Provincial Health Services Authority

# Systemic Therapy Update

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*For Health Professionals Who Care for People with Cancer*

## Inside This Issue



# Editor's Choice

## New Programs

BC Cancer Provincial Systemic Therapy has approved the following new treatment programs effective 01 June 2022. Full details of all treatment programs are available in the Chemotherapy Protocols section of the BC Cancer website.

### Genitourinary

**Maintenance Avelumab for Locally Advanced or Metastatic Urothelial Carcinoma (GUBAVE)** — The BC Cancer Genitourinary Tumour Group is introducing avelumab, an anti-PD-L1 immune checkpoint inhibitor, for maintenance therapy of patients with unresectable locally advanced or metastatic urothelial carcinoma (UC) whose disease has not progressed with first-line platinum-based induction chemotherapy. Until now, there was no option for maintenance therapy following a good response to first-line platinum-based therapy in this patient population. Avelumab maintenance therapy must start within 10 weeks of the last dose of chemotherapy; avelumab continues every two weeks until disease progression or unacceptable toxicity. Patients progressing on avelumab maintenance therapy are not eligible for second-line therapy with pembrolizumab.

## Editor's Choice

Approval of this treatment program is supported by evidence from the randomized, open-label phase III JAVELIN Bladder 100 trial that compared maintenance avelumab plus best supportive care (BSC) versus BSC alone in patients with unresectable locally advanced or metastatic UC without evidence of disease progression after completion of first-line platinum-based chemotherapy.[1,2] Statistically significant and clinically meaningful improvements in median overall survival (OS) and median progression-free survival (PFS) were demonstrated in the avelumab group (mOS: 21.4 months vs. 14.3 months, HR 0.69, 95% CI 0.56-0.86; mPFS: 3.7 months vs. 2.0 months, HR 0.62, 95% CI 0.52-0.75). Adverse events (AEs) of all categories occurred more frequently in the avelumab group (98.0% vs. 77.7%), as did grade 3 or higher AEs (47.4% vs. 25.2%). The most common treatment-related AEs in the avelumab group were pruritus (13.7%), hypothyroidism (10.5%), diarrhea (10.2%) and infusion-related reactions (10.2%); none of these AEs occurred in the BSC group. The most commonly occurring grade 3 or higher AEs in the avelumab group were urinary tract infection (4.4% vs. 2.6%) and anemia (3.8% vs. 2.9%).

### Lung

**First-Line Brigatinib for ALK-Positive Advanced Non-Small Cell Lung Cancer (LUAVBRI)** — The BC Cancer Lung Tumour Group is introducing brigatinib for the first-line treatment of patients with anaplastic lymphoma kinase (ALK)-positive stage IIIB or IV non-small cell lung cancer (NSCLC). Brigatinib is a broad spectrum tyrosine kinase inhibitor targeting a range of ALK mutations. Multiple ALK-inhibitors are approved for patients with ALK-positive advanced NSCLC, including crizotinib and alectinib as other first-line treatment options. A one-month brigatinib initiation pack, containing two different strengths, will be used to facilitate dose escalation in the first cycle. Patients should be counselled to initiate brigatinib at a dose of 90 mg once daily for the first 7 days; upon assessment for tolerability and confirmation by the prescriber, patients are to increase the dose to 180 mg once daily on day 8. Patients requiring dose interruption and/or dose reduction will be instructed appropriately by the prescriber. Patients receiving first-line crizotinib (LUAVCRIZF), if started prior to 01 June 2022, may switch to LUAVBRI if they have not experienced progression and meet all eligibility criteria. Sequential ALK-targeted therapy with alectinib, ceritinib or crizotinib is not funded after first-line brigatinib.

Supporting evidence for this treatment program comes from the randomized, controlled phase III ALTA-1L trial that compared brigatinib with crizotinib for patients with advanced ALK-positive NSCLC who had not previously received an ALK-inhibitor.[3,4,5] At the second interim analysis, the median PFS was longer among patients receiving brigatinib (24.0 months vs. 11.0 months, HR 0.49, 95% CI 0.35-0.68). The objective response rate (ORR) was higher with brigatinib (74% vs. 62%, OR 1.73, 95% CI 1.04-2.88), as was the intracranial ORR in patients with baseline brain metastases (66% vs. 16%, OR 11.75, 95% CI 4.19-32.91). Early-onset pulmonary events with features consistent with interstitial lung disease or pneumonitis were observed in five patients who received brigatinib and in no patients who received crizotinib only; symptoms typically emerged within 7 days of treatment initiation. The most frequently reported any-grade treatment-emergent AEs are shown in the table below:

| Any-Grade Treatment-Emergent Adverse Events | Brigatinib | Crizotinib |
|---|---|---|
| nausea | 30% | 58% |
| diarrhea | 52% | 56% |
| increased blood creatine phosphokinase | 46% | 17% |
| peripheral edema | 7% | 45% |
| vomiting | 21% | 44% |
| constipation | 18% | 42% |
| increased ALT | 21% | 35% |
| cough | 35% | 20% |
| hypertension | 32% | 8% |

