Systemic Therapy Update



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For Health Professionals Who Care For Cancer Patients

Inside This Issue:

- Editor's Choice Cardiotoxicity Associated with Fluorouracil and Capecitabine
- Cancer Drug Manual <u>New</u>: Bendamustine; Revised: Cetuximab
- Benefit Drug List Revised: UGOTDHR
- List of New and Revised Protocols, Provincial PrePrinted Orders and Patient Handouts Revised:

 UBRAJACTW, GIEFUPRT, GIENACTRT, GIFUFA,
 GIFUINF, UGIYTT, UGOOVDDCAT, GOOVVIN,
 UGOTDHR, HNSAVNP; Precautions on Cardiac
 Toxicities Associated with Fluorouracil and
 Capecitabine: BRAJCAFG, BRAJCAFPO,
 BRAJCEFG, BRAJCMF, BRAJCMFPO, BRAJDTFEC,
 BRAJFEC, BRAJFECD, BRAJFECDT, BRAVCAF,
 BRAVCAP, BRAVCMF, BRAVCMFPO, BRAVDCAP,
- UBRAVLCAP, UBRAVTCAP, BRINFCAF, BRINFCEF, BRINFCEFG, UBRLA2, UBRLACEF, BRLACEFG, GIAJCAPOX, GIAJFFOX, GIAJFL, GIAVCAP, GIAVFL, UGIAVTZCAP, UGICAPIRI, UGICAPOX, GICART, UGICIRB, UGICOXB, GICPART, UGIFIRINOX, GIFUART, GIFUPART, GIGAIRT, UGIGAJCPRT, UGIGAVCCT, UGIGAVCFT, GIGAVECC, GIGAVECF, GIGECC, GIGECF, GIRAJCOX, GIRAJFFOX, GIRCAP, GIRCRT, GIRINFRT, GUFUPRT, HNAVFUFA, HNAVFUP, HNLACAFRT, UHNLADCF, UHNNAVCAP, HNNAVFUFA, HNNAVFUP, HNSAVFAC, HNSAVFUP
- Website Resources and Contact Information

EDITOR'S CHOICE

CARDIOTOXICITY ASSOCIATED WITH FLUOROPYRIMIDINES

Fluoropyrimidines (fluorouracil, capecitabine) are the second most common group of chemotherapy drugs associated with cardiotoxicity. Specially, it may involve coronary vasospasm and many patients would have no pre-existing cardiac conditions. Most clinically significant events involve chest pain with EKG changes which can rarely cause myocardial ischemia or arrhythmias. Patients should be counselled to watch for symptoms of cardiac toxicity and to consult a physician immediately should they develop. Immediate treatment discontinuation is indicated if patients develop cardiac symptoms including signs suggestive of ischemia or cardiac arrhythmia. Patients should also have urgent cardiac assessment.

Generally, re-challenging with either fluorouracil or capecitabine is not recommended after cardiotoxicity as recurrence of symptoms is likely, and they can be severe or even fatal. In these cases, it is strongly advised to consult cardiologists and oncologists with expert knowledge about fluorouracil and capecitabine toxicity. The toxicity should also be noted in the patient's allergy profile.

CANCER DRUG MANUAL

NEW MONOGRAPHS AND PATIENT HANDOUTS

Bendamustine Monograph and Handout have been developed with expert review provided by Dr.
 Kerry Savage (Medical Oncologist, BCCA Lymphoma Tumour Group).

Bendamustine is an alkylating agent related to mechlorethamine and is used in the treatment of relapsed or refractory non-Hodgkin lymphoma (BCCA Protocol ULYBEND) and chronic lymphocytic leukemia. Myelosuppression is a common side effect, including neutropenia, thrombocytopenia and anemia. Common non-hematological toxicities include nausea, vomiting, fatigue, diarrhea, constipation and pyrexia. Other less common but serious side effects include febrile neutropenia, acute renal failure, cardiac failure, hypertensive crisis, hypersensitivity, skin reactions and pulmonary fibrosis. Bendamustine is a local irritant and post-marketing surveillance has reported marked swelling, pain, and erythema at the injection site. Therefore, infusion sites should be monitored carefully to avoid extravasation.

