

CYTOTOXIC THERAPY

1. General Information

RHB does not endorse the administration of intravenous cytotoxic therapy in remote health centres but does endorse the use of oral and adjuvant therapies. Health centre staff may issue and/or administer:

- oral cytotoxics for oncology clients or clients with autoimmune conditions
- targeted therapy such as oral Sunitinib (Sutent)
- intravenous non-cytotoxic therapy such as Trastuzumab (Herceptin), if the first dose has been administered under supervision in hospital.

Oral cytotoxic agents must be handled as described in [Safe Handling of Cytotoxics](#). No special precautions are required for non cytotoxic targeted or adjuvant therapies.

Most remote health clients in need of chemotherapy will be treated at ASH or RDH. In some cases this treatment is provided at Darwin Private Hospital or interstate. Radiotherapy is currently only available interstate.

This item provides information on the following:

- [Safe Handling of Cytotoxics](#)
- [Pharmacy Instructions & Labelling](#)
- [Discharge Information & Resources for Clients on Cytotoxic Therapy](#)
- [Managing Side Effects of Cytotoxic Therapy](#)

2. Definitions

Cytotoxic therapy: a treatment with any agent or process that kills cells. Chemotherapy and radiotherapy are forms of cytotoxic therapy which are used specifically to kill cancer cells. Normal cells, especially fast growing cells, can also be affected.

Chemotherapy: treatment with cytotoxic drugs or a standardized treatment regimen consisting of a combination of these drugs.

Radiotherapy: the medical use of ionizing radiation as part of cancer treatment to control malignant cells.

Targeted therapy: a type of treatment that uses drugs or other substances, such as monoclonal antibodies, to identify and attack specific cancer cells. Targeted therapy may have fewer side effects than other types of cancer treatments¹.

Adjuvant / adjunctive therapy: an addition to the primary treatment that is designed to help reach the ultimate goal; it includes pharmacological or immunological agents that either modify or enhance the effectiveness of other drugs or treatments or modify their side effects. They may have no effect on the primary condition for which the client is being treated.

3. Responsibilities

3.1 Health Centre Clinical Staff

- Provide care and support to clients who return to the community while they are undergoing cytotoxic therapy
- Administer intravenous adjuvant therapy (not chemotherapy) if required
- Ensure all oral cytotoxic agents are handled in accordance with [Section 4.1](#).
- Ensure clients on cytotoxic therapy are closely monitored for adverse effects and toxicity

¹ <http://www.cancer.gov/dictionary/>

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- Adequately counsel clients on course of therapy, precautions, expected outcomes, adverse effects and signs of toxicity
- Ensure any residual Cytotoxics are disposed of as described in Section 4.1.3, [Disposal of Unused Medicine](#)
- Consult with the RMP / oncology team as appropriate

3.2 Remote Medical Practitioner

- Undertake ongoing medical care of clients who return to the community while they are undergoing cytotoxic therapy
- Consult with oncology team as required

3.3 Hospital Oncology Teams

- Ensure that remote health centre clinical staff are provided with discharge summaries / other relevant information for oncology clients returning to the community
- Respond to requests for advice or information related to discharged oncology clients

3.4 Pharmacy

- Ensure cytotoxic medicines are packaged and labelled with a prominent warning in addition to standard labelling requirements
- Involve health centre clinical staff in the decision around the safest and most effective method of supplying the medicine
- Ensure health centre staff are briefed on safe handling techniques and precautions and monitoring for individual agents
- Ensure appropriate client information is provided with supply to ensure safe and effective use
- Respond to requests for further information from RHB staff and clients

4. Procedure

4.1 Safe Handling of Cytotoxics

There is minimal risk of harm from handling cytotoxic medicines or coming into contact with body wastes of a client on cytotoxic therapy.

4.1.1 Special Precautions - Health Centre Staff

Staff who are pregnant or breastfeeding, or planning pregnancy should be excluded from handling cytotoxic drugs.

