

# Systemic Therapy Update

Volume 24 Issue 4 April 2021

## For Health Professionals Who Care for Cancer Patients

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#### Cancer Drug Manual<sup>©</sup>

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**Resources and Contact Information** 

### Editor's Choice

#### **New Programs**

The BC Cancer Provincial Systemic Therapy Program has approved the following new treatment programs effective 01 April 2021. The full details of these programs are found on the BC Cancer website in the Chemotherapy Protocols section.

#### Gastrointestinal

Capecitabine for Adjuvant Therapy of Biliary Cancer (GIBAJCAP) — The BC Cancer Gastrointestinal Tumour Group is implementing adjuvant capecitabine in patients with completely resected biliary and gallbladder cancers. This is the first adjuvant therapy to be adopted as the standard of care in this patient population, despite the high risk of recurrence and poor overall survival after resection. Capecitabine 1000 mg/m² twice daily for 14 days out of a 21-day cycle is the recommended starting dosage.

In the phase III BILCAP trial, patients with resected biliary tract cancer received 8 cycles of capecitabine or placebo.<sup>1</sup> Median overall survival was longer in the capecitabine treatment group (51 months vs. 36 months, HR 0.81, CI 0.63-1.04 by intention-to-treat; 53 months vs. 36 months, HR 0.75, CI 0.58-0.97, per protocol). Adverse events were manageable and as expected for capecitabine.

### Editor's Choice

#### **New Programs**

#### Lymphoma

High-Dose Methotrexate for CNS Prophylaxis in Diffuse Large B-Cell Lymphoma (LYHDMTXPRO) — The BC Cancer Lymphoma and Myeloma Tumour Group is implementing a new high-dose methotrexate protocol for patients with diffuse large B-cell lymphoma requiring central nervous system (CNS) prophylaxis.<sup>2,3</sup> This protocol is specifically for patients with a high risk of CNS involvement who would benefit from prophylactic high-dose methotrexate, but who are not being treated with LYCHOPRMTX. Both protocols include 4 cycles of methotrexate 3.5 g/m²; however, frequency of administration for methotrexate is every 2 weeks in LYHDMTXPRO.

#### References

- 1. Primrose J, Fox R, Palmer D, et al. Capecitabine compared with observation in resected biliary tract cancer (BILCAP): a randomized, controlled, multicenter, phase 3 study. *Lancet Oncol* 2019;20:663-673. https://doi.org/10.1016/S1470-2045(18)30915-X
- Abramson JS, Hellmann M, Barnes JA, et al. Intravenous methotrexate as central nervous system (CNS) prophylaxis is associated with a low risk of CNS recurrence in high-risk patients with diffuse large B-cell lymphoma. Cancer 2010;116:4283-4290. https://doi.org/10.1002/cncr.25278
- 3. Cheah CY, Herbert KE, O'Rourke K, et al. A multicentre retrospective comparison of central nervous system prophylaxis strategies among patients with high-risk diffuse large B-cell lymphoma. *Br J Cancer* 2014;111:1072-1079. https://doi.org/10.1038/bjc.2014.405

### **Drug Update**

#### Interferon Alfa-2b Discontinuation

At BC Cancer, interferon alfa-2b is used in the intravesical treatment of bladder cancer in combination with BCG (GUBCGIFN) and in the intraocular treatment of ocular malignancies. Based on an evaluation of clinical use, Merck has made the decision to discontinue all strengths of interferon alfa-2b injection (INTRON A®) globally. There is no alternate supplier. Inventory will be available for distribution until supply has been depleted or has expired. Merck anticipates that supply will be available in Canada until June 2021.

BC Cancer Centres and Community Oncology Network (CON) sites have variable supplies remaining for the different interferon alfa-2b strengths. As such, prescribers should confirm with their pharmacy department regarding available supply and expiry date prior to prescribing treatment. Once supply is no longer available, patients will need to be switched to alternative treatment options as follows:

Protocols	Treatment Alternatives
Genitourinary	
GUBCGIFN *	GUBGEM or GUBMITO protocols
Ocular	
OCIFN *	Consult with Ocular Tumour Group Lead (Dr C. Paton)
NOS (Not Othe	erwise Specified) Protocols
NOS	For LKNOS, LYNOS, MYNOS or SMNOS protocols, consult respective Tumour Group

<sup>\*</sup> Protocols to 'retire' after interferon alfa-2b discontinuation and supplies have been depleted

Adapted from BC Cancer Briefing Note 30 March 2021

## **Provincial Systemic Therapy Program**

#### Revised Policy | III-10: Systemic Therapy Treatment Delivery Process

The BC Cancer Provincial Systemic Therapy Program has updated **Policy III-10: Systemic Therapy Treatment Delivery Process** effective 01 April 2021. All Systemic Therapy policies are located on the Shared Health Organizations Portal (SHOP) BC Cancer page.

#### Why are changes being made to Policy III-10?

Occasionally, doctors may prescribe open-ended orders for supportive care medications on doctor's order forms, which are separate from the cancer treatment Provincial Pre-Printed Orders (PPPOs). Such open-ended orders (e.g., *diphenhydramine 50 mg and hydrocortisone 100 mg IV with every treatment*) are subject to misinterpretation. There is a request to add language to Policy III-10 to provide guidance on how to write clear supplemental supportive care medication orders.