# Editor's Choice

## Multiple Myeloma

The BC Cancer Lymphoma and Myeloma Tumour Group is implementing two new first-line treatment options with daratumumab in combination with bortezomib- or lenalidomide- based treatment in newly diagnosed patients with multiple myeloma deemed ineligible for high-dose chemotherapy with autologous stem cell transplant. The addition of daratumumab to standard first-line bortezomib- or lenalidomide-based treatment has been associated with significantly improved response rates and PFS in previously untreated transplant-ineligible patients.

The following treatment protocols are now available:

- **Daratumumab, Cyclophosphamide, Bortezomib and Dexamethasone (UMYDARCBDF)**
- **Daratumumab, Lenalidomide and Dexamethasone (UMYDARLDF)**

BC Cancer Compassionate Access Program (CAP) approval is required. Patients currently receiving first-line therapy, if started prior to 01 June 2022, may switch to UMYDARCBDF or UMYDARLDF if they have not experienced progression and meet all eligibility criteria. Patients are eligible for only one line of daratumumab. The previous standard treatment protocols MYMPBOR and UMYLDF remain options for patients deemed too frail for or who decline treatment with a daratumumab-containing protocol.

The randomized, controlled phase III ALCYONE trial examined the addition of daratumumab to standard bortezomib, melphalan and prednisone compared with the standard regimen alone in newly diagnosed, transplant-ineligible patients with multiple myeloma.[6,7] Based on a median follow-up of 40.1 months, the addition of daratumumab was associated with a statistically and clinically significant improvement in median PFS (36.4 months vs. 19.3 months, HR 0.42, 95% CI 0.34-0.51). A significant benefit in OS was observed, with median OS not reached in either group (HR 0.60, 95% CI 0.46-0.80). The daratumumab administration schedules in the ALCYONE trial and in UMYDARCBDF differ as a consequence of the cycle lengths used; however, the net number of daratumumab doses administered is the same. Also, the ALCYONE trial used melphalan as the alkylating agent, whereas cyclophosphamide is used in UMYDARCBDF with the option of substituting melphalan for cyclophosphamide.[8]

In the randomized, controlled phase III MAIA trial, the addition of daratumumab to lenalidomide and dexamethasone was associated with a clinically and statistically significant improvement in median PFS compared with lenalidomide and dexamethasone alone (NR vs. 31.9 months, HR 0.56, 95% CI 0.43-0.73).[9,10]

The addition of daratumumab to standard therapy in the above phase III trials was associated with a moderate increase in any-grade and grade 3 or 4 infections, including pneumonia in particular.

**References**


1 Pan-Canadian Oncology Drug Review (pCODR) Expert Review Committee (pERC). Final recommendation for avelumab (Bavencio®) for the first-line maintenance treatment of patients with locally advanced or metastatic urothelial carcinoma whose disease has not progressed with first-line platinum-based induction chemotherapy. 23 March 2021.

2 Powles T, Park SH, Voog E, et al. Avelumab maintenance therapy for advanced or metastatic urothelial carcinoma. *N Engl J Med* 2020;383(13):1218-1230. https://doi.org/10.1056/NEJMoa2002788

3 Pan-Canadian Oncology Drug Review (pCODR) Expert Review Committee (pERC). Final recommendation for brigatinib (Alunbrig®) for the treatment of adult patients with anaplastic lymphoma kinase (ALK)-positive locally advanced (not amenable to curative therapy) or metastatic non-small cell lung cancer previously untreated with an ALK inhibitor. 21 April 2021.

4 Camidge DR, Kim HR, Ahn M-J, et al. Brigatinib versus crizotinib for ALK-positive non-small cell lung cancer. *N Engl J Med* 2018;379(21):2027-2039. https://doi.org/10.1056/NEJMoa1810171

5 Camidge DR, Kim HR, Ahn M-J, et al. Brigatinib versus crizotinib in advanced ALK inhibitor-naive ALK-positive non-small cell lung cancer: second interim analysis of the phase III ALTA-1L trial. *J Clin Oncol* 2020;38(31):3592-3603. https://doi.org/10.1200/JCO.20.00505