If health centre staff are involved in the administration of these drugs, the following safe handling techniques are required²:

- wear gloves when handling medicines or preparing dosettes
- if not using a dosette, only issue medicines to clients in a sealed, hard walled plastic container with a childproof cap
- use separate spatulas and counting trays, if required. These must not be used for any other medicines.
- do not cut or crush tablets or capsules – if the client is unable to swallow the tablets speak to the Medical Officer about sourcing an alternate formulation
- where appropriate, only supply the required number of tablets/capsules for the client to complete that cycle of treatment
- wash hands with soap and water immediately after handling
- do not eat, drink or smoke after handling medicines until hand washing is complete
- ensure that all packaging contains a cytotoxic label so that staff will be alerted before future handling
- follow [labelling guidelines](#).

² SHPA Standards of Practice for the Provision of Oral chemotherapy for the Treatment of Cancer, J Pharm Pract Res 2007; 37(2): 149-52, May 2007

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4.1.2 Instructions on Special Precautions - Clients and Carers

Clients should be made aware that:

- only they should handle the medicines; others handling the medicines should use gloves as there is a very slight risk of absorption through the skin
- they should not urinate anywhere but in a toilet
- they should flush the toilet twice after use
- men should use a condom when having intercourse as some small traces of chemotherapy agents may be found in semen
- all unused medicines must be returned to the health centre for appropriate disposal.

Carers / families should be made aware of all of the above and should be cautioned about:

- contact with client waste including excreta (urine, faeces, seat, saliva, vomit)
- contact with laundry, as it may be hazardous for at least 72 hours after completion of treatment³.

4.1.3 Disposal of unused medicine

Medicines must be packed directly into a colour coded, secure, labelled, leak proof, robust container for incineration. Where these are not available, a sharps disposal container may be appropriate⁴, but must have a cytotoxics warning label attached. Pharmacy will provide spare warning labels at the time of dispensing the medicine. The appropriately labelled container can be placed in the lockable yellow biohazard bin for transport to regional centres.

See Section 4.6 of [Waste Management](#) and Section 4.3 of [Return of Unwanted Medicines](#) for further information.

4.2 Pharmacy Instructions and Labelling

4.2.1 Instructions for Staff and Clients

Instructions for RHB staff on the handling and administration of cytotoxics and necessary counselling points for clients, including information on the most common adverse effects and potential signs of toxicity, will be included with the first supply of medicine. While subsequent supplies will be subject to the same general labelling requirements, the additional instructions will only be supplied on request.

4.2.2 Labelling Requirements

The following requirements are in addition to the standard labelling requirements specified in [Best Practice Guidelines on Medicine Labelling](#).

Cytotoxics dispensed from pharmacy will adhere to the following labelling guidelines⁵:

- clear dosing instructions (avoid use of 'as directed' as an entire instruction)
- if total dose is to be made up of two different strengths, the label must include the number of tablets of each dose as well as the total dose
- intended period of treatment (ie number of days)
- start and stop dates for short term and intermittent therapy
- doses of cytotoxics that are intended to be taken weekly must specify 'once a week' and the day the dose is due
- all containers must be labelled (not taped together with one label attached)
- cautionary and advisory labels (including those detailing specific storage requirements) must be added
- there will be a cytotoxic warning sticker, eg 'cytotoxic, handle with care', on each container (including Dose Administration Aids).

³ Allwood M et al, The Cytotoxics Handbook, 4th edition, 2002

⁴ Material Safety Data Sheet – Hydrea, Chemwatch 4635-19, 03/05/2005

⁵ SHPA Standards of Practice for the Provision of Oral chemotherapy for the Treatment of Cancer, J Pharm Pract Res 2007; 37(2): 149-52, May 2007

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If a Dose Administration Aid (DAA) is required:

- the medicine will be in a separate DAA – if other medicines are required they will be in another DAA.

If supplied without a DAA:

- the container will be supplied in separate packaging
- the original container will contain the dispense label, including dosing information for the client.

4.3 Discharge Information and Resources for Clients on Cytotoxic Therapy

4.3.1 Discharge Information for Oncology Clients – Central Australia

At the time of discharge from hospital the ASH Cancer Support Nurse will contact the health centre directly and discuss the ongoing care of the client, including management of side effects. The Cancer Support Nurse will also ensure that health centre clinical staff have details of appointments for future hospital treatment or investigation.

