BC Cancer Protocol Summary for Treatment of Limited Stage Small Cell Lung Cancer using Platinum and Oral Etoposide with Radiation Therapy

Protocol Code	*LUSCPEPORT*
Tumour Group	*Lung*
Contact Physician	*Dr. Cheryl Ho*

ELIGIBILITY:
Patients must have:
- Small cell lung cancer (SCLC)
  - Limited stage disease
- ECOG performance status 0 to 2
- Suitable candidate for thoracic radiation

Note:
- The intravenous formulation of etoposide should remain the preferred treatment option for the majority of patients as oral etoposide bioavailability is variable.
- For inpatients, use the intravenous formulation (See protocol LUSCPERT).

EXCLUSIONS:
- ECOG performance status 3 or higher

TESTS:
- Baseline: CBC & differential, platelets, creatinine, ALT, alkaline phosphatase, LDH, total bilirubin
- Before each cycle: CBC, differential, platelets, creatinine
- If clinically indicated: bilirubin

PREMEDICATIONS:
- Antiemetic protocol for highly emetogenic chemotherapy (see protocol SCNAUSEA).

TREATMENT:

Drug	Dose	BC Cancer Administration Guideline
CISplatin	75 mg/m^2 on Day 1 only	Prehydrate with NS 1000 mL over 1 hour, then give CISplatin IV in NS 500 mL with potassium chloride 20 mEq, magnesium sulfate 1 g, mannitol 30 g over 1 hour
etoposide*	200 mg/m^2/day on Days 1 to 3	PO

* Etoposide is available as 50 mg capsules. Refer to Oral Etoposide Dispensing Table below.

Oral Etoposide Dispensing Table:

Daily Dose (mg)	Dispense As:	
	Morning Dose (mg)	Evening Dose (mg)
100	100	N/A
150	150	N/A
200	200	N/A
250	150	100
300	150	150
350	200	150
400	200	200
450	250	200
500	250	250
550	300	250
600	300	300

- **Usual plan for radiotherapy to start with the second cycle of chemotherapy, although radiotherapy may be started with later cycles dependent on clinical circumstances**

- **Repeat every 21 days x 4 to 6 cycles**
  - **May be given every 28 days at physician's discretion**

- Prophylactic co-trimoxazole DS one tablet po bid or levoFLOXacin 500 mg po daily x 10 days beginning 7 days post-chemotherapy should be considered for patients judged to be at high risk of neutropenic fever

In cases of CISplatin toxicity or poorly functioning patients or age greater than 75:

Drug	Dose	BC Cancer Administration Guidelines
CARBOplatin	AUC 5 DAY 1 only Dose = AUC x (GFR* +25)	IV in 100 to 250 mL NS over 30 minutes

*GFR preferably from nuclear renogram, if not possible use:

$$GFR = \frac{N \times (140\text{-age in years}) \times wt\ (kg)}{\text{serum creatinine (micromol/L)}} \qquad N = 1.04\ (\text{women}) \text{ or } 1.23\ (\text{men})$$

The estimated GFR calculated using the Cockcroft-Gault equation should be capped at 125 mL/min when it is used to calculate the initial carboplatin dose. When a nuclear renogram is available, this clearance would take precedence.

DOSE MODIFICATIONS:

1. **Hematology:** for etoposide

ANC (X 10^9/L)		Platelets (x 10^9/L)	Dose
greater than or equal to 1.5	and	greater than or equal to 100	100%
1.0 to less than 1.5	or	75 to less than 100	50%
less than 1.0	or	less than 75	**Delay**

2. **Hepatic dysfunction:** for etoposide

Bilirubin (micromol/L)	Dose
less than 25	100%
25 to 50	50%
51 to 85	25%
greater than 85	**Delay**

3. **Renal dysfunction:**

For CISplatin

Calculated Cr Clearance (mL/min)	Dose
greater than or equal to 60	100%
45 to less than 60	80% CISplatin or go to CARBOplatin option
less than 45	Hold CISplatin or delay with additional IV fluids or go to CARBOplatin option

For etoposide

Calculated Cr Clearance (mL/min)	Dose
Greater than or equal to 30	100%
Less than 30	75%*

*Initial dose modification to 75% should be considered if creatinine clearance is less than 30 mL/min. Subsequent dosing should be based on patient tolerance and clinical effect.

PRECAUTIONS:

1. **Hypersensitivity:** Hypersensitivity reactions are very rare with oral etoposide capsules, and have been reported for CISplatin. Refer to BC Cancer Hypersensitivity Guidelines.
2. **Gastrointestinal** side effects occur at a slightly higher incidence with oral etoposide administration compared to IV administration.
3. **Neutropenia**: Fever or other evidence of infection must be assessed promptly and treated aggressively.
4. **Renal Toxicity**: Nephrotoxicity is common with CISplatin. Encourage oral hydration. Avoid nephrotoxic drugs such as aminoglycoside antibiotics.

Contact Dr. Cheryl Ho or tumour group delegate at (604) 930-2098 or 1-800-523-2885 with any problems or questions regarding this treatment program.

REFERENCES:

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6. Evans WK, Radwi A, Tomiak E, et al. Oral etoposide and carboplatin. Effective therapy for elderly patients with small cell lung cancer. Am J Clin Oncol. 1995 Apr;18(2):149-55.
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