6 Mateos M-V, Dimopoulos MA, Cavo M, et al. Daratumumab plus bortezomib, melphalan, and prednisone for untreated myeloma. *N Engl J Med* 2018;378(6):518-528. https://doi.org/10.1056/NEJMoa1714678
7 Mateos M-V, Cavo M, Blade J, et al. Overall survival with daratumumab, bortezomib, melphalan, and prednisone in newly diagnosed multiple myeloma (ALCYONE): a randomised, open-label, phase 3 trial. *Lancet* 2020;395(10218):132-141. https://doi.org/10.1016/S0140-6736(19)32956-3
8 Pan-Canadian Oncology Drug Review (pCODR) Expert Review Committee (pERC). Final recommendation for daratumumab (Darzalex®) in combination with bortezomib, melphalan and prednisone, for the treatment of patients with newly diagnosed multiple myeloma who are not suitable for autologous stem cell transplant. 29 August 2019.
9 Pan-Canadian Oncology Drug Review (pCODR) Expert Review Committee (pERC). Final recommendation for daratumumab (Darzalex®) in combination with lenalidomide and dexamethasone for the treatment of patients with newly diagnosed multiple myeloma who are ineligible for autologous stem cell transplant. 05 March 2020.
10 Facon T, Kumar S, Plesner T, et al. Daratumumab plus lenalidomide and dexamethasone for untreated myeloma. *N Engl J Med* 2019;380(22):2104-2115. https://doi.org/10.1056/NEJMoa1817249

## Revised Programs

### Gynecologic Oncology

**Antiemetic Recommendations for Carboplatin AUC ≥4** — Current supportive care guidelines recommend a three-drug prophylactic antiemetic regimen for chemotherapy containing carboplatin dosed at a target AUC of ≥4.[1,2,3] A three-drug antiemetic regimen is comprised of dexamethasone plus 5-$HT_3$ antagonist (ondansetron or palonosetron) plus $NK_1$ antagonist (aprepitant or netupitant).

To offer patients the option of an $NK_1$ antagonist, gynecologic oncology protocols containing carboplatin AUC ≥4 are being re-categorized as **highly emetogenic chemotherapy (HEC)**. Moving forward, affected PPPOs will include the following antiemetic selections, for administration 30 to 60 minutes prior to carboplatin:

dexamethasone 8 mg or 12 mg PO
and select ONE of the following:

- ☐ ondansetron 8 mg PO
- ☐ aprepitant 125 mg PO plus ondansetron 8 mg PO
- ☐ netupitant-palonosetron 300 mg-0.5 mg PO

Note that aprepitant will be the only $NK_1$ antagonist option for docetaxel-containing regimens (due to a drug interaction with netupitant-palonosetron) and for multi-day chemotherapy regimens such as GOSPE (due to the need for repeat ondansetron dosing).

The two-drug prophylactic antiemetic regimen for moderately emetogenic chemotherapy (MEC) (dexamethasone plus ondansetron) remains an option for patients who may not require a $NK_1$ antagonist or who do not have sufficient drug coverage for $NK_1$ antagonists. A patient support program for netupitant-palonosetron may be accessed through the local Drug Access Navigator (DAN) for patients with financial barriers.

For more details on prophylactic antiemetic regimens, please see the BC Cancer Guideline for Prevention and Treatment of Chemotherapy-Induced Nausea and Vomiting in Adults (SCNAUSEA).

1 *National Comprehensive Cancer Network* (NCCN)
2 *American Society of Clinical Oncology* (ASCO)
3 *European Society of Medical Oncology* (ESMO) *and the Multinational Association of Supportive Care in Cancer* (MASCC)

## Editor's Choice

### Genitourinary

**Brand Selection for Intravesical BCG (GUBCG)** — Two brands of BCG are funded by BC Cancer: OncoTICE and VERITY-BCG. The GUBCG protocol has been revised to indicate that BCG brand selection is based on BCG product availability and physician discretion.

More details on BCG brands, strains, dosing, prescribing and preparation are available in the February and May 2022 issues of the Systemic Therapy Update.

### Leukemia

**Ruxolitinib Dosing in Symptomatic Myelofibrosis (ULKMFRUX)** — The ruxolitinib starting dose has been updated in ULKMFRUX and in the BC Cancer Drug Manual Ruxolitinib Monograph to align with recent changes in the Health Canada-approved product monograph. The recommended ruxolitinib starting dose is based on the patient's baseline platelet count; the starting dose for patients with myelofibrosis and a platelet count of 75 to 100 x $10^9$/L has been increased to 10 mg twice daily.