REVISED MONOGRAPHS AND PATIENT HANDOUTS

- Cetuximab Monograph
 - Mechanism of Actions more details added on synergy with radiation therapy
 - Dosage Guidelines timing of cetuximab infusions in relation to radiation therapy clarified. The manufacturer's product monograph states that cetuximab should be given 1 hour before radiation therapy. However, cetuximab has a half-life of 3 to 4 days. Therefore, the Dosage Guidelines section has been revised to state that cetuximab may be given at any time on the day of radiation therapy.

BENEFIT DRUG LIST

REVISED PROGRAMS

The following program change has been made on the Benefit Drug List effective 01 May 2013:

Protocol Title	Protocol Code	New Benefit Status
Therapy for High Risk Gestational Trophoblastic Cancer Using CISplatin, Etoposide, DACTINomycin, Methotrexate and Leucovorin	UGOTDHR	Restricted

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

BC Cancer Agency Protocol Summaries, Provincial Pre-Printed Orders (PPPOs) and Patient Handouts are revised periodically. New, revised or deleted protocols, PPPOs and patient handouts for this month are listed

below. Protocol codes for treatments requiring "Compassionate Access Program" (previously Undesignated Indications Request) approval are prefixed with the letter "**U**".

REVISED PROTOCOLS, PPPOS AND PATIENT HANDOUTS (AFFECTED DOCUMENTS ARE CHECKED):					
CODE	Protocol	PPPO	Patient Handout	Changes	Protocol Title
UBRAJACTW				Minor typos corrected	Adjuvant Therapy for Early Breast Cancer using DOXOrubicin and Cyclophosphamide followed by Weekly PACLitaxel
GIEFUPRT				Cardiac toxicity updated, DPD deficiency added	Combined Modality Curative Therapy for Carcinoma of the Anal Canal using Mitomycin, Fluorouracil and Radiation Therapy
GIENACTRT		Ø		Check box for Class II indication added	Neoadjuvant Treatment of Esophageal and Gastroesophageal Carcinomas Using CARBOplatin, PACLitaxel and Radiation Therapy
GIFUFA				Cardiac toxicity updated, DPD deficiency added	Palliative Therapy for Advanced Colorectal Cancer Using Leucovorin and Fluorouracil
GIFUINF				Cardiac toxicity updated, DPD deficiency added	Palliative Therapy for Metastatic Colorectal Adenocarcinoma Using Fluorouracil Infusional Chemotherapy
UGIYTT	\square			Invoicing procedure updated	Yttrium-90 for Transarterial Radioembolisation (TARE)
UGOOVDDCAT	V			CAP requirement clarified in Eligibility	Primary Treatment of Advanced Epithelial Ovarian, Primary Peritoneal, or Fallopian Tube Carcinoma Using CARBOplatin and Weekly PACLitaxel
GOOVVIN	\square			Eligibility clarified	Treatment of Relapsed/Progressing Epithelial Ovarian, Primary Peritoneal, or Fallopian Tube Carcinoma Using Vinorelbine
UGOTDHR	Ø			CAP requirement added to Eligibility, Protocol code updated, TALLman lettering formatted	Therapy for High Risk Gestational Trophoblastic Cancer
HNSAVNP				Hydration regimen updated	Palliative Treatment of Advanced Salivary Gland Cancers with CISplatin and Vinorelbine

Precautions on cardiac toxicities have been updated for the following fluorouracil- or capecitabine-containing chemotherapy protocols:

CODE	Protocol Title
BRAJCAFG	Adjuvant Therapy for Breast Cancer Using Cyclophosphamide, DOXOrubicin, Fluorouracil and Filgrastim
BRAJCAFPO	Adjuvant Therapy for Breast Cancer using Oral Cyclophosphamide, DOXOrubicin and Fluorouracil

