

## Infusor Error Prevention Checklist

We recently had an incident where the wrong Infusor was selected for a patient. We had another incident where the incorrect diluent (normal saline) was selected instead of D5W. What other sources of errors should we watch for when providing Infusors to patients?

The following checklist can be used to help prevent rate errors from occurring with Infusors.

### Elastomeric Infusor Checklist for Rate Error Prevention

**Select the correct Infusor**

Compare the Infusor code on the BC Cancer pre-printed order to the one on the Infusor (SV2, LV1.5, LV2, LV5 or LV10).

- SV** Small volume (maximum capacity of 130 mL)
- LV** Large volume (maximum capacity of 300 mL)
- 1.5** 1.5 mL/hr fixed flow rate
- 2** 2 mL/hr fixed flow rate
- 5** 5 mL/hr fixed flow rate
- 10** 10 mL/hr fixed flow rate

If the pre-printed orders list more than one Infusor, ensure that the correct Infusor is selected for the dose.

Protocols may use different sized Infusors with different rates depending on the dose. In all cases, care should be taken to select the correct rate Infusor to allow the fluorouracil dose to be infused over the time interval specified by the protocol.

NOTE: The option to use SV2 Infusors no longer exists in BC Cancer protocols or pre-printed orders. Additionally, all gastrointestinal BC Cancer protocols that include a 46-hour infusional fluorouracil treatment have been standardized to

	<p>include dose banding with Baxter LV5 Infusors™. See the <a href="#">Dose Banding FAQ</a> for more information.</p> <p><b>46-Hour Infusion</b></p> <table border="0"> <tr> <td style="vertical-align: top;"> <p><b>Dose Banding:</b></p> <p>§ LV5 for all doses</p> </td> <td style="vertical-align: top;"> <p><b>No Dose Banding:</b></p> <p>§ LV5 for all doses (recommended)</p> <p>§ OR select either:</p> <ul style="list-style-type: none"> <li>· SV2 for doses less than or equal to 4400 mg</li> <li>· LV5 for doses greater than 4400 mg</li> </ul> </td> </tr> </table> <p><b>48-Hour Infusion:</b></p> <p>§ LV5 for all doses (recommended)</p> <p>§ OR select either:</p> <ul style="list-style-type: none"> <li>· SV2 for doses less than or equal to 4600 mg</li> <li>· LV5 for doses greater than 4600 mg</li> </ul>	<p><b>Dose Banding:</b></p> <p>§ LV5 for all doses</p>	<p><b>No Dose Banding:</b></p> <p>§ LV5 for all doses (recommended)</p> <p>§ OR select either:</p> <ul style="list-style-type: none"> <li>· SV2 for doses less than or equal to 4400 mg</li> <li>· LV5 for doses greater than 4400 mg</li> </ul>
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..	<p><b>Fill the Infusor to the correct volume</b></p> <p>Infusors should be filled to levels that fall within the minimum and maximum volumes, which are listed on the infusor. An underfilled infusor will infuse faster than the intended rate.</p>		
..	<p><b>Ensure that the correct diluent (D5W) is used</b></p> <p>Normal saline will cause the Infusor to infuse approximately 10% faster than with the intended D5W due to viscosity changes.</p>		
..	<p><b>Check that there is proper flow from the Infusor by allowing three drops of D5W to flow from the restrictor.</b></p> <p>This activity ensures there is no air in the Infusor to obstruct flow. It must be performed by pharmacy staff inside the biological safety cabinet prior to the addition of fluorouracil.</p>		

..	<p><b>Inspect the Infusor for any signs of leaking</b></p> <p>The presence of a leak would lead to an Infusor running out early.</p>
..	<p><b>Ensure that the access system (i.e. catheter) for connecting the Infusor is 22 gauge or larger.</b></p> <p>Anything smaller than 22 gauge may decrease flow.</p>
..	<p><b>Instruct the patients how to correctly position the Infusor.</b></p> <p>Elastomeric Infusors should be stored close to the same height as the luer lock connector. During the day Infusors are generally kept in a fanny pack carried around the waist. At night, Infusors are kept at bed height. Under the pillow is often recommended. If Infusors are placed on the floor below the bed the flow rate will be decreased. If they are placed on a dresser that is higher than the bed the flow rate will be increased.</p>
..	<p><b>Ensure that the flow restrictor is taped securely to the skin to maintain the correct temperature. Provide extra tape to the patient with instructions on how to re-tape the flow restrictor if it comes loose.</b></p> <p>If the flow restrictor is not taped securely to the skin, the temperature may drop leading to a decreased flow rate.</p>
..	<p><b>Do a visual inspect for possible sources of flow obstruction such as:</b></p> <ul style="list-style-type: none"> <li>· Infection (redness, firmness or swelling at the IV site)</li> <li>· Kinks or clamps in the tubing</li> <li>· Air in tubing</li> </ul>
..	<p><b>Instruct the patient to keep the Infusor at room temperature.</b></p> <p>Infusors will infuse faster in the heat or slower in the cold due to viscosity changes</p>

**References:**

1. Baxter elastomeric pumps patient guide. Mississauga, ON: Baxter Corporation; 2014.
2. Baxter elastomeric Pumps Clinician guide. Mississauga, ON: Baxter Corporation; 2014.
3. Adam Jones, Personal communication. Baxter Corporation, Sr. Marketing Manager Elastomerics. 27 March 2017.

*Reviewed: February 12, 2020*