

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Leucovorin</b> 50 mg/5 mL (GMP) (F)(PFL) no preservative <sup>1</sup>	N/A	10 mg/mL <sup>1</sup>	discard unused portion <sup>1</sup>	syringe	8 h RT <sup>1,2</sup>	
				0.05-10 mg/mL NS, D5W, Ringer's, LR, D10W, D5-NS <sup>1,2</sup>  (e.g., 50-250 mL*)	<b>NS</b> , D5W, LR, Ringer's: 24 h RT <sup>1</sup>  D10W, D5-NS: 8 h RT <sup>1</sup>	
<b>Leucovorin</b> 50 mg/5 mL 500 mg/50 mL (Pfizer/Hospira) (F)(PFL) no preservative <sup>3</sup>	N/A	10 mg/mL <sup>3</sup>	8 h <sup>3</sup>	syringe	8 h RT <sup>3</sup>	
				0.05–10 mg/mL <b>NS</b> , D5W, LR, Ringer's, D10W, D5NS <sup>3</sup>  (e.g., 50-250 mL*)	<b>NS</b> , D5W, LR, Ringer's: 24 h RT <sup>3</sup>  D10W, D5NS: 8 h RT <sup>3</sup>	

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<b>Leucovorin</b> 50 mg/5 mL 500 mg/50 mL (Teva) (F)(PFL) no preservative <sup>4</sup>	N/A	10 mg/mL <sup>5</sup>	discard unused portion <sup>5</sup>	syringe	8 h <sup>6,7</sup>	
				0.4 - 4.8 mg/mL <b>NS</b> , D5W <sup>8</sup>  (e.g., 50-250 mL*)	72 h <b>F</b> , RT <sup>8</sup>	
				0.06 - 0.4 mg/mL <b>NS</b> , D5W <sup>4</sup>	<b>NS:</b> 24 h RT <sup>4</sup>  <b>D5W:</b> 12 h RT <sup>4</sup>	
				0.06 - 1 mg/mL Ringer's, Lactated Ringer's, D10W, D10-NS <sup>4</sup>	<b>Ringer's, LR:</b> 24 h RT <sup>4</sup>  <b>D10W:</b> 12 h RT <sup>4</sup>  <b>D10NS:</b> 6 h RT <sup>4</sup>	

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<b>Lurbinectedin</b> 4 mg (Pharma Mar) (F) no preservative <sup>9</sup>	8 mL SWI <sup>9</sup>	0.5 mg/mL <sup>9</sup>	30 h F, RT <sup>9</sup>	100–250 mL <b>NS</b> , D5W <sup>9</sup>	30 h F, RT <sup>9</sup>	- larger infusion volume is recommended for peripheral line <sup>9</sup>
<b>Melphalan</b> 50 mg (GSK) (RT)(PFL) no preservative <sup>10</sup>	10mL supplied diluent <sup>10</sup>  immediately after adding diluent, shake vigorously <sup>10</sup>  record time of reconstitution	5 mg/mL <sup>10</sup>	2 h RT <sup>10</sup>  <b>do NOT refrigerate</b>	0.1 – 0.45 mg/mL in <b>NS</b> only <sup>10</sup>  (e.g., greater than 45 mg and less than or equal to 110 mg in 250 mL NS)*	complete administration within 60 min from time of initial reconstitution at RT <sup>11</sup>	
<b>Mesna</b> 400 mg/4 mL 1000 mg/10 mL (Baxter) (RT) no preservative <sup>12</sup>	N/A	100 mg/mL <sup>12</sup>  (use filter needle to withdraw from ampoule)	discard unused portion <sup>12</sup>	greater than 1 mg/mL in D5W, D5½-NS, NS, LR <sup>12-14</sup>	24 h RT <sup>12</sup>	
<b>Mesna</b> 1000 mg/10 mL 5000 mg/50 mL (Baxter) (RT) preservative <sup>12</sup>	N/A	100 mg/mL <sup>12</sup>	8 days RT <sup>12</sup>  (vial may be punctured up to 4 times) <sup>12</sup>	greater than 1 mg/mL in D5W, D5½-NS, NS, LR <sup>12-14</sup>	24 h RT <sup>12</sup>	

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<b>Mesna</b> 1000 mg/10 mL (Fresenius Kabi) (RT) preservative <sup>15</sup>	N/A	100 mg/mL <sup>15</sup>	14 d F, RT <sup>15,16</sup>	greater than or equal to 1 mg/mL in <b>NS</b> , D5W <sup>17</sup>	48 h F, 24 h RT <sup>15</sup>	
<b>Methotrexate</b> 50 mg/2 mL 500 mg/20 mL 1 g/40 mL (Accord) (RT)(PFL) no preservative <sup>18</sup>	N/A	25 mg/mL <sup>18</sup>	50mg: discard unused portion <sup>18</sup>  500 mg or 1 g: 8 h RT <sup>18</sup>	syringe	use within 8 h RT of initial puncture <sup>18</sup>	- for high-dose regimens (e.g., 1- 12 g/m <sup>2</sup> as a single dose) <sup>19-23</sup> : use preservative-free methotrexate <sup>18</sup> - do not use for IT injection
				0.4–2 mg/mL <b>NS</b> , D5W <sup>18</sup>  (100 mL * <b>NS</b> , D5W)	use within 24 h RT of initial puncture <sup>18</sup>  **(PFL)	
				high dose (e.g., 1-12 g/m <sup>2</sup> as a single dose) <sup>19-23</sup> : 1000 mL * NS	use within 24 h RT of initial puncture <sup>18</sup>  **(PFL)	

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<b>Methotrexate IT Injection</b> Only preservative free methotrexate may be administered by the intrathecal route <sup>24</sup> 50 mg/2 mL (Accord) (RT)(PFL) no preservative <sup>18</sup>	N/A	25 mg/mL <sup>18</sup>	discard unused portion <sup>18</sup>	qs to 6 mL with preservative free NS <sup>25,26</sup>	use within 4 h of initial puncture <sup>2</sup>	- auxiliary info <sup>2</sup> - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag <sup>27</sup>
<b>Methotrexate</b> 50 mg/2 mL 500 mg/20 mL (Accord) (RT)(PFL) preservative <sup>18</sup>	N/A	25 mg/mL <sup>18</sup>	14 d F <sup>2,18</sup>	syringe	14 d F <sup>2</sup>	- contains benzyl alcohol <sup>18</sup> - do NOT use for high-dose regimens (e.g., 1- 12 g/m <sup>2</sup> as a single dose) <sup>18</sup> - do NOT use for IT injection <sup>18</sup>
				0.4–2 mg/mL <b>NS</b> , D5W <sup>18</sup>  (100 mL * <b>NS</b> , D5W)	24 h RT <sup>18</sup>	