CODE	Protocol Title	
BRAJCEFG	Adjuvant Therapy for Breast Cancer Using Cyclophosphamide, Epirubicin, Fluorouracil and Filgrastim	
BRAJCMF	Adjuvant Therapy for High Risk Breast Cancer Using Cyclophosphamide (IV), Methotrexate and Fluorouracil	
BRAJCMFPO	Adjuvant Therapy for High Risk Breast Cancer Using Cyclophosphamide (Oral), Methotrexate and Fluorouracil	
BRAJDTFEC	Adjuvant Therapy for Breast Cancer Using DOCEtaxel and Trastuzumab, and Fluorouracil, Epirubicin and Cyclophosphamide	
BRAJFEC	Adjuvant Therapy for Breast Cancer Using Fluorouracil, Epirubicin and Cyclophosphamide	
BRAJFECD	Adjuvant Therapy for Breast Cancer Using Fluorouracil, Epirubicin and Cyclophosphamide and DOCEtaxel	
BRAJFECDT	Adjuvant Therapy for Breast Cancer using Fluorouracil, Epirubicin and Cyclophosphamide followed by DOCEtaxel and Trastuzumab	
BRAVCAF	Palliative Therapy for Metastatic Breast Cancer Using Cyclophosphamide, DOXOrubicin and Fluorouracil	
BRAVCAP	Therapy for Metastatic Breast Cancer Using Capecitabine	
BRAVCMF	Palliative Therapy for Advanced Breast Cancer Using Cyclophosphamide, Methotrexate and Fluorouracil	
BRAVCMFPO	Palliative Therapy for Advanced Breast Cancer Using Cyclophosphamide (Oral), Methotrexate and Fluorouracil	
BRAVDCAP	Palliative Therapy for Metastatic Breast Cancer Using DOCEtaxel and Capecitabine	
UBRAVLCAP	Therapy for Metastatic Breast Cancer Using Capecitabine and Lapatinib	
UBRAVTCAP	Palliative Therapy for Metastatic Breast Cancer using Trastuzumab and Capecitabine	
BRINFCAF	Therapy for Inflammatory Breast Cancer Using Cyclophosphamide, DOXOrubicin and Fluorouracil	
BRINFCEF	Therapy for Inflammatory Breast Cancer Using Cyclophosphamide, Epirubicin and Fluorouracil	
BRINFCEFG	Therapy for Inflammatory Breast Cancer Using Cyclophosphamide, Epirubicin, Fluorouracil and Filgrastim	
UBRLA2	Therapy for Locally Advanced Breast Cancer Using Cyclophosphamide, DOXOrubicin and Fluorouracil	
UBRLACEF	Therapy for Locally Advanced Breast Cancer Using Cyclophosphamide, Epirubicin and Fluorouracil	
BRLACEFG	Therapy for Locally Advanced Breast Cancer Using Cyclophosphamide, Epirubicin, Fluorouracil and Filgrastim	
GIAJCAP	Adjuvant Therapy of Colon Cancer Using Capecitabine	
GIAJCAPOX	Adjuvant Combination Chemotherapy for Stage III and Stage IIB Colon Cancer Using Oxaliplatin and Capecitabine	
GIAJFFOX	Adjuvant Combination Chemotherapy for Stage III and Stage IIB Colon Cancer Using Oxaliplatin, 5-Fluorouracil and Folinic Acid	
GIAJFL	Adjuvant Therapy of Colon Cancer Using Fluorouracil Injection and Infusion and Folinic Acid (Leucovorin) Infusion	
GIAVCAP	Palliative Therapy of Advanced Colorectal Cancer Using Capecitabine	
GIAVFL	Palliative Combination Chemotherapy for Metastatic Colorectal Cancer Using Fluorouracil Injection and Infusion and Folinic Acid (Leucovorin) Infusion	
UGIAVTZCAP	Palliative therapy of Metastatic Neuroendocrine Cancer using Temozolomide and Capecitabine	
UGICAPIRI	Palliative Combination Chemotherapy for Metastatic Colorectal Cancer Using Irinotecan and Capecitabine in Patients Unsuitable for GIFOLFIRI	

