accident involving the transportation vehicle, an information sheet (safety data sheet) should be carried and available for the emergency services, regarding the systemic anticancer therapy being carried.
B. Storage of systemic anticancer therapy in the home:
Safe, secure storage, out of the reach of children, is essential. If refrigerated storage is required, ideally, a separate refrigerator for chemobiological drug storage should be provided. If a separate fridge is not feasible, medication must be stored in a sealed plastic container in the bottom of the refrigerator. There must be no direct contact with food.

C. Administration:
- Oral Medication
- IV bolus, IM, SC
- Ambulatory chemotherapy

Patients requiring oral medication should undertake a competency assessment regarding the safe handling, administration and storage of their medication.
Healthcare professionals involved in administration should be trained specifically for this role. A record of this training should be kept.
For ambulatory chemotherapy: patients and all carers should receive training and information to enable them to:
- Check that the device continues to flow. Identify leakage from the device or line
- Know what to do if there is a problem with the line or device
- Know how to change the devices, medication reservoirs if appropriate

- Know how to correctly store the devices
- Discuss practical issues e.g. bathing, showering, how to wear the device, how to sleep with it.
- How to dispose of device, within local Trust policies and guidelines
- How to deal with cytotoxic spillage
- This information should include a 24-hour telephone number for specialist advice. Patients or their carers should be encouraged to use only this source of information

D. Disposal of cytotoxic waste:

Approved containers should be provided for cytotoxic waste. These should be stored in a secure area, sealed when full, and labelled to indicate "cytotoxic waste". Once filled, the approved containers should be collected for incineration by the local authority, Home-care Company or the hospital responsible for provision of systemic anticancer treatment.

8 MINIMISING RISK OF & MANAGEMENT OF ANAPHYLAXIS

The nurse administering treatment should be aware of prevention, recognition and treatment of anaphylaxis and will adhere to:

- Local guidelines

8.1 Minimising Risk of Anaphylaxis

- Staff should be familiar with current best practice guidelines for managing anaphylaxis.
- Nurses should maintain a high level of vigilance in relation to the manifestation of anaphylaxis.
- Nurses should be clear about their specific roles and responsibilities when encountering patients presenting with or experiencing anaphylaxis.
- Nurses should be aware of the chemobiological drugs or known danger zones for anaphylaxis.
- The key to successful management of severe anaphylaxis is appropriate staff education.

8.2 Managing Anaphylaxis

- Step 1: know drugs, susceptibility – recognize early warning signs.
- Step 2: give oxygen (10-15 litres/min), call for help.
- Step 3: follow algorithm in anaphylaxis guidelines, (when to give adrenaline).
- Step 4: continue treatment and support/monitoring post event.

9 MINIMISING RISK OF & MANAGING EXTRAVASATION

The nurse administering treatment should be aware of prevention, recognition and treatment of extravasation and will adhere to local guidelines

9.1 Minimising risk of Extravasation

Each patient will be assessed on an individual basis for venous access. The administering nurse should ensure the following when siting the peripheral cannula:

- Previous cannulation history
- Size
- Site
- Position
- Patency
- Integrity
- Visibility
- Security (dressings)

All venous access will be confirmed with 0.9% sodium chloride or appropriate compatible fluid and the appropriate giving set attached prior to administering any drugs. The line will be

checked for patency, confirmation of gravity drip and evidence of backflow prior to, during and after administration.

Drugs will be administered as per policy and prescription and assessed with regard to the following points:

- Potential of drug to irritate vein
- Integrity of the vein
- Type of device used
- Patient comfort and understanding

Vesicant drugs will be given first, once the line is established, as the integrity of the vein is greatest at this time. There should be frequent monitoring of site prior to, during and after administration. The administering nurse will be competent to identify extravasation and distinguish it from other reactions and take appropriate action for the following:

- Pain/burning/stinging at the site
- Leakage at the site
- Flare or blanching at the site
- Blistering at the site
- Anaphylaxis
- Allergic reaction
- Phlebitis/venous irritation

9.2 Managing Extravasation

If all the above points have been adhered to the risk of extravasation is minimised. However, extravasation may still occur due to other factors and then it is the prompt, efficient action that is taken immediately that will treat and reverse adverse effects.
The administering nurse will be competent in identifying and managing extravasation. Local guidelines will be available with extravasation kits within easy access in the treatment area.
Any episode of extravasation will be documented in nursing documentation, medical notes, green card and Trust Datix form.

