

Competencies for the Administration of Intravenous Cytotoxic and other Anti-cancer Drugs

Date Approved by Network Governance	May 2012
Date for Review	May 2015

Changes Between Versions 2 and 3

Paragraph 2.3 extended
Competence criteria revised and updated
References and hyperlinks updated

1. Scope of the competencies

These competencies have been developed to support the development of practitioners in the intravenous administration of anti cancer drugs to patients either with or without cancer. They also provide the evidence of learning and supervised practice in key areas relevant to this subject.

2. Background\statement of need

- 2.1 Many anti-cancer drugs have mutagenic, teratogenic and carcinogenic properties. It is essential that precautions are taken to ensure the safe administration of anti-cancer drugs to the patient and to protect the administrator from unnecessary exposure.
- 2.2 Anti-cancer drugs are administered across the Network to patients with malignant and non-malignant disease by competent practitioners.
- 2.3 The administration of anti-cancer drugs is an integral part of the care delivered to patients in a variety of clinical settings.
- 2.4 Ensuring that all practitioners are competent in the administration of anti-cancer drugs will help to provide a safe, timely, evidence based and patient focused approach to this treatment. They will also be ideally placed to monitor patients during treatment and assess any toxicities that may occur as a result of treatment.

3. Evidence for practice

See references for further information.

4. In all cases where anti cancer treatment is given

- 4.1 The following equipment must be readily available:
 - a) Extravasation kit (See Network Extravasation Guidelines)
 - b) Spillage kit (See Network Spillage Guidelines)
 - c) CPR equipment
 - d) Anaphylaxis kit (See Network Anaphylaxis Guidelines)
- 4.2 The practitioner must have attained a clinical qualification and be on a professional register (for example nurse, pharmacist, doctor).
- 4.3 All untoward incidents arising from the administration of anti-cancer drugs should be dealt with in accordance with the local Trusts Clinical Governance Framework.

5. Contraindications

- 5.1 The patient refuses treatment.
- 5.2 The patients' blood results and/or clinical condition contraindicate the administration of anti-cancer drugs.
- 5.3 The prescription is not correct.

6. Limitations to practice

- 6.1 Venous access is compromised.
- 6.2 Prior to the course of treatment commencing, the patient must be fully informed of the treatment and potential side effects, and sign a consent form.
- 6.3 Where the practitioner is pregnant or planning a pregnancy, they may refuse to administer anti-cancer drugs during the first trimester but this must be discussed with their line manager. (See Network "Guidelines for Cytotoxic Exposure in Pregnancy" for further guidance, see Pan Birmingham Cancer Network website <http://www.birminghamcancer.nhs.uk/staff/clinical-guidelines>)
- 6.4 When the practitioner has any concerns regarding the health of the patient including any side effects they are experiencing to the prescribed treatment.

7. Criteria for competence

- 7.1 Evidence of competence must be provided by the practitioner. A copy should be kept in the practitioner's personal file. Other copies should be made available to the trust according to local policies.
- 7.2 The practitioner must provide evidence of satisfactory supervised practice in the administration of anti-cancer drugs as witnessed by a competent practitioner experienced in the administration of anti-cancer drugs.
- 7.3 The number of supervised practices required before the relevant level of competence has been reached will be determined by the practitioner and their supervisor, taking into account the Practitioner's own learning needs.
- 7.4 In order to administer **infusional anti-cancer drugs via a peripheral cannula**, the registered practitioner must complete supervised practice, documented in appendix 2, and complete the competencies provided in Appendix 1.

- 7.5 In order to administer **infusional anti-cancer drugs via a central venous catheter**, the registered practitioner must be deemed competent to administer **infusional anti-cancer drugs via a peripheral cannula**. In addition they must complete further supervised practice, documented in appendix 3, complete local Trust Central Venous Catheter Competencies.
- 7.6 It is recognised that the **administration of vesicants** requires specific skills and knowledge beyond those required to administer other anti-cancer drugs. Practitioners must therefore undertake and provide evidence of additional training and supervised practice in relation to the administration of vesicants. The practitioner must be competent in the Performance of Peripheral Venous Cannulation and have completed local Trust competencies
- 7.7 The practitioner must demonstrate knowledge of:
- a) Royal College of Nursing (1998) Clinical Practice Guidelines The administration of cytotoxic chemotherapy (nurses only).
 - b) Network / Local Trust Policies for safe handling and management of cytotoxic spillage, anaphylaxis and extravasation
 - c) The NCAG report's (2009) recommendations for practice
- 7.8 The registered practitioner must have evidence of having attended an annual update in the safe administration and management of anti-cancer drugs.

References

1. Allwood M. Wright P. (2002) *The Cytotoxics Handbook*. 4th Edition, Radcliffe Press
2. Department of Health (2003) Updated National Guidance on the safe administration of intrathecal chemotherapy. Department of Health, London
3. Department of Health (2008) *Manual of Cancer Service Measures*, Department of Health, London
4. Department of Health (2009) *NCAG report: Ensuring quality and safety of chemotherapy services in England* Department of Health, London
5. Lilly (2009) *Cancer Chemotherapy* 6th Edition , Lilly
6. Nursing Midwifery Council (2008) *Code of Professional Conduct* Nursing Midwifery Council, London
7. Otto S. (1993) *Pocket Guide Oncology Nursing*, Mosby, London
8. Pan Birmingham Cancer Network [Guidelines for the Management of Spillage of Cytotoxic drugs](#)
9. Pan Birmingham Cancer Network [Guideline for the Management of Allergic Reactions to Anti-cancer Drugs in Adults](#)
10. Pan Birmingham Cancer Network [Guideline for the Management of Extravasation](#)
11. Dougherty, L and Lister, S. (2008) *The Royal Marsden Hospital Manual Of Clinical Nursing Procedures*. 7th Edition. Wiley Blackwell
12. RCN (1998) Clinical Practice Guidelines: *The administration of cytotoxic chemotherapy*. Royal College of Nursing, London

Authors of Versions 1 and 2

Rachel Hodges CNS Oncology
Heart of England NHS Foundation Trust

Samantha Toland Chemotherapy Nurse Trainer
University Hospitals Birmingham NHS Foundation Trust

Lara Barnish Project Lead
Pan Birmingham Cancer Network

Author of Version 3

Samantha Toland Chemotherapy Nurse Trainer
University Hospitals Birmingham NHS Foundation Trust

Approval Signatures

Pan Birmingham Cancer Network Clinical Governance Committee Chair

Name Karen Deeny

Signature 

Date: May 2012

Pan Birmingham Cancer Network Manager

Name Karen Metcalf

Signature 

Date: May 2012

Network Site Specific Group Clinical Chair

Name Frances Shaw

Signature 

Date: May 2012

CRITERIA FOR COMPETENCE – END COMPETENCEThe Administration of Intravenous Anti-cancer Drugs

Date of Course: _____

Name of Practitioner: _____

Name of Supervisor: _____

The practitioner must have attained competence in intravenous drug administration before commencing these competencies

Competencies to be achieved	Evidence of competence e.g. discussion with mentor or supervised practice	Date achieved	Practitioner sign	Supervisor sign
Discuss the cell cycle, and the effect that anti-cancer chemotherapeutic agents have on cell division				
Discuss the classifications of chemotherapy in relation to choice of chemotherapy drugs in regimens				
Discuss 5 commonly used regimens in your clinical practice to include: <ul style="list-style-type: none"> • Classifications of drugs • Route • Frequency • Number of cycles • Any mid treatment investigations e.g. CT • Side effect profile • Management of side effects • Patient information required • Disease and setting e.g. adjuvant 				
Regimen 1:				
Regimen 2:				
Regimen 3:				
Regimen 4:				
Regimen 5:				