## Clarification

### Genitourinary

**Olaparib for Metastatic Castration-Resistant Prostate Cancer (UGUPOLAP)** — Olaparib was introduced last month for patients with metastatic castration-resistant prostate cancer (mCRPC) harbouring mutations in homologous recombination repair genes BRCA 1/2 or ATM. All patients in the phase III PROfound trial were required to have prior treatment with an androgen receptor-axis-targeted (ARAT) therapy; prior taxane was allowed but on its own did not qualify patients for treatment with olaparib. The UGUPOLAP protocol eligibility have been clarified as follows: "*Progression on prior ARAT therapy (enzalutamide, abiraterone/prednisone, apalutamide or darolutamide), in the metastatic castration sensitive (mCSPC), nonmetastatic castration-resistant (nmCRPC), or metastatic castration-resistant (mCRPC) prostate cancer setting, with or without prior taxane chemotherapy*".

de Bono J, Mateo J, Fizazi K, et al. Olaparib for metastatic castration-resistant prostate cancer. *N Engl J Med* 2020;382(22):2091-2102. https://doi.org/10.1056/NEJMoa1911440

## Provincial Systemic Therapy

All policies and procedures are on the Shared Health Organizations Portal (SHOP) BC Cancer page.

## New: Pregnancy Assessment and Education Procedure

The provincial **Pregnancy Assessment and Education Procedure for Systemic Therapy Patients** is in effect as of 01 June 2022. This procedural document is based on current practice at the BC Cancer Regional Centres and pairs with the **Provincial Pregnancy Assessment and Education Policy** that was implemented in 2020. The aim of this document is to formalize the current pregnancy assessment processes and standards across the BC Cancer Regional Centres.

## New: Patient Education Videos

New patient education videos are now available on the BC Cancer website. Most of the videos have been produced by the Canadian Cancer Society and are about two minutes in length. Topics include chemotherapy and immunotherapy:

- **How Chemotherapy Works**
- **Taking Care of Yourself during Chemotherapy**
- **Taking Oral Chemotherapy at Home**
- **What is Immunotherapy?**

The videos can be found on the Systemic Therapy patient page under 'Videos' as well as on the Video Resources page.

A new **What is Cancer?** video is also available on the About Cancer page.

# Cancer Drug Manual©

All documents are available in the Cancer Drug Manual© on the BC Cancer website.

## New Documents

Note that the following drug is not a BC Cancer Benefit Drug and requires application to the BC Cancer Compassionate Access Program (CAP). The corresponding Interim Monograph and Patient Handout are made available for reference only.

The **Fedratinib Interim Monograph** and **Patient Handout** have been developed with expert review provided by Dr. Lynda Foltz (hematologist) of the Division of Hematology, St. Paul's Hospital. Fedratinib is an orally administered JAK2 and FLT3 inhibitor. It is used in the treatment of myelofibrosis. The usual dose is 400 mg once daily.

Highlights from these documents include:

- nausea, vomiting, and diarrhea are frequently reported; administration with a high-fat, large evening meal may help to reduce nausea and vomiting
- Wernicke's encephalopathy has been reported with fedratinib and is associated with thiamine depletion; thiamine levels should be corrected prior to treatment as needed and monitored regularly throughout treatment in all patients
- hematologic toxicity is common; blood or platelet transfusions and/or fedratinib dose modification may be required to manage toxicity

**Fedratinib** has been added to the **Auxiliary Label List** and has been evaluated for the **BC Health Authorities Provincial Hazardous Drug List.**

# Cancer Drug Manual©

## Revised Documents

**Bortezomib Monograph**

*Special Populations*: deleted bullet about irradiated blood products

**Brigatinib Monograph** and **Patient Handout**

*Supply and Storage (Additional information)*: added information about packaging, including the availability of an initiation pack for dispensing

*Dosage Guidelines*: added bolding/italicizing for BC Cancer usual dose and new protocol (LUAVBRI)

**Oxaliplatin Monograph**

*Side Effects table and paragraphs*: added new information about vascular pain

**Ruxolitinib Monograph**

*Uses*: updated per current nomenclature

*Cautions*: added new information about dyslipidemia; updated information in *Pregnancy* and *Breastfeeding* sections

*Dosage Guidelines*: updated Starting Dose table with new platelet parameters

**Chemotherapy Preparation and Stability Chart**

Contract changes (2022): added new contract brands for all affected drugs

# BC Cancer Benefit Drug List

## New Programs

The following treatment programs have been added to the Benefit Drug List effective 01 June 2022:

| Protocol Title | Protocol Code | Benefit Status |
|---|---|---|
| Maintenance Therapy of Locally Advanced or Metastatic Urothelial Carcinoma using **Avelumab** | **GUBAVE** | Class I |
| First-Line Treatment of ALK-Positive Advanced Non-Small Cell Lung Cancer (NSCLC) with **Brigatinib** | **LUAVBRI** | Class I |
| Treatment of Previously Untreated Multiple Myeloma and Not Eligible for Stem Cell Transplant using **Daratumumab**, **Cyclophosphamide**, **Bortezomib** and **Dexamethasone** | **UMYDARCBDF** | Restricted |
| Treatment of Previously Untreated Multiple Myeloma and Not Eligible for Stem Cell Transplant using **Daratumumab**, **Lenalidomide** and **Dexamethasone** | **UMYDARLDF** | Restricted |