4.3.2 Discharge Information for Oncology Clients – Top End

On discharge from hospital, RDH clients are given a folder with written information. Clients are encouraged to make this information available to health centre staff. The folder includes:

- [eviQ Cancer Treatments online](#) information sheets on the protocols related to their specific therapy
- information on potential side effects and how to manage these
- contact details for the regional hospital based Cancer Support Nurse and the Cancer Council
- the Centre for Disease Control [Melioidosis Fact Sheet](#).

4.3.3 Discharge Information for Oncology Clients – Interstate

Oncology clients are sometimes discharged directly from interstate facilities to the community without reference to the regional oncology team. If staff receive discharge information from an interstate institution it is advisable to contact the regional Cancer Support Nurse / oncology team and, if required, to forward the information to them.

If no information is received, health centre staff should contact the interstate facility directly to obtain appropriate discharge information as soon as they become aware of the discharge. Regional Cancer Support Nurses may be able to assist with these enquiries and will provide additional information and advice as required.

4.3.4 Discharge Information for Non Oncology Clients

There are no special discharge arrangements for clients who have been prescribed a cytotoxic agent for the treatment of an autoimmune condition. The discharge arrangement for supply of medicines will be the same as with conventional medicines. Medicines will be marked as cytotoxic by the regional hospital pharmacy as described in [Pharmacy Instructions & Labelling](#).

4.4 Managing Side Effects of Cytotoxic Therapy

4.4.1 Side Effects

Cytotoxic agents have unavoidable toxicities and health centre staff should be aware of how these present in order to educate clients about potential warning signs and when to seek further assistance. Staff should have access to information as described in [Instructions for Staff & Clients](#) Staff are advised to seek further information from the supervising Medical Officer, hospital oncology staff or pharmacy if required or to consult the [Australian Medicines Handbook](#)

4.4.2 Febrile Neutropenia – Urgent Attention Required

If any client who has received chemotherapy in the previous two weeks presents with a temperature of >38°C they must receive immediate attention as it may be a symptom of febrile

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neutropenia. This is most likely to occur 5 to 10 days after chemotherapy and is a serious condition. [Contact](#) the regional oncology team for advice. If necessary refer to the febrile neutropenia protocol on eviQ.

4.5 Further Information

Staff requiring further information on managing clients who have received cytotoxic therapy or information on cancer treatments are encouraged to register with [eviQ Cancer Treatments online](#). Registration is simple and quick. This is the site of choice for both ASH and RDH. Further resources are listed in [Section 6](#).

4.6 Contact Details

Services	Telephone BH	Fax
Alice Springs Hospital Pharmacy	08 8951 7570	08 8951 7766
Royal Darwin Hospital Pharmacy	08 8922 8499	08 8922 8307
ASH Cancer Support Nurse	08 8951 7777 (Switch)	08 8951 7503
RDH Cancer Support Nurse / Oncology / Haematology staff	08 8922 8888 (Switch)	08 8922 8889
Cancer Council NT	08 8927 4888	08 89274990
Poisons Information Hotline	131 126	
Therapeutic Advice & Information Service (TAIS) Line	1300 138 677	
The Cancer Council Helpline	13 11 20 (9 am to 5 pm Monday to Friday)	
Leukaemia Foundation Support and Counselling line	1800 620 420 (9 am to 5 pm Monday to Friday)	

5. Forms

Nil

6. References and Supporting Documents

Related Atlas Items:

[Additional Precautions](#)

[Standard Precautions](#)

[Return of Unwanted Medicines](#)

[Waste Management](#)

[Cancer Council Australia](#)

[eviQ Cancer Treatments online](#)

[Cancer Institute NSW](#)

[NT Radiation Oncology](#)

[Complex Authority Required - Highly Specialised Drugs](#)

[Quality Care Pharmacy Program Pharmacy Standards](#)

[General Requirements for Labels for Medicines](#)

[Best Practice Guidelines on Medicine Labelling](#)

[Melioidosis Fact Sheet](#)

Via [e-Library](#):

[MIMS](#)

[Australian Medicines Handbook](#)

[Australian Standards Online Premium](#): HB 202 – 2000: A Management System for Clinical and Related Wastes – Guide to Application of AS/NZ 3816 – 1998, Management of Clinical and Related Wastes

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