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<b>Methotrexate</b> 50 mg/2 mL 500 mg/20 mL 1 g/40 mL 2.5 g/100 mL (Pfizer/Hospira) (RT)(PFL) no preservative <sup>28</sup>	N/A	25 mg/mL <sup>28</sup>	50mg: discard unused portion <sup>28</sup>  500 mg, 1 g, or 2.5 g: 8 h RT <sup>28</sup>	syringe	use within 8 h RT of initial puncture <sup>28</sup>	- for high-dose regimens (e.g., 1- 12 g/m <sup>2</sup> as a single dose) <sup>19-23</sup> : use preservative-free methotrexate <sup>28</sup> - do not use for IT injection
				0.4–2 mg/mL <b>NS</b> , D5W <sup>28</sup>  (100 mL* <b>NS</b> , D5W)	use within 24 h RT of initial puncture <sup>28</sup>  **(PFL)	
				high dose (e.g., 1-12 g/m <sup>2</sup> as a single dose) <sup>19-23</sup> : 1000 mL* NS	use within 24 h RT of initial puncture <sup>28</sup>  **(PFL)	
<b>Methotrexate IT Injection</b> Only preservative free methotrexate may be administered by the intrathecal route <sup>24</sup> 50 mg/2 mL (Pfizer/Hospira) (RT)(PFL) no preservative <sup>28</sup>	N/A	25 mg/mL <sup>28</sup>	discard unused portion <sup>28</sup>	qs to 6 mL with preservative free NS <sup>25,26</sup>	use within 4 h of initial puncture <sup>16</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>27</sup>

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<b>Methotrexate</b> 50 mg/2 mL 500 mg/20 mL (Pfizer/Hospira) (RT)(PFL) preservative <sup>28</sup>	N/A	25 mg/mL <sup>28</sup>	14 d F <sup>16,28</sup>	syringe	14 d F <sup>16</sup>	- contains benzyl alcohol <sup>28</sup> - do NOT use for high-dose regimens (e.g., 1-12 g/m <sup>2</sup> as a single dose) <sup>28</sup> - do NOT use for IT injection <sup>28</sup>
				0.4–2 mg/mL <b>NS</b> , D5W <sup>28</sup>  (100 mL * <b>NS</b> , D5W)	24 h RT <sup>28</sup>	
<b>Mitomycin</b> 20 mg (Accord) (RT)(PFL) no preservative <sup>29</sup>	40 mL SWI <sup>29</sup>  shake well <sup>29</sup>	0.5 mg/mL <sup>29</sup>	72 h F, 6 h RT <sup>29</sup>  **(PFL) <sup>29</sup>	syringe	72 h F, 6 h RT <sup>29</sup>  **(PFL) <sup>29</sup>	

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<b>Mitomycin intravesical</b> 20 mg (Accord) (RT)(PFL) no preservative <sup>29</sup>	40 mL SWI <sup>29</sup> shake well <sup>29</sup>	0.5 mg/mL <sup>29</sup>	72 h F, 6 h RT <sup>29</sup>  **(PFL) <sup>29</sup>	syringe	72 h F, 6 h RT <sup>29</sup>  **(PFL) <sup>29</sup>	
	10 mL SWI <sup>30</sup> shake well <sup>29</sup>	2 mg/mL <sup>30</sup>	use immediately after preparation to prevent precipitation <sup>31</sup>	syringe	use immediately after preparation to prevent precipitation <sup>31</sup>	- may precipitate due to low solubility <sup>31,32</sup> - do NOT refrigerate <sup>31</sup>
	25 mL SWI shake well	0.8 mg/mL <sup>33</sup>	discard unused portion <sup>2,33</sup>  **(PFL) <sup>2,33</sup>	syringe	4 days RT <sup>33</sup>  **(PFL) <sup>2,33</sup>	- do NOT refrigerate <sup>33</sup>
	33.3 mL SWI shake well	0.6 mg/mL <sup>33</sup>	discard unused portion <sup>2,33</sup>  **(PFL) <sup>2,33</sup>	syringe	4 days F, RT <sup>33</sup>  **(PFL) <sup>2,33</sup>	
<b>Mitomycin intraperitoneal</b> 20 mg (Accord) (RT)(PFL) no preservative <sup>29</sup>	40 mL SWI <sup>29</sup> shake well <sup>29</sup>	0.5 mg/mL <sup>29</sup>	72 h F, 6 h RT <sup>29</sup>  **(PFL) <sup>29</sup>	0.02-0.04 mg/mL <sup>29</sup>  <b>NS</b> , sodium lactate <sup>29</sup>	NS: 18 h F, 3 h RT <sup>29</sup>  sodium lactate: 6 h F, 3 h RT <sup>29</sup>	



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<b>Mitomycin</b> 20 mg (Teva/Novopharm) (RT)(PFL) no preservative <sup>34</sup>	40 mL SWI <sup>34</sup> shake well <sup>34</sup>	0.5 mg/mL <sup>34</sup>	72 h F, 6 h RT <sup>34</sup>  **(PFL) <sup>34</sup>	syringe	72 h F, 6 h RT <sup>34</sup>  **(PFL) <sup>34</sup>	
<b>Mitomycin intravesical</b> 20 mg (Teva/Novopharm) (RT)(PFL) no preservative <sup>34</sup>	40 mL SWI <sup>34</sup> shake well <sup>34</sup>	0.5 mg/mL <sup>34</sup>	72 h F, 6 h RT <sup>34</sup>  **(PFL) <sup>34</sup>	syringe	72 h F, 6 h RT <sup>34</sup>  **(PFL) <sup>34</sup>	
	10 mL SWI <sup>30</sup> shake well <sup>34</sup>	2 mg/mL <sup>30</sup>	use immediately after preparation to prevent precipitation <sup>31</sup>	syringe	use immediately after preparation to prevent precipitation <sup>31</sup>	- may precipitate due to low solubility <sup>31,32</sup> - do NOT refrigerate <sup>31</sup>
	25 mL SWI shake well	0.8 mg/mL <sup>33</sup>	discard unused portion <sup>2,33</sup>  **(PFL) <sup>2,33</sup>	syringe	4 days RT <sup>33</sup>  **(PFL) <sup>2,33</sup>	- do NOT refrigerate <sup>33</sup>
	33.3 mL SWI shake well	0.6 mg/mL <sup>33</sup>	discard unused portion <sup>2,33</sup>  **(PFL) <sup>2,33</sup>	syringe	4 days F, RT <sup>33</sup>  **(PFL) <sup>2,33</sup>	

