

<b>Title: Employee Health: Management of Risks Related to Cytotoxic Agents</b>	<b>Number: V-20</b>
<b>Effective Date:</b> March 26, 1998	<b>Approved By:</b> Provincial Systemic Program Committee

**RATIONALE:**

Many cytotoxic agents are known to have adverse health effects as documented in patients who have received these substances in therapeutic doses. Cytotoxic agents are toxic at the cellular level, either binding directly to genetic material or affecting cellular protein synthesis. It is reasonable to suspect that health care workers or others who repeatedly handle or are exposed to cytotoxic agents may be at risk. The risk of handling these substances is directly related to the toxicity of the individual cytotoxic agents and the degree to which staff are exposed.

**POLICY:**

Although there are no specific screening techniques which indicate levels of exposure or to predict adverse health effects of exposure to cytotoxic agents, it is paramount to take measures to protect the employee's health status. Prevention of exposure is of primary importance and all employees are required to handle cytotoxic agents in a safe manner. The following measures are in place to monitor employee health for employees with a significant risk of exposure to cytotoxic agents (ie, employees involved in preparation, administration, housekeeping, waste disposal or transport of cytotoxic agents):

1. Employees will receive an orientation to current BCCA policies and procedures related to safe handling practices of cytotoxic agents.
2. Employees will have access to employee health/occupational health and safety services for the purpose of a general health interview/risk assessment. It is recommended that newly hired employees who are at risk of exposure undergo an assessment with employee health services within 4-6 weeks after hire to review any questions/concerns related to risk of cytotoxic exposure.
3. On an annual basis, employees are encouraged to arrange a routine medical examination with his/her family physician.
4. For health surveillance purposes, records of preparation and related handling activities must be maintained, as determined necessary by the Employee Health Unit and Workers' Compensation Board regulations.

**A. PERSONAL HYGIENE**

- Eating, drinking, smoking, application of cosmetics and the storage of food must be prohibited in any area where cytotoxic agents are mixed, administered, or stored.

**B. PREGNANCY**

- Employees must be fully informed of the potential reproductive hazard.

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- It is the responsibility of the employee handling cytotoxic agents to discuss with their immediate supervisor any desired change in work assignment as a result of their pregnancy, breast-feeding or attempt to reproduce.

**C. ACCIDENTAL EXPOSURE/CONTACT PROCEDURE**

- The employee will take the following measures immediately following accidental contact with cytotoxic agents/wastes.

**Eye Contact**

- i) Flush the affected eye(s) with copious amounts of clean water or normal saline for a minimum of 15 minutes.

**Skin Contact**

- i) Remove any contaminated clothing immediately.
- ii) Wash the affected area with soap and water for a minimum of 15 minutes.

**Skin Punctures**

- i) Wash the puncture site thoroughly with soap and running water for 15 minutes.
- ii) Allow wound to bleed freely.
- iii) Refer to extravasation policy (BCCA # III-20)

- The employee must report any accidental contact or skin puncture with cytotoxic agent/waste to their immediate supervisor.
- Contact the Employee Health Unit, Occupational Health Nurse or Industrial First Aid Attendant as soon as possible.

**OR**

Go to a hospital Emergency Department for assessment.

- Complete necessary documentation including employee incident report form appropriate to the Cancer Centre.

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## GLOSSARY

### **cytotoxic agent**

- a substance that is potentially genotoxic, oncogenic, mutagenic, teratogenic or in any way hazardous to cells; used commonly in referring to antineoplastic drugs that selectively damage or destroy dividing cells.

### **cytotoxic spill, contained**

- cytotoxic agent in an unintended location but which is confined in such a manner that it cannot spread or be dispersed (example: liquid cytotoxic agent absorbed into bed linen).

### **cytotoxic spill, uncontained**

- cytotoxic agent in an unintended location, not confined in a container or absorbent material and which exists in a manner which can be spread or dispersed (examples: liquid cytotoxic agent on a non-absorbent surface; solid or powdered cytotoxic agent on any open surface).

### **cytotoxic waste, disposable**

- cytotoxic agent, or equipment or material contaminated with a cytotoxic agent, which is intended for single use only (examples: excess or unused drug solutions, cytotoxic agent which is no longer required, intravenous tubing that was used to administer a cytotoxic agent, absorbent towels used to clean up an uncontained cytotoxic spill).

### **cytotoxic waste, non-disposable**

- equipment or material contaminated with a cytotoxic agent but which can be successfully decontaminated for re-use (examples: bed linens used for patients being treated with cytotoxic agents, expensive devices used to prepare or administer drug solutions).

### **exposure/contact**

- direct contact with a cytotoxic agent or equipment or material contaminated with a cytotoxic agent, in any form via skin contact, inhalation, injection (e.g. needle stick) or ingestion.

### **genotoxic**

- possessing ability to damage DNA, thereby causing mutations or cancer.

### **mutagenic**

- possessing ability to induce or increase permanent genetic changes by causing changes in DNA.

### **oncogenic**

- possessing ability to cause benign or malignant tumours.

### **teratogenic**

- possessing ability to cause birth defects in a developing fetus.

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- Policy VA-140: "Recommended health surveillance for employees handling cytotoxic antineoplastic drugs/wastes."
- Policy VA-150: "Accidental contact with cytotoxic antineoplastic drugs/wastes."
- Policy VA-160: "Recommended handling of cytotoxic antineoplastic drugs/wastes by employees who are pregnant, breast feeding or attempting to reproduce."
- Policy VA-170: "Safe handling of cytotoxic antineoplastic drugs/wastes."
- Policy VA-180: "Spill management of cytotoxic antineoplastic drugs/wastes."

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