	Protocol Title
GICAPOX	Palliative Combination Chemotherapy for Metastatic Colorectal Cancer Using Oxaliplatin and Capecitabine
CART	Combined Modality Therapy for Carcinoma of the Anal Canal using Mitomycin, Capecitabine and Radiation Therapy
GICIRB	Palliative Combination Chemotherapy for Metastatic Colorectal Cancer Using Irinotecan, Bevacizumab and Capecitabine
GICOXB	Palliative Combination Chemotherapy for Metastatic Colorectal Cancer Using Oxaliplatin, Bevacizumab and Capecitabine
CPART	Combined Modality Therapy for Carcinoma of the Anal Canal using CISplatin, Capecitabine and Radiation Therapy
GIFIRINOX	Palliative Combination Chemotherapy for Metastatic Pancreatic Adenocarcinoma Using Irinotecan, Oxaliplatin, Fluorouracil and Folinic Acid (Leucovorin)
FUART	Combined Modality Therapy for Locally Advanced Esophageal Cancer Using Fluorouracil and CISplatin
FUPART	Combined Modality Curative Therapy for Carcinoma of the Anal Canal using CISplatin, Infusional Fluorouracil and Radiation Therapy
GAIRT	Combined Modality Adjuvant Therapy for Completely Resected Gastric Adenocarcinoma Using Fluorouracil + Folinic Acid (Leucovorin) and Radiation Therapy
GIGAJCPRT	Adjuvant Chemotherapy of Gastric Cancer patients with Completely Resected Gastric Cancer using CISplatin and Capecitabine and Radiation Therapy
GIGAVCCT	Palliative Treatment of Metastatic or Inoperable, Locally Advanced Gastric or Gastroesophageal Junction Adenocarcinoma using CISplatin, Capecitabine and Trastuzumab
GIGAVCFT	Palliative Treatment of Metastatic or Inoperable, Locally Advanced Gastric or Gastroesophageal Junction Adenocarcinoma using CISplatin, Infusional Fluorouracil and Trastuzumab
GAVECC	Palliative Therapy for Metastatic or Locally Advanced Gastric or Esophagogastric Cancer Using Epirubicin, CISplatin and Capecitabine
GAVECF	Palliative Therapy for Metastatic or Locally Advanced Gastric, Esophagogastric Cancer Using Epirubicin, CISplatin and Infusional 5-Fluorouracil
GECC	Perioperative Treatment of Resectable Adenocarcinoma of the Stomach, Gastroesophageal Junction or Lower 1/3 Esophagus using Epirubicin, CISplatin and Capecitabine
GECF	Perioperative Treatment of Resectable Adenocarcinoma of the Stomach, Gastroesophageal Junction or Lower 1/3 Esophagus using Epirubicin, CISplatin and Infusional Fluorouracil
RAJCOX	Adjuvant Combination Chemotherapy for Stage III Rectal Cancer Using Oxaliplatin and Capecitabine
RAJFFOX	Adjuvant Combination Chemotherapy for Stage III Rectal Cancer Using Oxaliplatin, 5-Fluorouracil and Folinic Acid (Leucovorin)
RCAP	Adjuvant Therapy for Stage II and III Rectal Cancer Previously Treated with Preoperative Radiation Therapy using Capecitabine
RCRT	Combined Modality Adjuvant Therapy for High Risk Rectal Carcinoma Using Capecitabine and Radiation Therapy
RINFRT	Combined Modality Adjuvant Therapy for High Risk Rectal Carcinoma Using Capecitabine, Infusional Fluorouracil and Radiation Therapy
JFUPRT	Combined Modality Therapy for Squamous Cell Cancer of the Genitourinary System Using Fluorouracil and CISplatin with Radiation
NAVFUFA	5-Fluorouracil and Leucovorin for Recurrent Head and Neck Cancer (Squamous Cell Carcinoma)
NAVFUP	Treatment for Advanced Nasopharyngeal Cancer of the Head and Neck using CISplatin and Fluorouracil
NLACAFRT	Combined Chemotherapy (CARBOplatin and Fluorouracil) and Radiation Treatment for Locally Advanced Squamous Cell Carcinoma of the Head and Neck
HNLADCF	Treatment of Locally Advanced Squamous Cell Carcinoma of the Head and Neck with DOCEtaxel, CISplatin and Infusional Fluorouracil
HNNAVCAP	Treatment of Recurrent or Metastatic Nasopharyngeal Cancer with Capecitabine

CODE	Protocol Title
HNNAVFUFA	5-Fluorouracil and Leucovorin for Recurrent Head and Neck Cancer (Nasopharyngeal)
HNNAVFUP	Treatment of Advanced Squamous Cell Carcinoma of the Head and Neck Cancer Using CISplatin and Fluorouracil
HNSAVFAC	Palliative Therapy for Advanced Salivary Gland Cancers Using Cyclophosphamide, DOXOrubicin and Fluorouracil
HNSAVFUP	Treatment of Advanced Head and Neck Cancer Using CISplatin and Fluorouracil

Website Resources and Contact Information			
WEBSITE RESOURCES	www.bccancer.bc.ca		
Systemic Therapy Update	www.bccancer.bc.ca/HPI/ChemotherapyProtocols/stupdate		
Reimbursement & Forms: Benefit Drug List, Class II, Compassionate Access Program	www.bccancer.bc.ca/HPI/ChemotherapyProtocols/Forms		
Cancer Drug Manual	www.bccancer.bc.ca/cdm		
Cancer Management Guidelines	www.bccancer.bc.ca/CaMgmtGuidelines		
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