#### How can open-ended supportive care medication orders be misinterpreted?

There is potential for misinterpretation of open-ended supportive care medication orders as standing orders. Standing orders are deemed unsafe and are not approved for use at BC Cancer. Policy III-10: Systemic Therapy Treatment Delivery Process, the BC College of Nurses and Midwives position statement and the <u>Clinical Systems Transformation (CST) Orders Management Policy</u> do not permit standing orders.

# In the current paper chart system at BC Cancer, where can one write supportive care orders related to cancer treatments?

- **Preferred:** On the associated cancer treatment PPPO; the ongoing need for such orders should be assessed with each treatment cycle
- If written on a doctor's order form, the following must be specified:
  - associated PPPO or cancer treatment drug
  - o timing/duration (e.g., specific cycle number or number of cycles)
  - reassessment considerations
- Each discipline should establish a process to verify that applicable supplemental supportive care medication orders are carried over to next cycle

#### What are the changes to Policy III-10?

Section	Change			
2.2 Prescription Requirements Second bullet	<ul> <li>Removed the BC Cancer Medication Order Requirements Policy</li> <li>Added the CST Orders Management Policy</li> </ul>			
2.2 Prescription Requirements  Third bullet	Stated that unclear or incomplete orders (i.e., standing orders) are unacceptable			
<b>2.2 Prescription Requirements</b> Page 5	Added: "Orders must be patient-specific, with clear instructions for dose, treatment duration/number of cycles, clinical context and reassessment considerations" to clarify orders for supportive care treatments			
3.0 Related Documents	<ul> <li>Removed the BC Cancer Medication Order Requirements Policy</li> <li>Added the CST Orders Management Policy</li> </ul>			
4.0 Definitions	Added definition of "standing orders"			

## **Drug Shortages**

The following are updates of drug supply shortages in BC. Full details about new, updated or resolved drug shortages, including recommended treatment alternatives, are found in the *Briefing Notes* and email communications previously circulated to BC Cancer and the Community Oncology Network (CON).

#### Resolved

#### Leuprolide

(Adapted from e-mail communication 15 March 2021)

Leuprolide (LUPRON DEPOT®) 30 mg (4-month) injection is now available. If switching a patient back to this formulation, the next injection should correlate with the duration of action of the LHRH agonist that the patient received most recently. For example: if a patient most recently received an injection of 22.5 mg (3-month) leuprolide (LUPRON DEPOT®), upon switching, the patient should receive the 30 mg (4-month) leuprolide (LUPRON DEPOT®) injection 3 months after their last injection.

## Cancer Drug Manual<sup>©</sup>

All BC Cancer Drug Manual<sup>©</sup> documents can be accessed from the <u>Cancer Drug Manual</u><sup>©</sup> home page on the BC Cancer website.

#### **New Documents**

Note that the following drugs are <u>not</u> BC Cancer Benefit Drugs and require application to the BC Cancer Compassionate Access Program (CAP). The corresponding Interim Monographs and Patient Handout are made available for reference only.

The **Acalabrutinib Interim Monograph** and **Patient Handout** have been developed with expert review provided by Dr. Alina Gerrie (hematologist) and Louisa Pang (clinical pharmacist) of the BC Cancer Lymphoma and Myeloma Tumour Group. Acalabrutinib is an orally administered highly-selective inhibitor of Bruton's tyrosine kinase, used in the treatment of chronic lymphocytic leukemia and mantle cell lymphoma. The usual dose is 100 mg twice daily, given continuously.

Highlights from these documents include:

- fatigue, diarrhea, musculoskeletal pain and headache are frequently reported side effects
- serious and fatal bacterial, viral or fungal infections, including opportunistic infections, have been reported
- serious hemorrhagic events may occur; patients receiving concomitant antithrombotic agents may be at increased risk
- temporary lymphocytosis may occur upon treatment initiation; median onset is one week

Acalabrutinib has been added to the Auxiliary Label List and has been evaluated for the BC Cancer Hazardous Drug List.

## Cancer Drug Manual<sup>©</sup>

The **Mogamulizumab Interim Monograph** has been developed. **Mogamulizumab** is a first-in-class defucosylated, humanized  $IgG_1$   $\kappa$  monoclonal antibody targeting the C-C chemokine receptor 4 (CCR4). CCR4 is involved in cell trafficking of lymphocytes to various organs, including the skin, and is consistently expressed on the surface of tumour cells in T-cell malignancies. Mogamulizumab is used in the treatment of cutaneous T-cell lymphoma. Mogamulizumab is administered in 4-week cycles; usual dosing is 1 mg/kg IV weekly in the first cycle, followed by 1 mg/kg on days 1 and 15 for all subsequent cycles.

Highlights from this document include:

- consider premedication with diphenhydramine and acetaminophen for the first infusion in all patients
- serious infections are common and may be life-threatening
- patients with pre-existing autoimmune disease may experience a worsening of their condition during treatment
- hepatitis B virus reactivation has been reported

Mogamulizumab has been added to the Chemotherapy Preparation and Stability Chart and has been evaluated for the BC Cancer Hazardous Drug List.

