



# Systemic Therapy Update

Volume 10, Number 12 *for health professionals who care for cancer patients* December 2007  
Website access at <http://www.bccancer.bc.ca/HPI/ChemotherapyProtocols/stupdate.htm>

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## EDITOR'S CHOICE

### **CHANGE IN POLICY: VINCRISTINE PREPARED IN MINIBAG AND ADMINISTERED BY INFUSION**

**Effective December 1, 2007, Vincristine for Intravenous (IV) Administration** will only be prepared in 50 mL minibags and given over 5-15 minutes by peripheral IV infusion or central venous catheter (CVC) device. This is one strategy recommended by the WHO (July 2007) to minimize the risk of inadvertent fatal intrathecal (IT) administration of vincristine.<sup>1</sup> Similar recommendations were previously made by the Institute for Safe Medication Practices (ISMP)<sup>2</sup> and the Commission on Accreditation of Healthcare Organizations (JCAHO)<sup>3</sup> in the US. This practice change affects all vincristine-based chemotherapy protocols and pre-printed orders, as well as relevant BC Cancer Agency (BCCA) policies (see **Cancer Drug Manual, Revised Protocols and PPPOs, Provincial Systemic Therapy Policies** in this issue).

#### Risks Involving Vincristine Prepared in Syringes

The previous BCCA policy was to dilute vincristine to 20 mL of solution and dispense it in a 30-mL syringe. The larger solution and syringe volume was meant to deter accidental IT administration, since most IT chemotherapy is prepared in smaller volumes (e.g., 5-10 mL). However, this measure may be insufficient as the recent WHO alert reported the death of a patient after receiving inadvertent intrathecal vincristine prepared in a 20-mL syringe.<sup>1</sup> This follows two previous fatal cases involving 10-mL or larger syringes.<sup>4</sup>

#### Risk of Extravasation

Vincristine is a vesicant and therefore extravasation may result in tissue damage. Vesicant drugs are usually prepared in a syringe for direct IV push (side arm) administration to minimize the risk of extravasation. However, recent data suggest that the incidence of vincristine extravasation and related injuries is low, whether it is dispensed in syringe (0.03%) or minibag (0.041%).<sup>5</sup> This is probably due to better recognition of the risk factors for extravasation, training of oncology nurses, and other preventive measures.

### Practice implications: Administration of Vincristine by Short Term Infusion

Vincristine should be administered as a secondary medication through the upper port of a free-flowing primary IV. The chemotherapy certified nurse should remain present with the patient during the infusion, assessing the integrity of the vein as per sidearm administration, and checking blood return every 2 minutes. The infusion must run to gravity and **not** run via an infusion pump.

While vincristine may be infused over 5-15 minutes, the BCCA recommendation is to infuse it over 10 minutes for adult patients. This closely replicates the existing process for giving vesicants via the side arm, providing opportunities for regular checking of the site while allowing for efficient administration of the drug. The Nursing Practice Reference C-252 ([www.bccancer.bc.ca/HPI/Nursing/References/NursingBCCA/C-252](http://www.bccancer.bc.ca/HPI/Nursing/References/NursingBCCA/C-252)) has been updated to reflect this change.

### **References**

1. World Health Organization. Information Exchange System: Alert No. 115 (QSM/MC/IEA.115). Geneva, Switzerland: World Health Organization; 18 July 2007.
2. Institute for Safe Medication Practices. Fatal reports of intrathecal vincristine continue. ISMP Medication Safety Alert 2003;8(7):4.
3. Joint Commission on Accreditation of Healthcare Organizations. Preventing vincristine administration errors. Sentinel Event Alert 2005;14(34):1-3.
4. Alcaraz A, Rey C, Concha A, et al. Intrathecal vincristine: fatal myeloencephalopathy despite cerebrospinal fluid perfusion. J Toxicol Clin Toxicol 2002;40(5):557-61.
5. Gilbar PJ, Carrington CV. The incidence of extravasation of vinca alkaloids supplied in syringes or mini-bags. J Oncol Pharm Pract 2006;12(2):113-8.

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## **CANCER DRUG MANUAL**

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**Changes to Cancer Drug Manual Staff** Tanya Leduc has assumed the responsibility of Acting Editor of the Cancer Drug Manual following the departure of Sarah Jennings from the BC Cancer Agency.

Tanya is a pharmacist at the Vancouver Island Centre and has been a writer for the manual since April 2006. Her new portfolio involves the management of the manual's daily operations, and she is the first point of contact for issues related to the manual. Mário de Lemos, previously the editor, is now the manual's Project Manager and is acting in an advisory capacity. James Conklin, clinical pharmacist from the Vancouver Centre and a writer for the manual, completes the current Cancer Drug Manual staff team. Tanya can be reached via email at [tleduc@bccancer.bc.ca](mailto:tleduc@bccancer.bc.ca) or by phone at 250-519-5500 extension 3742.

**Dasatinib Monograph and Patient Handout:** peer-reviewed versions are now posted. Expert review was provided by Dr. Donna Forrest (Leukemia/BMT Tumour Group). See November 2007 issue of the Systemic Therapy Update for further details.

