DEFINITIONS:

Biological Response Modifier – cancer treatment using substances involved in the body’s biological response to the development of cancer

Chemotherapy – cancer treatment using drugs that are selectively destructive to malignant cells; cytotoxics

Hormonal Therapy – cancer treatment that removes, blocks or adds hormones

Targeted Therapy – cancer treatment that blocks the growth of cancer cells by interfering with specific targeted molecules needed for tumour growth; small molecules, monoclonal antibodies

DIRECTIVE:

In order to ensure the safe prescribing, preparation and administration of all IV and oral cancer treatments to BC Cancer Agency (BCCA) patients, these process steps will be followed:

See also related Provincial Systemic Program policies V-10 (Cytotoxic Agents, Safe Handling Standards), V-20 (Health Issues Related to Cytotoxic Agents), and V-30 (Spill Management of Cytotoxic Agents).

PROCESS STEPS:

1. **Prescriber Process:**

Medical Oncologists, Hematologists, BCCA Gynecological Oncologists, BCCA General Practitioners in Oncology and Medical Oncology or Hematology Residents and Fellows in training may prescribe cancer treatments. In the communities, Medical Oncologists, Hematologists, Internal Medicine consultants and General Practitioners with specialized training in oncology who are part of the community cancer care team may prescribe cancer treatments. Surgeons and other physicians not associated with the BC Cancer Agency Communities Oncology centres or services but affiliated with a site specific tumour group may prescribe and renew hormonal therapies and intravesicular chemotherapy. BCCA Nurse Practitioners, once they have completed the BCCA General Practitioners in Oncology training program, may prescribe cancer treatments for the second and subsequent cycles of a BCCA chemotherapy protocol, in accordance with the plan developed by the Most Responsible Physician, and may continue ongoing treatments with hormonal therapies.
In the communities, Nurse Practitioners may continue a prescription for Tamoxifen or an Aromatase Inhibitor for those patients who are being treated with a BCCA Protocol for adjuvant breast cancer.

All other physicians/practitioners and those listed writing prescriptions for treatments not covered by the above require their orders to be countersigned by one of the above.

### Specific Exceptions for High Dose Chemotherapy Protocols

All chemotherapy orders for acute leukemia protocols and for peripheral blood stem cell or bone marrow transplant supported high dose protocols must be signed by two of the approved physicians described in the paragraph above. Other high dose medical oncology protocols will only require two signatures if this is a requirement written in the protocol summary. Body Surface Area calculations for these protocols are based on IDEAL weight, if specified in the protocol.

Physicians must specify the drugs, dosage calculations and route of administration in all cancer treatment orders. If required for the cancer treatment being prescribed, body surface area calculations must be determined according to the Mosteller equation and be done for the first treatment of each chemotherapy protocol only. Subsequent body surface area recalculations will only be done if, in the physician's opinion, it is warranted by a change in the clinical status of the patient. The reasons prompting the recalculation must be documented in on the preprinted order. Body surface area calculations are based on actual body weight for all medical oncology protocols, except the high dose ones described above.

Physicians are also responsible for ensuring that all relevant clinical parameters such as complete blood counts or chemical tests have been checked. Every BC Cancer Agency treatment protocol must specify the tests required, the frequency of those tests and the appropriate time interval that the test is to be performed prior to each cycle of treatment. This information must also be included in the corresponding Provincial Pre Printed Order. For new patients or patients beginning a new course of cancer treatment, baseline tests must have been conducted within 4 weeks of the start of therapy.

A maximum of a 5% variance (according to protocol dosages) in dosage calculation is permitted.

Prescriptions for all intravenous IV or oral chemotherapy, targeted therapy and biological response modifiers must be written. Verbal and telephone orders are not permitted. If a prescription is modified, the changes must be signed and dated by the physician before the
treatment is dispensed or administered. Prescriptions are not acceptable when sent by email. An exception to the above can be made for telephone orders to suspend (hold) chemotherapy for reasons of safety.

- Telephone orders are acceptable for hormonal therapies.
- Faxed prescriptions from non-BCCA physician’s office are acceptable for take-home medications of chemotherapy, targeted therapy and biological modifiers.

Prescriptions must be complete, clear, simple to follow and do not include any abbreviations, symbols, and dose designations identified on the BC Cancer Agency Do Not Use List (also see BCCA Policy on of Use of Abbreviations/Acronyms in Clinical Documentation [PIM 060-IV-B-65]). The following elements must be provided for each order:

- prescribing date
- patient name and BCCA patient number
- the protocol code (or specific diagnosis if no protocol code assigned)
- name of drug - use approved generic drug names; no abbreviations.
- daily dose and number of days of treatment
- route of administration and any administration instructions
- starting dates (and times when appropriate)

Prescriptions must be written in accordance with approved policies, tumour group protocols, or Medical Oncology/Radiation Oncology clinical trials.