The Sacituzumab Govitecan Interim Monograph has been developed. Sacituzumab govitecan is an antibody-drug conjugate comprised of a humanized  $IgG_1$   $\kappa$  monoclonal antibody linked to SN-38, a small molecule topoisomerase inhibitor (SN-38 is the active metabolite of irinotecan). Sacituzumab govitecan is an inhibitor of trophoblast cell-surface antigen 2 (TROP-2). As both a gene and a protein, TROP-2 is overexpressed in many solid epithelial cancers, and is associated with regulating cancer cell proliferation, migration, invasion and metastasis. Sacituzumab govitecan is used in the treatment of breast cancer. Usual dosing is 10 mg/kg IV on days 1 and 8 of a 3-week cycle.

Highlights from this document include:

- premedication and close observation are recommended to manage hypersensitivity reactions occurring within 24 hours of treatment
- premedication with atropine may be required to prevent an excessive cholinergic response
- severe neutropenia and febrile neutropenia are reported; patients who are homozygous for the UGUT1A1\*28 allele are at increased risk of neutropenia and other adverse reactions
- severe diarrhea is reported and can be managed with prompt use of loperamide

Sacituzumab govitecan has been added to the Chemotherapy Preparation and Stability Chart and has been evaluated for the BC Cancer Hazardous Drug List.

#### **Revised Documents**

Highlights of key changes are listed below:

#### **Chemotherapy Preparation and Stability Chart**

Nomenclature for in-line filters has been standardized to the 0.2 micron filter size

## Addendum | Benefit Status Amendment

### Trifluridine-Tipiracil | GIGAVTRIFT → UGIGAVTRFT

A new **trifluridine-tipiracil** treatment program – for third-line treatment of advanced gastroesophageal carcinoma – was announced in the <u>March 2021</u> issue of the Systemic Therapy Update. This program should be listed as a **Restricted Benefit** with a corresponding **U** protocol code, and not as a Class I Benefit as initially listed. The current BC Cancer <u>Benefit Drug List</u> specifies the amended protocol code, <u>UGIGAVTRFT</u>. This treatment requires BC Cancer Compassionate Access Program (CAP) approval for all patients. Revisions to this treatment program are outlined in the *Benefit Drug List* and *Revised Protocols, PPPOs and Patient Handouts* tables.

## Benefit Drug List

#### **New Programs**

The following new treatment program has been added to the BC Cancer <u>Benefit Drug List</u> effective 01 April 2021:

Protocol Title	Protocol Code	Benefit Status
Adjuvant Therapy of Biliary Cancer using <b>Capecitabine</b>	GIBAJCAP	Class I
Central Nervous System Prophylaxis with <b>High-Dose Methotrexate</b> in Diffuse Large B-Cell Lymphoma	LYHDMTXPRO	Class I

## **Revised Programs**

The following treatment program has been revised on the **Benefit Drug List** effective 01 April 2021:

Protocol Title	Protocol Code	Benefit Status
Third-Line Therapy for Advanced Gastroesophageal Carcinoma using <b>Trifluridine- Tipiracil</b>	UGIGAVTRFT	Restricted See Addendum

## 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 approval are prefixed with the letter **U**.

NEW Proto	<b>NEW Protocols, PPPOs and Patient Handouts</b> (new documents checked ☑)				
Protocol Code	Protocol Title	Protocol	PPPO	Handout	
GIBAJCAP	Adjuvant Therapy of Biliary Cancer using Capecitabine			$\overline{\checkmark}$	
LYHDMTXPRO	Central Nervous System Prophylaxis with High-Dose Methotrexate in Diffuse Large B-Cell Lymphoma		✓ Inpatient PPPO		

REVISED P	<b>REVISED Protocols, PPPOs and Patient Handouts</b> (revisions in respective columns)			
Protocol Code	Protocol Title	Protocol	PPPO	Handout
BR   Breast				
BRAJAC	Adjuvant Therapy for Breast Cancer using Doxorubicin and Cyclophosphamide		Antiemetics revised	
BRAJACT	Neoadjuvant or Adjuvant Therapy for Breast Cancer using Doxorubicin and Cyclophosphamide Followed by Paclitaxel		Pretreatment metrics clarified; antiemetics revised	
BRAJACTG	Neoadjuvant or Adjuvant Therapy for Breast Cancer using Dose-Dense Therapy: Doxorubicin and Cyclophosphamide Followed by Paclitaxel		Antiemetics revised	
BRAJACTT	Neoadjuvant or Adjuvant Therapy for Breast Cancer using Doxorubicin and Cyclophosphamide Followed by Paclitaxel and Trastuzumab		Antiemetics revised	
BRAJACTTG	Neoadjuvant or Adjuvant Therapy for Breast Cancer using Dose-Dense Therapy: Doxorubicin and Cyclophosphamide Followed by Paclitaxel and Trastuzumab		Antiemetics revised	
BRAJACTW	Neoadjuvant or Adjuvant Therapy for Early Breast Cancer using Doxorubicin and Cyclophosphamide Followed by Weekly Paclitaxel		Antiemetics revised	
BRAJDAC	Neoadjuvant or Adjuvant Therapy for Breast Cancer using Cyclophosphamide, Doxorubicin and Docetaxel		Antiemetics revised	
BRAJFEC	Adjuvant Therapy for Breast Cancer using Fluorouracil, Epirubicin and Cyclophosphamide		Antiemetics revised	

