BC Cancer Clinical Pharmacy Guide

Understanding BC Cancer Treatment Protocols

Contents

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Introduction

In order to provide safe, evidence-based, and cost-effective cancer treatment to all patients with cancer in B.C., BC Cancer has developed cancer treatment regimens or treatment protocols. There are more than 350 different protocols approved for use by BC Cancer. Summaries of these protocols can be found on the BC Cancer website (www.bccancer.bc.ca) under Chemotherapy Protocols.

Each protocol summary contains the following information:

- Protocol code
- Tumour group
- Eligibility and exclusion criteria
- Tests (baseline tests and ongoing clinical and laboratory monitoring)
- Pre-medications and supportive care medications (if applicable)
- Treatment (including drug(s), dose, route and duration of administration, length and number of cycles)
- Dose modifications (potential toxicities and response)
- Precautions
- BC Cancer contact physician
- Date of last revision
- References

It is important to note that the Provincial Systemic Therapy Program of BC Cancer reviews and revises these protocols on a periodic basis and that both the format and content of the protocols may change. Therefore, printed copies of protocols should not be stored for future reference, as they may soon be out of date. The last revision date is shown in the footer of each protocol summary.

Always check the BC Cancer website for the most recent information.

Purpose of Protocol Codes

Patient Safety

The unique protocol code allows accurate communication within the health care team to readily identify the treatment prescribed for a patient. This is important given that cancer drug treatment often involves complex dosing schedules of drugs with potentially severe toxicities.

In addition, the BC Cancer treatment protocols have corresponding BC Cancer provincial preprinted orders (PPPOs) (or electronic PowerPlans for sites using Cerner) and patient information handouts. Use of protocol codes assists members of the health care team involved in cancer drug treatment delivery to have the necessary information to perform clinical checks and provide the safest possible patient care.

Evidence-based Treatment

The BC Cancer treatment protocols have been developed based on the latest evidence related to management of specific cancers. By capturing BC Cancer protocol information, BC Cancer is able to track outcome data for specific patient populations treated with specific protocols in BC. This information further informs clinicians regarding treatment efficacy.

Accountability

BC Cancer protocol data is also used to obtain valuable information for monitoring and forecasting related to drug therapy usage with the intent of making evidence-based drug therapies available for BC residents through effective management of the oncology drug budget.

Protocol Code Format

Each protocol is assigned a specific code, which is formatted as follows:

- The first two letters indicate the tumour group (see Table 1):

Table 1: Tumour Group Abbreviations			
BR	breast	LY	lymphoma
BMT	bone marrow transplant	MY	myeloma
CN	central nervous system/neuro-oncology	SM	melanoma
GI	gastrointestinal	MO	miscellaneous origins
GU	genitourinary	OC	ocular
GO	gynecology	PU	primary unknown
HN	head and neck	SA	sarcoma
KS	Kaposi's sarcoma	SC	supportive care
LK	leukemia	TA	tumour agnostic
LU	lung	U	* protocol requires CAP approval

* U is for "undesignated" and is added before the tumour group abbreviation to indicate that the protocol requires case-by-case approval for funding through the Compassionate Access Program (CAP). Additionally, treatments found in the Unfunded protocol section also have a U in front of the tumour group abbreviation along with a "UF" at the end of the protocol code to indicate that the treatment is "unfunded" by the BC Cancer Program at this time. This treatment may be available through manufacturer's patient assistance programs.

- Tumour agnostic (TA), also known as tissue-agnostic, is used for genomically-informed treatment regardless of anatomical or histological origin. For example, neurotrophic tyrosine receptor kinase (NTRK) gene fusions are biomarkers for cancer therapy which can be found in many different types of cancer. Treatments for NTRK gene fusion-positive cancers, regardless of where they are located in the body, fall under the TA tumour group.
- If a tumour group has more than one site, the tumour site may be included. For example, ovarian cancer protocol codes begin with GOOV ("GO" for gynecology tumour group, "OV" for ovarian cancer).
- The protocol code may identify if the treatment is adjuvant (AJ) or advanced (AV) or for locally advanced disease (LA). In general:
    - Adjuvant treatment is given after curative treatment (radiation or surgery) to reduce risk of disease recurrence and improve survival.
        - Some of these protocols allow for neo-adjuvant use, where cancer drug therapy is delivered prior to surgery
    - Advanced treatment intent is palliative and generally used to manage progression or symptoms of metastatic or unresectable disease.
    - Locally advanced disease is cancer that has grown from where it started into

localized tissue or lymph nodes but has not spread beyond that.