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<b>Mitomycin intraperitoneal</b> 20 mg (Teva/Novopharm) (RT)(PFL) no preservative <sup>34</sup>	40 mL SWI <sup>34</sup>  shake well <sup>34</sup>	0.5 mg/mL <sup>34</sup>	72 h F, 6 h RT <sup>34</sup>  **(PFL) <sup>34</sup>	0.02-0.04 mg/mL <sup>34</sup>  <b>NS</b> , sodium lactate <sup>34</sup>	NS: 18 h F, 6 h RT <sup>34</sup>  sodium lactate: 6 h F, RT <sup>34</sup>	
<b>mitoXANTRONE</b> 20 mg/10 mL (Fresenius Kabi) (RT) no preservative <sup>35</sup>	N/A	2 mg/mL <sup>35</sup>	discard unused portion <sup>35</sup>	<b>NS</b> , D5W <sup>35</sup>  Greater than or equal to *50 mL <sup>35</sup>	24 h RT <sup>35</sup>	
<b>mitoXANTRONE</b> 20 mg/10 mL 25 mg/12.5 mL 30 mg/15 mL (Pfizer/Hospira) (RT)(PFL) no preservative <sup>36</sup>	N/A	2 mg/mL <sup>36</sup>	discard unused portion <sup>36</sup>	0.2-0.6 mg/mL <b>NS</b> , D5W <sup>36</sup>  Greater than or equal to *50 mL <sup>36</sup>	72 h F, 24 h RT <sup>36</sup>  **(PFL) <sup>36</sup>	

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<p><b>Nivolumab</b> 40 mg/4 mL 100 mg/10 mL (BMS) (F)(PFL) do not shake no preservative<sup>37</sup></p>	<p>N/A</p>	<p>10 mg/mL<sup>37</sup></p>	<p>discard unused portion<sup>37</sup></p>	<p>1-10 mg/mL <b>NS</b>, D5W<sup>37</sup>  (50-100* mL)  mix by gentle inversion; do not shake<sup>37</sup></p>	<p>complete administration within 24 h F, 8 h RT<sup>37</sup>  **(PFL)<sup>37</sup></p>	<p>- administer with a 0.2 to 1.2 micron in-line filter<sup>37</sup> - discard if cloudy or has pronounced colour change (should be clear to pale yellow)<sup>37</sup></p>
<p><b>oBINutuzumab</b> 1000 mg/40 mL (Roche) (F)(PFL)<sup>**</sup> do not shake no preservative<sup>38</sup></p>	<p>N/A</p>	<p>25 mg/mL<sup>38</sup></p>	<p>discard unused portion<sup>39</sup></p>	<p>100 mg: in 100 mL <b>NS</b><sup>38</sup>  900 mg: in 250 mL <b>NS</b><sup>38</sup>  1000 mg: in 250 mL <b>NS</b><sup>38</sup></p>	<p>24 h <b>F</b>, 48 h RT<sup>38,40</sup></p>	<p>-once removed from the fridge, diluted product is stable for an additional 48 h RT<sup>38,40</sup> - do NOT shake<sup>38</sup> - do NOT use dextrose containing solutions<sup>38</sup></p>

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<b>Octreotide</b> 50 mcg/1 mL 100 mcg/1 mL 500 mcg/1 mL (Omega) (F)(PFL) no preservative <sup>41</sup>	N/A	50 mcg/mL <sup>41</sup>  100 mcg/mL <sup>41</sup>  500 mcg/mL <sup>41</sup>	use within 4 h <sup>41</sup>	NS <sup>41</sup>  volume adjusted to ensure a continuous infusion of octreotide at 25 mcg/hour <sup>41</sup>	24 h RT <sup>41</sup>	
<b>Octreotide</b> multidose vial: 1000 mcg/5 mL (Omega) (F)(PFL) preservative <sup>41</sup>	N/A	200 mcg/mL <sup>41</sup>	15 d F <sup>41</sup>	NS <sup>41</sup>  volume adjusted to ensure a continuous infusion of octreotide at 25 mcg/hour <sup>41</sup>	24 h RT <sup>41</sup>	
<b>Octreotide</b> 50 mcg/1 mL 100 mcg/1 mL 500 mcg/1 mL (Teva/Novopharm) (F)(PFL) no preservative <sup>42</sup>	N/A	50 mcg/mL <sup>42</sup>  100 mcg/mL <sup>42</sup>  500 mcg/mL <sup>42</sup>	discard unused portion <sup>42</sup>	SC syringe <sup>42</sup>	use within 4 h <sup>42</sup>	
				infusion: NS <sup>42</sup>	24 h RT <sup>42</sup>	

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<b>Octreotide</b> multidose vial: 1000 mcg/5 mL (Teva/Novopharm) (F)(PFL) preservative <sup>42</sup>	N/A	200 mcg/mL <sup>42</sup>	14 d F <sup>42,43</sup>	SC syringe	use within 14 d F <sup>42,43</sup>	
				infusion: NS <sup>42</sup>	24 h RT <sup>42</sup>	
<b>Octreotide</b> (SANDOSTATIN®) 1000 mcg/5 mL (Novartis) (F)(PFL) preservative <sup>44</sup>	N/A	200 mcg/mL <sup>44</sup>	discard unused portion <sup>45</sup>	50–200 mL NS <sup>11,46,47</sup>  SC infusion: adjust volume to ensure infusion rate of 25 mcg/h <sup>46</sup>	24 h RT <sup>46</sup>	
<b>Octreotide</b> (SANDOSTATIN®) 50 mcg/1 mL 100 mcg/1 mL 500 mcg/1 mL (Novartis) (F)(PFL) no preservative <sup>44</sup>	N/A	50 mcg/mL  100 mcg/mL  500 mcg/mL <sup>44</sup>	discard unused portion <sup>46</sup>	50-100 mL <sup>11,47</sup>  NS <sup>46</sup>  SC infusion: adjust volume to ensure infusion rate of 25 mcg/h <sup>46</sup>	24 h RT <sup>46</sup>	

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<b>Octreotide</b> (SANDOSTATIN LAR®) 10 mg 20 mg 30 mg (Novartis) (F)(PFL) no preservative <sup>45</sup>	2 mL supplied diluent  gently run 2 mL down sides of the vial; do NOT disturb for 2–5 min, then swirl moderately <sup>46</sup>  record time of reconstitution	10 mg: 5 mg/mL  20 mg: 10 mg/mL  30 mg: 15 mg/mL <sup>46</sup>	discard unused portion <sup>46</sup>	deep intragluteal administration only <sup>46</sup>	use within 4 h of initial reconstitution <sup>7,46</sup>	- do NOT shake
<b>Oxaliplatin</b> 50 mg/10 mL 100 mg/20 mL 200 mg/40 mL (Hospira/Pfizer) (RT) no preservative <sup>48</sup>	N/A	5 mg/mL <sup>48</sup>	discard unused portion <sup>48</sup>	250-500 mL D5W  (0.2-0.7 mg/mL <sup>48</sup>  do NOT use NS or other chloride- containing solutions <sup>49</sup>  do NOT use aluminum-containing needle and syringe <sup>49</sup>	0.2-0.4 mg/mL: 24 h RT or 5 d F plus an additional 8 h RT <sup>48,50</sup>  0.5–2 mg/mL: 24 h RT or 14 d F plus an additional 8 h RT <sup>48,50</sup>	- do NOT use aluminum- containing needle, syringe or tubing <sup>48</sup>