Protocol Code	Protocol Title	Protocol	PPPO	Handout
BRAJFECD	Neoadjuvant or Adjuvant Therapy for Breast Cancer using Fluorouracil, Epirubicin, Cyclophosphamide and Docetaxel		Antiemetics revised	
BRAJFECDT	Neoadjuvant or Adjuvant Therapy for Breast Cancer using Fluorouracil, Epirubicin and Cyclophosphamide Followed by Docetaxel and Trastuzumab		Antiemetics revised	
BRAVAC	Palliative Therapy for Metastatic Breast Cancer using Doxorubicin and Cyclophosphamide		Antiemetics revised	
BRAVERIB	Palliative Therapy for Metastatic Breast Cancer using Eribulin		Antiemetics revised	
BRAVGEM	Palliative Therapy for Metastatic Breast Cancer using Gemcitabine		Antiemetics revised	
BRAVGEMP	Palliative Therapy for Metastatic Breast Cancer using Cisplatin and Gemcitabine		Antiemetics revised	
UBRAVKAD	Palliative Therapy for Metastatic Breast Cancer using Trastuzumab Emtansine (KADCYLA)		Antiemetics revised; filter size clarified; tests clarified	
BRAVNAV	Palliative Therapy for Metastatic Breast Cancer using Vinorelbine		Institution name and logo updated; antiemetics revised	
UBRAVRBFLV	Therapy of Advanced Breast Cancer using Ribociclib and Fulvestrant with or without LHRH Agonist	Fulvestrant treatment day clarified (for cycle 2 onward)	Fulvestrant treatment day clarified (for cycle 2 onward)	
BRAVTRVIN	Palliative Therapy for Metastatic Breast Cancer using Trastuzumab and Vinorelbine		Antiemetics revised	
BRLAACD	Treatment of Locally Advanced Breast Cancer using Doxorubicin and Cyclophosphamide Followed by Docetaxel		Pretreatment metrics clarified; antiemetics revised	
BRLAACDT	Treatment of Locally Advanced Breast Cancer using Doxorubicin and Cyclophosphamide Followed by Docetaxel and Trastuzumab		Pretreatment metrics clarified; antiemetics revised	
BRLACTWAC	Neoadjuvant Therapy for Triple-Negative Breast Cancer using Carboplatin and Weekly Paclitaxel Followed by Doxorubicin and Cyclophosphamide		Antiemetics revised	
BRLATACG	Neoadjuvant Therapy for Breast Cancer using Dose- Dense Therapy: Paclitaxel Followed by Doxorubicin and Cyclophosphamide		Antiemetics revised	

Protocol Code	Protocol Title	Protocol	PPPO	Handout
BRLATWAC	Neoadjuvant Therapy for Locally Advanced Breast Cancer using Weekly Paclitaxel Followed by Doxorubicin and Cyclophosphamide		Antiemetics revised	
CN   Neuro-Or	cology			
CNCCV	Adjuvant Lomustine, Cisplatin and Vincristine in Adult High-Risk Medulloblastoma or other Primitive Neuro- Ectodermal Tumour (PNET)		Tests clarified; antiemetics revised; TALLman lettering updated Inpatient PPPO	
CNMODPCV	Modified PCV Chemotherapy of Brain Tumours using Procarbazine, Lomustine (CCNU) and Vincristine	Tests (day 22) clarified	Tests (day 22) clarified	
GI   Gastrointe	stinal			
GIAAVCT	First-Line Palliative Treatment of Metastatic Anal Squamous Cell Carcinoma using Carboplatin and Weekly Paclitaxel		Filter size updated	
GIAVPG	First-Line Palliative Chemotherapy for Advanced Gallbladder Cancer and Cholangiocarcinoma using Gemcitabine and Cisplatin		Pretreatment metrics clarified; antiemetics revised	
GICART	Curative Combined Modality Therapy for Carcinoma of the Anal Canal using Mitomycin, Capecitabine and Radiation Therapy		Antiemetics revised	
GICPART	Curative Combined Modality Therapy for Carcinoma of the Anal Canal using Cisplatin, Capecitabine and Radiation Therapy		Antiemetics revised	
GIENDO2	Palliative Therapy for Pancreatic Endocrine Tumours using Streptozocin and Doxorubicin		Antiemetics revised	
GIFUART	Curative Combined Modality Therapy for Carcinoma of the Anal Canal using Mitomycin, Infusional Fluorouracil and Radiation Therapy		Antiemetics revised	
GIFUPART	Curative Combined Modality Therapy for Carcinoma of the Anal Canal using Cisplatin, Infusional Fluorouracil and Radiation Therapy		Antiemetics revised	
GIGAVCC	Palliative Therapy of Metastatic or Locally Advanced Anal Squamous Cell Carcinoma using Cisplatin and Capecitabine		Antiemetics revised	
GIGAVCFT	Palliative Treatment of Metastatic or Inoperable, Locally Advanced Gastric or Gastroesophageal Junction Adenocarcinoma using Cisplatin, Infusional Fluorouracil and Trastuzumab		Antiemetics revised	