# Highlights of New & Revised Protocols, PPPOs and Patient Handouts

**BC Cancer Protocol Summaries, Provincial Pre-Printed Orders (PPPOs) and Patient Handouts** are revised periodically. New, revised or deleted protocols, PPPOs and patient handouts for this month are listed below, with document revisions indicated in the respective columns. Protocol codes for treatment requiring BC Cancer Compassionate Access Program (CAP) approval are prefixed with the letter **U.**

## NEW Protocols, PPPOs and Patient Handouts *(new documents checked ☑)*

| Protocol Code | Protocol Title | Protocol | PPPO | Handout |
|---|---|---|---|---|
| **GUBAVE** | Maintenance Therapy of Locally Advanced or Metastatic Urothelial Carcinoma using Avelumab | ☑ | ☑ | ☐ |
| **LUAVBRI** | First-Line Treatment of ALK-Positive Advanced Non-Small Cell Lung Cancer (NSCLC) with Brigatinib | ☑ | ☑ | ☐ |
| **UMYDARCBDF** | Treatment of Previously Untreated Multiple Myeloma and Not Eligible for Stem Cell Transplant using Daratumumab, Cyclophosphamide, Bortezomib and Dexamethasone | ☑ | ☑ **Cycle 1 PPPO** **Cycle 2+ PPPO** | ☐ |
| **UMYDARLDF** | Treatment of Previously Untreated Multiple Myeloma and Not Eligible for Stem Cell Transplant using Daratumumab, Lenalidomide and Dexamethasone | ☑ | ☑ **Cycle 1 PPPO** **Cycle 2+ PPPO** | ☐ |

## REVISED Protocols, PPPOs and Patient Handouts *(revisions in respective columns)*

| Protocol Code | Protocol Title | Protocol | PPPO | Handout |
|---|---|---|---|---|
| **GI \| Gastrointestinal** | | | | |
| **UGIAVPEM** | First-Line Treatment of dMMR/MSI-H Metastatic Colorectal Cancer using Pembrolizumab | ------ | ------ | *Table updated* |
| **UGIAVPEM6** | First-Line Treatment of dMMR/MSI-H Metastatic Colorectal Cancer using 6-Weekly Pembrolizumab | ------ | ------ | *Table updated* |
| **GIAVPG** | First-Line Palliative Chemotherapy for Advanced Gallbladder ~~Cancer~~ or Pancreatic Carcinoma and Cholangiocarcinoma using Gemcitabine and Cisplatin | *Protocol title and Eligibility revised (CAP no longer required for pancreatic carcinoma)* | ------ | ----- |
| **GIAVTZCAP** | Palliative Therapy of Metastatic Neuroendocrine Cancer using Temozolomide and Capecitabine | *Eligibility updated* | ------ | ------ |