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<b>Oxaliplatin</b> 50 mg/10 mL 100 mg/20 mL 150 mg/30 mL 200 mg/40 mL (Sandoz) (RT)(PFL) no preservative <sup>49</sup>	N/A	5 mg/mL <sup>49</sup>	2 d F, RT <sup>39,51</sup>	0.2-0.7 mg/mL <sup>49</sup> 250-500 mL D5W <sup>49</sup> do NOT use NS or other chloride- containing solution <sup>49</sup> do NOT use aluminum-containing needle and syringe <sup>49</sup>	0.2-2 mg/mL: 48 h F, 24 h RT <sup>49</sup>	
<b>Oxaliplatin</b> 50 mg/10 mL 100 mg/20 mL 200 mg/40 mL (Teva) (RT)(PFL) no preservative <sup>52</sup>	N/A	5 mg/mL <sup>52</sup>	discard unused portion <sup>52</sup>	250-500 mL D5W (0.2-0.7 mg/mL) <sup>52</sup> do <b>NOT</b> use NS or other chloride- containing solution <sup>52</sup> do NOT use aluminum-containing needle and syringe <sup>52</sup>	0.2-2 mg/mL: 48 h F, 24 h RT <sup>52</sup>	- do NOT use aluminum- containing needle, syringe or tubing <sup>52</sup>

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<b>PACLitaxel</b> 30 mg/5 mL 100 mg/16.7 mL 300 mg/50 mL (Accord) (RT)(PFL) no preservative <sup>53</sup>	N/A	6 mg/mL <sup>53</sup>	30 mg: 48 h RT <sup>39,53</sup>  100 mg: 48 h RT <sup>39,53</sup>  300 mg: 24 h RT <sup>53</sup>	0.3-1.2 mg/mL in <b>NS</b> , D5W, D5NS, D5LR <sup>53</sup>  (e.g., 100-1000 mL)*	complete administration within 27 h RT <sup>53</sup>	- use non-DEHP bag and tubing with 0.22 micron in-line filter <sup>53</sup> - avoid excessive shaking <sup>53</sup>
<b>PACLitaxel</b> 30 mg/5 mL 100 mg/16.7 mL 300 mg/50 mL (Biolyse) (RT) <sup>54</sup> no preservative <sup>55</sup>	N/A	6 mg/mL <sup>55</sup>	48 h RT <sup>39,56</sup>	0.3-1.2 mg/mL in <b>NS</b> , D5W <sup>55</sup>  (e.g., 100-1000 mL)*	complete administration within 27 h RT <sup>55,57</sup>	- use non-DEHP bag and tubing with 0.22 micron in-line filter <sup>55</sup>
				0.1 mg/mL in <b>NS</b> <sup>58</sup>	44 h <b>F</b> , RT <sup>58</sup>	
				0.012-0.12 mg/mL in <b>NS</b> <sup>59</sup>	16 h RT <sup>57</sup>	
				devices with spikes (e.g., chemo dispensing pins) <b>may be used</b> with vials <sup>60</sup>		



**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>PACLitaxel</b> 30 mg/5 mL 100 mg/16.7 mL 150 mg/25 mL 300 mg/50 mL (Hospira) (RT)(PFL) preservative <sup>61</sup>	N/A	6 mg/mL <sup>62</sup>	48 h RT <sup>39,62,63</sup>	0.3-1.2 mg/mL in <b>NS</b> , D5W, D5-NS, D5-LR <sup>62</sup>  (e.g., 100-1000 mL)*	complete administration within 27 h RT <sup>62</sup>	- use non-DEHP bag and tubing with 0.22 micron in-line filter <sup>62</sup>
<b>PACLitaxel, nanoparticle, albumin- bound (NAB)</b> 100 mg (Celgene) (RT)(PFL) no preservative <sup>64</sup>	20 mL NS <sup>64</sup>  - slowly direct diluent against side of vial (i.e., greater than or equal to 1 min) during reconstitution <sup>64</sup>  - let stand for greater than or equal to 5 min to wet powder <sup>64</sup>  - gently swirl or invert for greater than or equal to 2 min <sup>64</sup>	5 mg/mL <sup>64</sup>	use immediately (RT) or 8 h F <sup>64</sup>  **(PFL) <sup>64</sup>	in empty sterile PVC, non-PVC, or non- DEHP infusion bag <sup>64</sup>	48 h F plus an additional 8 h RT <sup>65</sup>	- each vial contains 900 mg human albumin <sup>64</sup> - to prevent foaming, do NOT inject NS directly onto the powder <sup>64</sup> - some settling may occur; use mild agitation to resuspend <sup>64</sup> - administer using a 15 micron filter <b>ONLY</b> (NOTE:filters with a pore size less than 15 microns may cause filter blockage) <sup>66,67</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Pamidronate</b> 30 mg/10 mL 60 mg/10 mL 90 mg/10 mL (Fresenius Kabi) (RT) no preservative <sup>68</sup>	N/A	3 mg/mL <sup>68</sup>	discard unused portion <sup>68</sup>	Less than or equal to 0.36 mg/mL <sup>68</sup> <b>NS</b> , D5W <sup>68</sup>	24 h RT <sup>68</sup>	- do <b>NOT</b> mix with calcium containing solutions <sup>68</sup>
		6 mg/mL <sup>68</sup>				
		9 mg/mL <sup>68</sup>				
<b>Pamidronate</b> 30 mg/10 mL 60 mg/10 mL 90 mg/10 mL (Hospira) (RT) no preservative <sup>69</sup>	N/A	3 mg/mL <sup>69</sup>	discard unused portion <sup>69</sup>	0.06–0.36 mg/mL in <b>NS</b> , D5W <sup>69</sup>	24 h F plus an additional 24 h RT (total 48 h) <sup>69</sup>  **(PFL) <sup>69</sup>	- do <b>NOT</b> mix with calcium containing solution (e.g., Ringer's) <sup>69</sup>
		6 mg/mL <sup>69</sup>				
		9 mg/mL <sup>69</sup>				
<b>Pamidronate</b> 30 mg/10 mL 60 mg/10 mL 90 mg/10 mL (Omega) (RT) no preservative <sup>70</sup>	N/A <sup>70</sup>	3 mg/mL <sup>70</sup>	discard unused portion <sup>70</sup>	0.06–0.36 mg/mL in <b>NS</b> , D5W <sup>70</sup>	24 h F plus an additional 24 h RT (total 48 h) <sup>70</sup>  **(PFL) <sup>70</sup>	- do <b>NOT</b> mix with calcium containing solution (e.g., Ringer's) <sup>70</sup>
		6 mg/mL <sup>70</sup>				
		9 mg/mL <sup>70</sup>				