- The first one to three letters of the drug(s) used in the protocol usually complete the protocol code ("CAPOX" for capecitabine and oxaliplatin).
- Some Class I drugs do not have BC Cancer protocols associated with them or may be used as single agent treatment (see Benefit Status section below). These drugs are indicated on the Benefit Drug List by the default code **"NOS"** which stands for "**N**ot **O**therwise **S**pecified". The order will be assigned a protocol code following the format XXNOS where the XX is substituted with the tumour group being treated.
- The letters "RT" at the end of a protocol code name are used to designate combined modality therapy protocols, which include treatment with both cancer drug therapy and radiation therapy. Treatment may be at the same time (concurrent therapy) or sequential (chemotherapy alone *after* concurrent therapy). For example, the LUSCPE treatment protocol involves treatment with cisplatin and etoposide while the LUSCPERT treatment protocol involves use of cisplatin and etoposide in conjunction with radiation therapy.

Every attempt is made to have protocols follow this general pattern, but there are variations:

- Not every protocol code identifies the intent of treatment (i.e., whether it is "adjuvant" or "advanced").
- Most protocol codes use generic drug names, but occasionally brand names are used instead (e.g., Adriamycin® (doxorubicin) and cyclophosphamide in BRAJAC).
- A number of protocol codes do not follow the BC Cancer format for nomenclature but have been adopted because the acronyms were widely used and predated BC Cancer treatment protocols ("CHOP" for cyclophosphamide, doxorubicin (hydroxydaunorubicin), vincristine (Oncovin®), and prednisone).

Examples:

- LUAVDC is a lung protocol for advanced disease using docetaxel and cisplatin
- BRAJANAS is a breast protocol for adjuvant treatment using anastrozole
- LYHDMTXPRO is a lymphoma protocol using high-dose methotrexate (MTX) for prophylaxis of central nervous system disease
- GIFOLFIRI is a gastrointestinal protocol using folinic acid, fluorouracil, and irinotecan
- UGUPAPA is a genitourinary prostate protocol using apalutamide requiring case-by-case

approval (CAP) prior to treatment

- LKNOS is the protocol code used for hydroxyurea treatment for any leukemia. There is no specific protocol for hydroxyurea for any tumour group
- HNLAPRT is a head and neck cancer protocol for locally advanced disease using Platinol® (cisplatin) with concurrent radiation therapy

When a cancer drug treatment order is written, a specific protocol code must accompany the order to allow the pharmacist to check the written order. It is important to check that the protocol ordered is consistent with the patient's diagnosis and eligibility criteria. If it is not, the pharmacist must contact the prescriber to clarify any discrepancies.

Absence of a Protocol Code

When the protocol code is absent from the orders, the pharmacist should follow the guidelines below to obtain this essential information:

- If this is the patient's first treatment, contact the prescriber to confirm which BC Cancer approved protocol is being used for treatment. Ensure that the patient's diagnosis is consistent with the assigned protocol by following the eligibility criteria outlined in the protocol.

- If the patient has been previously treated, check that the current orders are consistent with the previous protocol. The protocol code for the previous cycle can then be assigned to the current orders, and the pharmacist should follow the previous protocol for checking the orders.

Absence of a Treatment Protocol

There are three possible sources of protocol codes:

1. CAP outcomes
2. Chemotherapy Protocols
3. Benefit Drug List

When an XXNOS or CAP-assigned protocol code is used, there is no protocol to guide checking the cancer drug treatment order for eligibility, dosing, and appropriateness of treatment. It

must be determined whether the treatment is suitable for the patient from other sources of information.

These include:

- Cancer Management Manual (formerly called the "Cancer Management Guidelines")
- Cancer Drug Manual
- External cancer drug regimen resources
- Literature support for proposed treatment
- CAP-assigned protocols sometimes refer to another protocol that can be used for guidance

Benefit Status

BC Cancer pays for the cost of all approved cancer treatment medications for all residents of BC. Supportive care medications are not covered by BC Cancer.