Physicians must complete the following documentation:

- Doctors Order form
- Provincial Pre printed Order or Prescription form

For initiation of a new course of chemotherapy: physicians must dictate for the medical record the name of the chemotherapy treatment regimen and confirmation of discussion regarding side effects and benefits with the patient. Requests must be submitted online to the Compassionate Access Program, if required, prior to the commencement of treatment.

2. **Pharmacy Process:**

Prior to dispensing IV or oral cancer treatments, the pharmacist will verify the order according the tumour group protocol or referenced treatment regimen, in order to clarify and resolve any discrepancies (see also Pharmacy Directive – Medication Orders). The pharmacist doing the clinical review will document that the order is approved for preparation on the appropriate form.
The pharmacist doing the check of the final product will ensure correct computer entry, ensure appropriate order preparation, and dispense the medication for the patient.

The following must be reviewed and verified by a pharmacist prior to dispensing IV and oral cancer treatments:

- pharmacy medication profile
- protocol code and cycle number (if appropriate)
- drug, dose (a maximum of a 5% variance is permitted in dose calculation unless a variance is prohibited by the treatment protocol), route, administration, timing and duration of each medication ordered. For cyclical therapies, no more than one cycle of medication will be dispensed at a time.
- benefit status of the medication(s) and receipt of appropriate approval forms, if required
- patient-specific factors including allergies, alerts, and protocol required laboratory values. For new patients or patients beginning a new course of cancer treatment, baseline tests must have been conducted with four weeks of the start of therapy.
- body surface area, calculated by the Mosteller equation, for the first treatment of each chemotherapy protocol only (based on actual body weight except for the designated high dose protocols described above, where ideal body weight is used) unless recalculated by the physician and documented on the preprinted order - if required for the cancer treatment being prescribed

The information required above is to be derived from the BCCA computerized medication profile, the appropriate approved tumour group protocol, BCCA Compassionate Access Program approval or Cancer Drug Manual, the Provincial Preprinted Order Form or prescription, the BCCA Benefit List, the patient’s complete medical record including source documentation for patient-specific factors. Prescriptions for all chemotherapy, targeted therapy and biological response modifiers received from non-BCCA physicians must be accompanied by the above information. Any discrepancies identified will be resolved by the pharmacist in discussion with the prescribing physician prior to dispensing the medication(s). Any changes to the orders will be signed by the physician. Documentation of the discrepancy and the resolution will be completed by the pharmacist on the physician’s order.

Computer order entry, medication preparation and medication dispensing will be done using safe handling techniques for cytotoxic agents according to Provincial Systemic Therapy Program, Safe Handling of Cytotoxic Antineoplastic Drugs/Wastes, Cancer Center directives and Pharmacy directives and procedures.
Dispensing of IV cancer treatments will be documented in the medical record, in departmental records and in the BCCA computerized medication profile. Dispensing of oral/ “take home” cancer treatments will be documented on the original prescription, in the BCCA computerized medication profile and in the Provincial PharmaNet system.

3. Nursing Process:

Prior to administering cancer treatments the chemotherapy certified nurse reviews the following information in accordance with Nursing Division Directives C-252:
- previous and current treatment as documented in the patient's record
- relevant Nursing documentation
- applicable laboratory results. For new patients or patients beginning a new course of cancer treatment, baseline tests must have been conducted with four weeks of the start of therapy.

This information is available from the patient’s chart and doctors’ orders.

The chemotherapy certified nurse will ensure that the ordered dosage falls within the recommended range according to the approved tumour group treatment protocol, CAP approval or Cancer Drug Manual. This involves:
- calculating body surface area, using the Mosteller equation, for the first treatment of each chemotherapy protocol only unless recalculated by the physician and documented on the preprinted order
- calculating dose (Note: a maximum of a 5% variance is permitted in dose calculation, unless a variance is prohibited by the treatment protocol)
- calculating modifications according to applicable laboratory results

Any discrepancies identified will be discussed with the ordering physician prior to administering the medication(s). Documentation of the discrepancy and the resolution will be completed by the nurse in the Nursing record. Treatment administration will be documented on the Medication Administration Record (M.A.R.) and when appropriate, on other relevant nursing documentation, according to the Nursing Documentation guidelines.

4. Patient Education and Information Process:

Education and information will be provided by physicians, pharmacists and nurses. Other health care professionals may also provide information as appropriate.
Each new patient receiving cancer treatment will have a group and/or individualized teaching session.

Education will include both verbal and written information regarding:
- general cancer treatment information
- specific protocol or drug treatment information to meet individual patient needs
- For oral or “take home” treatments, patients will be educated to be the third check such that they are knowledgeable of the name and dose of medication that they are being prescribed
- follow-up counseling for repeat prescriptions and side effect management

Documentation of counseling will be done in the appropriate section of the patient’s chart.