REVISED P	rotocols, PPPOs and Patient Handouts (	revisions in respe	ective columns)	
Protocol Code	Protocol Title	Protocol	PPPO	Handout
<u>U</u> GIGAVTR <del>I</del> FT	Third-Line Therapy for Advanced Gastroesophageal Carcinoma using Trifluridine-Tipiracil	Protocol Code revised; Eligibility updated; CAP requirement added	Protocol code revised; CAP requirement added; height, weight, BSA and mitte fields added; dispensing quantity and tests (day 15) updated	
GIGECC	Perioperative Treatment of Resectable Adenocarcinoma of the Stomach, Gastroesophageal Junction or Lower ½ Esophagus using Epirubicin, Cisplatin and Capecitabine		Antiemetics revised	
GIPAJGCAP	Adjuvant Chemotherapy for Resected Pancreatic Adenocarcinoma using Capecitabine and Gemcitabine		Antiemetics revised	
GIPAJGEM	Adjuvant Chemotherapy for Pancreatic Adenocarcinoma using Gemcitabine		Institution name and logo updated; antiemetics revised	
GIPAVFFOX	Palliative Combination Chemotherapy for Metastatic Pancreatic Cancer using Oxaliplatin, Fluorouracil and Leucovorin	Precautions updated		
GIPGEM	Palliative Chemotherapy for Pancreatic Adenocarcinoma, Gallbladder Cancer and Cholangiocarcinoma using Gemcitabine		Institution name and logo updated; antiemetics revised	
GIRALT	Palliative Chemotherapy for Metastatic Colorectal Cancer using Raltitrexed in Patients with Previous Fluorouracil Toxicity	Institution name updated; AST replaced with ALT; Dose Modifications clarified	Institution name and logo updated; pretreatment metrics clarified; antiemetics revised; AST replaced with ALT	
UGIPRRT	Peptide Receptor Radionuclide Therapy (PRRT) using <sup>177</sup> Lu-Dotatate (LUTATHERA) for Treatment in Patients with Somatostatin Receptor Positive Midgut Neuroendocrine Tumours	Eligibility updated with radiographic progression on somatostatin analogue		
GO   Gynecolo	gic			
GOBEP	Therapy of Ovarian Germ Cell Cancer using Bleomycin, Etoposide and Cisplatin		Antiemetics revised; hydrocortisone infusion time updated	
GOCISP	Alternative Treatment of Gynecological Malignancies using Cisplatin and Paclitaxel		Antiemetics revised	
GOCISPBEV	Alternative Treatment of Gynecological Malignancies using Bevacizumab, Cisplatin and Paclitaxel		Antiemetics revised	

REVISED Protocols, PPPOs and Patient Handouts (revisions in respective columns)				
Protocol Code	Protocol Title	Protocol	PPPO	Handout
GOCXAJCAT	Primary Adjuvant Treatment of Adenocarcinoma/ Adenosquamous Cancer of the Cervix with Carboplatin and Paclitaxel Preceding or Following Irradiation with or without Cisplatin	Tests clarified; Premedications revised	Premedications revised; AST removed	
GOEP	Therapy of Dysgerminomatous Ovarian Germ Cell Cancer using Cisplatin and Etoposide		Antiemetics revised	
GOOVBEVG	Treatment of Platinum-Resistant Epithelial Ovarian Cancer with Bevacizumab and Gemcitabine		Antiemetics revised; line flushes removed	
GOOVCIS	Therapy for Invasive Epithelial Ovarian Cancer using Cisplatin		Antiemetics revised	
GOOVGEM	Treatment of Relapsed/Progressing Epithelial Ovarian, Primary Peritoneal, or Fallopian Tube Carcinoma using Gemcitabine		Antiemetics revised	
GOTDLRA	Therapy for Low-Risk Gestational Trophoblastic Cancer using Dactinomycin		Hypersensitivity banner removed	
GU   Genitouri	nary			
GUAJPG	Adjuvant Therapy for Urothelial Carcinoma using Cisplatin and Gemcitabine		Antiemetics revised	
GUAVPG	Palliative Therapy for Urothelial Carcinoma using Cisplatin and Gemcitabine		Antiemetics revised	
GUBEP	Curative Therapy for Germ Cell Cancer using Bleomycin, Etoposide and Cisplatin		Antiemetics revised	
GUEDPM	Treatment of Metastatic Adrenocortical Cancer with Etoposide, Doxorubicin, Cisplatin and Mitotane		Antiemetics revised; mitotane titration clarified	
GUEP	Etoposide-Cisplatin Protocol for Germ Cell Cancers		Antiemetics revised	
GUEVER	Therapy for Advanced Renal Cancer using Everolimus		Everolimus dose level revised	
GUMITO	Treatment of Adrenal Cortical Cancer with Mitotane		Mitotane titration clarified	
GUMVAC	Therapy for Transitional Cell Cancers of the Urothelium using Methotrexate, Vinblastine, Doxorubicin and Cisplatin		Antiemetics revised; AST removed	
GUNAJPG	Neoadjuvant Therapy for Urothelial Carcinoma using Cisplatin and Gemcitabine		Antiemetics revised	
UGUPABI	Palliative Therapy for Metastatic Castration-Resistant Prostate Cancer using Abiraterone and Prednisone		Prednisone dosing options reformatted	