When a patient is diagnosed with cancer, the prescriber must register the patient with BC Cancer. At that time, a 7-digit BC Cancer identity number will be issued and used to identify and track all activity related to that patient. The first two numbers in the BC Cancer identity number represent the year in which the patient was first registered with BC Cancer (i.e., BC Cancer # 22-12345 indicates that the patient was registered in 2022). For sites using Cerner, an additional MRN (Medical Record Number) is assigned and it does not follow the same pattern as the BC Cancer identity number.

BC Cancer will reimburse to the dispensing hospital pharmacy the drug costs associated with all approved cancer treatments for registered patients in the province. These approved drugs are referred to as "benefit drugs" and are eligible for reimbursement through the Community Oncology Network (CON) Program on an individual billing basis or directly if the drugs are administered in a BC Cancer Centre. CON hospitals submit claims to BC Cancer through a program called OSCAR (**O**nline **S**ystem for **C**ancer drug **A**djudication and **R**eimbursement).

All benefit drugs, and their indications for use, are listed in the BC Cancer Benefit Drug List. The Benefit Drug List is frequently revised; therefore, it is advisable to review this list directly from the BC Cancer website. Benefit drugs are divided into two general categories: Class I drugs and Restricted Funding (R) drugs that require case-by-case approval from the Compassionate Access Program (CAP approval).

Occasionally patients may also be approved to receive cancer treatments with drugs otherwise not available in Canada through Health Canada's Special Access Program (SAP) (see below). More rarely, patients may be approved to receive part of an unfunded treatment (non-benefit) onsite involving drug from a manufacturer's patient assistance program (PAP). These drugs will also require a CAP approval through BC Cancer to be administered at BC Cancer.

Class I Drugs

A drug designated as Class I is used in the active treatment of cancer or for a specific purpose which is defined in an approved BC Cancer treatment protocol. Some Class I drugs may be used as a single agent for a treatment not included in an approved BC Cancer protocol. These drugs are indicated in the *Benefit Drug List* with a NOS (not otherwise specified) default protocol code. A limited number of Class I drugs do not have any BC Cancer protocols associated with their use (e.g., hydroxyurea). These are also indicated on the *Benefit Drug List* with a NOS default code.

If a default NOS protocol code is not included on the *Benefit Drug List*, the drug must be used following an approved treatment protocol or the treatment must be approved by the BC Cancer Compassionate Access Program (see below).

There are restrictions on the approved indications for some drugs. For example, megestrol acetate is covered for the active treatment of breast and endometrial cancers, but is not covered for appetite stimulation or symptom management.

Approved drug indications, doses and treatment guidelines are determined by the Tumour Groups at BC Cancer using evidence-based and best practice standards. Tumour groups are interdisciplinary teams that specialize in treating one cancer site, such as the Breast Tumour Group. Members of the individual Tumour Groups can be contacted for questions and concerns regarding protocols. Membership lists are located under each tumour site in Cancer Management Manual on the BC Cancer website.

Compassionate Access Program (CAP)

Case-by-case approval can be granted for the use of a drug that does not fit into the Class I criteria, or for treatments for which there is no approved BC Cancer protocol. Case-by-case approval is also needed for substantial changes to an existing treatment protocol, such as adding or substituting a different drug, increasing the dose, decreasing the interval, changing the route of administration, or extending beyond the specified number of cycles. These scenarios all require BC Cancer Compassionate Access Program (CAP) approval as they have

fiscal and patient safety ramifications. Using cancer drugs in conjunction with radiation therapy without a BC Cancer protocol also requires CAP approval.

The III-45: Compassionate Access Program Policy and Application Procedure outline the CAP approval process. Approval is obtained by submitting the appropriate patient-specific clinical information to the Provincial Systemic Therapy Program through the secure Compassionate Access Program website. This website may also be consulted by pharmacists to determine whether a treatment regimen has been approved for a patient. New users must register with the CAP office to gain access to the system (email cap_bcca@bccancer.bc.ca).

CAP requests typically require a minimum of two business days for a decision outcome to be reported. To be eligible for reimbursement, notification of approval must be received **prior** to scheduling patients for treatment. In some cases, approval is granted for a specific number of cycles, after which the patient's response to treatment must be reassessed. If treatment is to continue, a second CAP request must be submitted to the Provincial Systemic Therapy Program.

Note: some patients may receive compassionate supply of drugs directly from the drug company. This should not be confused with the BC Cancer Compassionate Access Program (CAP) approved drugs (see below).

Patient Assistance Programs (PAP)

Some drug manufacturers offer external compassionate supply and may have formal Patient Assistance Programs (PAP) that provide access to drugs prior to their evaluation or approval from BC Cancer. The PAP drugs do not require BC Cancer CAP approval and are typically not dispensed by BC Cancer pharmacies. However, if a patient is to receive treatment onsite with externally funded compassionate supply, then a BC Cancer CAP approval is required.

See the **Manufacturer Patient Assistance Programs** table in the Patient Assistance Programs document on the Systemic Therapy web page for a list of drugs with compassionate supply. This document is frequently revised by the BC Cancer Pharmacy Drug Access Navigators; therefore, it is advisable to review this list directly from the BC Cancer website. Oral PAP drugs are delivered directly to the patient's home or pharmacy of choice. Parenteral PAP drugs are administered as per local practices (generally through private infusion clinics).

Special Access Program (SAP)

Health Canada's Special Access Program (SAP) provides practitioners with access to non-marketed drugs for the treatment of patients with serious or life-threatening conditions when conventional therapies have failed, are unsuitable, or are unavailable.

The SAP authorizes a manufacturer to sell a specific quantity of drug that cannot otherwise be sold or distributed in Canada. SAP approval from Health Canada is needed in order to import the SAP drug into Canada. Most SAP drugs are ordered for specific patient use at BC Cancer. One exception to this is hyaluronidase, which is an SAP drug ordered for general use and is stocked in extravasation kits.

The Oncology Related Drugs with Special Ordering Process document on the Systemic Therapy web page lists drugs used for cancer treatment that require application to the SAP program. The document also contains useful information about procedures for obtaining these drugs after having received SAP approval. This document and a link to the Health Canada SAP drug request forms are both available on the Systemic Therapy [Reimbursements & Forms] web page.

When a request is made for an SAP drug to be used in cancer treatment, the pharmacist should first determine the benefit status of the drug:

- If the drug is a Class I drug and is being used for an approved indication and dosage, the order can be processed, and the SAP procedure can be implemented.
- If the drug is not a benefit drug or is not being used for an approved indication, it will require local CAP approval from the Provincial Systemic Therapy Program, as well as Health Canada SAP approval, before ordering the drug. The BC Cancer CAP approval would indicate that the drug is approved on the condition that it receives Health Canada SAP approval.

The cost of an SAP drug may be paid by the manufacturer or by BC Cancer; each drug is handled individually. If reimbursement is to come from BC Cancer, all necessary documentation must be completed prior to obtaining and dispensing the drug.

Special Authority Drugs

PharmaCare's Special Authority (SA) Request program grants coverage for certain supportive care drugs used by patients with cancer. Since these drugs are not for active cancer treatment, they are not covered for outpatients by BC Cancer or dispensed by BC Cancer pharmacies.

Oncology prescribers submit a SA request for pre-approval of coverage, and provide patients a prescription to be filled at a retail pharmacy. Some examples of supportive care drugs that need PharmaCare SA approval are listed here:

- Anticoagulants such as *dalteparin, enoxaparin* and *tinzaparin*
- Antivirals *entecavir* and *tenofovir* now used for Hepatitis B reactivation prophylaxis (previously *lamivudine*)
- Granulocyte colony stimulating factor (G-CSF) *filgrastim* used for bone marrow transplant patients, febrile neutropenia treatment, and febrile neutropenia prophylaxis in curative cancer regimens
- *Olanzapine* when used as an antinauseant

PharmaCare allows specialists who commonly prescribe certain medications to patients to enter into a *Collaborative Prescribing Agreement* (CPA). If a CPA is in place, prescribers do not need to apply for SA each time. The following supportive care drugs require SA approval but have CPA exemptions in place for oncology prescribers:

- Antiemetics such as *aprepitant*, *granisetron*, *ondansetron* and *netupitant-palonosetron*
- Opioids such as *fentanyl patch* and *hydromorphone controlled release caps*

Note: the standardized BC Cancer Magic Mouthwash compounded prescription formulation does not require a SA request to be submitted for coverage. This formulation has been assigned a unique Product Identification Number (PIN) 22123334 that can be provided to the dispensing pharmacies for PharmaCare coverage. See the Magic Mouthwash information on the Supportive Care web page.