**BCCA Protocol Summary for Management of Hypersensitivity Reactions to Chemotherapeutic Agents**

*Protocol Code*  
SCDRUGRX

*Tumour Group*  
Supportive Care

**Definition of Hypersensitivity Reaction**  
An adverse reaction occurring generally within seconds or minutes of drug administration with features of an anaphylactic (antibody mediated) or anaphylactoid (not antibody mediated) reaction. Reactions may include urticaria, dyspnea, bronchospasm, angioedema, hypotension, tachycardia, back or abdominal discomfort/pain or occasionally cardiorespiratory arrest.

**TREATMENT**

1. **General Management:** It is recommended that patients are assessed by a physician if having a reaction requiring the administration of medications or as patient condition warrants.

| Moderate                                                                 | Stop infusion.  
|--------------------------------------------------------------------------|---------------------------------------------------------------|
| e.g., moderate rash, flushing, pruritis, mild dyspnea, chest discomfort, abdomenal discomfort, lower back pain, mild hypotension | - Give diphenhydramine 25-50 mg IV push and/or hydrocortisone sodium succinate 100 mg IV push per physician orders.  
- After recovery of symptoms, resume infusion at a rate per protocol. If no direction in protocol consider resuming at 25% of previous rate for at least 5 minutes, 50% for a least 5 minutes, 75% for at least 5 minutes and then full rate if no reaction.  
- Depending on severity of reaction, may increase to full rate at physician's discretion.  
- Premedicate for all future cycles (see Prophylaxis section). Initiate infusion at slower rate (consider 50% of full rate) per physician orders.  
| Severe (potentially life threatening)                                     | Stop infusion and do not restart.  
| i.e., to be used if reaction escalates (e.g., one or more of respiratory distress requiring treatment, angioedema, hypotension requiring therapy) | - Give Epinephrine 0.5 mg* intramuscularly STAT. Repeat epinephrine at 5 minute intervals twice more as needed (ie if breathing becomes more laboured or level of consciousness decreases)  
*Note: Administer a maximum of three doses of epinephrine.  
- Give diphenhydramine 50 mg IV push and/or hydrocortisone sodium succinate 100 mg IV push per physician orders.  
- Oxygen if needed for dyspnea (see below).  
- Normal saline if needed for hypotension (see below).  
- Bronchodilators if indicated (see below).  
- Either permanently discontinue the drug that caused the reaction or attempt to retreat on another occasion after premedication (see prophyllaxis section) and using slower infusion rate indicated under moderate section.  
- *Initiate Emergency Response System appropriate for facility if patient condition warrant.*

*Note: Epinephrine 1:1,000 = 1 mg/mL and Epinephrine 1:10,000 = 1 mg/10 mL*
2. **Hypotension:** Administer normal saline to maintain blood pressure per physician orders (e.g., 300 mL/h).

3. **Dyspnea:** Administer oxygen to maintain oxygen saturations per physician orders and/or provide patient comfort.

4. **Bronchospasm:**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>BCCA Administration Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salbutamol</td>
<td>5 mg</td>
<td>by nebuliser per facility standard</td>
</tr>
<tr>
<td>Add if severe bronchospasm:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipratropium bromide (ATROVENT®)</td>
<td>0.5 mg</td>
<td>by nebuliser per facility standard</td>
</tr>
</tbody>
</table>

**PROPHYLAXIS**

- Determine if the drug or route is essential or if an alternative can be used (e.g., substitute docetaxel for paclitaxel, cisplatin for carboplatin, oral etoposide for parenteral etoposide).
- If the drug or route is essential, pre-treat according to allergic prophylaxis protocol by which patient is being treated.
- If no protocol available consider the following:

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<tbody>
<tr>
<td>Dexamethasone</td>
<td>20 mg given 12 h and 6 h pre-chemo AND/OR</td>
<td>PO</td>
</tr>
<tr>
<td>Diphenhydramine</td>
<td>50 mg given 30 min pre-chemo</td>
<td>IV in 50 mL NS over 20 min (compatible 3 h when mixed in bag)</td>
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<tr>
<td>Ranitidine</td>
<td>50 mg given 30 min pre-chemo</td>
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**Date activated:** 1 Dec 2005

**Date revised:** 1 Jan 2011 (epinephrine dose and administration route revised, references added)

**References:**