**Vincristine Monograph** has been revised in the Parenteral Administration section (see Editor's Choice in this issue).

**Chemotherapy Preparation and Stability Chart** has been revised with the following:

- oxaliplatin (Sanofi-Aventis): expiry of the diluted product has been extended to 48 hours at room temperature and 14 days when refrigerated
- dacarbazine: the caution to protect the diluted product from light has been reinstated based on further data
- vincristine: preparation has been revised (see Editor's Choice in this issue)

## PROVINCIAL SYSTEMIC THERAPY PROGRAM POLICIES

**Vincristine-Related Policies** have all been revised to reflect changes in its preparation and administration (see Editor's Choice in this issue). This includes:

- Prevention and Management of Extravasation of Chemotherapy (Policy III-20): vincristine added to the list of vesicants to be mixed in minibag
- Administration of Cytotoxic Drugs by the Intrathecal Route (Policy III-50): title of Policy V-40 revised (see below) in cross-reference
- Labelling of Vinca Alkaloid Preparations (Policy V-40): title of policy and preparation of vincristine revised
- Administration of Chemotherapeutic Agents (Nursing Practice Reference C-252)

## LIST OF NEW AND REVISED PROTOCOLS, PRE-PRINTED ORDERS AND PATIENT HANDOUTS

**BC Cancer Agency Protocol Summaries, Provincial Pre-Printed Orders (PPPOs) and Patient Handouts** are revised periodically. New and revised protocols, PPPOs and patient handouts for this month are listed below. Protocol codes for treatments requiring "Compassionate Access Program" approval are prefixed with the letter U.

### NEW PROTOCOLS, PPPOs AND PATIENT HANDOUTS (AFFECTED DOCUMENTS ARE CHECKED):

CODE	Protocol	PPPO	Patient Handout	Protocol Title
BRAVA3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Palliative Therapy for Metastatic Breast Cancer using Weekly Doxorubicin
GIGECF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Perioperative Treatment of Resectable Adenocarcinoma of the Stomach, Gastroesophageal Junction or Lower 1/3 Esophagus using Epirubicin, Cisplatin and Infusional Fluorouracil
GIRINFRT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Combined Modality Adjuvant Therapy for High Risk Rectal Carcinoma using Capecitabine, Infusional Fluorouracil and Radiation Therapy
GIRCRT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Combined Modality Adjuvant Therapy for High Risk Rectal Carcinoma using Capecitabine and Radiation Therapy
GIRCAP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adjuvant Capecitabine Therapy for Stage II and III Rectal Cancer Previously Treated with Preoperative Radiotherapy
ULUPAC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Treatment of Thymoma with Platinum, Doxorubicin, and Cyclophosphamide

### REVISED PROTOCOLS, PPPOs AND PATIENT HANDOUTS (AFFECTED DOCUMENTS ARE CHECKED):

CODE	Protocol	PPPO	Patient Handout	Changes	Protocol Title
BRAJACTT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>minor typo deleted in dosing section</i>	Adjuvant Therapy for Breast Cancer using Doxorubicin and Cyclophosphamide followed by Paclitaxel and Trastuzumab
BRAVCAP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Eligibility changed to include first line use, cardiac precaution added</i>	Therapy for Metastatic Breast Cancer Using Capecitabine
BRAVGEMD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>check box added for dexamethasone premedication</i>	Palliative Therapy for Metastatic Breast Cancer using Gemcitabine and Docetaxel

CODE	Protocol	PPPO	Patient Handout	Changes	Protocol Title
BRAVNAV	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>treatment duration clarified</i>	Palliative Therapy for Metastatic Breast Cancer using Vinorelbine
CNAJZRT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>lab tests clarified</i>	Concomitant and Adjuvant Temozolomide for Newly Diagnosed Malignant Gliomas with Radiation
UGIFOXB	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>check box deleted from urine analysis</i>	Palliative Combination Chemotherapy for Metastatic Colorectal Cancer Using Oxaliplatin, 5-Fluorouracil, Folinic Acid (Leucovorin) and Bevacizumab
GIFURRT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>replaced by capecitabine-based protocol (GIRINFRT)</i>	Combined Modality Adjuvant Therapy for High Risk Rectal Carcinoma using Fluorouracil, Folinic Acid (Leucovorin) and Radiation Therapy
GIFURCRT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>replaced by capecitabine-based protocol (GIRCRT)</i>	Combined Modality Adjuvant Therapy for High Risk Rectal Carcinoma using Fluorouracil, Folinic Acid (Leucovorin), Capecitabine and Radiation Therapy
GIRFF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>replaced by capecitabine-based protocol (GIRCAP)</i>	Adjuvant Therapy for Stage II and III Rectal Cancer Previously Treated with Preoperative Radiotherapy
LYIT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>lab work is required weekly, not before each treatment</i>	Treatment of Lymphoma using Intrathecal Methotrexate and Cytarabine
ULYRMTN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>eligibility revised</i>	Maintenance Rituximab for Indolent Lymphoma
SADTIC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>dilution volume for Dacarbazine clarified</i>	High Dose Single Agent Dacarbazine (DTIC) for Metastatic Soft Tissue Sarcoma
SMDTIC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>dilution volume for Dacarbazine clarified</i>	Palliative Therapy for Metastatic Malignant Melanoma Using High Dose Dacarbazine (DTIC)