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Pamidronate</b> 30 mg/10 mL 60 mg/10 mL 90 mg/10 mL (Pfizer) (RT) no preservative <sup>71</sup>	N/A	3 mg/mL <sup>71</sup>	discard unused portion <sup>71</sup>	0.06-0.36 mg/mL in <b>NS</b> , D5W <sup>71</sup>	24 h F plus an additional 24 h RT (total 48 h) <sup>71</sup>  **(PFL) <sup>71</sup>	- do <b>NOT</b> mix with calcium containing solution (e.g., Ringer's) <sup>71</sup>
		6 mg/mL <sup>71</sup>				
		9 mg/mL <sup>71</sup>				
<b>Pamidronate</b> 30 mg/10 mL 60mg/10 mL 90 mg/10 mL (Sandoz Canada) RT no preservative <sup>72</sup>	N/A	3 mg/mL <sup>72</sup>	discard unused portion <sup>43,72</sup>	<b>NS</b> ; D5W <sup>72</sup>	24 h RT <sup>72</sup>	- do <b>NOT</b> mix with calcium containing solution (e.g., Ringer's) <sup>72</sup>
		6 mg/mL <sup>72</sup>				
		9 mg/mL <sup>72</sup>				
<b>PANitumumab</b> 100 mg/5 mL 400 mg/20 mL (Amgen) (F)(PFL) do not shake no preservative <sup>73</sup>	N/A	20 mg/mL <sup>73</sup>	discard unused portion <sup>73</sup>	1-10mg/mL <sup>73</sup>  100 mL * NS <sup>73</sup>	24 h F, 6 h RT <sup>73-76</sup>	- administer with 0.2 or 0.22 micron in-line filter <sup>73</sup> - solution may contain particulates which do not affect product quality <sup>73</sup> - do not administer if discoloured <sup>73</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>pegaspargase</b> (pegylated asparaginase <i>E. coli</i> ) 3750 units/5 mL (Shire) (F)(PFL) do not shake no preservative <sup>77</sup>	N/A	750 units/mL <sup>77</sup>	discard unused portion <sup>77</sup>	IM: max volume: 2 mL in children and adolescents; 3 mL in adults  if volume greater than above, use multiple sites <sup>77</sup>	syringe: use within 4 h of vial puncture <sup>39,77</sup>	- do NOT shake <sup>77</sup>
				IV: 100 mL <b>NS</b> , D5W <sup>77</sup>	bag: use within 4 h of vial puncture <sup>39,77</sup>	
<b>Pembrolizumab</b> 100 mg/4 mL (Merck) (F)(PFL) do not shake no preservatives <sup>78</sup>	N/A	25 mg/mL <sup>78</sup>	discard unused portion <sup>2,78</sup>	1-10 mg/mL <b>NS</b> , D5W <sup>78</sup>  mix by gentle inversion <sup>78</sup>	complete administration within 96 h F, 6 h RT <sup>78</sup>	- use a 0.2 to 5 micron in-line filter <sup>78</sup> - allow vials and diluted solutions to come to RT prior to use <sup>78</sup> - vials contain 0.25 mL overfill <sup>78</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Pembrolizumab</b> 50 mg (Merck) (F) no preservative <sup>79</sup>	2.3 mL SWI <sup>79</sup>  direct diluent against side of vial during reconstitution to avoid foaming <sup>79</sup>  allow up to 5 minutes for bubbles to clear <sup>79</sup>  do NOT shake <sup>79</sup>	25 mg/mL <sup>79</sup>	24 h F, 6 h RT <sup>79</sup>	1-10 mg/mL NS, D5W <sup>79</sup>  mix by gentle inversion <sup>79</sup>	complete administration within 24 h F, 6 h RT <sup>79</sup>	- use 0.2 to 5 micron in-line filter <sup>80</sup> - allow reconstituted vials and diluted solutions to come to RT prior to use <sup>79</sup> - vials can be at RT for up to 24 h prior to use <sup>79</sup> - vials contain 20% overfill <sup>79</sup>
<b>Pemetrexed</b> 100 mg 500 mg (Accord) (RT) no preservative <sup>81</sup>	100 mg: 4.2 mL NS <sup>81</sup>  500 mg: 20 mL NS <sup>81</sup>	25 mg/mL <sup>81</sup>	24 h F, RT <sup>81</sup>	100 mL NS <sup>81</sup>	24 h F, RT <sup>81</sup>	- do <b>NOT</b> mix with calcium containing solution (e.g., Ringer's) <sup>81</sup>
<b>Pemetrexed</b> 100 mg 500 mg (Eli Lilly) (RT) no preservative <sup>82</sup>	100 mg: 4.2 mL NS <sup>82</sup>  500 mg: 20 mL preservative- free NS <sup>82</sup>	25 mg/mL <sup>82</sup>	24 h F, RT <sup>82</sup>	100 mL NS <sup>82</sup>	24 h F, RT <sup>82</sup>	- do <b>NOT</b> mix with calcium containing solution (e.g., Ringer's) <sup>83</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Pentostatin</b> 10 mg (Hospira/Pfizer) (F) no preservative <sup>84</sup>	5 mL SWI <sup>84</sup>	2 mg/mL <sup>84</sup>	8 h RT <sup>84</sup>	25-50 mL NS, D5W <sup>84</sup>  (0.18-0.33 mg/mL) <sup>84</sup>	8 h RT <sup>84</sup>	
<b>PERTuzumab</b> 420 mg/14 mL (Roche) (F)(PFL) no preservative <sup>85</sup>	N/A	30 mg/mL <sup>85</sup>  do NOT shake <sup>85</sup>	discard unused portion <sup>39,85</sup>	250 mL NS only <sup>85</sup>  mix by gentle inversion to avoid foaming <sup>85</sup>	24 h F, RT <sup>85</sup>	- do NOT use dextrose containing solutions <sup>85</sup>
<b>Plerixafor</b> 24 mg/1.2 mL (sanofi-aventis) (RT) no preservative <sup>86</sup>	N/A	20 mg/mL <sup>86</sup>	discard unused portion <sup>86</sup>	SC syringe <sup>86</sup>	48 hours RT <sup>43,87</sup>	
<b>Polatuzumab vedotin</b> 140 mg (Genentech) (F)(PFL) do not shake no preservative <sup>88</sup>	7.2 mL SWI <sup>88</sup>  direct diluent against side of vial during reconstitution <sup>88</sup>	20 mg/mL <sup>88**</sup>  (PFL) <sup>88</sup>	48 h F, 8 h RT <sup>88</sup>	0.72-2.7 mg/mL NS, D5W, ½NS <sup>88</sup>  (dilute to a minimum volume of 50 mL) <sup>88</sup>  gently invert bag to mix <sup>88</sup>	in NS <sup>88</sup> : 24 h F, 4h RT  in D5W <sup>88</sup> : 36 h F, 4 h RT  in ½NS <sup>88</sup> : 18 h F, 4 h RT	- do NOT shake <sup>88</sup> - use 0.2-0.22 micron in-line filter <sup>88</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Pralatrexate</b> 20 mg/1 mL 40 mg/2 mL (Servier) (F)(PFL) no preservative <sup>89</sup>	N/A	20 mg/mL <sup>89</sup>	discard unused portion <sup>2</sup>	syringe <sup>89</sup>	24 h F, RT <sup>90</sup>  **(PFL) <sup>90</sup>	- do NOT dilute <sup>89</sup>
<b>Raltitrexed</b> 2 mg (Pfizer) (F,RT)(PFL) (no preservative) <sup>91</sup>	4 mL SWI <sup>91</sup>	0.5 mg/mL <sup>91</sup>	24 h F, RT <sup>91</sup>	50-250 mL NS, D5W <sup>91</sup>	complete administration within 24 h F, RT <sup>91</sup>	
<b>Ramucirumab</b> 100 mg/10 mL 500 mg/50 mL (Eli Lilly) (F)(PFL) (do not shake) no preservative <sup>92</sup>	N/A	10 mg/mL <sup>92</sup>	discard unused portion <sup>92</sup>	250 mL* NS <sup>92</sup>  (0.4 – 4 mg/mL) <sup>93</sup>  gently invert to mix <sup>92</sup>  do NOT shake <sup>92</sup>	24 h F, 4 h RT <sup>92</sup>	- use 0.22 micron filter <sup>92</sup> - do NOT use dextrose containing solutions <sup>92</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>riTUXimab (RITUXAN®)</b> 100 mg/10 mL 500 mg/50 mL (Roche) (F)(PFL) no preservative <sup>94</sup>	N/A	10 mg/mL <sup>94</sup>	discard unused portion <sup>2,94</sup>	1-4 mg/mL <b>NS</b> , D5W <sup>94</sup>  (e.g., 250-500 mL)*	<b>NS:</b> 14 d F, 24 h RT <sup>94</sup>  <b>D5W:</b> 24 h F, 12 h RT <sup>94</sup>	- once removed from the fridge, product compounded in <b>NS</b> is stable for 24h RT <sup>94</sup> - once removed from the fridge, product compounded in <b>D5W</b> is stable for 12h RT <sup>94</sup>
<b>riTUXimab subcutaneous (RITUXAN® SC)</b> 1400 mg/11.7 mL 1600 mg/13.4 mL (Roche) (F)(PFL) no preservative <sup>95</sup>	N/A	120 mg/mL <sup>95</sup>	discard unused portion <sup>95</sup>	SC syringe <sup>95</sup>	48 h F plus 8 h RT <sup>95</sup>	- contains hyaluronidase <sup>95</sup> - formulations are <b>NOT</b> interchangeable <sup>95</sup>
<b>riTUXimab (RIXIMYO®)</b> 100 mg/10 mL 500 mg/50 mL (Sandoz) (F)(PFL) (do NOT shake) no preservative <sup>96</sup>	N/A	10 mg/mL <sup>96</sup>	discard unused portion <sup>96</sup>	1-4 mg/mL <b>NS</b> , D5W <sup>96</sup>  (e.g., 250-500 mL)*  gently invert to mix	<b>NS:</b> 14 d F plus an additional 24 h RT <sup>2,96</sup>  <b>D5W:</b> 24 h F plus an additional 12 h RT <sup>96</sup>	