| REVISED Protocols, PPPOs and Patient Handouts *(revisions in respective columns)* | | | | |
|---|---|---|---|---|
| **Protocol Code** | **Protocol Title** | **Protocol** | **PPPO** | **Handout** |
| **GIFIRINOX** | Palliative Combination Chemotherapy for Advanced Pancreatic Adenocarcinoma using Irinotecan, Oxaliplatin, Fluorouracil and Leucovorin | *Eligibility updated* | ------ | ------ |
| **GO \| Gynecologic Oncology** | | | | |
| **GOCABR** | Alternative Treatment of Gynecological Malignancies using Carboplatin and Paclitaxel NAB (ABRAXANE) | *Premedications revised* | *Premedications revised* | ----- |
| **GOCABRBEV** | Alternative Treatment of Gynecological Malignancies using Bevacizumab, Carboplatin and Paclitaxel NAB (ABRAXANE) | *Premedications revised* | *Premedications revised* | ----- |
| **GOCXCAD** | Primary Treatment of Advanced/Recurrent Non-Small Cell Cancer of the Cervix with Carboplatin and Docetaxel in Ambulatory Care Settings | *Antiemetics revised* | *Premedications revised* | ----- |
| **GOCXCAT** | Primary Treatment of Advanced/Recurrent Non-Small Cell Cancer of the Cervix with Carboplatin and Paclitaxel in Ambulatory Care Settings | *Contact Physician and antiemetics revised* | *Premedications revised* | ----- |
| **GOCXCATB** | Primary Treatment of Metastatic or Recurrent Cancer of the Cervix with Bevacizumab, Carboplatin and Paclitaxel | *Antiemetics revised* | *Premedications revised* | ----- |
| **GOENDCAD** | Treatment of Primary Advanced or Recurrent Endometrial Cancer using Carboplatin and Docetaxel | *Antiemetics revised* | *Premedications revised* | ----- |
| **GOENDCAT** | Treatment of Primary Advanced or Recurrent Endometrial Cancer using Carboplatin and Paclitaxel | *Antiemetics revised* | *Premedications revised* | ----- |
| **GOOVCAD** | Primary Treatment with Visible or No Visible Residual Tumour (Moderate, High, or Extreme Risk) or Treatment at Relapse of Invasive Epithelial Ovarian, Fallopian Tube and Primary Peritoneal Cancer, using Carboplatin and Docetaxel | *Antiemetics revised* | *Premedications revised* | ----- |
| **GOOVCAG** | Treatment of Advanced Ovarian Cancer in Patients Who Have Progressed or Recurred Following First-Line Platinum-Based Treatment using Carboplatin and Gemcitabine | *Premedications revised* | *Institution name and logo updated; Premedications revised* | ----- |
| **GOOVCARB** | First- or Second-Line Therapy for Invasive Epithelial Ovarian Cancer using Single-Agent Carboplatin | *Premedications revised* | *Premedications revised* | ----- |
| **GOOVCATB** | Primary Treatment of Invasive Epithelial Ovarian, Fallopian Tube or Primary Peritoneal Cancer with High Risk of Relapse using Bevacizumab, Carboplatin and Paclitaxel | *Premedications and antiemetics revised* | *Premedications revised*<br>**Induction PPPO** | ----- |
| **GOOVCATM** | Primary Treatment of No Visible Residual (Moderate-High Risk) Invasive Epithelial Ovarian, Fallopian Tube and Primary Peritoneal Cancer using Carboplatin and Paclitaxel | *Antiemetics revised* | *Premedications revised* | ----- |

## REVISED Protocols, PPPOs and Patient Handouts *(revisions in respective columns)*

| Protocol Code | Protocol Title | Protocol | PPPO | Handout |
|---|---|---|---|---|
| **GOOVCATR** | Second-Line Treatment of Invasive Epithelial Ovarian, Fallopian Tube or Peritoneal Cancer Relapsing after Primary Treatment using Paclitaxel and Carboplatin | *Antiemetics revised* | *Premedications revised* | ----- |
| **GOOVCATX** | Primary Treatment of Visible Residual (Extreme Risk) Invasive Epithelial Ovarian, Fallopian Tube or Peritoneal Cancer using Carboplatin and Paclitaxel | *Antiemetics revised* | *Premedications revised* | ----- |
| **GOOVDDCAT** | Primary Treatment of Advanced Epithelial Ovarian, Primary Peritoneal or Fallopian Tube Carcinoma using Carboplatin and Weekly Paclitaxel | *Antiemetics revised* | *Premedications revised* | ----- |
| **GOOVFPLDC** | First-Line Treatment of Epithelial Ovarian Cancer using Doxorubicin Pegylated Liposomal and Carboplatin | *Premedications revised* | *Premedications revised* | ----- |
| **GOOVIPPC** | Primary Treatment of Stage III Less Than or Equal to 1 cm Visible Residual Invasive Epithelial Ovarian Cancer or Stage I Grade 3 or Stage II Grade 3 Papillary Serous Ovarian Cancer using Intravenous and Intraperitoneal Paclitaxel and Intraperitoneal Carboplatin | *Contact Physician and antiemetics revised* | *Premedications revised* | ----- |
| **GOOVPLDC** | Treatment of Epithelial Ovarian Cancer Relapsing after Primary Treatment using Doxorubicin Pegylated Liposomal and Carboplatin | *Contact Physician and Premedications revised* | *Premedications revised* | ----- |
| **GOSCPE** | Treatment of Small Cell Gynecologic Cancer with Cisplatin and Etoposide | *Premedications revised* | *Premedications revised* | ----- |
| **GOSCPERT** | Treatment of Small Cell Gynecologic Cancer using Cisplatin and Etoposide with Radiation Therapy | *Premedications revised* | *Premedications revised* | ----- |
| **GU \| Genitourinary** | | | | |
| **GUAVPEM** | Treatment of Locally Advanced or Metastatic Urothelial Carcinoma using Pembrolizumab | *Exclusions updated* | ----- | ----- |
| **GUAVPEM6** | Treatment of Locally Advanced or Metastatic Urothelial Carcinoma using 6-Weekly Pembrolizumab | *Exclusions updated* | ----- | ----- |
| **GUBCG** | Therapy for High- or Intermediate-Risk Non-Muscle Invasive Bladder Cancer using BCG | *BCG brand selection clarified* | ----- | ----- |
| **UGUPOLAP** | Treatment of Metastatic Castration-Resistant Prostate Cancer using Olaparib | *Eligibility clarified* | ----- | ----- |
| **GUSUNI** | Palliative Therapy for Renal Cell Carcinoma using Sunitinib | *Tests clarified* | ----- | ----- |
| **LK\| Leukemia** | | | | |
| **ULKAMLAVEN** | Therapy of Acute Myeloid Leukemia using Azacitidine and Venetoclax | *Eligibility updated* | ----- | ----- |
| **ULKMFRUX** | Treatment of Symptomatic Myelofibrosis with Ruxolitinib | *Starting dose updated* | ----- | ----- |