REVISED Protocols, PPPOs and Patient Handouts (revisions in respective columns)				
Protocol Code	Protocol Title	Protocol	PPPO	Handout
GUPMX	Palliative Therapy for Hormone-Refractory Prostate Cancer using Mitoxantrone and Prednisone		Institutional name and logo updated; antiemetics revised	
GUPNSAA	Non-Steroidal Treatment of Prostate Cancer		Bicalutamide and flutamide options reformatted	
HN   Head and	Neck			
HNAVFUP	Treatment of Advanced Squamous Cell Carcinoma of the Head and Neck Cancer using Fluorouracil and Platinum		Antiemetics revised	
HNAVM	Treatment of Head and Neck Cancer using Methotrexate as Standard Therapy	Institution name, TALLman lettering, and treatment cycle length revised		
UHNAVNIV	Palliative Therapy for Unresectable, Platinum- Refractory, Recurrent or Metastatic Squamous Cell Cancer of the Head and Neck using Nivolumab	Eligibility clarified with "CAP approval not required to switch between UHNAVNIV and UHNAVNIV4"		
UHNAVNIV4	Palliative Therapy for Unresectable, Platinum- Refractory, Recurrent or Metastatic Squamous Cell Cancer of the Head and Neck using 4-Weekly Nivolumab			
HNAVP	Palliative Chemotherapy for Advanced Head and Neck Squamous Cell Carcinoma with Weekly Cisplatin		Institutional name and logo updated; pretreatment metrics clarified; antiemetics revised	
HNAVPC	Treatment for Unresectable, Locoregionally Recurrent or Metastatic Squamous Cell Carcinoma of the Head and Neck using Paclitaxel and Cisplatin or Carboplatin		Antiemetics revised	
HNAVPD	Treatment of Recurrent or Metastatic Squamous Cell Carcinoma of the Head and Neck with Platinum and Docetaxel		Antiemetics revised; tests clarified	
HNLADCF	Treatment of Locally Advanced Squamous Cell Carcinoma of the Head and Neck with Docetaxel, Cisplatin and Infusional Fluorouracil		CAP statement removed; antiemetics revised; AST removed	
HNLAPRT	Combined Chemotherapy Cisplatin and Radiation Treatment for Locally Advanced Squamous Cell Carcinoma of the Head and Neck	Tests clarified; prochlorperazine route updated	Antiemetics revised	
HNNAVFUP	Advanced Nasopharyngeal Cancer of the Head and Neck using Platinum and Fluorouracil		Antiemetics revised	

Protocol Code	Protocol Title	Protocol	PPPO	Handout
HNNAVGEM	Treatment of Loco-Regionally Recurrent/Metastatic Nasopharyngeal Cancer Not Amenable for Local Curative Therapy with Gemcitabine		Institutional name and logo updated; antiemetics revised	
HNNAVP	Palliative Chemotherapy for Advanced Head and Neck Nasopharyngeal Carcinoma with Weekly Cisplatin		Institutional name and logo updated; pretreatment metrics clarified; antiemetics revised	
HNNAVPG	Treatment of Locoregionally Recurrent and/or Metastatic Nasopharyngeal Cancer with Platinum and Gemcitabine		Antiemetics revised	
HNNLAPG	Induction Treatment of Locally Advanced Nasopharyngeal Cancer with Cisplatin and Gemcitabine		Antiemetics revised; AST removed	
HNOTLEN	Therapy for Locally Recurrent or Metastatic, RAI- Refractory Differentiated Thyroid Cancer using Lenvatinib	Treatment starting dose revised		
HNOTVAN	Treatment for Locally Advanced or Metastatic Medullary Thyroid Cancer using Vandetanib		Mitte line revised	
HNSAVFAC	Palliative Therapy for Advanced Salivary Gland Cancers using Cyclophosphamide, Doxorubicin and Fluorouracil		Antiemetics revised	
HNSAVFUP	Treatment of Advanced Head and Neck Cancer using Cisplatin and Fluorouracil		Antiemetics revised	
HNSAVNP	Palliative Treatment of Advanced Salivary Gland Cancers with Cisplatin and Vinorelbine		Pretreatment metrics clarified; antiemetics revised	
HNSAVPAC	Treatment of Advanced Salivary Gland Cancers with Platinum, Doxorubicin and Cyclophosphamide		Antiemetics revised	
LU   Lung				
LUAJNP	Adjuvant Cisplatin and Vinorelbine Following Resection of Non-Small Cell Lung Cancer		Antiemetics revised	
LUAVDC	First-Line Treatment of Advanced Non-Small Cell Lung Cancer (NSCLC) with Cisplatin and Docetaxel		Antiemetics revised	
LUAVPG	Treatment of Advanced Non-Small Cell Lung Cancer (NSCLC) with Platinum and Gemcitabine		Antiemetics revised	
ULUAVPGPMB	First-Line Treatment of Advanced Squamous Non- Small Cell Lung Cancer with Platinum, Gemcitabine and Pembrolizumab		Antiemetics revised	