**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>riTUXimab (RUXIENCE®)</b> 100 mg/10 mL 500 mg/50 mL (Pfizer) (F)(PFL) no preservative <sup>97</sup>	N/A	10 mg/mL <sup>97</sup>	discard unused portion <sup>97</sup>	1-4 mg/mL <b>NS</b> , D5W <sup>97</sup>  (e.g., 250-500 mL)*  gently invert to mix	24 h F plus an additional 8 h RT <sup>97</sup>	
<b>riTUXimab (TRUXIMA®)</b> 100 mg/10 mL 500 mg/50 mL (Celltrion/Teva) (F)(PFL) no preservative <sup>98</sup>	N/A	10 mg/mL <sup>98</sup>	discard unused portion <sup>98</sup>	1-4 mg/mL <b>NS</b> , D5W <sup>98</sup>  (e.g., 250-500 mL)*  gently invert to mix	24 h F plus an additional 8 h RT <sup>98</sup>	
<b>romiDEPsin</b> 10 mg (Celgene Inc.) (RT) <sup>99</sup> no preservative <sup>39</sup>	2.2 mL of supplied diluent <sup>99,100</sup>  swirl gently to mix <sup>99</sup>	5 mg/mL <sup>99</sup>	8 h RT <sup>99</sup>	500 mL NS <sup>99</sup>	24 h RT <sup>99</sup>	- reconstituted solution will be slightly viscous <sup>101</sup> - vials contain overfill to allow for full drug recovery (drug vial contains 11 mg romidepsin; diluent vial contains 2.4 mL diluent) <sup>99</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Siltuximab</b> 100 mg 400 mg (Janssen) (F)(PFL) no preservative <sup>102</sup>	100 mg: 5.2 mL SWI <sup>102</sup>  400 mg: 20 mL SWI <sup>102</sup>  allow vial to come to room temperature prior to use (~30 minutes) <sup>102</sup>  gently swirl, do NOT shake <sup>102</sup>	20 mg/mL <sup>102</sup>	2 h RT <sup>102</sup>	250 mL <b>D5W</b> <sup>102</sup>  dilute to final volume by withdrawing volume from bag equal to volume of drug to be added <sup>102</sup>	complete administration within 6 h RT <sup>102</sup>	- use 0.2 micron in- line filter <sup>102</sup>
<b>Streptozocin</b> 1g (Pfizer) (F)(PFL) no preservative <sup>103</sup>	9.5mL <b>NS</b> , SWI, D5W <sup>103</sup>	100 mg/mL <sup>103</sup>	48 h F, <sup>103</sup> 24 h RT	syringe <sup>103</sup>	48 h F, 24 h RT <sup>103</sup>	
				50-500 mL* <b>NS</b> , D5W, SWI <sup>103</sup>	48 h F, 24 h RT <sup>103</sup>	
<b>Temsirolimus</b> 30 mg/1.2 mL (Wyeth) (F)(PFL) <sup>104,105</sup> no preservative <sup>106</sup>	1.8 mL supplied diluent <sup>104,105</sup>	10 mg/mL <sup>104,105</sup>	24 h RT <sup>104,105</sup>  **(PFL) <sup>104</sup>	250 mL <b>NS</b> <sup>104,105</sup>	complete administration within 6 h <sup>104,105</sup>	- use non-DEHP bag and tubing with in-line filter <sup>104,105</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Teniposide</b> 50 mg/5 mL (BMS) (RT) preservative <sup>107</sup>	N/A	10 mg/mL <sup>107</sup>	discard unused portion	50 – 500 mL <b>NS</b> , D5W for a final concentration of 0.1-1 mg/mL <sup>107</sup>	0.1-0.4 mg/mL: 24 h RT <sup>107</sup>  1 mg/mL: complete administration within 4 h of preparation RT <sup>107,108</sup>	<ul style="list-style-type: none"> <li>- do not refrigerate</li> <li>- use non-DEHP bag and tubing<sup>107</sup></li> <li>- do not use if precipitates<sup>107,108</sup></li> <li>- contains DMA***</li> <li>- excessive agitation may cause precipitation<sup>107</sup></li> </ul>
<b>Thiotepa</b> 15 mg 100 mg (Adienne/Methapharm) (F) no preservative <sup>109</sup>	<b>15 mg:</b> 1.5 mL SWI <sup>109</sup>  <b>100 mg:</b> 10 mL SWI <sup>109</sup>  to remove haze, filter through 0.22 micron filter after reconstitution <sup>110</sup>  record time of reconstitution	10 mg/mL <sup>109</sup>	8 h F <sup>109</sup>	reconstituted solution is hypotonic and must be further diluted with NS prior to use <sup>109</sup>  doses ≤ 500 mg: 500 mL NS or with an appropriate volume to achieve 0.5-1 mg/mL concentration <sup>109</sup>  doses > 500 mg: 1000 mL NS <sup>109</sup>	24 h F, 4 h RT <sup>109</sup>	<ul style="list-style-type: none"> <li>- do not use if precipitates are present<sup>109</sup></li> <li>- reconstituted solution may be used if opalescent<sup>109</sup></li> <li>- administer with 0.2 micron inline filter<sup>109</sup></li> </ul>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Thiotepa IT injection</b> 15 mg 100mg (Adienne/Methapharm) (F) no preservative <sup>109</sup>	diluents containing preservatives should <b>NOT</b> be used for intrathecal administration <sup>111</sup>  <b>15 mg:</b> 1.5 mL SWI <sup>109</sup>  <b>100 mg:</b> 10 mL SWI <sup>109</sup>  to remove haze, filter through 0.22 micron filter after reconstitution <sup>110</sup>  record time of reconstitution	10 mg/mL <sup>109</sup>	8 h F <sup>109</sup>	qs to 6 mL with preservative free NS <sup>26</sup>	use within 4 h of initial reconstitution <sup>2</sup>	- auxiliary info <sup>27</sup> : "IT" - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag <sup>27</sup> - do not use if precipitates are present <sup>109</sup> - reconstituted solution may be used if opalescent <sup>109</sup>
<b>Thyrotropin alfa</b> 1.1 mg (Genzyme) (F)(PFL) no preservative <sup>112</sup>	1.2 mL SWI <sup>112</sup>  swirl contents <sup>112</sup>  do NOT shake	0.9 mg/mL <sup>112</sup>	24 h F <sup>112</sup>	syringe <sup>112</sup>	24 h F <sup>112</sup>	