| REVISED Protocols, PPPOs and Patient Handouts *(revisions in respective columns)* | | | | |
|---|---|---|---|---|
| **Protocol Code** | **Protocol Title** | **Protocol** | **PPPO** | **Handout** |
| **LU \| Lung** | | | | |
| **LUAVALE** | Treatment of ALK-Positive Advanced Non-Small Cell Lung Cancer (NSCLC) with Alectinib | *Exclusions updated* | ----- | ----- |
| **LUAVCER** | Treatment of ALK-Positive Advanced Non-Small Cell Lung Cancer (NSCLC) with Ceritinib | *Eligibility updated* | ----- | ----- |
| **LUAVCRIZ** | Second-Line Treatment of ALK-Positive Advanced Non-Small Cell Lung Cancer (NSCLC) with Crizotinib | *Eligibility updated* | ----- | ----- |
| **LY \| Lymphoma** | | | | |
| **LYNIV** | Treatment of Relapsed or Refractory Hodgkin Lymphoma using Nivolumab | *Eligibility updated* | ----- | ----- |
| **LYNIV4** | Treatment of Relapsed or Refractory Hodgkin Lymphoma using 4-Weekly Nivolumab | *Eligibility updated* | ----- | ----- |
| **LYOBBEND** | Treatment of Rituximab-Refractory Follicular Lymphoma (FL) with Obinutuzumab in Combination with Bendamustine | *Vitals monitoring updated; HBV DNA monitoring revised* | *Vitals monitoring updated* | ----- |
| **MY \| Myeloma** | | | | |
| **UMYBLDF** | Treatment of Previously Untreated Multiple Myeloma and Not Eligible for Stem Cell Transplant using Bortezomib, Lenalidomide and Dexamethasone | *Eligibility and Exclusions clarified; Tests, HBV DNA monitoring and References revised* | *Tests revised* | ----- |
| **MYBORMTN** | Maintenance Therapy of Multiple Myeloma using Bortezomib for Patients with the High-Risk Chromosome Abnormality | *Eligibility and Exclusions clarified; Tests and HBV DNA monitoring revised* | *Tests revised* | ----- |
| **MYBORPRE** | Treatment of Multiple Myeloma using Bortezomib, Dexamethasone with or without Cyclophosphamide as Induction Pre-Stem Cell Transplant | *Eligibility and Exclusions clarified; Tests and HBV DNA monitoring revised* | *Tests revised* | ----- |
| **MYBORREL** | Treatment of Relapsed Multiple Myeloma using Bortezomib, Dexamethasone with or without Cyclophosphamide | *Eligibility and Exclusions clarified; Tests and HBV DNA monitoring revised* | *Tests revised* | ----- |
| **UMYCARDEX** | Therapy of Multiple Myeloma using Carfilzomib and Dexamethasone with or without Cyclophosphamide | *Eligibility and Exclusions clarified; Tests and HBV DNA monitoring revised* | *Tests revised* | ----- |
| **UMYCARLD** | Therapy of Multiple Myeloma using Carfilzomib, Lenalidomide with Dexamethasone | *Eligibility and Exclusions clarified; Tests and HBV DNA monitoring revised* | *Tests revised* | ----- |