Protocol Code	Protocol Title	Protocol	PPPO	Handout
LUAVPP	First-Line Treatment of Advanced Non-Small Cell Lung Cancer with Platinum and Pemetrexed		Antiemetics revised	
ULUAVPPPMB	First-Line Treatment of Advanced Non-Squamous Non- Small Cell Lung Cancer with Platinum, Pemetrexed and Pembrolizumab		Antiemetics revised	
LUMMPG	Treatment of Malignant Mesothelioma with Platinum and Gemcitabine		Pretreatment metrics clarified; antiemetics revised	
LUMMPP	Treatment of Malignant Mesothelioma with Platinum and Pemetrexed		Antiemetics revised	
LUOTCAV	Treatment of Thymoma/Thymic Carcinoma with Cyclophosphamide, Doxorubicin and Vincristine (CAV)		Antiemetics revised	
LUOTPAC	Treatment of Thymoma with Platinum, Doxorubicin, and Cyclophosphamide		Antiemetics revised	
LUSCCAV	Treatment of Extensive-Stage Small Cell Lung Cancer (SCLC) with Cyclophosphamide, Doxorubicin and Vincristine (CAV)		Antiemetics revised	
LUSCPI	Second-Line Treatment of Extensive-Stage Small Cell Lung Cancer (SCLC) with Irinotecan with or without Platinum		Antiemetics revised	
LUSCTOP	Second-Line Treatment of Recurrent Small Cell Lung Cancer (SCLC) with Topotecan		Antiemetics revised	
LY   Lymphom	a			
LYBENDR	Treatment of Non-Hodgkin Lymphoma with Bendamustine and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYCHLRR	Treatment of Indolent B-Cell Lymphoma with Chlorambucil and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYCHOPR	Treatment of Lymphoma with Doxorubicin, Cyclophosphamide, Vincristine, Prednisone and Rituximab	Nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYCHOPRMTX	Central Nervous System Prophylaxis with High-Dose Methotrexate, CHOP and Rituximab in Diffuse Large B- Cell Lymphoma	Nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYCHPBV	Treatment of CD30-Positive Peripheral T-Cell Lymphoma (PTCL) with Doxorubicin, Cyclophosphamide, Prednisone (CHP) and Brentuximab Vedotin		Prednisone dose rounding clarified	

<b>Protocol Code</b>	Protocol Title	Protocol	PPPO	Handout
LYCLLBENDR	Treatment of Relapsed/Refractory Chronic Lymphocytic Leukemia or Small Lymphocytic Lymphoma with Bendamustine and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYCLLCHLR	Treatment of Chronic Lymphocytic Leukemia with Chlorambucil and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYCLLCVPR	Treatment of Relapsed Chronic Lymphocytic Leukemia using Cyclophosphamide, Vincristine, Prednisone and Rituximab (CVP-R)	Nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYCLLFBR	Treatment of Previously Untreated Chronic Lymphocytic Leukemia (CLL) with Bendamustine and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYCLLFLUDR	Treatment of Chronic Lymphocytic Leukemia or Prolymphocytic Leukemia with Fludarabine and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYCODOXMR	Treatment of Burkitt's Lymphoma and Leukemia (ALL-L3) with Cyclophosphamide, Vincristine, Doxorubicin, Methotrexate, Leucovorin (CODOX-M) and Rituximab	Nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYCSPA	Cyclosporine A-for Cytopenias Associated with Lymphoproliferative Disorder of Large Granular Lymphocytes	Institution name, protocol title and drug name revised	Drug name revised	
LYCVPR	Treatment of Advanced Indolent Lymphoma using Cyclophosphamide, Vincristine, Prednisone and Rituximab (CVP-R)	Nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYEPOCHR	Treatment of Lymphoma with Dose-Adjusted Etoposide, Doxorubicin, Vincristine, Cyclophosphamide, Prednisone and Rituximab with Intrathecal Methotrexate	Nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab Inpatient PPPO	
LYFCR	Treatment of Chronic Lymphocytic Leukemia (CLL) or Prolymphocytic Leukemia with Fludarabine, Cyclophosphamide and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
ULYFIBRU	Treatment of Previously Untreated Chronic Lymphocytic Leukemia or Small Lymphocytic Lymphoma using Ibrutinib	Eligibility criteria revised	Dispensing quantity clarified; dose rounding instruction removed	

REVISED P	REVISED Protocols, PPPOs and Patient Handouts (revisions in respective columns)			
Protocol Code	Protocol Title	Protocol	PPPO	Handout
LYFLUDR	Treatment of Relapsed Indolent Lymphoma with Fludarabine and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYGDPR	Treatment of Lymphoma with Gemcitabine, Dexamethasone and Platinum with Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYHDMRP	Treatment of Primary Intracerebral Lymphoma with High-Dose Methotrexate and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYIBRU	Treatment of Relapsed/Refractory Chronic Lymphocytic Leukemia or Small Lymphocytic Lymphoma using Ibrutinib		Dispensing quantity clarified; dose rounding instruction removed	
LYIDELAR	Treatment of Relapsed/Refractory Chronic Lymphocytic Leukemia (CLL) or Small Lymphocytic Lymphoma (SLL) using Idelalisib and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab; dispensing quantity options revised	
LYIVACR	Treatment of Burkitt's Lymphoma and Leukemia (ALL-L3) with Ifosfamide, Mesna, Etoposide, Cytarabine (IVAC) and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYMIBRU	Treatment of Relapsed/Refractory Mantle-Cell Lymphoma using Ibrutinib		Dispensing quantity clarified revised; dose rounding instruction removed	
LYRICE	Treatment of Relapsed or Refractory Advanced Stage Aggressive B-Cell Non-Hodgkin's Lymphoma with Ifosfamide, Carboplatin, Etoposide and Rituximab	Nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYRITUX	Treatment of Lymphoma with Single-Agent Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYRMTN	Maintenance Rituximab for Indolent Lymphoma	Nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	
LYVENETOR	Treatment of Relapsed/Refractory Chronic Lymphocytic Leukemia or Small Lymphocytic Lymphoma using Venetoclax and Rituximab	Timing and nomenclature of subcutaneous rituximab	Nomenclature of subcutaneous rituximab	