Competencies to be achieved	Evidence of competence e.g. discussion with mentor or supervised practice	Date achieved	Practitioner sign	Supervisor sign
Discuss classification of chemotherapy drugs to include: <ul style="list-style-type: none"> • Vesicant • Irritant • Non vesicant 				
Discuss why vesicant drugs given as an infusion via a peripheral cannula should be avoided where possible				
Discuss the classification of vesicant drugs that can be administered via an infusion (but not using a pump) including: <ul style="list-style-type: none"> • Name of drugs • Rationale • Nurses role • Specific risks 				
Discuss the importance of taking an accurate history from the patient to include: <ul style="list-style-type: none"> • Baseline symptom assessment using the Common Toxicity Criteria for Adverse Events (CTCAE 2003) • Pre cycle assessment of symptoms • When dose reductions may be required • When supportive therapies may be required 				
Discuss the pre treatment investigations and results required prior to administering anti-cancer chemotherapy to include: <ul style="list-style-type: none"> • Full Blood Count • Biochemistry • Glomerular Filtration Rate • Liver function tests 				
Discuss how you can ensure the patient has given their informed consent, and who can obtain this				

Competencies to be achieved	Evidence of competence e.g. discussion with mentor or supervised practice	Date achieved	Practitioner sign	Supervisor sign
Demonstrates correct checking procedure of anti-cancer chemotherapy prescription to include: <ul style="list-style-type: none"> • Height • Weight • Body Surface Area • Bloods/GFR • Name/PID • Date • Doses and/or dose modifications 				
Discuss the information needs of patients including: <ul style="list-style-type: none"> • Chemotherapy related Information given prior to commencing anti-cancer chemotherapy • Contact information for routine/urgent enquiries (inc 24hr contact) • Other relevant information e.g. Hair loss, CVAD information, cold cap etc • The need to reinforce information during treatment • Education for patient's self care at home • The importance of providing written information to back up verbal information 				

Competencies to be achieved	Evidence of competence e.g. discussion with mentor or supervised practice	Date achieved	Practitioner sign	Supervisor sign
<p>Discuss the management of side effects dependant on CTCAE grade of anti-cancer chemotherapy to include:</p> <ul style="list-style-type: none"> • Neutropenic sepsis • Thrombocytopenia • Anaemia • Nausea and Vomiting • Mucositis • Constipation • Diarrhoea • Loss of taste • Alopecia • Skin • Fatigue • Appetite • Peripheral neuropathy • Palmer Planter Syndrome • Renal Impairment • Cardiac toxicity 				
<p>Discuss the following:</p> <ul style="list-style-type: none"> • Transportation of anti-cancer chemotherapy between departments • Storage of anti-cancer chemotherapy in ward area • Safe handling of anti-cancer chemotherapy • Disposal of waste including equipment used during the administration • Disposal of body fluid waste 				
<p>Demonstrate knowledge of the following including accurate documentation:</p> <ul style="list-style-type: none"> • Action to take in the event of infiltration and identify drugs involved • Action to take in the event of extravasation and identify drugs involved • Action to take in the event of skin or mucous membrane contamination with anti-cancer chemotherapy 				

Competencies to be achieved	Evidence of competence e.g. discussion with mentor or supervised practice	Date achieved	Practitioner sign	Supervisor sign
<ul style="list-style-type: none"> Action to be taken in the event of spillage of anti-cancer chemotherapy Action to be taken in the event of anaphylactic reaction 				
Discuss the rationale behind cannula choice and siting of device for patient receiving: <ul style="list-style-type: none"> Vesicant Chemotherapy Irritants Non vesicant 				
Discuss the choice of cannula and the importance of maintaining cannula patency in patients receiving anti-cancer chemotherapy				
In relation to cannulation, Discuss the importance of checking if the patient has had a blood test that day				
Discuss 2 different ways in which you can assess the patency of the vein				
Discuss any relevant Network or local Trust Policies that may affect your practice				
Discuss any National Initiatives that you think affect your practice				
Demonstrate the appropriate use of cannula for the patient and the chemotherapy drugs to be administered				
Demonstrate the appropriate siting of a cannula for chemotherapy				
Demonstrate 2 different safety checks to ensure cannula patency				
Demonstrate the ability to give non-vesicant bolus chemotherapy through a fast flowing drip				
Demonstrate the ability to give vesicant bolus chemotherapy through a fast flowing drip				