| REVISED Protocols, PPPOs and Patient Handouts *(revisions in respective columns)* | | | | |
|---|---|---|---|---|
| **Protocol Code** | **Protocol Title** | **Protocol** | **PPPO** | **Handout** |
| **UMYDARBD** | Treatment of Relapsed and Refractory Multiple Myeloma with Daratumumab in Combination with Bortezomib and Dexamethasone with or without Cyclophosphamide | *Eligibility updated; Tests and HBV DNA monitoring revised; vitals monitoring updated* | *Tests revised; vitals monitoring updated*<br>**Cycle 1 PPPO**<br>**Cycle 2+ PPPO** | ----- |
| **UMYDARLD** | Treatment of Relapsed and Refractory Multiple Myeloma with Daratumumab in Combination with Lenalidomide and Dexamethasone | *Eligibility and Exclusions updated; Tests and HBV DNA monitoring revised; vitals monitoring updated* | *Tests revised; vitals monitoring updated*<br>**Cycle 1 PPPO**<br>**Cycle 2+ PPPO** | ----- |
| **UMYLDF** | Treatment of Previously Untreated Multiple Myeloma and Not Eligible for Stem Cell Transplant using Lenalidomide with Low-Dose Dexamethasone | *Eligibility and Exclusions clarified; cyclophosphamide added; Tests, HBV DNA monitoring and References revised; contacts updated* | *Cyclophosphamide added; Tests revised* | ----- |
| **UMYLDREL** | Therapy of Relapsed Multiple Myeloma using Lenalidomide with Dexamethasone | *Eligibility and Exclusions clarified; cyclophosphamide added; Tests, HBV DNA monitoring and platelet cut-off revised; contacts updated* | **PPPO**: *Pre-chemotherapy metrics revised; cyclophosphamide added; Tests revised*<br>**Handout**: *Institution name and logo updated; cyclophosphamide added* | |
| **UMYLENMTN** | Maintenance Therapy of Multiple Myeloma using Lenalidomide | *Eligibility and Exclusions clarified; Tests and HBV DNA monitoring revised* | *Tests revised* | ----- |
| **MYMP** | Treatment of Multiple Myeloma using Melphalan and Prednisone | *Tests and HBV DNA monitoring revised* | *Tests revised* | ----- |
| **MYMPBOR** | Treatment of Multiple Myeloma using Melphalan, Prednisone and Weekly Bortezomib with the Option of Substituting Cyclophosphamide for Melphalan | *Eligibility and Exclusions clarified; Tests and HBV DNA monitoring revised* | *Tests revised* | ----- |
| **UMYPOMDEX** | Therapy of Multiple Myeloma using Pomalidomide with Dexamethasone | *Eligibility and Exclusions clarified; cyclophosphamide added; Tests and HBV DNA monitoring revised* | *Cyclophosphamide added; Tests revised* | ----- |
| **SM \| Skin and Melanoma** | | | | |
| **SMMCCAVE** | Second-Line Treatment of Recurrent or Metastatic Merkel Cell Carcinoma using Avelumab | ----- | *Hypersensitivity banner added* | ----- |

## Resources and Contact Information

| Resource | Phone | Email / Toll Free / Fax |
|---|---|---|
| Systemic Therapy Update: www.bccancer.bc.ca/health-professionals/clinical-resources/systemic-therapy/systemic-therapy-update | | |
| Systemic Therapy Update Editor | 604-877-6000 x 672649 | bulletin@bccancer.bc.ca |
| Oncology Drug Information<br>Cancer Drug Manual Editor<br>Pharmacy Oncology Certification<br>Nurse Educators | 604-877-6275<br>250-519-5500 x 693742<br>250-712-3900 x 686820<br>604-877-6000 x 672638 | druginfo@bccancer.bc.ca<br>nbadry@bccancer.bc.ca<br>rxchemocert@bccancer.bc.ca<br>nursinged@bccancer.bc.ca |
| CAP – Compassionate Access Program | 604-877-6277 | cap_bcca@bccancer.bc.ca fax 604-708-2026 |
| OSCAR – Online System for Cancer Drugs Adjudication and Reimbursement | 888-355-0355 | oscar@bccancer.bc.ca fax 604-708-2051 |
| Manufacturer Patient Assistance Programs: http://www.bccancer.bc.ca/mpap | | |
| Library/Cancer Information | 604-675-8003 | requests@bccancer.bc.ca toll free 888-675-8001 x 8003 |
| Library Document Delivery | 604-675-8002 | requests@bccancer.bc.ca |
| Pharmacy Professional Practice<br>Professional Practice, Nursing<br>Provincial Systemic Therapy | 604-877-6000 x 672247<br>604-877-6000 x 672623<br>604-877-6000 x 672247 | mlin@bccancer.bc.ca<br>BCCancerPPNAdmin@ehcnet.phsa.ca<br>mlin@bccancer.bc.ca |
| BC Cancer – Abbotsford<br>BC Cancer – Kelowna<br>BC Cancer – Prince George<br>BC Cancer – Surrey<br>BC Cancer – Vancouver<br>BC Cancer – Victoria | 604-851-4710<br>250-712-3900<br>250-645-7300<br>604-930-2098<br>604-877-6000<br>250-519-5500 | toll free 877-547-3777<br>toll free 888-563-7773<br>toll free 855-775-7300<br>toll free 800-523-2885<br>toll free 800-663-3333<br>toll free 800-670-3322 |
| Community Oncology Network (CON) sites: To update your contact information, please contact: bulletin@bccancer.bc.ca | | |

## Editorial Review Board