REVISED Protocols, PPPOs and Patient Handouts (revisions in respective columns)				
Protocol Code	Protocol Title	Protocol	PPPO	Handout
MY   Myeloma				
UMYBLDF	Treatment of Previously Untreated Multiple Myeloma and Not Eligible for Stem Cell Transplant using Bortezomib, Lenalidomide and Dexamethasone		Formatting revised	
MYBORPRE	Treatment of Multiple Myeloma using Bortezomib, Dexamethasone with or without Cyclophosphamide as Induction Pre-Stem Cell Transplant		Cyclophosphamide frequency clarified	
MYBORREL	Treatment of Relapsed Multiple Myeloma using Bortezomib, Dexamethasone with or without Cyclophosphamide		Cyclophosphamide frequency clarified	
UMYDARBD	Treatment of Relapsed and Refractory Multiple Myeloma with Daratumumab in Combination with Bortezomib and Dexamethasone with or without Cyclophosphamide		Steroid regimen clarified Cycle 1 PPPO	
UMYDARLD	Treatment of Relapsed and Refractory Multiple Myeloma with Daratumumab in Combination with Lenalidomide and Dexamethasone		Steroid regimen clarified Cycle 1 PPPO	
MYMPBOR	Treatment of Multiple Myeloma using Melphalan, Prednisone and Weekly Bortezomib with the Option of Substituting Cyclophosphamide for Melphalan	Cyclophosphamide frequency clarified	Bortezomib and cyclophosphamide frequency clarified; prednisone dose rounding clarified	
SA   Sarcoma				
KSLDO	Therapy of Kaposi Sarcoma using Doxorubicin Pegylated Liposomal		Antiemetics revised	
KSVB	Palliative Therapy for Kaposi's Sarcoma using Vinblastine Alternating with Vincristine		Institutional name and logo updated; antiemetics revised; AST removed	
SAAI	Doxorubicin-Ifosfamide-Mesna For Use In Patients with Advanced Soft Tissue Sarcoma	Tests and antiemetics revised	Inpatient PPPO	
SAAI3	3-Day Doxorubicin-Ifosfamide-Mesna for Use in Patients with Advanced Soft Tissue Sarcoma	Tests and antiemetics revised	Inpatient PPPO	
SAAJADIC	Adjuvant Treatment of Patients with Soft Tissue Sarcoma using Doxorubicin and Dacarbazine		Antiemetics revised	
SAAJAP	Adjuvant Therapy for Osteosarcoma using Doxorubicin and Cisplatin	Tests and antiemetics revised	Inpatient PPPO	
SAAVADIC	Treatment of Patients with Soft Tissue Sarcoma using Doxorubicin and Dacarbazine		Antiemetics revised	

REVISED P	rotocols, PPPOs and Patient Handouts (	revisions in respe	ective columns)	
Protocol Code	Protocol Title	Protocol	PPPO	Handout
SAAVAP	Therapy of Advanced Osteosarcoma using Doxorubicin and Cisplatin	Tests and antiemetics revised	Inpatient PPPO	
SAAVI	Ifosfamide for Use in Patients with Advanced Soft Tissue Sarcoma	Tests and antiemetics revised	Inpatient PPPO	
SAAVI3	3-Day Ifosfamide for Use in Patients with Advanced Soft Tissue Sarcoma	Antiemetics revised	Inpatient PPPO	
SAAVIME3	3-Day Etoposide and Ifosfamide-Mesna for Patients with Advanced Soft Tissue or Bony Sarcomas	Tests and antiemetics revised	Inpatient PPPO	
SAAVTC	Treatment of Recurrent and Refractory Neuroblastoma, Ewing's Sarcoma, Osteogenic Sarcoma or Rhabdomyosarcoma with Topotecan and Cyclophosphamide		Antiemetics revised	
SADTIC	High-Dose Single-Agent Dacarbazine (DTIC) for Metastatic Soft Tissue Sarcoma		Antiemetics revised	
SAIME	Etoposide, Ifosfamide-Mesna (SAIME) for Use in Sarcomas		Inpatient PPPO	
SAVAC	Treatment of Sarcomas with Vincristine, Doxorubicin and Cyclophosphamide (SAVAC)		Antiemetics revised	
SAVACM	Treatment of Sarcomas with Pelvic Primaries or Chemotherapy-Induced Hematuria using Vincristine, Doxorubicin, Cyclophosphamide and Mesna	Prochlorperazine route revised	Inpatient PPPO	
SC   Supportive	e Care			
SCMESNA	Mesna Dosage Modification for Hematuria Secondary to Oxazaphosphorines (e.g. Ifosfamide and Cyclophosphamide)		Inpatient PPPOs	
SM   Skin and Melanoma				
SMDTIC	Palliative Therapy for Metastatic Malignant Melanoma using High-Dose Dacarbazine (DTIC)	Institution name updated; dacarbazine dosing units revised from mg/m² to g/m²	Antiemetics revised; dacarbazine dosing units revised from mg/m² to g/m²	
SMPDT	Topical Therapy for Skin Cancer with PDT (Photodynamic Therapy)	Typo corrected (Eligibility)		

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