Competencies to be achieved	Evidence of competence e.g. discussion with mentor or supervised practice	Date achieved	Practitioner sign	Supervisor sign
Demonstrate the ability to establish infusional line and safely administer anti-cancer chemotherapy to patient				
Demonstrate correct calibration of infusional pumps being used				
Demonstrates accurate record keeping				
Be observed talking to a new patient about chemotherapy and its side effects, assessing the patients baseline symptoms and providing the correct verbal and written information				
Be observed reviewing a patient for a subsequent cycle of treatment				

Non Vesicant

I declare that I have expanded my knowledge and skills and undertake to practice with accountability for my decisions and actions. I have read and understood the protocol for performance of the Administration of Intravenous Anti-cancer Drugs

Signature of Practitioner : _____

Date : _____

I declare that I have supervised this Practitioner and found her/him to be competent as judged by the above criteria in the administration of **non-vesicant** chemotherapy.

Signature of Supervisor : _____

Date : _____

Vesicant

I declare that I have expanded my knowledge and skills and undertake to practice with accountability for my decisions and actions. I have read and understood the protocol for performance of the Administration of Intravenous Anti-cancer Drugs

Signature of Practitioner : _____

Date : _____

I declare that I have supervised this Practitioner and found her/him to be competent as judged by the above criteria in the administration of **vesicant** chemotherapy.

Signature of Supervisor : _____

Date : _____

A copy of this record should be placed in the practitioner's personal file, other copies should be made available to the trust according to local policies.

EVIDENCE OF SUPERVISED PRACTICE

Administration of Anti-cancer Chemotherapy via a Peripheral Cannula

EVIDENCE OF SUPERVISED PRACTICE

To become a competent practitioner, it is the responsibility of each practitioner to undertake supervised practice in order to administer Anti-cancer Chemotherapy Drugs. .

Name of Practitioner : _____

Name of Supervisor _____

Date	Patient	Location	Details of Procedure	Observed by Name\Band	Signature of Practitioner

CRITERIA FOR COMPETENCE – END COMPETENCEAdministration of Anti-cancer Chemotherapy Via a Central Venous Catheter

Date of Course: _____

Name of Practitioner: _____

Name of Supervisor: _____

The Practitioner must have attained competence in I/V administration, attained competence in Peripheral Venous Cannulation and been assessed as competent to administer Anti-cancer Chemotherapy via Peripheral Cannula (all covered in the CVAD training)

Competencies to be achieved	Evidence of competence e.g. discussion with mentor and supervised practice	Date Achieved	Practitioner Sign	Supervisor Sign
Discuss the rationale behind the need for a CVC in relation to venous access of patients requiring Anti-cancer Chemotherapy drugs				
Discuss the implications of infusional vesicant drugs via a CVC				
Demonstrate proficiency in administering Anti-cancer drug via CVC and caring for patients receiving anti-cancer chemotherapy.				
Demonstrate knowledge of the following including documentation: <ul style="list-style-type: none"> Action to take in event of infiltration and identify drugs involved Action to take in the event of extravasation and identify drugs involved 				
Discuss the rationale behind the use of 'walkmed' or ' baxter ' type infusor pumps				
Demonstrate correct connection and disconnection of 'walkmed' ' baxter ' or 'alarus type infusor pump to CVC				

Competencies to be achieved	Evidence of competence e.g. discussion with mentor or supervised practice	Date achieved	Practitioner sign	Supervisor sign
Discuss implications of patient being discharged home with chemotherapy in progress via 'walkmed' or 'baxter' pump, and what information and equipment they should be provided with				

I declare that I have expanded my knowledge and skills and undertake to practice with accountability for my decisions and actions. I have read and understood the protocol for Administration of Anti-cancer Chemotherapy Via a Central Venous Catheter.

Signature of Practitioner : _____

Date : _____

I declare that I have supervised this Practitioner and found her/him to be competent as judged by the above criteria.

Signature of Supervisor : _____

Date : _____

A copy of this record should be placed in the practitioner's personal file, other copies should be made available to the trust according to local policies.