BCCA Protocol Summary for Hyperthermic Intraperitoneal Chemotherapy (HIPEC) for Patients with Peritoneal Desmoplastic Small Round Cell Tumour (DSRCT) Using CISplatin

**Protocol Code**
SAHIPEC

**Tumour Group**
Sarcoma

**Contact Physician**
Dr. Meg Knowling
Dr. Yarrow McConnell

The cytoreductive surgery and hyperthermic intraperitoneal chemotherapy are to be carried out only at the Vancouver General Hospital with the participation of Medical Oncology, BCCA.

**ELIGIBILITY:**
- All cases considered for cytoreductive surgery (CRS) with hyperthermic intraperitoneal chemotherapy (HIPEC) must be reviewed in a multidisciplinary tumour conference, including subspecialty pathology review.
- Peritoneal desmoplastic small round cell tumour
- Adequate marrow reserve (ANC greater than or equal to 1.5 x 10^9/L, platelets greater than 100 x 10^9/L)
- Adequate renal (Creatinine Clearance greater than or equal to 60 mL/min) and liver function

**ABSOLUTE CONTRAINDICATIONS:**
- ECOG > 2
- Unresectable disease on preoperative imaging
- Extra-abdominal metastases
- Multifocal malignant small bowel obstruction
- Co-morbidities precluding extensive surgery (renal failure, cardiac disease, COPD, irreversible hematological disorders, and other)

**RELATIVE CONTRAINDICATIONS:**
- Age > 70 years
- Extensive disease not amenable for R0/1 resection
- Disease progression while on chemotherapy
- Bilateral hydronephrosis

**TESTS:**
Before treatment:
- Baseline: CBC and differential, Creatinine, LFTs (Bilirubin, AST, Alkaline Phosphatase) and appropriate tumour markers.
- CT chest/abdomen/pelvis to evaluate extent of disease

**PREMEDICATIONS:**
- For most patients this regimen has low/moderate emetogenicity. Some patients may require pre-treatment antiemetics.
- See SCNAUSEA protocol.
TREATMENT:

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dosage</th>
<th>BCCA Administration Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISplatin</td>
<td>100 mg/m²</td>
<td>INTRAPERITONEAL mixed in 3 L of 1.5% dextrose peritoneal dialysis solution with calcium 2.4 mEq/L and perfused for 90 minutes at intraperitoneal temperature 40-42°C using open “coliseum” technique and Belmont hyperthermia pump, flow rate 1000 mL/min</td>
</tr>
</tbody>
</table>

DOSES TO BE BASED ON IDEAL BODY WEIGHT (IBW):

\[
BSA \left( m^2 \right) = \sqrt{\frac{Height \ (cm) \times Weight \ (kg)}{3600}}
\]

Ideal Body Weight (IBW):

Males:
- IBW (kg) = 51.65 + 0.73 (height in cm – 152.4)

Females:
- IBW (kg) = 48.67 + 0.65 (height in cm – 152.4)

DOSE MODIFICATIONS:

<table>
<thead>
<tr>
<th>Clinical Criteria for Dose Modification</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age greater than 60 y</td>
<td>75%</td>
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DOSE MODIFICATION IN RENAL DYSFUNCTION

<table>
<thead>
<tr>
<th>Creatinine Clearance (mL/min)</th>
<th>CISplatin Dose</th>
</tr>
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<tbody>
<tr>
<td>Greater than 60</td>
<td>100%</td>
</tr>
<tr>
<td>45 to 60</td>
<td>75%</td>
</tr>
<tr>
<td>Less than 45</td>
<td>Consider omitting</td>
</tr>
</tbody>
</table>

Cockcroft/Gault formula:

\[
CrCl \ (mL/min) = \frac{N \ (140-age) \times \text{weight (kg)}}{\text{serum creatinine (micromol/L)}}
\]

Where \( N = 1.04 \) for females, and \( 1.23 \) for males.
NON-HEMATOLOGICAL TOXICITY REQUIRING DOSE MODIFICATIONS:

1. **Neuropathy:** Dose modification or discontinuation may be required (See BCCA Cancer Drug Manual).

PRECAUTIONS:

1. **Neutropenia:** Fever or other evidence of infection must be assessed promptly and treated aggressively. Refer to BCCA Febrile Neutropenia Guidelines.
2. **Nephrotoxicity:** Nephrotoxicity is common with CISplatin. Encourage oral hydration. Avoid nephrotoxic drugs such as aminoglycoside antibiotics.

Call Dr. Yarrow McConnell at 604-875-4111 or Dr. Meg Knowling (or Sarcoma Tumour Group delegate) at (604) 877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.

Date activated: 1 Jan 2016

Date revised:

References: