

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Aldesleukin</b> 22 million units (1.3 mg) (SteriMax) (F)(PFL) no preservative <sup>1</sup>	1.2 mL SWI <sup>1</sup>  direct diluent against side of vial during reconstitution <sup>1</sup>  do NOT shake <sup>1</sup>	18 million unit/mL (1.1 mg/mL) <sup>1</sup>	12 h F, RT <sup>1,2</sup>	30-70 mcg/mL <sup>1</sup>  50 mL D5W <sup>1</sup>  <30 mcg/mL: dilute in D5W containing human albumin 0.1% <sup>3</sup>	48 h F, RT <sup>1</sup>  bring to RT prior to use <sup>1</sup>	- do NOT use in- line filter <sup>1</sup> - avoid bacteriostatic water for injection or NS due to increased aggregation <sup>1</sup>
				SC syringe <sup>4,5</sup>	10 d F <sup>2,5</sup>  **(PFL)	
<b>Aldesleukin intralesional</b> 22 million units (1.3 mg) (SteriMax) (F)(PFL) no preservative <sup>1</sup>	1.2 mL SWI <sup>1</sup>  direct diluent against side of vial during reconstitution <sup>1</sup>  do NOT shake <sup>1</sup>	18 million unit/mL (1.1 mg/mL) <sup>1</sup>	12 h F, RT <sup>1,2</sup>	add 3.2 mL D5W to reconstituted vial to give 5 million units/mL <sup>6,7</sup>  withdraw entire contents of vial into syringes for administration <sup>6,8</sup>	syringe: 48 h F <sup>6</sup> (discard any remaining unused syringes following procedure)	- avoid bacteriostatic water for injection or NS due to increased aggregation <sup>1</sup>

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<b>Alemtuzumab</b> 30 mg/mL (Genzyme/Bayer) <sup>9</sup> (F)(PFL) do not shake no preservative <sup>10</sup>	N/A	filter NOT required <sup>10</sup>  30 mg/mL <sup>10</sup>	discard unused portion <sup>10</sup>	SC syringe <sup>11</sup>	discard at the end of the day <b>F</b> , RT	- do NOT shake <sup>12</sup>
				100 mL <b>NS</b> , D5W <sup>10</sup>	8 h <b>F</b> , RT <sup>10**</sup> (PFL) <sup>12</sup>	
<b>Amivantamab</b> (JNJ-61186372) <sup>13,14</sup> 350 mg (Janssen) (F)(PFL) no preservative <sup>15</sup> (SAP)	N/A	50 mg/mL	discard unused portion <sup>15</sup>	250 mL <b>NS</b> , D5W <sup>15</sup>  dilute to final volume by withdrawing volume from bag equal to volume of drug to be added <sup>15</sup>  mix by gentle inversion <sup>15</sup>	complete administration within 10 h RT <sup>15</sup>	- do not shake <sup>15</sup> - discard if discolouration or visible particles are present <sup>15</sup> - administer with 0.2 micron in-line filter <sup>15</sup>

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<b>Amivantamab</b> 350 mg (Janssen) (F)(PFL) no preservative <sup>16</sup>	N/A	50 mg/mL <sup>16</sup>	discard unused portion <sup>16</sup>	250 mL <b>NS</b> , D5W <sup>16</sup>  dilute to final volume by withdrawing volume from bag equal to volume of drug to be added <sup>16</sup>  mix by gentle inversion; do not shake <sup>16</sup>	complete administration within 10 h RT <sup>16</sup>	- each vial contains 0.5 mL overfill <sup>16</sup> - discard if discolouration or visible particles are present <sup>16</sup> - administer with 0.2 micron in-line filter <sup>16</sup>
<b>Amsacrine</b> 75 mg/1.5 mL (Erfa Canada) (RT) no preservative <sup>17</sup>	glass syringes preferred for reconstitution; MAX time in plastic syringe <sup>17</sup> : 15 min  13.5 mL supplied diluent (L-lactic acid) <sup>1</sup>  to reconstitute: transfer 1.5 mL from ampoule into the diluent vial <sup>17</sup>	5 mg/mL <sup>17</sup>	12 h RT <sup>2,17</sup>  **(PFL) <sup>17</sup>	500 mL D5W <sup>17</sup>  (plastic or glass container) <sup>17</sup>	7 d <b>F</b> , 4 d RT <sup>2,17</sup>	- contains DMA***

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<b>Arsenic trioxide</b> 10 mg/10 mL (Phebra/ICON) (RT) no preservative <sup>18</sup>	N/A	1 mg/mL <sup>18</sup>	discard unused portion <sup>18</sup>	100-250 mL <b>NS</b> , D5W <sup>18</sup>	48 h F, 24 h RT <sup>18</sup>	
<b>Arsenic trioxide</b> 10 mg/10 mL (Sandoz) (RT) no preservative <sup>19</sup>	N/A	1 mg/mL <sup>19</sup>	discard unused portion <sup>19</sup>	100-250 mL <b>NS</b> , D5W <sup>19</sup>	48 h F, 24 h RT <sup>19</sup>	
<b>Arsenic trioxide</b> 10 mg/10 mL (SteriMax) (RT) no preservative <sup>20</sup>	N/A	1 mg/mL <sup>20</sup>	discard unused portion <sup>20</sup>	100-250 mL <b>NS</b> , D5W <sup>20</sup>	48 h F, 24 h RT <sup>20</sup>	

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<b>Asparaginase-erwinia</b> (asparaginase <i>Erwinia chrysanthemi</i> ) 10,000 units (CGF/Jazz) (F) no preservative <sup>21</sup>	1-2 mL NS <sup>21</sup>  do not shake; mix gently to minimize bubbles and contact with stopper <sup>21</sup>	10,000-5000 units/mL	15 min RT <sup>21</sup>	syringe <sup>21</sup>	4 h RT <sup>21</sup>	- contact with the rubber stopper may denature the reconstituted drug, creating filaments of insoluble material; if present, administer with 5 micron filter <sup>21</sup> - do not use sterile water for reconstitution as the resulting product is not isotonic <sup>21</sup>
<b>PEG-asparaginase - see pegaspargase in L-Z chart</b> (pegylated asparaginase <i>E. coli</i> )						
<b>Atezolizumab</b> 840 mg/14 mL 1200 mg/20 mL (Hoffman-La Roche) (F)(PFL) do not shake no preservative <sup>22</sup>	N/A	60 mg/mL <sup>22</sup>	discard unused portion <sup>22</sup>	250 mL NS <sup>22</sup>  mix by gentle inversion <sup>22</sup>	24 h F, 8 h RT <sup>22</sup>	- do NOT shake <sup>22</sup>

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<b>Avelumab</b> 200 mg/10 mL (EMD) (F)(PFL) no preservative <sup>23</sup>	N/A	20 mg/mL <sup>23</sup>	discard unused portion <sup>24</sup>	250 mL <b>NS</b> , ½-NS <sup>23</sup>  mix by gentle inversion <sup>23</sup>	complete administration within 24 h F, 8 h RT <sup>23</sup>  if refrigerated, bring bag to RT prior to administration <sup>23</sup>	- do NOT shake <sup>23</sup> - administer with 0.2 micron in-line filter <sup>23</sup>

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<b>azaCITIDine</b> 100 mg (Celgene) (RT) no preservative <sup>25</sup>	4 mL SWI <sup>25</sup>  shake vigorously <sup>25</sup>  record time of reconstitution	25 mg/mL <sup>25</sup>	use within 45 min RT or 8 h F <sup>25</sup>	SC syringe <sup>25</sup>	45 min RT (including preparation time) or 8 h F <sup>25</sup>  refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution <sup>25</sup>  <b>Refrigerated syringes<sup>25</sup>:</b> <ul style="list-style-type: none"> <li>allow up to 30 min prior to administration to reach temperature of ~20-25°C</li> <li>discard syringe if time elapsed at RT is greater than 30 min</li> </ul>	- discard if contains large particles <sup>25</sup> - re-suspend syringe contents before injection by vigorously rolling syringe between palms <sup>25</sup> - if cold diluent reconstitution is used to extend stability, minimize exposure to RT; ensure proper refrigeration of diluent, reconstituted vial and final product <sup>26,27</sup>
	<b>cold diluent reconstitution:</b> 4 mL SWI at 2-8°C <sup>26,27</sup>	25 mg/mL <sup>25</sup>	12 h F <sup>2,26,27</sup>		22 h F <sup>26,27</sup>	

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<b>azaCITIDine</b> 100 mg (Dr. Reddy's) (RT) no preservative <sup>28</sup>	4 mL SWI <sup>28</sup>  shake vigorously <sup>28</sup>	25 mg/mL <sup>28</sup>	use within 45 min RT or 8 h F <sup>28</sup>	SC syringe <sup>28</sup>	45 min RT (including preparation time) or 8 h F <sup>28</sup>  refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution <sup>28</sup>  <b>Refrigerated syringes<sup>28</sup>:</b> • allow up to 30 min prior to administration to reach temperature of ~20-25°C • discard syringe if time elapsed at RT is greater than 30 min	- do not filter <sup>28</sup> - discard if contains large particles <sup>28</sup> - re-suspend syringe contents before injection by vigorously rolling syringe between palms <sup>28</sup>



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<b>azaCITIDine</b> 100 mg (Hikma) (RT) no preservative <sup>29</sup>	4 mL SWI <sup>29</sup>  shake vigorously <sup>29</sup>	25 mg/mL <sup>29</sup>	use within 45 min RT or 8 h F <sup>29</sup>	SC syringe <sup>29</sup>	45 min RT (including preparation time) or 8 h F <sup>29</sup>  refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution <sup>29</sup>  <b>Refrigerated syringes<sup>29</sup>:</b> • allow up to 30 min prior to administration to reach temperature of ~20-25°C • discard syringe if time elapsed at RT is greater than 30 min	- do not filter <sup>29</sup> - discard if contains large particles <sup>29</sup> - re-suspend syringe contents before injection by vigorously rolling syringe between palms <sup>29</sup>

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<b>BCG</b> <i>(Tice strain)</i> <b>(OncoTICE®)</b> <u><b>intravesical</b></u> 50 mg (1 to 8 x 10 <sup>8</sup> CFU) (Merck Canada) (F)(PFL) no preservative <sup>30</sup>	1 mL preservative-free NS <sup>30</sup>  allow to stand for a few min; gently swirl to suspend <sup>30</sup>  do NOT shake <sup>30</sup>  record time of reconstitution	1 to 8x10 <sup>8</sup> CFU/vial <sup>30</sup>	2 h F <sup>30</sup>  **(PFL) <sup>30</sup>	transfer contents from vial to 50 mL syringe, rinse vial with 1 mL NS and transfer rinse solution to the 50 mL syringe, then qs up to 45 mL with NS <sup>30</sup>  if a CSTD is used: transfer contents from vial to 50 mL syringe and qs up to 45 mL with NS; do NOT rinse vial <sup>30</sup>	use within 2 h F of reconstitution <sup>30,31</sup>  **(PFL) <sup>30</sup>	- auxiliary info: biohazard <sup>31</sup> - do NOT filter <sup>30</sup> - do NOT shake <sup>30</sup>

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<b>BCG</b> ( <i>Russian strain</i> ) <b>(VERITY-BCG®)</b> <u>intravesical</u> 40 mg (1 to 8 x 10 <sup>8</sup> CFU) (Verity) (F)(PFL) no preservative <sup>32</sup>	1 mL preservative-free NS <sup>32</sup>  allow to stand for a few min; gently swirl to suspend <sup>32</sup>  do NOT shake <sup>32</sup>  record time of reconstitution	1 to 8x10 <sup>8</sup> CFU/vial <sup>32</sup>	2 h F <sup>32</sup>  **(PFL) <sup>32</sup>	transfer contents from 1 <sup>st</sup> vial to 50 mL syringe, rinse vial with 1 mL NS and transfer rinse solution to the 50 mL syringe; then, repeat steps for 2 <sup>nd</sup> vial and qs up to 45 mL with NS <sup>32</sup>	use within 2 h F of reconstitution <sup>31,32</sup>  **(PFL) <sup>32</sup>	- auxiliary info: biohazard <sup>31</sup> - TWO vials must be used to achieve the recommended full dose <sup>32</sup> - do NOT shake <sup>32</sup>
<b>Belantamab mafodotin</b> 30 mg/1.5 mL (GSK) (frozen)(PFL) do not shake no preservative <sup>33</sup> (SAP)	n/a	20 mg/mL <sup>33</sup>	thaw up to 4 h RT, F before use <sup>33</sup>  once thawed: <b>unpunctured</b> vial: 10 d F <sup>33</sup>  once thawed: <b>punctured</b> vial: discard unused portion <sup>31,33</sup>  **(PFL) <sup>33</sup>  do NOT shake <sup>33</sup>	0.2-2 mg/mL NS <sup>33</sup>  250 mL * NS <sup>33</sup>	8 h RT <sup>33</sup>	- supplied as frozen liquid <sup>33</sup> - recommended freezer temp <sup>33</sup> is (- 50°C to -15°C) - thawed drug cannot be refrozen <sup>33</sup>

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<b>Belantamab mafodotin</b> 100 mg (GSK) (F)(PFL) no preservative <sup>34</sup> (SAP)	allow vial to stand at RT for 10 min before reconstitution <sup>35</sup>  2 mL SWI <sup>34</sup>  swirl gently to mix; do NOT shake <sup>35</sup>	50 mg/mL <sup>34</sup>	use immediately after reconstitution <sup>34</sup>  discard unused portion <sup>34</sup>	0.2-2 mg/mL NS <sup>34</sup>  250 mL * NS <sup>34</sup>  mix by gentle inversion; do NOT shake <sup>35</sup>	complete administration within 8 h RT <sup>34</sup>	- discard if particulate matter is present <sup>34</sup>
<b>Belinostat</b> 500 mg (Spectrum) (RT) no preservative <sup>36</sup> (SAP)	9 mL SWI <sup>36</sup>	50 mg/mL <sup>36</sup>	12 h RT <sup>36</sup>	250 mL NS <sup>36</sup>	complete administration within 36 h RT <sup>36</sup>	- administer with 0.2 micron in-line filter <sup>36</sup>
<b>Bendamustine</b> 25 mg 100 mg (Natco) (RT)(PFL) no preservative <sup>37</sup>	25 mg: 5 mL SWI <sup>37</sup>  100 mg: 20 mL SWI <sup>37</sup>  shake well; dissolves completely in 5 min <sup>37</sup>	5 mg/mL <sup>37</sup>	30 min <sup>37</sup>	0.2-0.6 mg/mL <b>NS</b> , D2.5-½NS <sup>37</sup>  100-500 mL†	complete administration within 24 h F, 3 h RT <sup>37</sup>	

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<b>Bendamustine</b> 25 mg 100 mg (Teva) (RT,F)(PFL) no preservative <sup>38</sup>	25 mg: 5 mL SWI <sup>38</sup>  100 mg: 20 mL SW <sup>38</sup>  shake well; dissolves completely in 5 min <sup>38</sup>	5 mg/mL <sup>38</sup>	30 min <sup>38</sup>	0.2-0.6 mg/mL <b>NS</b> , D2.5-½NS <sup>38</sup>  100-500 mL†	complete administration within 24 h F, 3 h RT <sup>39</sup>	
<b>Bevacizumab (AVASTIN®)</b> 100 mg/4 mL 400 mg/16 mL (Roche) (F)(PFL) do not shake no preservative <sup>40</sup>	N/A	25 mg/mL <sup>40</sup>	discard unused portion <sup>40</sup>	1.4-16.5 mg/mL NS only <sup>40</sup>  100-250 mL†	48 h F, RT <sup>40</sup>	- do NOT shake <sup>40</sup>
<b>Bevacizumab (MVASI®)</b> 100 mg/4 mL 400 mg/16 mL (Amgen) (F)(PFL) do not shake no preservative <sup>41</sup>	N/A	25 mg/mL <sup>41</sup>	discard unused portion <sup>41</sup>	1.4-16.5 mg/mL NS only <sup>41</sup>  100-250 mL†	48 h F, RT <sup>41</sup>	- do NOT shake <sup>41</sup>

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<b>Bevacizumab (ZIRABEV®)</b> 100 mg/4 mL 400 mg/16 mL (Pfizer) (F)(PFL) do not shake no preservative <sup>42</sup>	N/A	25 mg/mL <sup>42</sup>	discard unused portion <sup>42</sup>	1.4-16.5 mg/mL NS only <sup>42</sup>  100-250 mL†	10 d F, 48 h RT <sup>2,42</sup>	- do NOT shake <sup>42</sup>
<b>Bleomycin</b> 15 units (NB: dose in units only) (Fresenius Kabi) (F)(PFL) no preservative <sup>43</sup>	6 mL * NS <sup>43</sup>	2.5 units/mL	12 h F <sup>2,43</sup>	50 mL * NS <sup>43</sup>	24 h RT <sup>43</sup>	
<b>Bleomycin</b> 15 units (NB: dose in units only) (Pfizer/Hospira) (F)(PFL) no preservative <sup>44</sup>	6 mL * NS, SWI <sup>44</sup>	2.5 units/mL	12 h F, RT <sup>2,44</sup>	50 mL * NS <sup>44</sup>	4 h RT <sup>2,31,44</sup>	

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<b>Blinatumomab</b> 38.5 mcg (Amgen) (F)(PFL) do not shake no preservative <sup>45</sup>	3 mL SWI <sup>45</sup>  do NOT use supplied IV solution stabilizer to reconstitute vials <sup>45</sup>  direct diluent against side of vial during reconstitution <sup>45</sup>  gently swirl to avoid excess foaming <sup>45</sup>	12.5 mcg/mL <sup>45</sup>	12 h F <sup>2,46</sup> , 4 h RT <sup>46</sup>	250 mL NS <sup>45</sup>  add supplied IV solution stabilizer to NS bag and gently mix to avoid foaming <sup>45</sup>  add reconstituted drug to bag <b>following</b> addition of IV solution stabilizer <sup>45</sup>	complete administration within 10 d F, 96 h RT <sup>46</sup>	- use non-DEHP bag and IV administration set <sup>45</sup> - administer with 0.2 micron in-line filter <sup>45</sup> - prime lines with blinatumomab solution; do NOT use NS
<b>Bortezomib SC injection</b> 3.5 mg (Actavis) (RT)(PFL) no preservative <sup>47</sup>	1.4 mL NS <sup>47</sup>	2.5 mg/mL <sup>47</sup>	12 h F, RT <sup>2,48</sup>	SC syringe <sup>47</sup>	10 d F, 4 d RT <sup>2,48</sup>	- auxiliary info: <b>WARNING:</b> <b>SUBCUTANEOUS</b> use only. Fatal if given by other routes.

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<b>Bortezomib</b> 3.5 mg (Actavis) (RT)(PFL) no preservative <sup>47</sup>	3.5 mL NS <sup>47</sup>	1 mg/mL <sup>47</sup>	12 h F, RT <sup>2,48</sup>	IV syringe <sup>47</sup>	10 d F, 4 d RT <sup>2,48</sup>	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
<b>Bortezomib SC injection</b> 3.5 mg (Apotex) (RT)(PFL) no preservative <sup>49</sup>	1.4 mL NS <sup>49</sup>	2.5 mg/mL <sup>49</sup>	12 h F, RT <sup>2,50</sup>	SC syringe <sup>49</sup>	10 d F, 4 d RT <sup>2,50</sup>	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
<b>Bortezomib</b> 3.5 mg (Apotex) (RT)(PFL) no preservative <sup>49</sup>	3.5 mL NS <sup>49</sup>	1 mg/mL <sup>49</sup>	12 h F, RT <sup>2,50</sup>	IV syringe <sup>49</sup>	10 d F, 4 d RT <sup>2,50</sup>	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.



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<b>Bortezomib SC injection</b> 3.5 mg (Janssen) (RT)(PFL) no preservative <sup>51</sup>	1.4 mL NS <sup>51</sup>	2.5 mg/mL <sup>51</sup>	12 h F, RT <sup>2,48</sup>	SC syringe <sup>51</sup>	10 d F, 4 d RT <sup>2,48</sup>	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
<b>Bortezomib</b> 3.5 mg (Janssen) (RT)(PFL) no preservative <sup>51</sup>	3.5 mL NS <sup>51</sup>	1 mg/mL <sup>51</sup>	12 h F, RT <sup>2,48</sup>	IV syringe <sup>51</sup>	10 d F, 4 d RT <sup>2,48</sup>	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
<b>Bortezomib SC injection</b> 2.5 mg 3.5 mg (Juno/MDA) (RT)(PFL) no preservative <sup>52</sup>	2.5 mg: 1 mL NS <sup>52</sup>  3.5 mg: 1.4 mL NS <sup>52</sup>	2.5 mg/mL <sup>52</sup>	12 h F, RT <sup>2,53</sup>	SC syringe <sup>52</sup>	10 d F, 4 d RT <sup>2,53</sup>	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.

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<b>Bortezomib</b> 1 mg 2.5 mg 3.5 mg (Juno/MDA) (RT)(PFL) no preservative <sup>52</sup>	1 mg: 1 mL NS <sup>52</sup>  2.5 mg: 2.5 mL NS <sup>52</sup>  3.5 mg: 3.5 mL NS <sup>52</sup>	1 mg/mL <sup>52</sup>	12 h F, RT <sup>2,53</sup>	IV syringe <sup>52</sup>	10 d F, 4 d RT <sup>2,53</sup>	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
<b>Bortezomib SC injection</b> 3.5 mg (Marcan) (RT)(PFL) no preservative <sup>54</sup>	1.4 mL NS <sup>54</sup>	2.5 mg/mL <sup>54</sup>	12 h F, RT <sup>2,55,56</sup>	SC syringe <sup>54</sup>	10 d F, 2 d RT <sup>2,55,56</sup>	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
<b>Bortezomib</b> 3.5 mg (Marcan) (RT)(PFL) no preservative <sup>54</sup>	3.5 mL NS <sup>54</sup>	1 mg/mL <sup>54</sup>	12 h F, RT <sup>2,55,56</sup>	IV syringe <sup>54</sup>	10 d F, 2 d RT <sup>2,55,56</sup>	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Bortezomib SC injection</b> 3.5 mg (PMS) (RT)(PFL) no preservative <sup>57</sup>	1.4 mL NS <sup>57</sup>	2.5 mg/mL <sup>57</sup>	8 h RT <sup>57</sup>	SC syringe <sup>57</sup>	8 h RT <sup>57</sup>	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
<b>Bortezomib</b> 3.5 mg (PMS) (RT)(PFL) no preservative <sup>57</sup>	3.5 mL NS <sup>57</sup>	1 mg/mL <sup>57</sup>	8 h RT <sup>57</sup>	IV syringe <sup>57</sup>	8 h RT <sup>57</sup>	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
<b>Bortezomib SC injection</b> 1 mg 2.5 mg 3.5 mg (Taro) (RT)(PFL) no preservative <sup>58</sup>	1 mg: 0.4 mL NS <sup>58</sup>  2.5 mg: 1 mL NS <sup>58</sup>  3.5 mg: 1.4 mL NS <sup>58</sup>	2.5 mg/mL <sup>58</sup>	8 h RT <sup>58</sup>	SC syringe <sup>58</sup>	8 h RT <sup>58</sup>	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Bortezomib</b> 1 mg 2.5 mg 3.5 mg (Taro) (RT)(PFL) no preservative <sup>58</sup>	1 mg: 1 mL NS <sup>58</sup>  2.5 mg: 2.5 mL NS <sup>58</sup>  3.5 mg: 3.5 mL NS <sup>58</sup>	1 mg/mL <sup>58</sup>	8 h RT <sup>58</sup>	IV syringe <sup>58</sup>	8 h RT <sup>58</sup>	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
<b>Bortezomib SC injection</b> 3.5 mg (Teva) (RT)(PFL) no preservative <sup>59</sup>	1.4 mL NS <sup>59</sup>	2.5 mg/mL <sup>59</sup>	12 h F, RT <sup>2,48</sup>	SC syringe <sup>59</sup>	10 d F, 4 d RT <sup>2,48</sup>	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
<b>Bortezomib</b> 3.5 mg (Teva) (RT)(PFL) no preservative <sup>59</sup>	3.5 mL NS <sup>59</sup>	1 mg/mL <sup>59</sup>	12 h F, RT <sup>2,48</sup>	IV syringe <sup>59</sup>	10 d F, 4 d RT <sup>2,48</sup>	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Brentuximab vedotin</b> 50 mg (Seagen) (F)(PFL) no preservative <sup>60</sup>	10.5 mL SWI <sup>60</sup>  direct diluent against side of vial during reconstitution <sup>60</sup>  do NOT shake <sup>60</sup>	5 mg/mL <sup>60</sup>	12 h F <sup>2,60</sup>	0.4-1.8 mg/mL <b>NS</b> , D5W, Lactated Ringer's <sup>60</sup>  50-100 mL†  gently invert to mix <sup>60</sup>	24 h F <sup>2,60</sup>	- solution should be colorless, clear to slightly opalescent, and free of visible particulates <sup>60</sup>
<b>Busulfan</b> 60 mg/10 mL (PMS) (F) no preservative <sup>61</sup>	N/A	6 mg/mL <sup>61</sup>	discard unused portion <sup>31,61</sup>	dilute to volume 10 times drug volume to achieve final concentration of ~0.5 mg/mL <b>NS</b> , D5W <sup>61</sup>  250-1000 mL†	complete administration within 12 h F, 8 h RT <sup>61</sup>	- contains DMA*** - always add busulfan to diluent to mix; do not add diluent to busulfan <sup>61</sup>

### BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Busulfan</b> 60 mg/10 mL (SteriMax) (F) no preservative <sup>62</sup>	N/A	6 mg/mL <sup>62</sup>	discard unused portion <sup>24,62</sup>	dilute to volume 10 times drug volume to achieve final concentration of ~0.5 mg/mL <b>NS</b> , D5W <sup>62</sup>  250-1000 mL†	in <b>NS</b> : complete administration within 12 h F, 8 h RT <sup>62</sup>  in <b>D5W</b> : complete administration within 8 h RT <sup>62</sup>	- contains DMA*** - always add busulfan to diluent to mix; do not add diluent to busulfan <sup>62</sup>
<b>Cabazitaxel</b> 60 mg/1.5 mL (Dr. Reddy's) (RT) no preservative <sup>63</sup>	supplied diluent: withdraw entire contents of diluent vial and inject into the concentrate vial <sup>63</sup>  slowly direct diluent against inside of vial to limit foaming <sup>63</sup>  mix by repeated inversions for 45 sec <sup>63</sup>  do NOT shake <sup>63</sup>  let sit for 5 min <sup>63</sup>	10 mg/mL <sup>63</sup>	1 h RT <sup>63</sup>	0.10-0.26 mg/mL <b>NS</b> , D5W <sup>63</sup>  100-250 mL†	complete administration within 48 h F, 8 h RT <sup>63</sup>	- use non-DEHP bag and tubing <sup>63</sup> - administer with 0.2 micron in-line filter <sup>63</sup> - concentrate and diluent vials contain overfill <sup>63</sup> - diluent contains 13% (w/w) ethanol in water <sup>63</sup> - discard if crystallization occurs <sup>63</sup>

# BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Cabazitaxel</b> 45 mg/4.5 mL 60 mg/6 mL (Sandoz) (RT) preservative <sup>64</sup>	N/A	10 mg/mL <sup>64</sup>	10 d F, RT <sup>64</sup>	0.10-0.26 mg/mL <b>NS</b> , D5W <sup>64</sup>  100-250 mL†	complete administration within 48 h F, 8 h RT <sup>64</sup>	- use non-DEHP bag and tubing <sup>64</sup> - administer with 0.2 micron in-line filter <sup>64</sup> - vials contain overflow <sup>64</sup>
<b>Cabazitaxel</b> 60 mg/1.5 mL (sanofi-aventis) (RT) no preservative <sup>65</sup>	supplied diluent: withdraw entire contents of diluent vial and inject into the concentrate vial <sup>65</sup>  slowly direct diluent against inside of vial to limit foaming <sup>65</sup>  mix by repeated inversions for 45 sec <sup>65</sup>  do NOT shake <sup>65</sup>  let sit for 5 min <sup>65</sup>	10 mg/mL <sup>65</sup>	1 h RT <sup>65</sup>	0.10-0.26 mg/mL <b>NS</b> , D5W <sup>65</sup>  100-250 mL†	complete administration within 48 h F, 8 h RT <sup>65</sup>	- use non-DEHP bag and tubing <sup>65</sup> - administer with 0.2 micron in-line filter <sup>65</sup> - concentrate and diluent vials contain overflow <sup>65</sup> - diluent contains 13% (w/w) ethanol in water <sup>65</sup> - discard if crystallization occurs <sup>65</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>CARBOplatin</b> 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Accord) (RT)(PFL) no preservative <sup>66</sup>	N/A	10 mg/mL <sup>66</sup>	discard unused portion <sup>66</sup>	0.5-10 mg/mL <b>NS</b> , D5W <sup>66</sup>  50-250 mL†	24 h F, 8 h RT <sup>66</sup>	- do NOT use aluminum- containing needle, syringe, or tubing <sup>66</sup>
<b>CARBOplatin</b> 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Omega) (RT)(PFL) no preservative <sup>67</sup>	N/A	10 mg/mL <sup>67</sup>	discard unused portion <sup>67</sup>	0.3-10 mg/mL <b>NS</b> , D5W <sup>67</sup>  50-250 mL†	48 h F <sup>67</sup> , 24 h RT <sup>68</sup>	- do NOT use aluminum- containing needle, syringe or tubing <sup>67</sup>
<b>CARBOplatin</b> 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Pfizer/Hospira) (RT)(PFL) no preservative <sup>69</sup>	N/A	10 mg/mL <sup>69</sup>	discard unused portion <sup>69</sup>	0.3-10 mg/mL <b>NS</b> , D5W <sup>69</sup>  50-250 mL†	48 h F <sup>69</sup>	- do NOT use aluminum- containing needle, syringe, or tubing <sup>69</sup>



BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>CARBOplatin</b> 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL (Teva) (RT)(PFL) no preservative <sup>70</sup>	N/A	10 mg/mL <sup>70</sup>	discard unused portion RT <sup>70</sup>	0.5-10 mg/mL <sup>71</sup> <b>NS</b> , D5W <sup>70,72,73</sup>  50-250 mL†	8 h F <sup>74</sup> , RT <sup>70</sup>	- do NOT use aluminum- containing needle, syringe, or tubing <sup>70</sup>
<b>Carfilzomib</b> 10 mg 30 mg 60 mg (Amgen) (F)(PFL) no preservative <sup>75</sup>	10 mg: 5 mL SWI <sup>75</sup>  30 mg: 15 mL SWI <sup>75</sup>  60 mg: 29 mL SWI <sup>75</sup>  direct diluent against side of vial during reconstitution <sup>75</sup>  swirl gently; do NOT shake <sup>75</sup>  if foaming occurs, allow to settle until clear (~5 min) <sup>75</sup>	2 mg/mL <sup>75</sup>	12 h F, 4 h RT <sup>2,75</sup>	50-100 mL* <b>D5W</b> only <sup>75</sup>  do NOT dilute in NS <sup>75</sup>	24 h F, 4 h RT <sup>2,75</sup>	- if a CSTD is not used in compounding, a 21 gauge (or larger gauge) needle is recommended to prevent coring of the vial stopper <sup>76-78</sup> - do not use NS for reconstitution or dilution <sup>75</sup> - discard if contains particulates <sup>75</sup>

### BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Carmustine</b> 100 mg (SteriMax) (F) no preservative <sup>79</sup>	3mL supplied diluent <sup>79</sup>  bring drug and diluent vials to RT prior to mixing <sup>79</sup>  completely dissolve drug in diluent, then add 27 mL SWI <sup>79</sup>	3.3 mg/mL in ethanol 10% <sup>79</sup>	48 h F <sup>79</sup>  precipitates can be re-dissolved by warming the vial to RT with gentle shaking <sup>79</sup>	500 mL NS, D5W <sup>79</sup>  in glass or polypropylene containers ONLY <sup>79</sup>	8 h RT <sup>79</sup>  or  48 h F plus an additional 6 h RT <sup>79</sup>  **(PFL) <sup>79</sup>	- supplied diluent is dehydrated alcohol <sup>79</sup> - do not use vial if oily film is present <sup>79</sup> - final product should be gently shaken for ~10 sec to remix bag contents prior to administration <sup>79</sup> - administer with PVC-free infusion set <sup>79</sup> - protect from light for administration <sup>79</sup>
<b>Cemiplimab</b> 250 mg/5 mL 350 mg/7 mL (sanofi) (F)(PFL) do not shake no preservative <sup>80</sup>	N/A	50 mg/mL <sup>80</sup>	discard unused portion <sup>31,80</sup>	1-20 mg/mL <b>NS</b> , D5W <sup>80</sup>  50 mL†  mix by gentle inversion	complete administration within 24 h F, 8 h RT <sup>80</sup>	- administer with 0.2 micron filter <sup>80</sup> - solution may contain white particulates which do not affect product quality <sup>80</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Cetuximab</b> 100 mg/50 mL 200 mg/100 mL (Imclone/Lilly) (F) do not shake no preservative <sup>81</sup>	N/A	2 mg/mL <sup>81</sup>	12 h F, 8 h RT <sup>81</sup>	syringe <sup>81</sup>	12 h F, 8 h RT <sup>81</sup>	- administer with 0.2 micron filter <sup>81</sup> - solution may contain white particulates which do not affect product quality <sup>81</sup>
				evacuated container or bag <sup>81</sup>		
<b>CISplatin</b> 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Accord) (RT)(PFL) no preservative <sup>82</sup>	N/A	1 mg/mL <sup>82</sup>	discard unused portion <sup>31</sup>	NS <sup>82</sup>  100-500 mL†  or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol <sup>82</sup>	24 h RT <sup>82</sup>	- do NOT use aluminum- containing needle, syringe or tubing <sup>82</sup> - suggested dose limits relate to the physical limitations of the bag size and added drug volume; it is not a concentration- dependent property of the drug - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>CISplatin</b> 50 mg/50 mL 100 mg/100mL (Pfizer/Hospira) (RT)(PFL) no preservative <sup>83</sup>	N/A	1 mg/mL <sup>83</sup>	discard unused portion <sup>31</sup>	NS <sup>83</sup>  100-500 mL†  or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol <sup>83</sup>	24 h RT <sup>83</sup>	- do NOT use aluminum- containing needle, syringe or tubing <sup>83</sup> - suggested dose limits relate to the physical limitations of the bag size and added drug volume; it is not a concentration- dependent property of the drug - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>CISplatin</b> 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Sandoz) (RT)(PFL) no preservative <sup>84</sup>	N/A	1 mg/mL <sup>84</sup>	12 h RT <sup>2,85</sup>	NS <sup>84</sup>  100-500 mL†  or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol <sup>84</sup>	24 h RT <sup>85</sup>	- do NOT use aluminum- containing needle, syringe or tubing <sup>84</sup> - suggested dose limits relate to the physical limitations of the bag size and added drug volume; it is not a concentration- dependent property of the drug - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>CISplatin</b> 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Teva) (RT)(PFL) no preservative <sup>86</sup>	N/A	1 mg/mL <sup>86</sup>	discard unused portion <sup>24</sup>	NS <sup>86</sup>  100-500 mL†  or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol <sup>86</sup>	24 h RT <sup>86</sup>	- do NOT use aluminum- containing needle, syringe or tubing <sup>86</sup> - suggested dose limits relate to the physical limitations of the bag size and added drug volume; it is not a concentration- dependent property of the drug - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Cladribine</b> 10 mg/10 mL (Fresenius Kabi) (F)(PFL) no preservative <sup>87</sup>	N/A	1 mg/mL <sup>87</sup>	discard unused potion <sup>87</sup>	SC syringe <sup>88</sup>	48 h F, discard end of day RT <sup>31,89,90</sup>	
				500 mL <b>NS only</b> <sup>87</sup> do NOT use D5W <sup>87</sup>	24 h RT <sup>87</sup>	
				Cassette: qs to 100 mL with <b>bacteriostatic NS only</b> via SIMS DELTEC INC. MEDICATION CASSETTES® <sup>87</sup>  filter drug and diluent through 0.22 micron filter as each solution is being introduced into the cassette <sup>87</sup>	at least 7 days <sup>87</sup>	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Cladribine</b> 10 mg/10 mL (GMP) (F)(PFL) no preservative <sup>91</sup>	N/A	1 mg/mL <sup>91</sup>	discard unused portion <sup>31,91</sup>	SC syringe <sup>88</sup>	48 h F, discard end of day RT <sup>31,89,90</sup>	
				500 mL NS only <sup>91</sup>  do NOT use D5W <sup>91</sup>	24 h RT <sup>91</sup>	
				Cassette: qs to 100 mL with <b>bacteriostatic NS only</b> via SIMS DELTEC INC. MEDICATION CASSETTES® <sup>91</sup>  filter drug and diluent through 0.22 micron filter as each solution is being introduced into the cassette <sup>91</sup>	at least 7 days <sup>91</sup>	



# BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Crisantaspase</b> (recombinant asparaginase <i>Erwinia chrysanthemum</i> ) 10 mg/0.5 mL (Jazz) (F)(PFL) do not shake preservative free <sup>92</sup>	N/A	20 mg/mL <sup>92</sup>	discard unused portion <sup>92</sup>	IM syringe <sup>92</sup> max volume: 2 mL  if volume >2 mL, use multiple sites <sup>92</sup>	use within 4 h RT <sup>92</sup>  (PFL NOT required for syringe) <sup>92</sup>	- discard if cloudy, discoloured, or contains particulates <sup>92</sup> - do NOT shake <sup>92</sup>
<b>Cyclophosphamide</b> 200 mg 500 mg 1000 mg 2000 mg (Baxter) (RT)(PFL) no preservative <sup>93</sup>	200 mg <sup>93</sup> : 10 mL NS  500 mg <sup>93</sup> : 25 mL NS  1000 mg <sup>93</sup> : 50 mL NS  2000 mg <sup>93</sup> : 100 mL NS	20 mg/mL <sup>93</sup>	12 h F, RT <sup>2,93</sup>	<b>NS</b> , D5W, D5NS <sup>93</sup>  100-250 mL†  high dose in BMT: may need 500 mL*	36 h F, 24 h RT <sup>94-96</sup>	- suggested dose limits relate to the physical limitations of the bag size and added drug volume; it is not a concentration- dependent property of the drug - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Cytarabine</b> 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative <sup>97</sup>	N/A	100 mg/mL <sup>97</sup>	12 h RT <sup>2,97</sup>	0.1-37.5 mg/mL <b>NS</b> , D5W, SWI <sup>97</sup>  100 mL†	in NS: 4 d RT <sup>2,97</sup>  other solutions: 72 h F, 24 h RT <sup>97</sup>  **(PFL) <sup>97</sup>	
<b>Cytarabine IT injection</b> 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative <sup>97</sup>	N/A  record time of puncture	100 mg/mL <sup>97</sup>	use within 4 h of initial puncture <sup>2</sup>	IT syringe  qs to 6 mL with preservative free NS <sup>98-100</sup>  diluent containing preservatives should <b>NOT</b> be used for intrathecal administration <sup>101</sup>	use within 4 h of initial puncture <sup>2</sup>  **(PFL) <sup>97</sup>	- auxiliary info <sup>2</sup> : IT - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag <sup>100</sup>
<b>Cytarabine SC injection</b> 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative <sup>97</sup>	N/A	100 mg/mL <sup>97</sup>	12 h RT <sup>2,97</sup>	SC syringe	10 d F, 4 d RT <sup>2,102-104</sup>  **(PFL) <sup>97</sup>	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Cytarabine</b> 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative <sup>105</sup>	N/A	100 mg/mL <sup>105</sup>	discard unused portion <sup>31,105</sup>	0.1-37.5 mg/mL <b>NS</b> , D5W, SWI <sup>105</sup>  100 mL†	10 d F, 48 h RT <sup>105</sup>  **(PFL)	
<b>Cytarabine IT injection</b> 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative <sup>105</sup>	N/A  record time of puncture	100 mg/mL <sup>105</sup>	use within 4 h of initial puncture <sup>31</sup>	IT syringe  qs to 6 mL with preservative free <b>NS</b> <sup>98,99</sup>  diluent containing preservatives should <b>NOT</b> be used for intrathecal administration <sup>101</sup>	use within 4 h of initial puncture <sup>31</sup>  **(PFL)	- auxiliary info: IT <sup>31</sup> - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag <sup>100</sup>
<b>Cytarabine SC injection</b> 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative <sup>105</sup>	N/A	100 mg/mL <sup>105</sup>	discard unused portion <sup>31,105</sup>	SC syringe	10 d F, 48 h RT <sup>105</sup>  **(PFL)	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Cytarabine</b> 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative <sup>106</sup>	N/A	100 mg/mL <sup>106</sup>	12 h RT <sup>2,106</sup>	0.1-37.5 mg/mL <b>NS</b> , D5W, SWI, LR <sup>106</sup>  100 mL *	in NS: 4 d RT <sup>2,106</sup>  other solutions: 72 h F, 24 h RT <sup>106</sup>  **(PFL) <sup>106</sup>	
<b>Cytarabine IT injection</b> 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative <sup>106</sup>	N/A  record time of puncture	100 mg/mL <sup>106</sup>	use within 4 h of initial puncture <sup>2</sup>	IT syringe  qs to 6 mL with preservative free NS <sup>98-100</sup>  diluent containing preservatives should <b>NOT</b> be used for intrathecal administration <sup>101</sup>	use within 4 h of initial puncture <sup>2</sup>  **(PFL) <sup>106</sup>	- auxiliary info: IT <sup>2</sup> - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag <sup>100</sup>
<b>Cytarabine SC injection</b> 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative <sup>106</sup>	N/A	100 mg/mL <sup>106</sup>	12 h RT <sup>2,106</sup>	SC syringe	10 d F, 4 d RT <sup>2,102-104</sup>  **(PFL) <sup>106</sup>	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Dacarbazine</b> 600 mg (Pfizer) (F)(PFL) no preservative <sup>107</sup>	59.1 mL SWI <sup>107</sup>	10 mg/mL <sup>107</sup>	12 h F, 8 h RT <sup>2,107</sup>	0.19-3.0 mg/mL <b>NS</b> , D5W <sup>107</sup>  500-1000 mL†	24 h F <sup>107</sup>  **(PFL) <sup>108</sup>	- protect container from light during administration <sup>108</sup>
<b>DACTINomycin</b> 0.5 mg (GMD Pharma for Recordati) (RT)(PFL) no preservative <sup>109</sup> (SAP)	1.1 mL SWI (preservative-free) <sup>109</sup>  do <b>NOT</b> use SWI with preservative (may form precipitate) <sup>109</sup>	0.5 mg/mL (500 mcg/mL) <sup>109</sup>	discard unused portion <sup>110</sup>	syringe <sup>109</sup>	use within 4 h of initial vial puncture <sup>110</sup>	- drug loss reported with some cellulose ester membrane in- line filters <sup>109</sup>
				10 mcg/mL or greater <sup>109</sup>  <b>NS</b> , D5W <sup>109,111</sup>		
<b>Daratumumab</b> 100 mg/5mL 400 mg/20mL (Janssen) (F)(PFL) do not shake no preservative <sup>112</sup>	N/A	20 mg/mL <sup>112</sup>	discard unused portion <sup>112</sup>	500-1000 mL NS  dilute to final volume by withdrawing volume from bag equal to volume of drug to be added <sup>112</sup>  mix by gentle inversion <sup>112</sup>	24 h F, followed by 15 h infusion (total 39 h) <sup>112</sup>  allow bag to come to RT, then use immediately <sup>112</sup>  **(PFL)	- administer with 0.2 micron in-line filter <sup>112</sup> - discard if visible particles are observed <sup>112</sup> - complete infusion within 15 h <sup>112</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Daratumumab subcutaneous (DARZALEX SC®)</b> 1800 mg/15 mL (Janssen) (F)(PFL) do not shake no preservative <sup>113</sup>	N/A	120 mg/mL <sup>113</sup>  allow vial to come to RT prior to use <sup>113</sup>	discard unused portion <sup>2,113</sup>	SC syringe <sup>113</sup>	24 h F, plus an additional 12 h RT <sup>113</sup>  bring to RT prior to use <sup>113</sup>	- contains hyaluronidase <sup>113</sup> - formulations are NOT interchangeable <sup>113</sup> - discard if opaque particles or discolouration are present <sup>113</sup> - unpunctured vial may be stored up to 24 h at RT <sup>113</sup>
<b>DAUNOrubicin</b> 20 mg (Erfar) (RT)(PFL) no preservative <sup>114</sup>	4 mL SWI <sup>114</sup>	5 mg/mL <sup>114</sup>	12 h F, RT <sup>2,114</sup>  **(PFL) <sup>114</sup>	100-250 mL <b>NS</b> , D5W <sup>114</sup>	48 h F, 24 h RT <sup>115</sup>  **(PFL) <sup>114</sup>	

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Daunorubicin- cytarabine liposome</b> 44 mg-100 mg (Jazz) (F)(PFL) no preservative <sup>116</sup>	19 mL <b>SWI</b> <sup>116</sup>  allow vial to come to RT for 30 min prior to use <sup>116</sup>  swirl gently for 5 min, inverting the vial every 30 sec; do NOT shake <sup>116</sup>  allow vial to rest for 15 min after reconstitution <sup>116</sup>  gently invert each vial 5 times prior to withdrawing concentrate for dilution <sup>116</sup>  record time of reconstitution	2.2 mg/mL daunorubicin- 5 mg/mL cytarabine <sup>116</sup>	4 h <b>F</b> <sup>116</sup>  max <i>combined</i> storage time for reconstituted vial and diluted product is 4 h <b>F</b> (NOT 4 h <b>F</b> each) <sup>116</sup>	500 mL <b>NS</b> , D5W <sup>116</sup>  mix by gentle inversion <sup>116</sup>	4h <b>F</b> <sup>116</sup>  max <i>combined</i> storage time for reconstituted vial and diluted product is 4 h <b>F</b> (NOT 4 h <b>F</b> each) <sup>116</sup>	- reconstituted product is an opaque, purple, homogenous dispersion <sup>116</sup> - before administration, final product should be gently inverted to remix solution after refrigeration <sup>116</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Degarelix</b> 80 mg 120 mg (Ferring) (RT) do not shake <sup>117</sup> no preservative <sup>118</sup>	80 mg: 4.2 mL SWI (supplied diluent) <sup>117</sup>	20 mg/mL <sup>117</sup>	2 h RT <sup>117</sup>	SC syringe <sup>117</sup>	2 h RT <sup>117</sup>	
	120 mg: 3 mL SWI (supplied diluent) <sup>117</sup>	40 mg/mL <sup>117</sup>				
	swirl gently; avoid shaking to prevent foam formation <sup>117</sup>  reconstitution may take up to 15 min <sup>117</sup>					



BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Denosumab (XGEVA®)</b> 120 mg/1.7 mL (Amgen) (F)(PFL) do not shake no preservative <sup>119</sup>	N/A	71 mg/mL <sup>119</sup>	discard unused portion <sup>110,119</sup>	SC syringe <sup>119</sup>	use within 4 h F, RT of initial puncture <sup>110</sup>  bring to RT 15-30 min prior to use <sup>119</sup>	- not interchangeable with PROLIA <sup>119</sup> - do not use if solution is cloudy; trace amounts of translucent to white proteinaceous particles are acceptable <sup>119</sup> - avoid vigorous shaking <sup>119</sup>
<b>Dexrazoxane</b> 250 mg 500 mg (Hikma USA) (RT) no preservative <sup>120,121</sup>	250 mg: 25 mL SWI <sup>121</sup>  500 mg: 50 mL SWI <sup>121</sup>	10 mg/mL <sup>121</sup>	3 h F, 30 min RT <sup>121</sup>	MUST BE FURTHER DILUTED with Lactated Ringers to 1.3-3.0 mg/mL <sup>121</sup>	4 h F, 1 h RT <sup>121</sup>	
<b>Dexrazoxane</b> 250 mg 500 mg (Pfizer) (RT) no preservative <sup>122</sup>	250 mg: 25 mL SWI <sup>122</sup>  500 mg: 50 mL SWI <sup>122</sup>	10 mg/mL <sup>122</sup>	3 h F, 30 min RT <sup>122</sup>	MUST BE FURTHER DILUTED with Lactated Ringers to 1.3-3.0 mg/mL <sup>122</sup>	4 h F, 1 h RT <sup>122</sup>	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Dinutuximab</b> 17.5 mg/5 mL (Unither/United Therapies) (F)(PFL) do not shake no preservative <sup>123</sup>	N/A	3.5 mg/mL <sup>123</sup>	discard unused portion <sup>31</sup>	100 mL NS <sup>123</sup>  mix by gentle inversion <sup>123</sup>	initiate infusion within 4 h of dilution; refrigerate bag if not hung immediately <sup>123</sup>  complete administration within 24 h of dilution <sup>123</sup>	- do NOT shake <sup>123</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>DOCEtaxel</b> 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Pfizer/Hospira) (F, RT)(PFL) preservative <sup>124</sup>	N/A	10 mg/mL <sup>124</sup>	20mg: discard unused portion <sup>2,124</sup>  80 mg or 160 mg: 28 d F <sup>2,124</sup>  **(PFL) <sup>124</sup>  (max number of punctures: up to 3 doses can be removed when a filtered venting needle [e.g., Chemo- Vent®] is also inserted, i.e., 6 punctures total) <sup>125</sup>	0.3-0.74 mg/mL <b>NS</b> , D5W <sup>124</sup>  100-500 mL†	10 d F, 4 d RT <sup>2,126</sup>  **(PFL) <sup>126</sup> during F storage	- use non-DEHP bag and IV administration set <sup>124</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>DOCEtaxel intravesical</b> 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Pfizer/Hospira) (F, RT)(PFL) preservative <sup>124</sup>	N/A	10 mg/mL <sup>124</sup>	20 mg: discard unused portion <sup>2,124</sup>  80 mg or 160 mg: 28 d F <sup>2,124</sup>  **(PFL) <sup>124</sup>  (max number of punctures: up to 3 doses can be removed when a filtered venting needle [e.g., Chemo- Vent®] is also inserted, i.e., 6 punctures total) <sup>125</sup>	syringe  dilute with NS to final volume of 45 mL <sup>127,128</sup>	up to 0.9 mg/mL: 10 d F, 4 d RT <sup>2,126</sup>  **(PFL) <sup>126</sup> during F storage	
<b>DOCEtaxel</b> 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Sandoz) (F,RT)(PFL) preservative <sup>129</sup>	N/A	10 mg/mL <sup>129</sup>	28 d F, RT <sup>2,130</sup>	0.3-0.74 mg/mL <b>NS, D5W</b> <sup>129</sup>  100-500 mL†	24 h F, 4 h RT <sup>2,131</sup>	- use non-DEHP bag and IV administration set <sup>129</sup>

# BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>DOCEtaxel</b> <b>intravesical</b> 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Sandoz) (F,RT)(PFL) preservative <sup>129</sup>	N/A	10 mg/mL <sup>129</sup>	28 d F, RT <sup>2,130</sup>	syringe  dilute with NS to final volume of 45 mL <sup>127,128</sup>	up to 0.9 mg/mL <sup>132,133</sup> : use immediately after preparation to prevent particle formation <sup>2,131</sup>	- particle formation occurs earlier with higher temperature and higher concentrations <sup>131</sup>
<b>DOXOrubicin</b> 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 200 mg/100 mL (Accord) (F)(PFL) no preservative <sup>134</sup>	N/A	2 mg/mL <sup>134</sup>	8 h <sup>134</sup>	syringe <sup>134</sup>	24 h F, RT from initial vial puncture <sup>134</sup>	- for LYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing either etoposide or etoposide phosphate AND DOXOrubicin and vinCRISTine)
				0.01–2 mg/mL NS <sup>135,136</sup>  1000 mL <sup>137-139</sup>	24 h RT <sup>135,136</sup>	

# BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>DOXOrubicin</b> 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 200 mg/100 mL (Teva) (F)(PFL) no preservative <sup>140</sup>	N/A	2 mg/mL <sup>140</sup>	8 h <sup>140</sup>	syringe <sup>140</sup>	48 h F, 24 h RT <sup>140</sup> from initial vial puncture	- for LYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing either etoposide or etoposide phosphate AND DOXOrubicin and vinCRISTine)
				0.01–2 mg/mL NS <sup>135,136</sup> 1000 mL <sup>137-139</sup>	24 h RT <sup>135,136</sup>	
<b>DOXOrubicin</b> 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Pfizer) (F) no preservative <sup>141</sup>	N/A	2 mg/mL <sup>141</sup>	discard unused portion <sup>110,141</sup>	syringe <sup>141</sup>	48 h F, 24 h RT <sup>141</sup>	- for LYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing either etoposide or etoposide phosphate AND DOXOrubicin and vinCRISTine)
				0.01–2 mg/mL NS <sup>135,136</sup> 1000 mL <sup>137-139</sup>	24 h RT <sup>135,136</sup>	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>DOXOrubicin Pegylated Liposomal</b> 20 mg/10 mL (Janssen) (F) no preservative <sup>142</sup>	N/A	2 mg/mL <sup>142</sup>	discard unused portion <sup>142</sup>	<b>D5W only</b> <sup>142</sup>  <90 mg: 250 mL <sup>142</sup>  ≥90 mg: 500mL <sup>142</sup>	24 h F <sup>142</sup>	- do not filter <sup>142</sup>
<b>DOXOrubicin Pegylated Liposomal</b> 20 mg/10 mL 50 mg/25 mL (Taro) (F) no preservative <sup>143</sup>	N/A	2 mg/mL <sup>143</sup>	discard unused portion <sup>143</sup>	<b>D5W only</b> <sup>143</sup>  <90 mg: 250 mL <sup>143</sup>  ≥90 mg: 500mL <sup>143</sup>	24 h F <sup>143</sup>	- do not filter <sup>143</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>DSPACE</b> (ULY0D-PACE protocol) (RT) no preservative <sup>2,139,144,145</sup>	see brand specific entries for: cyclophosphamide as applicable	see brand specific entries for: CISplatin, cyclophosphamide, etoposide	see brand specific entries for: CISplatin, cyclophosphamide, etoposide	in 1000 mL NS <sup>138,144,145</sup>	≤0.2 mg/mL: 24 h RT <sup>2,144,145</sup>	- final product is a 3-in-1 solution containing etoposide, CISplatin, cyclophosphamide (see ULY0D-PACE protocol) - use non-DEHP bag and tubing only - administer with 0.2 micron in-line filter



# BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Durvalumab</b> 120 mg/2.4 mL 500 mg/10 mL (AstraZeneca) (F)(PFL) do not shake no preservative <sup>146</sup>	N/A	50 mg/mL <sup>146</sup>	discard unused portion <sup>146</sup>	1-15 mg/mL <b>NS, D5W</b> <sup>146</sup>  100 mL†  mix by gentle inversion <sup>146</sup>	10 d F, 12 h RT <sup>2,146</sup>	- do NOT shake <sup>146</sup> - administer with 0.2 micron in-line filter <sup>146</sup> - discard vial if solution is cloudy, discolored, or visible particles are present <sup>146</sup> - use filtered venting needle (e.g., Chemo- Vent®) in place of CSTD for compounding <sup>147</sup>
<b>Elranatamab</b> 44 mg/1.1 mL 76 mg/1.9 mL (Pfizer) (F)(PFL) do not shake no preservative <sup>148</sup>	N/A	40 mg/mL <sup>148</sup>  allow vials to reach RT before using <sup>148</sup>	discard unused portion <sup>148</sup>	SC syringe <sup>148</sup>	use within 4 h F, RT <sup>148</sup>	- do not use if contains particulates <sup>148</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Elranatamab</b> 76 mg/1.9 mL (Pfizer) (F)(PFL) no preservative <sup>149</sup> (SAP)	N/A	40 mg/mL <sup>149</sup>  allow vials up to 15 min to reach RT before using <sup>149</sup>	discard unused portion <sup>2,149</sup>	SC syringe <sup>149</sup>	use immediately after preparation <sup>2,149</sup>	- supplied diluent to be used only for doses <8 mg <sup>149</sup> - solution colour may be colourless to yellow/brown <sup>149</sup> - unpunctured vials can be kept at RT up to 8 h before returning to F; discard if longer than 8 h RT <sup>149</sup> - solutions can be prepared in normal room light; avoid direct sunlight <sup>149</sup> - CSTD cannot be used during storage of prepared doses <sup>149,150</sup> - to <b>prepare</b> 76 mg dose ONLY: use filtered venting needle (e.g., Chemo-Vent®) in place of CSTD <sup>151</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Enfortumab vedotin</b> 20 mg 30 mg (Seagen) (F)(PFL) do not shake no preservative <sup>152</sup>	20 mg <sup>152</sup> : 2.3 mL SWI  30 mg <sup>152</sup> : 3.3 mL SWI  slowly swirl until completely dissolved; do not shake <sup>152</sup>  allow to settle until bubbles are gone (≥1 min) <sup>152</sup>	10 mg/mL <sup>152</sup>	12 h F <sup>2,152</sup>	0.3-4 mg/mL <b>NS</b> , D5W, Lactated Ringer's <sup>152</sup>  50 mL*  mix by gentle inversion <sup>152</sup>	16 h F <sup>152</sup>  **(PFL) <sup>152</sup>	- discard if visible particles are present or solution is discolored <sup>152</sup> - do not shake <sup>152</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Epcoritamab</b> (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative <sup>153</sup>	N/A  bring vial to RT prior to use (<1 h) <sup>153</sup>  gently swirl vial prior to use <sup>153</sup>  do not invert, vortex, or shake <sup>153</sup>	5 mg/mL <sup>153</sup>  <b>For Step-up Dose 1 (0.16 mg)</b> <sup>153</sup>  To create <b>intermediate vial (0.8 mg/mL):</b> <b>using 4 mg vial:</b> transfer 0.8 mL drug solution into empty vial and add 4.2 mL NS; gently swirl for 30-45 sec	discard unused portion <sup>153</sup>	SC syringe <sup>153</sup>  <b>For Step-up Dose 1 (0.16 mg)</b> <sup>153</sup>  To create <b>dosing vial (0.16 mg/mL):</b> transfer 2.0 mL from intermediate vial into the dosing vial and add 8.0 mL NS; gently swirl for 30-45 sec  withdraw 1.0 mL into syringe for administration <sup>153</sup>  mix gently; do not invert, vortex, or shake <sup>153</sup>	24 h F, 12 h RT <sup>153</sup> (RT storage includes preparation)  **(PFL) <sup>153</sup>	<b>- CAUTION:</b> two concentrations are available <b>- use 4 mg vial for step-up doses only</b> <sup>153</sup> - minimize exposure to daylight <sup>153</sup>

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Epcoritamab</b> (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative <sup>153</sup>	N/A  bring vial to RT prior to use (<1 h) <sup>153</sup>  gently swirl vial prior to use <sup>153</sup>  do not invert, vortex, or shake <sup>153</sup>	5 mg/mL <sup>153</sup>  For <b>Step-up Dose 2 (0.8 mg)</b> <sup>153</sup>  To create <b>intermediate vial (0.8 mg/mL):</b> <b>using 4 mg vial:</b> transfer 0.8 mL drug solution into empty vial and add 4.2 mL NS; gently swirl for 30-45 sec	discard unused portion <sup>153</sup>	SC syringe <sup>153</sup>  For <b>Step-up Dose 2 (0.8 mg)</b> <sup>153</sup>  withdraw 1.0 mL from the intermediate vial into syringe for administration  mix gently; do not invert, vortex, or shake <sup>153</sup>	24 h F, 12 h RT <sup>153</sup> (RT storage includes preparation)  **(PFL) <sup>153</sup>	- <b>CAUTION:</b> two concentrations are available <sup>153</sup> - <b>use 4 mg vial for step-up doses only</b> <sup>153</sup> - minimize exposure to daylight <sup>153</sup>
<b>Epcoritamab</b> (AbbVie) 48 mg/0.8 mL (F)(PFL) do not shake no preservative <sup>153</sup>	N/A  bring vial to RT prior to use (<1 h) <sup>153</sup>  gently swirl vial prior to use <sup>153</sup>  do not invert, vortex, or shake <sup>153</sup>	60 mg/mL <sup>153</sup>	discard unused portion <sup>153</sup>	SC syringe <sup>153</sup>  do not invert, vortex, or shake <sup>153</sup>	24 h F, 12 h RT <sup>153</sup> (RT storage includes preparation)  **(PFL) <sup>153</sup>	- <b>CAUTION:</b> two concentrations are available - <b>use 48 mg vial for full doses only</b> <sup>153</sup> - minimize exposure to daylight <sup>153</sup>

# BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Epcoritamab</b> (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative <sup>154</sup> (SAP)	N/A  bring vial to RT prior to use <sup>154</sup>  gently swirl vial prior to use <sup>154</sup>	5 mg/mL <sup>154</sup>  <b>For Step-up Dose 1<sup>154</sup> (0.16 mg)</b>  To create <b>intermediate vial (0.8 mg/mL):</b> <b>using 4 mg vial:</b> transfer 0.8 mL drug solution into empty vial and add 4.2 mL NS; gently swirl for 30-45 sec (at 45 degree angle)	discard unused portion <sup>154</sup>	SC syringe <sup>154</sup>  <b>For Step-up Dose 1<sup>154</sup> (0.16 mg)</b>  To create <b>dosing vial (0.16 mg/mL):</b> transfer 2.0 mL from intermediate vial into the dosing vial and add 8.0 mL NS; gently swirl for 30-45 sec (at 45 degree angle)  withdraw 1.0 mL into syringe for administration	24 h <sup>154</sup> ; to a maximum of 20 h F, 4 h RT <sup>154</sup>  mix gently; do not invert, vortex, or shake <sup>154</sup>	- <b>CAUTION:</b> two concentrations are available <sup>154</sup> - <b>use 4 mg vial for step-up doses only<sup>154</sup></b> - do not use if visible particles are observed <sup>154</sup> - do not use CSTD for preparation or administration <sup>154</sup> ; use filtered venting needle (Chemo- Vent®) for preparation

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<b>Epcoritamab</b> (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative <sup>154</sup> (SAP)	N/A  bring vial to RT prior to use <sup>154</sup>  gently swirl vial prior to use <sup>154</sup>	5 mg/mL <sup>154</sup>  For <b>Step-up Dose 2 (0.8 mg)</b> <sup>154</sup>  To create <b>intermediate vial (0.8 mg/mL):</b> <b>using 4 mg vial:</b> transfer 0.8 mL drug solution into empty vial and add 4.2 mL NS; gently swirl for 30-45 sec (at 45 degree angle)	discard unused portion <sup>154</sup>	SC syringe <sup>154</sup>  For <b>Step-up Dose 2 (0.8 mg)</b> <sup>154</sup>  withdraw 1.0 mL from the intermediate vial into syringe for administration	24 h <sup>154</sup> ; to a maximum of 20 h F, 4 h RT <sup>154</sup>  mix gently; do not invert, vortex, or shake <sup>154</sup>	- <b>CAUTION:</b> two concentrations are available <sup>154</sup> - <b>use 4 mg vial for            step-up doses            only</b> <sup>154</sup> - do not use if visible particles are observed <sup>154</sup> - do not use CSTD for preparation or administration <sup>154</sup> ; use filtered venting needle (Chemo- Vent®) for preparation

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<b>Epcoritamab</b> (AbbVie) 48 mg/0.8 mL (F)(PFL) do not shake no preservative <sup>154</sup> (SAP)	N/A  bring vial to RT prior to use <sup>154</sup>  gently swirl vial prior to use <sup>154</sup>	60 mg/mL <sup>154</sup>	discard unused portion <sup>154</sup>	SC syringe <sup>154</sup>	24 h <sup>154</sup> ; to a maximum of 20 h F, 4 h RT <sup>154</sup>  mix gently; do not invert, vortex, or shake <sup>154</sup>	- <b>CAUTION:</b> two concentrations are available <sup>154</sup> - <b>use 48 mg vial for full doses only</b> <sup>154</sup> - do not use if visible particles are observed <sup>154</sup> - do not use CSTD for preparation or administration <sup>154</sup> ; use filtered venting needle (Chemo- Vent®) for preparation
<b>Epirubicin</b> 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 150 mg/75 mL 200 mg/100 mL (Teva/Novopharm) (F)(PFL) no preservative <sup>155</sup>	N/A	2 mg/mL <sup>155</sup>	8 h F, RT <sup>155</sup>	syringe <sup>155</sup>	48 h F, 24 h RT from initial vial puncture <sup>155</sup>	



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<b>Epirubicin</b> 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Fresenius Kabi) (F)(PFL) no preservative <sup>156</sup>	N/A  record time of puncture	2 mg/mL <sup>156</sup>	8 h <sup>156</sup>	syringe <sup>156</sup>	48 h F, 24 h RT from initial vial puncture <sup>156</sup>	
				100 mL* <b>NS, D5W</b>	48 h F, RT <sup>24,156</sup>	
<b>Epirubicin</b> 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Pfizer) (F)(PFL) no preservative <sup>157</sup>	N/A  record time of puncture	2 mg/mL <sup>157</sup>	8 h <sup>157</sup>	syringe <sup>157</sup>	48 h F, 24 h RT from initial vial puncture <sup>157</sup>	
				100 mL* <b>NS, D5W<sup>72</sup></b>	48 h F, RT <sup>158</sup>	

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<b>EPOCHR</b> (LYEPOCHR protocol) (RT) no preservative <sup>24,159-162</sup>	see brand specific entries for: DOXOrubicin as applicable	see brand specific entries for: DOXOrubicin, etoposide, vinCRISTine	see brand specific entries for: DOXOrubicin, etoposide, vinCRISTine	etoposide dose ≤125 mg/24 h: in 500 mL NS  etoposide dose >125 mg/24 h: in 1000 mL NS	etoposide concentration ≤0.25 mg/mL: complete administration within 72 h RT  precipitation occurs at etoposide concentrations >0.25 mg/mL	- final product is a 3-in-1 solution containing <b>etoposide</b> , DOXOrubicin, and vinCRISTine (refer to LYEPOCHR protocol) - use non-DEHP bag and tubing only - administer with 0.2 micron in-line filter
<b>EPOCHR with etoposide phosphate</b> (LYEPOCHR protocol) (RT) no preservative <sup>163,164</sup>	see brand specific entries for: DOXOrubicin and etoposide phosphate as applicable	see brand specific entries for: DOXOrubicin, etoposide phosphate, vinCRISTine	see brand specific entries for: DOXOrubicin, etoposide phosphate, vinCRISTine	500 mL <b>NS</b> <sup>165</sup>	4 d RT, 5 d F <sup>2,163</sup>	- final product is a 3-in-1 solution containing <b>etoposide phosphate</b> , DOXOrubicin, and vinCRISTine (refer to LYEPOCHR protocol)

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<b>eriBULin</b> 1 mg/2 mL (Eisai Limited) (RT)(PFL) <sup>166</sup> no preservative <sup>24</sup>	N/A	0.5 mg/mL <sup>166</sup>	discard unused portion <sup>24,166</sup>	IV syringe <sup>166</sup>	24 h F, 6 h RT <sup>166</sup>	- do not administer through dextrose containing lines <sup>166</sup> - vials contain dehydrated alcohol USP (5% v/v) <sup>166</sup>

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<b>Etoposide</b> 100 mg/5 mL 200 mg/10 mL 500 mg/25 mL 1000 mg/50 mL (Teva) (RT)(PFL) no preservative <sup>167</sup>	N/A	20 mg/mL <sup>167</sup>	discard unused portion <sup>167</sup>	0.2-0.4 mg/mL NS <sup>167</sup>  100-1000 mL†	stability is concentration dependent  <b>0.2-0.3 mg/mL:</b> 7 d F, <sup>168</sup> 2 d RT <sup>168,169</sup>  <b>0.4-0.5 mg/mL:</b> 1 d F, <sup>168</sup> 1d RT <sup>168</sup>  <b>0.6-9.0 mg/mL:</b> generally unstable  <b>9.5 mg/mL:</b> 2 d F, <sup>168</sup> 1d RT <sup>168</sup>  <b>10-12 mg/mL:</b> 7 d F, <sup>168</sup> 2 d RT <sup>168,169</sup>	- use non-DEHP bag and tubing only - administer with 0.2 micron in-line filter <sup>170</sup> - for LYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing either etoposide or etoposide phosphate AND DOXOrubicin and vinCRISTine) - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)
				D5W <sup>167</sup>	4 h RT <sup>167,171</sup>	

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<b>Etoposide phosphate (ETOPOPHOS®)</b> 100 mg (Xediton/Cheplapharm) (F)(PFL) no preservative <sup>172-174</sup> (SAP)	5 mL NS, D5W, SWI, BWI <sup>175</sup>	20 mg/mL <sup>175</sup>	in NS, D5W, SWI: 12 h F, RT <sup>2,175</sup>	500 mL <b>NS</b> , D5W <sup>175</sup>	24 h F, RT <sup>175</sup>	- for LYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing either etoposide or etoposide phosphate AND DOXOrubicin and vinCRISTine)
	10 mL NS, D5W, SWI, BWI <sup>175</sup>	10 mg/mL <sup>175</sup>	in BWI: 7 d F, 48 h RT <sup>175</sup>	(do not dilute to less than 0.1 mg/mL) <sup>175</sup>		
<b>Filgrastim (NEUPOGEN®)</b> 300 mcg/1 mL 480 mcg/1.6 mL (Amgen) (F)(PFL) do not shake no preservative <sup>176</sup>	N/A	300 mcg/mL <sup>176</sup>	discard unused portion <sup>176</sup>	SC syringe <sup>176</sup>	10 d F <sup>2,177</sup>	- albumin is added to D5W to prevent filgrastim adsorption to plastic <sup>176</sup> - incompatible with saline <sup>176,178</sup> - do NOT dilute to less than 5 mcg/mL <sup>176</sup>
				50-100 mL <b>D5W</b> only <sup>178</sup>  in PVC, polyolefin, or glass <sup>176</sup>  (for filgrastim concentrations of 5-15 mcg/mL in D5W, add albumin 2 mg/mL) <sup>176</sup>	7 d F <sup>177</sup>	

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<b>Fludarabine</b> 50 mg (Accord) (F) no preservative <sup>179</sup>	N/A	25 mg/mL <sup>179</sup>	discard unused portion <sup>179</sup>	dilute to maximum of 1 mg/mL <b>NS, D5W</b> <sup>179</sup>  100 mL†	72 h F, 24 h RT <sup>179</sup>	
<b>Fludarabine</b> 50 mg (Teva) (F) no preservative <sup>180</sup>	N/A	25 mg/mL <sup>180</sup>	discard unused portion <sup>180</sup>	dilute to maximum of 1 mg/mL <b>NS, D5W</b> <sup>180</sup>  100 mL†	72 h F, 24 h RT <sup>180</sup>	

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<b>Fluorouracil</b> 5000 mg/100 mL (Accord) (RT)(PFL) no preservative <sup>181</sup>	N/A	50 mg/mL <sup>181</sup>	12 h RT <sup>2,182</sup>	syringe <sup>181</sup>	4 d RT <sup>182</sup>	
				0.5-10 mg/mL <b>D5W</b> <sup>182</sup> 500 mL†	4 d RT <sup>182</sup>	
				CIVI: ambulatory pump <sup>183</sup>	complete within 8 d <sup>182</sup>	
<b>Fluorouracil</b> 500 mg/10 mL 5000 mg/100 mL (Sandoz) (RT)(PFL) no preservative <sup>184</sup>	N/A	50 mg/mL <sup>184</sup>	12 h RT <sup>2,185</sup>	syringe	4 d RT <sup>2,185</sup>	
				0.35-15 mg/mL <b>D5W</b> <sup>185</sup> 500 mL†	10 d F, 4 d RT <sup>2,185</sup>	
				CIVI: ambulatory pump <sup>183</sup>	complete within 8 d <sup>186-188</sup>	

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<b>Gemcitabine</b> 1000 mg 2000 mg (Accord) (RT) no preservative <sup>189</sup>	1000 mg: 25 mL NS <sup>189</sup>	38 mg/mL <sup>189</sup>	12 h RT <sup>2,189</sup>  refrigeration may cause crystallization <sup>189</sup>	syringe <sup>189</sup>	24 h RT <sup>2,189</sup>	
	2000 mg: 50 mL NS <sup>189</sup>			0.1-38 mg/mL NS <sup>189</sup>  250 mL†	4 d RT <sup>2,190,191</sup>	
<b>Gemcitabine intravesical</b> 1000 mg 2000 mg (Accord) (RT) no preservative <sup>189</sup>	1000 mg: 25 mL NS <sup>189</sup>  2000 mg: 50 mL NS <sup>189</sup>	38 mg/mL <sup>189</sup>	12 h RT <sup>2,189</sup>  refrigeration may cause crystallization <sup>189</sup>	syringe  dilute with NS to final volume of 45-90 mL <sup>127,128,192-194</sup>	up to 38 mg/mL <sup>2,189</sup> 24 h RT	
<b>Gemcitabine</b> 200 mg/5.3 mL 1000 mg/26.3 mL 2000 mg/52.6 mL (Pfizer/Hospira) (F) no preservative <sup>194</sup>	N/A	38 mg/mL <sup>194</sup>	discard unused portion <sup>194</sup>	syringe <sup>194</sup>	0.1-26 mg/mL: 10 d F, 24 h RT **(PFL) <sup>2,195,196</sup>  27-38 mg/mL: 24 h RT <sup>196</sup>	
				0.1–38 mg/mL <b>NS, D5W</b> <sup>194</sup>  250 mL†		



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<b>Gemcitabine intravesical</b> 200 mg/5.3 mL 1000 mg/26.3 mL 2000 mg/52.6 mL (Pfizer/Hospira) (F) no preservative <sup>194</sup>	N/A	38 mg/mL <sup>194</sup>	discard unused portion <sup>194</sup>	syringe  dilute with NS to final volume of 45-90 mL <sup>127,128,192-194</sup>	0.1-26 mg/mL: 10 d F, 24 h RT **(PFL) <sup>2,195,196</sup>  27-38 mg/mL: 24 h RT <sup>196</sup>	
<b>Gemcitabine (NOTE: concentration)</b> 200 mg/5 mL 1000 mg/25 mL 2000 mg/50 mL (Sandoz) (F) no preservative <sup>197</sup>	N/A	40 mg/mL <sup>197</sup>	discard unused portion <sup>197</sup>	syringe <sup>197</sup>	1-25 mg/mL: 10 d F, 4 d RT <sup>2,197,198</sup>	<b>CAUTION: alternative concentration</b>
				0.1–40 mg/mL <b>NS, D5W</b> <sup>197</sup>  250 mL†	26-40 mg/mL: 24 h RT <sup>197</sup>	
<b>Gemcitabine (NOTE: concentration) intravesical</b> 200 mg/5 mL 1000 mg/25 mL 2000 mg/50 mL (Sandoz) (F) no preservative <sup>197</sup>	N/A	40 mg/mL <sup>197</sup>	discard unused portion <sup>197</sup>	syringe  dilute with NS to final volume of 45-90 mL <sup>127,128,192-194</sup>	1-25 mg/mL: 10 d F, 4 d RT <sup>2,197,198</sup>  26-40 mg/mL: 24 h RT <sup>197</sup>	<b>CAUTION: alternative concentration</b>

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<b>Gemtuzumab ozogamicin</b> 4.5 mg (Pfizer) (F)(PFL) no preservative <sup>199</sup>	5 mL SWI <sup>199</sup>  allow vial to come to RT prior to use (~5 min) <sup>199</sup>  swirl gently to mix; do NOT shake <sup>199</sup>	1 mg/mL <sup>199</sup>	6 h F, 3 h RT <sup>199</sup>  protect from light if not used immediately <sup>199</sup>	0.075-0.234 mg/mL <b>NS</b> <sup>199</sup>  25-50 mL†  mix by gentle inversion; do NOT shake <sup>199</sup>	complete administration within 12 h F, 6 h RT <sup>199</sup>  (PFL)**  if refrigerated, bring bag to RT over 1 h prior to administration <sup>199</sup>	- administer with 0.2 micron in-line filter <sup>199</sup> - protect infusion <b>bag</b> from light (including UV) for administration <sup>199</sup> - protect administration <b>line</b> from light <b>ONLY</b> if hang time will be longer than 2 h <sup>199,200</sup> - solution may contain white particulates which do not affect product quality <sup>199</sup>
<b>IDArubicin PFS</b> 5 mg/5 mL 10 mg/10 mL 20 mg/20 mL (Pfizer) (F)(PFL) no preservative <sup>201</sup>	N/A	1 mg/mL <sup>201</sup>	discard unused portion <sup>201</sup>  **(PFL) <sup>201</sup>	syringe <sup>201</sup>	use within 4 h from initial puncture <sup>201,202</sup>	- avoid alkaline solutions <sup>201</sup>

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<b>Ifosfamide</b> 1000 mg 3000 mg (Baxter) (RT) no preservative <sup>203</sup>	1000 mg: 20 mL SWI <sup>203</sup>  3000 mg: 60 mL SWI <sup>203</sup>  shake well	50 mg/mL <sup>203</sup>	12 h F, RT <sup>2,204</sup>	0.6-20 mg/mL <b>NS</b> , D5W, Lactated Ringer's <sup>203</sup>  500 mL†	72 h F, 24 h RT <sup>204</sup>  24 h F, RT when mixed with mesna <sup>72</sup>	
<b>Ifosfamide</b> 1000 mg 3000 mg (Fresenius Kabi) (RT) no preservative <sup>205</sup>	1000 mg: 20 mL SWI <sup>205</sup>  3000 mg: 60 mL SWI <sup>205</sup>  shake well	50 mg/mL <sup>205</sup>	12 h F, RT <sup>2,206</sup>	0.6-20 mg/mL <b>NS</b> , D5W, Lactated Ringer's <sup>205</sup>  500 mL†	72 h F, 24 h RT <sup>206</sup>  24 h F, RT when mixed with mesna <sup>72</sup>	

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<b>Iniparib</b> 100 mg/10 mL (sanofi-aventis) (F) no preservative <sup>207</sup> (SAP)	N/A	10 mg/mL <sup>207</sup>	discard unused portion <sup>207</sup>	250 mL <b>NS</b> , D5W  dilute to 250 mL final volume by withdrawing volume from bag equal to volume of drug to be added <sup>207</sup>  (OR may also use empty IV bag and qs to final volume of 250 mL with <b>NS</b> , D5W <sup>207</sup> )	24 h RT <sup>207</sup>	
<b>Inotuzumab ozogamicin</b> 0.9 mg (Pfizer) (F)(PFL) no preservative <sup>208</sup>	4 mL <b>SWI</b> <sup>208</sup>  gently swirl vial to mix <sup>208</sup>	0.25 mg/mL <sup>208</sup>  record time of reconstitution	4 h <b>F</b> <sup>208</sup>  dilute dose within 4 h of reconstitution <sup>208</sup>  protect from light if not used immediately <sup>209</sup>	0.01-0.1 mg/mL <b>NS</b> <sup>208</sup>  25-50 mL†  mix by gentle inversion <sup>208</sup>	complete administration within 8 h of reconstitution <b>F</b> , RT <sup>208</sup>  (PFL) <sup>208</sup>  if refrigerated, bring bag to RT over 1 h prior to administration <sup>208</sup>	- do NOT shake <sup>208</sup> - protect container from UV and fluorescent light during storage and administration <sup>208,209</sup> - protect administration line from light ONLY if hang time will be longer than 1 h <sup>208,209</sup>

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<b>Ipilimumab</b> 50 mg/10 mL 200 mg/40 mL (BMS Canada) (F)(PFL) no preservative <sup>210</sup>	N/A	5 mg/mL <sup>210</sup>	12 h F, RT <sup>2,211</sup>	1-4 mg/mL <b>NS</b> , D5W <sup>210</sup>  25-250 mL†  OR undiluted in empty viaflex bag or glass bottle  (allow vials to stand at RT for ~5 min prior to withdrawal of contents) <sup>210</sup>	24 h F, RT <sup>211</sup>	- do NOT shake <sup>210</sup> - administer with 0.2 micron in-line filter <sup>210</sup> - vials may contain translucent-to- white amorphous particles <sup>210</sup> - discard if cloudy or has pronounced colour change (should be clear to pale yellow) <sup>210</sup>
<b>Irinotecan</b> 40 mg/2 mL 100 mg/5 mL 500 mg/25 mL (Accord) (RT)(PFL) no preservative <sup>212</sup>	N/A	20 mg/mL <sup>212</sup>	discard unused portion <sup>212</sup>	0.12-3.0 mg/mL <b>D5W</b> (preferred), <b>NS</b> <sup>212</sup>  250-500 mL†	48 h F, 24 h RT  **(PFL) <sup>212</sup>	

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<b>Irinotecan</b> 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Auro) (RT)(PFL) no preservative <sup>213</sup>	N/A	20 mg/mL <sup>213</sup>	discard unused portion <sup>213</sup>	0.12-3.0 mg/mL <b>D5W</b> (preferred), NS <sup>213</sup>  250-500 mL†	10 d F, 4 d RT <sup>2,213</sup>  **(PFL) <sup>213</sup>  <b>if NOT protected from light:</b> 72 h RT <sup>213</sup>	
<b>Irinotecan</b> 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Pfizer/Hospira) (RT)(PFL) no preservative <sup>214</sup>	N/A	20 mg/mL <sup>214</sup>	discard unused portion <sup>214</sup>	0.12-3.0 mg/mL <b>D5W</b> (preferred), NS <sup>214</sup>  250-500 mL†	10 d F, 4 d RT <sup>2,214</sup>  **(PFL) <sup>214</sup>  <b>if NOT protected from light:</b> 72 h RT <sup>214</sup>	
<b>Irinotecan liposome</b> 43 mg/10 mL (Servier) (F)(PFL) no preservative <sup>215</sup>	N/A	4.3 mg/mL <sup>215</sup>	discard unused portion <sup>215</sup>	to a final volume of 500 mL <b>NS</b> , D5W <sup>215</sup>  mix by gentle inversion <sup>215</sup>	24 h F, 4 h RT <sup>215</sup>  **(PFL)  if refrigerated, bring bag to RT prior to administration <sup>215</sup>	- do not use in-line filter <sup>215</sup> - <b>expressed as irinotecan free base</b>

### BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product (for IV bag size selection, see Notes†)	Product Stability	Special Precautions/Notes
<b>Isatuximab</b> 100 mg/5 mL 500 mg/25 mL (sanofi-aventis) (F)(PFL) do not shake no preservative <sup>216</sup>	N/A	20 mg/mL <sup>216</sup>  inspect vial and discard if discolouration or visible particles are present <sup>216</sup>	discard unused portion <sup>216</sup>	250 mL <b>NS, D5W</b> <sup>216</sup>  mix by gentle inversion; do NOT shake <sup>216</sup>	48 h F plus an additional 8 h RT including infusion time <sup>216</sup>	- administer with a 0.2 micron in-line filter <sup>216</sup>
<b>Ixabepilone</b> 15 mg (contains 16 mg) 45 mg (contains 47 mg) (BMS) (F)(PFL) no preservative <sup>217</sup> (SAP)	15 mg: 8 mL diluent (supplied) <sup>217</sup>  45 mg: 23.5 mL diluent (supplied) <sup>217</sup>	2 mg/mL <sup>217</sup>	1 h RT <sup>217</sup>	0.2-0.6 mg/mL Lactated Ringer's <sup>217</sup>	6 h RT <sup>217</sup>	- use non-DEHP bag and administration set <sup>217</sup> - administer with 0.2 micron in-line filter <sup>217</sup>

\* Suggested volume based on usual dose range and any concentration range of stability data

† see BC Cancer IV Bag Selection table: standardized bag sizes are provided for select Benefit Drugs with concentration-dependent stability or large drug volume

\*\* Protect from light means minimizing exposure to direct sunlight over a storage period. More specific information on protection from light (eg, protecting container and tubing during administration) will be indicated in the Special Precautions/Notes column.

\*\*\* Contains DMA (N,N dimethylacetamide). Product may be incompatible with closed system transfer devices (CSTD) such as ChemoLock.

**Centres are not to change content locally. All suggestions for change are to be forwarded to the Cancer Drug Manual editor.**

## Explanatory Notes:

**Stability data** assumes products prepared using standard aseptic technique in biological safety cabinet at low risk for contamination according to the classification outlined in USP 797.<sup>218,219</sup>

**Vial stability:** Stability of solution after first puncture or reconstituted solution.

**Storage temperature:** If information states same stability with refrigerator and room temperature storage, then fridge stability is bolded as preferred (ie, to minimize growth of micro-organisms).

**Discard unused portion:** Unused portion from single use vials should be discarded at the end of the day.

**“overfill known”** is stated if the manufacturer states overfill that is present is within acceptable limits.

**“Complete administration within \_\_\_”** is stated if the manufacturer specifies that the infusion must be completed in a specific time frame following preparation, usually including entire time required for preparation (from first puncture), storage, and administration of infusion.

Nomenclature for **in-line filters** has been standardized in the chart to 0.2 micron filter size. For more information, refer to CDM drug monograph.

## Abbreviations:

BWI = bacteriostatic water for injection

CIVI: ambulatory pump = Continuous Intravenous Infusion (e.g., elastomeric infusor)

CSTD = closed system transfer device

D5W = dextrose 5% in water

DMA = N,N dimethylacetamide

F = refrigerate

Non-DEHP = not containing Di(2-ethylhexyl) phthalate (DEHP)

NS = normal saline

PES = polyethersulfone

PFL = protect from light

RT = room temperature

SAP = drug is approved for use through the Health Canada Special Access Program

SWI = sterile water for injection

## References:

1. SteriMax Inc. PROLEUKIN® product monograph. Oakville, Ontario; July 6 2020
2. BC Cancer. Provincial Pharmacy Directive Number II-20: Chemotherapy Preparation Chart. Vancouver, British Columbia: BC Cancer; May 1 2022
3. McEvoy GK, editor. AHFS 2008 Drug Information. Bethesda, Maryland: American Society of Health-System Pharmacists, Inc.; . p. 917-925
4. Koreth J, Matsuoka K, Kim HT, et al. Interleukin-2 and regulatory T cells in graft-versus-host disease. N Engl J Med 2011;365(22):2055-2066
5. Koreth J, Alyea EP, Cutler C, Ho VT, et al. Clinical Study Protocol: A phase I study of ultra-low dose subcutaneous interleukin-2 (IL-2) for treatment of refractory chronic graft versus host disease. Boston, MA, USA: Dana Farber Cancer Institute; Harvard Medical Centre; 14 Dec 2010
6. Temple-Oberle CF, Byers BA, Hurdle V, et al. Intra-lesional interleukin-2 for in-transit melanoma. J Surg Oncol 2014;109(4):327-331



7. BC Cancer Skin and Melanoma Tumour Group. (SMILALD) BC Cancer Protocol Summary for Treatment of In-Transit Melanoma Using Intralesional Aldesleukin (IL-2). Vancouver, British Columbia: BC Cancer; 1 June 2021
8. BC Cancer Skin and Melanoma Tumour Group. (SMILALD) BC Cancer Protocol Summary for Treatment of In-Transit Melanoma Using Intralesional Aldesleukin (IL-2). Vancouver, British Columbia: BC Cancer; 1 August 2021
9. Rui Paiva. Business Unit Director, Transplant and Oncology. Personal communication. 1 June 2009
10. Bayer HealthCare Pharmaceuticals. MabCampath® Package Insert. Toronto, Ontario; 1 September 2007
11. Lundin J, Porwit-MacDonald A, Rossmann ED, et al. Cellular immune reconstitution after subcutaneous alemtuzumab (anti-CD52 monoclonal antibody, CAMPATH-1H) treatment as first-line therapy for B-cell chronic lymphocytic leukaemia. *Leukemia* 2004(18):484-490
12. Berlex Canada Inc. Campath Drug Information. San Antonio, Texas; undated undated
13. Neijssen J, Cardoso RMF, Chevalier KM, et al. Discovery of amivantamab (JNJ-61186372), a bispecific antibody targeting EGFR and MET. *J Biol Chem* 2021;296(100641):1-13
14. Eric Li, Manager Special Access Program, Janssen Inc. Personal Communication. November 18, 2021
15. Janssen Biotech Inc. RYBREVANT® full prescribing information. Horsham, PA, USA; May 2021
16. Janssen Inc. RYBREVANT® product monograph. Toronto, Ontario; March 30, 2022
17. Erfa Canada Inc. AMSA PD® injection product monograph. Westmount, Quebec; 16 August 2005
18. Phebra Pty Inc (distributed in Canada by ICON Plc). Arsenic trioxide product monograph. Dundas, Ontario; November 7, 2019
19. Sandoz Canada Inc. Arsenic trioxide for injection product monograph. Boucherville, Quebec; March 8, 2021
20. SteriMax Inc. Arsenic Trioxide product monograph. Oakville, Ontario; September 27, 2019
21. CGF Pharmatec for Jazz Pharmaceuticals France SAS. ERWINASE® product monograph. Montreal, Quebec; August 30 2016
22. Hoffmann-La Roche Limited. TECENTRIQ® product monograph. Mississauga, Ontario; 19 September 2019
23. EMD Serono. BAVENCIO® product monograph. Mississauga, Ontario; 4 May 2018
24. BC Cancer Agency. Pharmacy Policy Number II-20: Guiding Principles for Chemotherapy Preparation Chart. Vancouver, British Columbia: BC Cancer Agency; 19 September 2007
25. Celgene Inc. VIDAZA® product monograph. Mississauga, Ontario; 22 March 2018
26. Tutino A, Lai M. Cold water reconstitution of Vidaza with subsequent refrigerated storage prolongs drug stability. *Eur J Oncol Pharm* 2011;5(3-4):24-25, 34
27. Celgene Corporation. VIDAZA® full prescribing information. Summit, New Jersey, USA; May 2022
28. Dr. Reddy's Laboratories Limited. Azacitidine for injection product monograph. Mississauga, Ontario; 19 April 2017
29. Hikma Canada Inc. Azacitidine for injection product monograph. Caledon, Ontario; November 6, 2020
30. Merck Canada Inc. OncoTICE® product monograph. Kirkland, Quebec; 29 April 2019
31. BC Cancer. Provincial Pharmacy Directive Number II-20: Chemotherapy Preparation Chart. Vancouver, British Columbia: BC Cancer; December 5 2018
32. Verity Pharmaceuticals Inc. VERITY-BCG® Product Monograph. Mississauga, Ontario; 5 January 2021
33. GlaxoSmithKline. Belantamab mafodotin (GSK2857916) Investigational Product Information for Compassionate Use - Version 5.0. Collegeville, Pennsylvania, USA; 25 September 2019
34. GlaxoSmithKline. Belantamab mafodotin (GSK2857916) LYOPHILIZED POWDER Investigational Product Information for Compassionate Use - Version 1. Collegeville, Pennsylvania, USA; 26 October 2020
35. GlaxoSmithKline. BLENREP® full prescribing information. Research Triangle Park, North Carolina, USA; August 2020
36. Spectrum Pharmaceuticals Inc. BELEODAQ® full prescribing information. Irvine, CA, USA; April 2012
37. Natco Pharma Canada Inc. NAT-Bendamustine product monograph. Mississauga, ON; March 4, 2020
38. Teva Canada Limited. TREANDA® product monograph. Toronto, Ontario; 10 January . 2018
39. Lundbeck Canada Inc. TREANDA® product monograph. Montreal, Quebec; 22 August . 2012
40. Hoffman-La Roche Limited. AVASTIN® product monograph. Mississauga, Ontario; 6 June 2018
41. Amgen Canada Inc. MVASI® product monograph. Mississauga, Ontario; 5 June 2019
42. Pfizer Canada-ULC. ZIRABEV® product monograph. Kirkland, Quebec; June 17 2021
43. Fresenius Kabi Canada Ltd. Bleomycin for injection product monograph. Richmond Hill, Ontario; 1 June . 2016
44. Pfizer Canada Inc. Bleomycin for Injection product monograph. Kirkland, Quebec; 8 August 2017
45. Amgen Canada Inc. BLINCYTO® product monograph. Mississauga, Ontario; 12 July . 2016
46. Amgen Canada Inc. BLINCYTO® product monograph. Mississauga, Ontario; May 6, 2021
47. Actavis Pharma Company. ACT BORTEZOMIB® Bortezomib for injection product monograph. Mississauga, Ontario; 24 September 2015

48. Law S, Charbonneau LF, Iazzeta J, et al. Stability of generic formulations of bortezomib 1.0 and 2.5 mg/mL in vials and syringes stored at 4°C and room temperature (23°C). CJHP Canadian Society of Hospital Pharmacists Professional Practice Conference 2018 Poster Abstracts. Feb 4 - 6, 2018
49. Apotex Inc. Bortezomib for injection product monograph. Toronto, Ontario; 15 February 2019
50. Walker SE, Law S, Ma N. (Abstract) Stability of 1.0 and 2.5 mg/mL bortezomib solution in vials and syringes following reconstitution with 0.9% sodium chloride at 4°C and room temperature (25°C). (Apotex brand). Department of Pharmacy, Sunnybrook Health Sciences Centre and Leslie Dan Faculty of Pharmacy, University of Toronto. Toronto, ON 2019
51. Janssen Inc. VELCADE® product monograph. Toronto, Ontario; 20 June 2013
52. Juno Pharmaceuticals Corp. Bortezomib for injection product monograph. Mississauga, Ontario; 23 Jun 2020
53. Law S, Charbonneau F, Iazzeta J, et al. Stability of generic formulations of bortezomib 1.0 and 2.5 mg/mL in vials and syringes stored at 4°C and room temperature (23°C or 25°C). CJHP 2021;74(1):57-69
54. Marcan Pharmaceuticals Inc. Bortezomib product monograph. Ottawa, Ontario; October 17, 2019
55. MSN Laboratories Private Limited, Formulations Division - Nandigama. Reconstitution Study Report for Bortezomib for Injection 3.5 mg vial (Reference Protocol No SSP-CL011-003-00) . 2016:1-8
56. Suresh Arvapalli. Director - Technical. Marcan Pharmaceuticals Inc. Personal communication - extended stability study on Bortezomib for Injection 3.5 mg. August 9 2021
57. Pharmascience Inc. pms-BORTEZOMIB product monograph. Montréal, Quebec; March 8, 2019
58. Taro Pharmaceuticals Inc. Taro-Bortezomib product monograph. Brampton, Ontario; October 27, 2021
59. Teva Canada Limited. Bortezomib for injection® product monograph. Toronto, Ontario; 22 January 2015
60. Seagen Canada Inc. ADCETRIS® product monograph. Mississauga, Ontario; June 11 2021
61. Pharmascience Inc. Busulfan for injection product monograph. Montreal, Quebec; 14 June 2018
62. SteriMax Inc. Busulfan for injection product monograph. Oakville, Ontario; 4 May 2017
63. Dr. Reddy's Laboratories Canada Inc. Cabazitaxel for injection product monograph. Mississauga, Ontario; January 14, 2020
64. Sandoz Canada Inc. Cabazitaxel for injection product monograph. Boucherville, Quebec; 17 December . 2019
65. sanofi-aventis Canada Inc. JEVTANA® product monograph. Laval, Quebec; 7 September . 2017
66. Accord Healthcare Inc. Carboplatin injection® product monograph. Kirkland, Quebec; 15 May 2019
67. Omega Laboratories Ltd. Carboplatin injection product monograph. Montreal, Quebec; 24 March . 2011
68. Nayla El Zir. Associate, Regulatory Affairs, Omega Laboratories Limited. Personal communication. 12 April 2017
69. Pfizer Canada-ULC. Carboplatin injection product monograph. Kirkland, Quebec; 31 December 2018
70. Novopharm Limited. Carboplatin Package Insert. Toronto, Canada; Undated Undated
71. Manjinder S Kang. Regulatory Affairs Drug Information Pharmacist, Novopharm Canada. Personal communication. 14 March 2005
72. Trissel LA. Handbook on Injectable Drugs. 13th ed. Bethesda, MD: American Society of Health-System Pharmacists, Inc.; 2005
73. Repchinsky C editor. Paraplatin-AQ, Compendium of Pharmaceuticals and Specialties. 12th ed. Ottawa, Ontario: Canadian Pharmacists Association; 2004
74. BC Cancer Provincial Pharmacy Professional Practice Council. BC Cancer Provincial Pharmacy Professional Practice Council meeting minutes . April 13, 2022
75. Amgen Canada Inc. KYPROLIS® product monograph. Mississauga, Ontario; January 27, 2021
76. Luis Simao. Area Manager, ICU Medical Canada. Personal communication. 11 May 2018
77. Amgen Canada Inc. KYPROLIS® product monograph. Mississauga, Ontario; 6 July 2017
78. Diane Lord. Medical Information, Amgen Canada Inc. Personal communication. 8 May 2018
79. SteriMax Inc. Carmustine for Injection product monograph. Oakville, Ontario; October 11, 2022
80. sanofi-aventis Canada Inc. LIBTAYO® product monograph. Laval, Quebec; 10 April 2019
81. ImClone LLC (distributed by Eli Lilly Canada Inc). ERBITUX® product monograph. Toronto, Ontario; January 10, 2018
82. Accord Healthcare Inc. Cisplatin injection product monograph. Kirkland, Quebec; 15 February . 2019
83. Pfizer Canada-ULC. Cisplatin injection product monograph. Kirkland, Quebec; 7 December 2018
84. Sandoz Canada Inc. Cisplatin Injection BP product monograph. Boucherville, Quebec; 13 April . 2011
85. Sandoz Canada Inc. Cisplatin Injection BP product monograph. Boucherville, Quebec; September 28 2015
86. Teva Canada Limited. Cisplatin injection® product monograph. Toronto, Ontario; 6 March . 2013
87. Fresenius Kabi Canada Ltd. Cladribine injection® product monograph. Richmond Hill, Ontario; 9 June 2015
88. BC Cancer Lymphoma Tumour Group. (LYCDA) BC Cancer Protocol Summary for Treatment of Hairy Cell Leukemia with Cladribine. Vancouver, British Columbia: BC Cancer; 1 January 2021

89. Myrna O'Brodovich. Senior Medical Information Associate, Ortho Biotech. Personal communication. 2 April 2008
90. de Lemos ML, Hamata L. Stability issues of parenteral chemotherapy drugs. J Oncol Pharm Pract 2007;13(1):27-31
91. Generic Medical Partners Inc. Cladribine injection product monograph. Toronto, Ontario; December 3 2019
92. Jazz Pharmaceuticals Canada Inc. RYLAZE® product monograph. Mississauga, Ontario; September 2, 2022
93. Baxter Corporation. PROCYTOX® product monograph. Mississauga, Ontario; 7 September 2012
94. Baxter Corporation Medical Information. Personal communication. 14 May 2020
95. Baxter Healthcare Corporation. Cyclophosphamide for injection full prescribing information. Deerfield, Illinois USA; May 2013
96. Trissel's® 2 Clinical Pharmaceutics Database - Lexicomp Online (database on the Internet). Cyclophosphamide. Wolters Kluwer Clinical Drug Information Inc., undated. Available at: <http://online.lexi.com>. Accessed 14 May, 2020
97. Pfizer Canada Inc. Cytarabine Solution for Injection product monograph. Kirkland, Quebec; 3 November 2015
98. BC Cancer Lymphoma Tumour Group. (LYIT) BC Cancer Protocol Summary for Treatment of Lymphoma using Intrathecal Methotrexate and Cytarabine. Vancouver, British Columbia: BC Cancer; 1 June 2014
99. BC Cancer Miscellaneous Origin Tumour Group. (MOIT) BC Cancer Protocol Summary for Solid Tumours using Intrathecal Methotrexate and/or Thiotepa and/or Cytarabine. Vancouver, British Columbia: BC Cancer; 1 October 2018
100. BC Cancer. Systemic Therapy Policy and Procedure III-50: Administration of High Alert Medications by the Intrathecal Route via Lumbar Puncture or Ommaya Reservoir. Vancouver, British Columbia; May 1 2019
101. Hematology/Oncology Pharmacy Association. HOPA News Clinical Pearls: Intrathecal Chemotherapy: Focus on Drugs, Dosing, and Preparation. 13(4) ed. Chicago, Illinois, USA: Hematology/Oncology Pharmacy Association; 2016
102. BC Cancer Agency - Provincial Pharmacy Professional Practice Council. Minutes of The Provincial Pharmacy Professional Practice Council (P4C) Meeting. Vancouver, British Columbia: BC Cancer; Feb 5, 2014
103. Astier A, Pinguet F, Vigneron J. The practical stability of anticancer drugs: SFPO and ESOP recommendations. Eur J Oncol Pharm 2010;4:4-10
104. Dellamorte Bing C, Nowobilski-Vasilios A. Extended Stability for Parenteral Drugs. 5th ed. Bethesda, Maryland: American Society of Health-System Pharmacists, Inc; 2013
105. Pharmascience Inc. Cytarabine Solution for Injection product monograph. Montreal, Quebec; 14 February 2017
106. SteriMax Inc. Cytarabine injection product monograph. Oakville, Ontario; April 19, 2021
107. Pfizer Canada Inc. Dacarbazine for Injection product monograph. Kirkland, Quebec; 31 May 2018
108. Trissel L. Handbook on injectable drugs. 13th ed. Bethesda, Maryland: American Society of Health-System Pharmacists; 2005. p. 428-431
109. Recordati Rare Diseases Inc. COSMEGEN® product monograph. Lebanon, New Jersey USA; 24 July 2014
110. BC Cancer Agency. Pharmacy Policy Number II-20: Guiding Principles for Chemotherapy Preparation Chart. Vancouver, British Columbia: BC Cancer Agency; 19 September 2007
111. Andy Harbrow. Global Medical Services Manager, Primevigilance (for Recordati Rare Diseases Inc. ). Personal communication: dactinomycin solutions for infusion. 15 July 2014
112. Janssen Inc. DARZALEX® product monograph. Toronto, Ontario; 29 June 2016
113. Janssen Inc. DARZALEX® SC product monograph. Toronto, Ontario; June 22, 2022
114. ERFA Canada Inc. CERUBIDINE® product monograph. Montréal, Quebec; August 2, 2017
115. ERFA Canada Inc. Daunorubicin product monograph. Montreal, Quebec; August 15 2012
116. Jazz Pharmaceuticals Canada Inc. VYXEOS® product monograph. Mississauga, Ontario; April 28, 2021
117. Ferring Pharmaceuticals. FIRMAGON® product monograph. North York, Ontario; 20 March . 2013
118. Ferring Pharmaceuticals. FIRMAGON® product monograph. North York, Ontario; 06 November . 2009
119. Amgen Canada Inc. XGEVA® product monograph. Mississauga, Ontario; 14 October . 2011
120. Mike Armstrong. Canada Country Director. Hikma Canada Limited. Importation of US-labelled Dexrazoxane for Injection due to the current shortage of Canadian-authorized Dexrazoxane for Injection. Mississauga, Ontario; March 24, 2023
121. Hikma Pharmaceuticals USA Inc. Dexrazoxane for Injection full prescribing information. Berkeley Heights, New Jersey, USA; December 2018
122. Pfizer Canada Inc. ZINECARD® product monograph. Kirkland, Quebec; March 30 2015
123. Unither Biotec Inc. for United Therapeutics Corp. UNITUXIN® product monograph. Magog, Quebec; 28 November 2018
124. Pfizer Canada-ULC. Docetaxel injection product monograph. Kirkland, Quebec; 26 March 2021
125. Josee Lloyd. Senior Clinical Specialist, Hospira Clinical Support Team, Hospira Healthcare Corporation. Personal communication: multidose vials and venting needles. 13 July 2011

126. Hospira Canada Clinical Support Team, Hospira Canada Healthcare Corporation. Personal communication. 21 March 2011
127. Steinberg RL, Thomas LJ, Brooks N, et al. Multi-institution evaluation of sequential intravesical gemcitabine and docetaxel as rescue therapy for non-muscle invasive bladder cancer. *J Urol* 2020;203(5):902-909
128. BC Cancer Genitourinary Tumour Group. (GUBGEMDOC) BC Cancer Protocol Summary for Intravesical Therapy for Non-Muscle Invasive Bladder Cancer Using Gemcitabine and Docetaxel. Vancouver, British Columbia: BC Cancer; 1 August 2021
129. Sandoz Canada Inc. Docetaxel injection product monograph. Boucherville, Quebec; 17 November 2020
130. Bazundama Bazuta Feza Sandrine. Medical Information Intern, Sandoz Canada Inc. Personal communication: in-house vial stability for docetaxel injection. 14 August 2018
131. Bazundama Bazuta Feza Sandrine. Medical Information Intern, Sandoz Canada Inc. Personal communication: in-house product stability of diluted docetaxel injection. 14 August 2018
132. Vigneron J, Astier A, Trittler R, et al. SFPO and ESOP recommendations for the practical stability of anticancer drugs: an update. *Ann Pharm Fr* 2013;71(6):376-389
133. Trissel's® 2 Clinical Pharmaceutics Database - Lexicomp Online (database on the Internet). Docetaxel. Wolters Kluwer Clinical Drug Information Inc., undated. Available at: <http://online.lexi.com>. Accessed 7 July, 2021
134. Accord Healthcare Inc. Doxorubicin injection® product monograph. Montreal, Quebec; 9 April 2014
135. Trissel's® 2 Clinical Pharmaceutics Database - Lexicomp Online (database on the Internet). Doxorubicin. Wolters Kluwer Clinical Drug Information Inc., undated. Available at: <http://online.lexi.com>. Accessed March 23, 2023
136. Trissel's® 2 IV Compatibility (database on the Internet). Doxorubicin. Merative MICROMEDEX® 2.0, undated. Available at: <http://www.micromedex.com>. Accessed March 23, 2023
137. Gerrie AS, Mikhael JR, Cheng L, et al. D(T)PACE as salvage therapy for aggressive or refractory multiple myeloma. *Br J Haematol* 2013;161(6):802-810
138. Lee C, Barlogie B, Munshi N, et al. DTPACE: An Effective, Novel Combination Chemotherapy With Thalidomide for Previously Treated Patients With Myeloma. *J Clin Oncol* 2003;21(14):2732-2739
139. BC Cancer Myeloma Tumour Group. (UMY0 [D-PACE]) BC Cancer Interim Treatment Plan for ULY0 CAP 112919 (Treatment of Myeloma with CISplatin, Etoposide, DOXOrubicin, Cyclophosphamide and Dexamethasone). Vancouver, British Columbia: BC Cancer; April 1 2023
140. Novopharm Limited. Doxorubicin Product Monograph. Scarborough, Ontario; 8 November 1996
141. Pfizer Canada Inc. ADRIAMYCIN® injection product monograph. Kirkland, Quebec; 28 August . 2007
142. Janssen Inc. CAELYX® product monograph. Toronto, Ontario; 10 October 2013
143. Taro Pharmaceuticals Inc. Taro-DOXOrubicin Liposomal product monograph. Brampton, Ontario; 7 October 2019
144. Trissel's® 2 Clinical Pharmaceutics Database - Lexicomp Online (database on the Internet). CISplatin + CycloPHOSphamide - Admixture compatibility/ Study 1 /Note. Wolters Kluwer Clinical Drug Information Inc., undated. Available at: <http://online.lexi.com>. Accessed March 9, 2023
145. Trissel's® 2 IV Compatibility (database on the Internet). Cisplatin and cyclophosphamide admixture compatibility. Merative MICROMEDEX® 2.0, undated. Available at: <http://www.micromedex.com>. Accessed March 9, 2023
146. AstraZeneca Canada Inc. IMFINZI® product monograph. Mississauga, Ontario; October 25 2023
147. McInerney M, Suess J. SBAR: Preparation of Durvalumab Vials without ChemoLock®. Approved by BC Cancer Provincial Pharmacy Professional Practice Committee. 2023
148. Pfizer Canada-ULC. ELREXFIO® product monograph. Kirkland, Québec; December 6, 2023
149. Pfizer Inc and Affiliates Global Product Development. PF-06863135 Solution for Subcutaneous Injection (40 mg/mL) Investigational Product Manual Version 1.0. New York, NY; December 7, 2021
150. Hicham Gonzalez. Medical Liaison. Pfizer Canada Oncology. Personal Communication. March 29, 2023
151. Michelle Koberinski. BC Cancer Oncology Certification Pharmacy Technician. Personal Communication - Elranatamab. May 30, 2023
152. Seagen Canada Inc. PADCEV® product monograph. Mississauga, Ontario; October 29 2021
153. AbbVie Corporation. EPKINLY® product monograph. St-Laurent, Quebec; October 13, 2023
154. AbbVie Inc. Investigative Site Pharmacy Manual for Protocol M20-638 (EPCORETM FL-1): Investigational Product Preparation and Administration Instructions for Epcoritamab (ABBV-GMAB-3013). Version 2.0. North Chicago, Illinois, USA; August 5, 2022
155. Novopharm. Epirubicin for Injection product monograph. Toronto, Ontario; 16 March . 2009
156. Pharmaceutical Partners of Canada, Inc. Epirubicin Hydrochloride Injection product monograph. Richmond Hill, Ontario; 6 July . 2010
157. Pharmacia Canada Inc. Pharmorubicin PFS Package Insert. Mississauga, Ontario; May 2003
158. Trissel LA. Handbook on Injectable Drugs. 12th ed. Bethesda, MD: American Society of Health-System Pharmacists, Inc.; 2003

159. BC Cancer Agency Lymphoma Tumour Group. (ULYEPOCHR) Interim BCCA Protocol Summary for Treatment of Lymphoma with Dose-Adjusted Etoposide, DOXOrubicin, VinCRiStine, Cyclophosphamide, PredniSONE, and riTUXimab (LYEPOCHR) with Intrathecal Methotrexate. Vancouver, British Columbia: BC Cancer Agency; 1 July 2015
160. Barry Goldspiel. NIH Clinical Centre. Personal communication: EPOCHR. 14 April 2015
161. Wolfe JL, Thoma LA, Du C, et al. Compatibility and stability of vincristine sulfate, doxorubicin hydrochloride, and etoposide in 0.9% sodium chloride injection. Am J Health-Syst Pharm 1999;56:985-989
162. Dunleavy K, Pittaluga S, Shovlin M, et al. Low-intensity therapy in adults with Burkitt's lymphoma. N Engl J Med 2013;369:1915-1925
163. Yuan P, Grimes GJ, Shankman SE, et al. Compatibility and stability of vincristine sulfate, doxorubicin hydrochloride, and etoposide phosphate in 0.9% sodium chloride injection. Am J Health-Syst Pharm 2001;58(7):594-598
164. BC Cancer Lymphoma Tumour Group. (LYEPOCHR) BC Cancer Protocol Summary for Treatment of Lymphoma with Dose Adjusted Etoposide, DOXOrubicin, vinCRiStine, Cyclophosphamide, predniSONE and riTUXimab with Intrathecal Methotrexate. Vancouver, British Columbia: BC Cancer; January 1 2022
165. eviQ. Cancer Institute New South Wales. NSW Government. Non-Hodgkin lymphoma DA-R-EPOCH (dose adjusted rituximab etoposide prednisolone vincristine CYCLOPHOSPHAMIDE DOXOrubicin) - Treatment schedule overview . St Leonards NSW Australia September 17 2022
166. Eisai Limited. HALAVEN® product monograph. Mississauga, Ontario; 17 January . 2013
167. Novopharm Limited. Etoposide Product Monograph. Toronto, Ontario; 2000
168. Lepage R, Walker S, Godin J. Stability and compatibility of etoposide in normal saline. Canadian Journal of Hospital Pharmacy 2000;53(5):338-345
169. The United States Pharmacopeial Convention, Inc. General Chapter 797: Pharmaceutical compounding - sterile preparations. USP 27-NF 22. Rockville, Maryland: The United States Pharmacopeial Convention, Inc.; 2003
170. BC Cancer Agency. Provincial Pharmacy Directive III-50-04: Management of Particulate During Sterile Preparation. Vancouver, British Columbia: BC Cancer Agency; 9 July 2014
171. Angie Chan. Drug Information Pharmacist, Novopharm. Personal communication. 29 September 2006
172. Bristol-Myers Squibb Company. ETOPOPHOS® product monograph. Princeton, New Jersey, USA; March 2011
173. Joseph Atallah. Interim County Medical Director. Bristol-Myers Squibb Canada. Personal communication re: new Canadian distributor for ETOPOPHOS®. November 15, 2019
174. George Gafrey. VP Business Development. Xediton Pharmaceuticals Inc. Personal communication re: new Canadian distributor for ETOPOPHOS®. November 27, 2019
175. Bristol-Myers Squibb Company. ETOPOPHOS® product monograph. Princeton, New Jersey, USA; May 2019
176. Amgen Canada Inc. NEUPOGEN® product monograph. Mississauga, Ontario; March 21 2014
177. Amgen Medical Information. Amgen Canada Inc. Personal communication. 8 July 2014
178. Trissel LA. Handbook on Injectable Drugs. 13th ed. Bethesda, Maryland: American Society of Health-System Pharmacists, Inc; 2005. p. 648-655
179. Accord Healthcare Inc. Fludarabine phosphate injection product monograph. Kirkland, Quebec; September 29, 2021
180. Teva Canada Limited. Fludarabine phosphate product monograph. Toronto, Ontario; March 1, 2016
181. Accord Healthcare Inc. Fluorouracil injection® product monograph. Kirkland, Quebec; 30 September 2013
182. Charles Vachon. Quality and Regulatory Affairs, Accord Healthcare Inc. Personal communication. 29 September 2016
183. John Korontzis. Regulatory Affairs Associate, Mayne Pharma Canada. Personal communication: Fluorouracil. February 16, 2005
184. Sandoz Canada Inc. Fluorouracil Injection product monograph. Boucherville, Quebec; 3 April . 2012
185. Alexandre Dussault. Drug Information & Pharmacovigilance Coordinator, Sandoz Canada Inc. Personal communication. 19 November 2015
186. Trissel L. Handbook on Injectable Drugs. 13th ed. Bethesda, Maryland: American Society of Health-System Pharmacists; 2005. p. 613-622
187. BC Cancer Agency Experimental Therapeutics. Physicochemical stability analysis of fluorouracil products in final chemotherapeutic preparations. Vancouver, BC. ;Study number 50009:1-43
188. Stiles ML, Allen Jr LV, Tu YH. Stability of fluorouracil administered through four portable infusion pumps. American Journal of Hospital Pharmacy 1989;46(10):2036-2040
189. Accord Healthcare Inc. Gemcitabine injection product monograph. Kirkland, Quebec; 24 March 2020
190. Purvi Agrawal BScPharm. Regulatory Affairs Manager, Accord Healthcare Inc. Personal communication. 07 September 2012
191. Astron Research LU. Gemcitabine for Injection (STBRG/ACGEM/01).
192. Skinner EC, Goldman B, Sakr WA, et al. SWOG S0353: Phase II trial of intravesical gemcitabine in patients with nonmuscle invasive bladder cancer and recurrence after 2 prior courses of intravesical Bacillus Calmette-Guerin. J Urol 2013;190(4):1200-1204
193. BC Cancer Genitourinary Tumour Group. (GUBGEM) BC Cancer Protocol Summary for Intravesical Therapy for Non-Muscle Invasive Bladder Cancer Using Gemcitabine. Vancouver, British Columbia: BC Cancer; 1 November 2019
194. Pfizer Canada Inc. Gemcitabine Injection (ready to use solution) product monograph. Kirkland, Quebec; 25 October 2018



195. Vachon, Brigitte. Clinical Specialist, Clinical Support. Hospira Healthcare Corporation. Personal Communication: Stability of Gemcitabine Injection (Ready-to-use solution) Diluted in Solution. June 11, 2015
196. Pfizer Canada-ULC. Gemcitabine injection product monograph. Kirkland, Québec; March 16, 2021
197. Sandoz Canada Inc. Gemcitabine hydrochloride solution for injection product monograph. Boucherville, Quebec; 14 August 2014
198. Bazundama Bazula Faza, Sandrine. Drug Information Coordinator. Sandoz Canada Inc. Personal Communication: Gemcitabine injection. July 22, 2019
199. Pfizer Canada-ULC. MYLOTARG® product monograph. Kirkland, Quebec; 28 November 2019
200. Sharon Keane. Pfizer Canada Medical Information. Personal communication. 7 July 2020
201. ULC Pfizer Canada. Idarubicin hydrochloride injection product monograph. Kirkland, Quebec; September 14, 2021
202. BC Cancer Provincial Systemic Therapy Program. Provincial Systemic Therapy Program Policy III-20: Prevention and Management of Extravasation of Chemotherapy. Vancouver, British Columbia: BC Cancer; March 1 2021
203. Baxter Corporation. IFEX® product monograph. Mississauga, Ontario; 5 April 2012
204. Baxter Corporation. IFEX® product monograph. Mississauga, Ontario; June 27, 2018
205. Pharmaceutical Partners of Canada, Inc. Ifosfamide for Injection product monograph. Richmond Hill, Ontario; 17 January . 2008
206. Fresenius Kabi Canada Ltd. Ifosfamide for Injection product monograph. Toronto, Ontario; October 10, 2018
207. sanofi-aventis Canada. Iniparib (BSI-201; SAR240550) Special Access Program Guidance for the Physician. Laval, Quebec; 15 December. 2010
208. Pfizer Canada Inc. BESPONSA® product monograph. Kirkland, Quebec; 15 March 2018
209. Pfizer Medical Information. Pfizer Canada Inc. Personal communication. 26 November 2018
210. Bristol Myers Squibb Canada. YERVOY® product monograph. Montreal, Quebec; 1 February . 2012
211. Bristol-Myers Squibb Canada. YERVOY® product monograph. Montreal Canada; December 12, 2017
212. Accord Healthcare Inc. Irinotecan injection® product monograph. Kirkland, Quebec; 6 May 2014
213. Auro Pharma Inc. Irinotecan hydrochloride injection product monograph. Woodbridge, Ontario; June 30, 2020
214. Pfizer Canada Inc. Irinotecan hydrochloride injection product monograph. Kirkland, Quebec; 8 March 2019
215. Servier Canada Inc. ONIVYDE® product monograph. Laval, Quebec; 4 January 2019
216. sanofi-aventis Canada Inc. SARCLISA® product monograph. Laval, Quebec; October 12 2022
217. Bristol-Myers Squibb. IXEMPRA® product monograph. Princeton, New Jersey; 01 October . 2007
218. The United States Pharmacopeia, (USP). General Chapter 797: Pharmaceutical compounding - sterile preparations. USP 27-NF 22. Rockville, Maryland: The United States Pharmacopeial Convention, Inc.; 2004
219. Kastango ES. The ASHP discussion guide for compounding sterile preparations. Bethesda (MD): American Society of Health-System Pharmacists, Inc.; 2004. p. 5