B3 Small Cell Lung Cancer Protocols

B3.1 Cisplatin-Etoposide (CE)

B3.1.1 Indication
- First line chemotherapy for limited small cell lung cancer when concomitant thoracic RT is planned which starts with the second cycle of chemotherapy
- Prophylactic cranial radiation is given after completion of chemotherapy for patients with good response

B3.1.2 Pre treatment Evaluation
- Multi-disciplinary review and histological confirmation
- Investigations should include CT scan of chest, and upper abdomen, CXR
- CT head scans and bone scans are performed in the event of symptoms only
- Record WHO performance status, current height, weight and surface area
- FBC, U&Es (including Magnesium and Calcium), Serum Creatinine, LFTs, LDH
- Calculate creatinine clearance (refer to renal dose modification table)
- Consider formal measurement of creatinine clearance in patients with low surface area using either 24-hour urine collection or EDTA measurements
- Consider auditory assessment
- Document evaluable disease where appropriate
- Give adequate verbal and written information for patients and relatives concerning patient’s disease, treatment strategy and side effects/mortality risk.
- Obtain written consent from patient or guardian.
- If appropriate, discuss potential risk of infertility/early menopause with patient and relatives.

B3.1.3 Drug Regimen

<table>
<thead>
<tr>
<th>Days</th>
<th>Drug</th>
<th>Dose</th>
<th>Route</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cisplatin†</td>
<td>80mg/m²</td>
<td>IV</td>
<td>IV infusion in 500ml Sodium Chloride 0.9% over 60 minutes with pre and post hydration †</td>
</tr>
<tr>
<td>1 and 2</td>
<td>Etoposide</td>
<td>100mg/m²</td>
<td>IV</td>
<td>IV infusion in 500-1000ml Sodium Chloride 0.9% over 1 Hour ††</td>
</tr>
</tbody>
</table>
### B3.1.4 Additional Modifications
- None

### B3.1.5 Dose Modifications
- Dose adjustments within a cycle will be made following the guidelines shown in the following guidelines based on weekly white blood cell (WBC), absolute neutrophil count (ANC) and platelet counts, and clinical assessment of non-haematological toxicity.

#### B3.1.5.1 Haematological
- Defer therapy for 1 week if neutrophils $< 1.0 \times 10^9/l$ or platelets $< 100 \times 10^9/l$

**Dose modifications for subsequent cycles:**
- Reduce Etoposide by 25\% following symptomatic neutropenia.

#### B3.1.5.2 Renal Function

<table>
<thead>
<tr>
<th>GFR ml/min</th>
<th>Cisplatin Dose</th>
<th>Etoposide Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>$&gt; 55$</td>
<td>Use AUC as per protocol – 100%</td>
<td>100%</td>
</tr>
<tr>
<td>46 – 54</td>
<td>Either / or Substitute with Carboplatin AUC x 5</td>
<td>85%</td>
</tr>
<tr>
<td>30 – 45</td>
<td>Cisplatin dose mg=mls/min clearance †</td>
<td>80%</td>
</tr>
<tr>
<td>$&lt; 30$</td>
<td>* Consider Dose Reduction Carboplatin Contra-Indicated if GFR &lt;20ml/min</td>
<td>75%</td>
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</table>

† Although there is experience of using the same dose of Cisplatin as the Creatinine Clearance (CrCl) (i.e. 1mg/ml/min GFR, there is no evidence to support this practice)

‡‡ If CrCl 20-30ml/min then calculate actual GFR using EDTA clearance or 24-hour urine collection and then use calculate Carboplatin dose using Calvert Equation with usual AUC

#### B3.1.5.3 Hepatic Function

<table>
<thead>
<tr>
<th>Bilirubin (µmol/L)</th>
<th>AST/ALT (µmol/L)</th>
<th>Cisplatin Dose</th>
<th>Etoposide Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>$&lt; 26$</td>
<td>Normal</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>26 – 50</td>
<td>$&lt; 180$</td>
<td>100%</td>
<td>50%</td>
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</table>
B3.1.5.4 Other Non-Haematological Dose Modifications

- In case of grade 3 or 4 neurotoxicity, Cisplatin should be definitively stopped.

B3.1.6 Antiemetics/supportive therapy

- This regimen has moderate to severe emetic potential - refer to local protocol
- Continuous Ciprofloxacin 250 mg bd and Fluconazole 50 mg od following symptomatic neutropenia
- If Mucositis or Diarrhoea ≥ Grade 3 in previous course then give 66% dose of both agents

B3.1.7 Cycle frequency

- 21 days for up to 6 cycles

B3.1.8 Adverse effects

- Nausea/vomiting
- Myelosuppression and risk of sepsis and thrombocytopenia
- Constipation and/or diarrhoea
- Alopecia
- Peripheral neuropathy & ototoxicity including tinnitus
- Encephalopathy
- Caution with extravasation due to vesicant drugs
- Nephrotoxicity
- Ototoxicity
- Stomatitis & Mucositis
- Fatigue
- Lung fibrosis
- Haemorrhagic cystitis
- Line thrombus
ASWCS Chemotherapy Handbook Jan 2005 Update

- Electrolyte Imbalance (especially hypomagnesaemia and hypocalcaemia)
- Hypersensitivity Reactions

**B3.1.9 Investigations Prior to Subsequent Cycles**

- Before each course check:
  1. FBC
  2. U&Es (including albumin & magnesium)
  3. Serum Creatinine and consider formal measurement of creatinine clearance in patients with low surface area using either 24-hour urine collection or EDTA measurements. Ensure that calculated creatinine clearance >55mls/min (refer to renal dose modification table)
  4. LFTs
- Clinical toxicity assessment (including stomatitis, neurotoxicity & ototoxicity)

**B3.1.10 References**


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<table>
<thead>
<tr>
<th>Chairman of ASWCS Network Pharmacist Group</th>
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