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

<b>DRUG &amp; STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)</b>	<b>Reconstitute With:</b>	<b>To Give:</b>	<b>Vial Stability</b>	<b>Product</b>	<b>Product Stability</b>	<b>Special Precautions/Notes</b>
<b>Tocilizumab</b> 80 mg/4 mL 200 mg/10 mL 400 mg/20 mL (Roche) (F)(PFL) no preservative <sup>113</sup>	N/A	20 mg/mL <sup>113</sup>	discard unused portion <sup>113</sup>	100 mL NS <sup>113</sup>  dilute to final volume by withdrawing volume from bag equal to volume of drug to be added <sup>113</sup>  gently invert to mix <sup>113</sup>	complete administration within 24 h F, RT <sup>113</sup>  bring to room temperature prior to administration <sup>113</sup>	- to prevent foaming: slowly add drug to infusion bag and gently invert bag to mix <sup>113</sup>
<b>Topotecan</b> 4 mg/4 mL (Accord) (RT)(PFL) no preservative <sup>114</sup>	N/A	1 mg/mL <sup>114</sup>	discard unused portion <sup>2,114</sup>	0.025-0.5 mg/mL  50-100 mL NS, D5W <sup>114</sup>	14 d F, 48 h RT <sup>2,114</sup>	
<b>Topotecan</b> 1 mg 4 mg (Actavis) (RT)(PFL) no preservative <sup>115</sup>	<b>1 mg:</b> 1.1 mL SWI <sup>115</sup>  <b>4 mg:</b> 4 mL SWI <sup>115</sup>	1 mg/mL <sup>115</sup>	24 h F, RT <sup>115</sup>	0.02-0.5 mg/mL  50-100 mL NS, D5W <sup>115</sup>	24 F, RT <sup>115</sup>	
<b>Topotecan</b> 4 mg/4 mL (Pfizer/Hospira) (F)(PFL) no preservative <sup>116</sup>	N/A	1 mg/mL <sup>116</sup>	discard unused portion <sup>2,116</sup>	0.02-0.5 mg/mL  50-100 mL NS, D5W <sup>116</sup>	24 h F, RT <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	Product Stability	Special Precautions/Notes
<b>Topotecan</b> 4 mg/4 mL (Sandoz) (F)(PFL) no preservative <sup>117</sup>	N/A	1 mg/mL <sup>117</sup>	discard unused portion <sup>117</sup>	0.02-0.5 mg/mL  50-100 mL <b>NS</b> , D5W <sup>117</sup>	24 h F <sup>117</sup>  **(PFL) <sup>117</sup>	
<b>Trastuzumab (HERCEPTIN®)</b> 440 mg (Roche) (F) no preservative <sup>118</sup>	20 mL supplied BWI <sup>118</sup>  swirl vial gently; allow to stand undisturbed for 5 min <sup>118</sup>	21 mg/mL <sup>118</sup>	14 d F <sup>39</sup>	250 mL <b>NS</b> only <sup>118</sup>  do NOT use dextrose containing solutions <sup>118</sup>	24 h F, RT <sup>118</sup>	- do NOT shake <sup>118</sup>
<b>Trastuzumab (HERZUMA®)</b> 440 mg (Celltrion/Teva) (F) no preservative <sup>119</sup>	20 mL supplied BWI <sup>119</sup>  swirl vial gently; allow to stand undisturbed for 5 min <sup>119</sup>	21 mg/mL <sup>119</sup>	14 d F <sup>2,119</sup>	250 mL NS only <sup>119</sup>  do NOT use dextrose containing solutions <sup>119</sup>	24 h F, RT <sup>119</sup>	- do NOT shake <sup>119</sup> - supplied BWI contains benzyl alcohol <sup>119</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Trastuzumab (OGIVRI®)</b> 150 mg 440 mg (BGP) (F) no preservative <sup>120</sup>	150 mg vial: 7.2 mL SWI <sup>120</sup>	21 mg/mL <sup>120</sup>	discard unused portion <sup>120</sup>	250 mL NS only <sup>120</sup>  do <b>NOT</b> use dextrose containing solutions <sup>120</sup>	24 h F, RT <sup>120</sup>	- do NOT shake <sup>120</sup> - supplied BWI contains benzyl alcohol <sup>120</sup>
	440 mg vial: 20 mL supplied BWI <sup>120</sup>  swirl vial gently; allow to stand undisturbed for 5 min <sup>120</sup>		14 d F <sup>2,120</sup>			
<b>Trastuzumab (TRAZIMERA®)</b> 150 mg 440 mg (Pfizer) (F) no preservative <sup>121</sup>	150 mg vial: 7.2 mL SWI <sup>121</sup>	21 mg/mL <sup>121</sup>	discard unused portion <sup>121</sup>	250 mL NS only <sup>121</sup>  do <b>NOT</b> use dextrose containing solutions <sup>121</sup>	24 h F, RT <sup>121</sup>	- do NOT shake <sup>121</sup> - supplied BWI contains benzyl alcohol <sup>121</sup>
	440 mg vial: 20 mL supplied BWI <sup>121</sup>  swirl vial gently; allow to stand undisturbed for 5 min <sup>121</sup>		14 d F <sup>2,121</sup>			

