BRIEFING NOTE: POTENTIAL ETOPOSIDE IV SHORTAGE

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SUMMARY:

There are ongoing supply interruptions of etoposide injectable in Canada.

Teva is the only Canadian supplier of preservative-free etoposide injectable. Teva has released supplies of etoposide, but it is on allocation. BC Cancer centres have received supply. The ongoing supply is not yet secure and it is anticipated that there could be further shortages lasting until December 2019.

Sandoz is the only Canadian supplier of etoposide injectable with preservatives. They do not anticipate supply to be available again until December 2019.

Etoposide phosphate (Etopophos® - Bristol-Myers Squibb), which is not interchangeable with etoposide, may be available only through the Health Canada Special Access Program.

Oral etoposide capsules, which have been available at restricted levels for the past few months, are available and no shortages reported.

RECOMMENDATION:

It is recommended that cancer centres and hospitals continue to conserve etoposide injectable, when appropriate. It is noted that most etoposide containing protocols are curative, with limited recommended alternatives. Alternative protocols where appropriate, are noted in the table below.

In non-curative protocols, the use of oral etoposide is a reasonable alternative. There is no formal dose conversion available, but based on a pharmacokinetic comparison of oral and IV etoposide, and due to variability in absorption, an equivalency of 100 mg/m^2 IV etoposide to 150-200 mg/m^2 oral etoposide has been suggested. Etoposide capsules follow dose-dependent absorption, and therefore doses are divided BID. When used during the etoposide injectable shortage, etoposide capsules will be reimbursed by BC Cancer (Compassionate Access Program approval not required).

ETOPOSIDE IV PROTOCOLS	ALTERNATIVE PROTOCOLS
CN	
CNCARV	Single agent carboplatin (CNCARV without etoposide).
CNETO	Protocol uses oral etoposide
CNTMZETO	Protocol uses oral etoposide
GI	
GIPE	No alternative
GO	
GOBEP	No alternative
GOEP	No alternative
GOOVETO	Single agent options include GOOVTOP, GOOLDOX, GOOVGEM, GOOVVIN, GOOVTAX3, GOOVDOC or GOOVCYCPO. Combination regimens include UGOOVBEVG, UGOOVBEVLD, UGOOVBEVP or UGOOVBEVV.
GOSMCCRT	No alternative

GOTDEMACO	No alternative
GU	
GUBEP	No alternative
GUEDPM	Consult Tumour Group
GUEP	No alternative
GUSCPE	GUAVPG
GUSCPERT	GUAVPG. Consult TG for management during concurrent radiotherapy.
GUVIP2	No alternative
HL	
HLHETCSPA	No alternative
HN	
HNAVPE	HNAVPC
HNNAVPE	HNNAVPC
LU	
LULAPERT	LULACATRT (weekly carboplatin/paclitaxel)
LULAPE2RT	LULACATRT (weekly carboplatin/paclitaxel)
LUOTPE	LUSCCAV
LUOTPERT	No alternative
LUPUPE	Carboplatin/paclitaxel Q3W (as with other unknown primaries). Consult Tumour Group.
LUSCPE	LUSCPI (or LUSCCAV or LUSCTOP)
LUSCPERT	LUSCPI based on: https://www.ncbi.nlm.nih.gov/pubmed/24309370
LUSCPOE	Protocol uses oral etoposide
LY	
LYEPOCHR	Curative. No alternative.
LYIVACR	Curative. No alternative.
LYPALL	Etoposide IV not used. Etoposide PO rarely used. Only an option if fail other therapies and performance status still adequate
ULYRICE	Curative. No alternative.
LYSMILE	Curative. No alternative.
LYVIPDRT	Curative. No alternative.
CHEP-BV (clinical trial)	Clinical trial in PTCL. No alternative.
Pediatric	
All protocols	Consult Oncology at BCCH
SA	
SAALT2W	Curative. No alternative.
SAALT3W	No alternative if regimen used for curative intent.
SAAVIME3	Consult Tumour Group
SAIME	Consult Tumour Group
SM	
SMMCCPE	CAV or LUSCPI For second line, accessing avelumab patient access program may be an option.

FOR FURTHER INFORMATION:

Please contact the Provincial Pharmacy Drug Information Line at 604-877-6000 extension 676275 for more information.

REFERENCES:

1. Etoposide. Revised 1 March 2017. In: BC Cancer Drug Manual®. Badry, Nadine (editor). BC Cancer. Vancouver, BC. Available at http://www.bccancer.bc.ca/.
2. Kroschinsky FP, Friedrichsen K, Mueller J, et al. Pharmacokinetic comparison of oral and intravenous etoposide in patients treated with the CHOEP-regimen for malignant lymphomas. Cancer Chemother Pharmacol 2008; 61:785-790.