10. MINIMISING RISK OF & MANAGEMENT OF SPILLAGE/CONTAMINATION

The risk of spillage will be minimised by having appropriate training for all staff involved in the administration and handling of systemic anticancer drugs. Persons transporting these drugs will be trained in the action to be taken in the event of spillage.

10.1 Minimising risk of Spillage

Measurements to prevent spillage and contamination will be utilised at all times, including access to protective working environment and equipment:

- Working space
- Wearing of plastic apron
- Wearing of appropriate non-powder gloves
- Availability and use of protective eye glasses/goggles
- Availability and use of protective arm covers

Appropriate administration techniques and guidelines will be adhered to including the use of:

- Luer lock syringes
- No needle policy
- IV fluid bags spiked at waist height
- Ensuring that all fluid is infused
- Well secured lines
- Advice to patients on appropriate precautions
- Disposal of all giving sets, syringes and IV bags in cytotoxic waste bins

10.2 Managing Spillage

Spillage kits containing at least the following items (see local policy) should be available in all areas where cytotoxics are handled:

- Instructions
- Industrial thickness gloves
- Overshoes
- Apron and armlets
- Filter face mask
- Absorbent pads/granules
- Scoop

All episodes of spillage will be documented and Datix forms completed both for environment, patient and staff contamination.

11 HANDLING & DISPOSAL OF WASTE

All staff will be aware of risks in handling waste and will adhere to local guidelines and protocols and will contain at least the following:

Cytotoxic waste bins must only be used for the disposal of cytotoxic waste

All waste contaminated with cytotoxic drugs must be disposed of in accordance with Local policies

12 RECOMMENDATIONS

- All staff involved in the administration of chemobiological drugs should have yearly competency based training updates.
- These guidelines will be used as a standard to internally audit practice on an annual basis.
- Guidelines will be reviewed 3 yearly to ensure they are evidenced based and advocating best practice.

13 PROCESS FOR MONITORING COMPLIANCE

Qualified staff new to the service will be expected to attend the 3 day Chemotherapy Competency Induction Workshop to be entered into the work based learning Chemotherapy Competency Programme (NEYHCA 2013). The monitoring of compliance with and clinical competency of staff regarding the management and administration of systemic anticancer therapy will be undertaken by the ward/department managers with support from the Chemotherapy Nurse Specialist Team. All nursing staff will complete required competency and will reviewed yearly, with specific regard to systemic anti-cancer therapy administration (Topic 4) and health and safety (Topic 5) Chemotherapy Competency Programme.

The guidelines will be monitored and reviewed as per the cancer standards and Peer review process with advice and support from the Trust Chemotherapy Committee Meeting (CCM) members.

Any administration incidents must be documented accordingly and reported via HEY Trust DATIX system regardless of whether there has been any clinical harm and reviewed by the CCM.

14 REFERENCES

- Royal College of Nursing (RCN) Clinical Practice guidelines: The Administration of Cytotoxic Chemotherapy (1998)
- The Royal Marsden Handbook of Cancer Chemotherapy (2005)
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- Control Of Substances Hazardous to Health (2002)
- NMC Standards for Medicines Management (2008)
- NMC The Code: standards for conduct, performance and ethics for nurses and midwives (2015)
- National Patient Safety Agency Using Vinca Alkaloid Minibags (2008)

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Chemotherapy Nurse Specialist Team Chemotherapy Committee Meeting Members Russell Patmore Dr R Roy Dr A. Dhadda Head of Clinical Chemotherapy Services Mandi Elliott Lead CNS of Clinical Chemotherapy Services Clinical Effectiveness Policies & Practice Development Committee
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Managers	Nursing Staff Only	Medical Staff Only

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