**REVISED VINCRISTINE-RELATED PROTOCOLS AND PPPOs (AFFECTED DOCUMENTS ARE CHECKED):**

CODE	Protocol	PPPO	Patient Handout	Changes	Protocol Title
CNCCV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Adjuvant Lomustine, Cisplatin And Vincristine In Adult High-Risk Medulloblastoma Or Other Primitive Neuroectodermal Tumour
CNMODPCV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Modified PCV Chemotherapy Of Brain Tumours Using Procarbazine, Lomustine (CCNU) and Vincristine
KSVB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Therapy for Kaposi's Sarcoma Using Vinblastine-Vincristine

CODE	Protocol	PPPO	Patient Handout	Changes	Protocol Title
LUALTL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Therapy For Limited Stage SCLC Using Alternating CAV/EP Plus Early Thoracic Irradiation Using Cyclophosphamide, Doxorubicin, Vincristine, Etoposide And Cisplatin
LUCAV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Treatment for extensive small cell lung cancer (SCLC) with cyclophosphamide, doxorubicin and vincristine (CAV)
LUPAVESE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Treatment For Extensive Stage Small Cell Lung Cancer (SCLC) With Cisplatin, Doxorubicin, Vincristine And Etoposide (PAVE)
LUPAVESL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Treatment For Limited Stage Small Cell Lung Cancer (SCLC) With Cisplatin, Doxorubicin, Vincristine And Etoposide (PAVE), And Cisplatin And Etoposide (EP) Concurrent With Early Thoracic Irradiation
LYCHOP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Treatment of Lymphoma with Doxorubicin, Cyclophosphamide, Vincristine and Prednisone
LYCHOPR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Treatment of Lymphoma with Doxorubicin, Cyclophosphamide, Vincristine, Prednisone and Rituximab
LYCVP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Treatment Of Advanced Indolent Lymphoma Using Cyclophosphamide, Vincristine And Prednisone
LYCVPABO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Treatment of Hodgkin's Disease with Cyclophosphamide, Vinblastine, Procarbazine And Prednisone
LYCVPR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Treatment of Advanced Indolent Lymphoma using Cyclophosphamide, Vincristine, Prednisone and Rituximab (CVP-R)
SAVAC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Adjuvant Therapy For Newly Diagnosed Ewing's Sarcoma/Peripheral Neuroectodermal Tumor (PNET) Or Rhabdomyosarcoma Using Vincristine, Doxorubicin And Cyclophosphamide
SAVACM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Preparation and administration of vincristine changed</i>	Therapy For Newly Diagnosed Ewing's Sarcoma/Peripheral Neuroectodermal Tumor (PNET) And Rhabdomyosarcoma With Pelvic Primaries Or Chemotherapy Induced Hematuria Using Vincristine, Doxorubicin And Cyclophosphamide

### COMMUNITIES ONCOLOGY NETWORK

**Social Workers on the Web** There is new information on the Community Oncology Network webpage (<http://www.bccancer.bc.ca/RS/Communitiesoncologynetwork/cservices/default.htm>).

Patients and family members, along with health care providers, will now have contact information for community social workers at the tip of their fingers by simply “clicking” on any of the communities on the map of British Columbia.

## WEBSITE RESOURCES

The following are available on the BC Cancer Agency website ([www.bccancer.bc.ca](http://www.bccancer.bc.ca)) under the Health Professionals Info section:

REIMBURSEMENT AND FORMS: BENEFIT DRUG LIST, CLASS II, COMPASSIONATE ACCESS PROGRAM (UNDESIGNATED INDICATION)	<a href="http://www.bccancer.bc.ca/HPI/ChemotherapyProtocols/Forms">www.bccancer.bc.ca/HPI/ChemotherapyProtocols/Forms</a>
CANCER DRUG MANUAL	<a href="http://www.bccancer.bc.ca/cdm">www.bccancer.bc.ca/cdm</a>
CANCER MANAGEMENT GUIDELINES	<a href="http://www.bccancer.bc.ca/CaMgmtGuidelines">www.bccancer.bc.ca/CaMgmtGuidelines</a>
CANCER CHEMOTHERAPY PROTOCOLS	<a href="http://www.bccancer.bc.ca/ChemoProtocols">www.bccancer.bc.ca/ChemoProtocols</a>
CANCER CHEMOTHERAPY PRE-PRINTED ORDERS	<a href="http://www.bccancer.bc.ca/ChemoProtocols">www.bccancer.bc.ca/ChemoProtocols</a> under the index page of each tumour site
SYSTEMIC THERAPY PROGRAM POLICIES	<a href="http://www.bccancer.bc.ca/HPI/ChemotherapyProtocols/Policies">www.bccancer.bc.ca/HPI/ChemotherapyProtocols/Policies</a>
<a href="#">UNCONVENTIONAL CANCER THERAPIES MANUAL</a>	under Patient/Public Info, Unconventional Therapies

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