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Trastuzumab emtansine (KADCYLA®)</b> 100 mg 160 mg (Roche) (F)(PFL) no preservative <sup>122</sup>	100 mg vial: 5 mL SWI <sup>122</sup>  160 mg vial: 8 mL SWI <sup>122</sup>  swirl gently until completely dissolved  do NOT shake <sup>122</sup>	20 mg/mL <sup>122</sup>	24 h F <sup>122</sup>  do NOT freeze <sup>122</sup>	250 mL NS or ½NS only <sup>122</sup>  do NOT shake <sup>122</sup>	24 h F <sup>122</sup>  do NOT freeze <sup>122</sup>	- do not use if reconstituted solution contains visible particulates or is cloudy or discolored <sup>122</sup> - dextrose 5% solutions cause aggregation of the protein; do not dilute with dextrose containing solutions <sup>122</sup> - use a 0.2 micron in-line filter or 0.22 micron polyethersulfane (PES) filter to administer infusions prepared in NS; filter is optional for solutions in 0.45% NS <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	Product Stability	Special Precautions/Notes
<b>TRC105 (Carotuximab)</b> 100 mg/4 mL 200 mg/8 mL 400 mg/16 mL (Tracon) (F)(PFL) no preservative <sup>123</sup>	N/A	25 mg/mL <sup>123</sup>	discard unused portion <sup>39</sup>	0.6 – 10 mg/mL NS <sup>124</sup>  invert gently to mix	complete infusion within 24 h F, 8 h RT <sup>123,124</sup>	- use a 0.2 micron in-line filter for administration <sup>123</sup>
<b>Treosulfan</b> 1 g 5 g (medac) (RT) no preservative <sup>125,126</sup>	pre-heat diluent to 25-30°C (max)  shake vial carefully to loosen powder before adding the warmed diluent  1 g vial: 20 mL SWI or ½NS gently shake while adding diluent <sup>125,126</sup>  5 g vial: 100 mL SWI or ½NS gently shake while adding diluent <sup>125,126</sup>  (takes ~2 min to reconstitute)	50 mg/mL <sup>125,126</sup>	48 h RT <sup>2,125,127</sup>	undiluted <sup>128</sup>  or  dilute with <b>NS</b> or D5W in empty infusion bag for final concentration = 20 mg/mL <sup>127</sup>	48 h RT <sup>2,125,127</sup>	- compatible with polytetrafluoroethyl ene filters <sup>129</sup> - may sometimes require vigorous shaking to reconstitute <sup>125,126</sup> - do NOT refrigerate as may cause precipitation <sup>125,126</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>vinBLAStine</b> 10 mg/10 mL (Pfizer) (F)(PFL) no preservative <sup>130</sup>	N/A	1 mg/mL <sup>130</sup>	discard unused portion <sup>2,130</sup>	25-50 mL <b>NS</b> , D5W <sup>131</sup>	use within 4 h of initial vial puncture <sup>2,130</sup>	- auxiliary info: WARNING: FOR INTRAVENOUS USE ONLY – FATAL IF GIVEN BY OTHER ROUTES <sup>132,133</sup>
<b>vinBLAStine</b> 10 mg/10 mL (Teva) (F)(PFL) no preservative <sup>134</sup>	N/A	1 mg/mL <sup>134</sup>	discard unused portion <sup>2,134</sup>	25-50 mL <b>NS</b> , D5W <sup>131</sup>	use within 4 h of initial vial puncture <sup>2,134</sup>	- auxiliary info: WARNING: FOR INTRAVENOUS USE ONLY – FATAL IF GIVEN BY OTHER ROUTES <sup>132,133</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>vinCRISTine</b> 2 mg/2 mL 5 mg/5 mL (Hospira) (F)(PFL) no preservative <sup>135</sup>	N/A	1 mg/mL <sup>135</sup>	8 h F, RT <sup>135</sup>	50 mL * NS, D5W <sup>135</sup>	24 h F, 6 h RT <sup>135</sup>  **(PFL) <sup>135</sup>	- auxiliary info: WARNING: FOR INTRAVENOUS USE ONLY – FATAL IF GIVEN BY OTHER ROUTES <sup>136,137</sup> - for ULYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing etoposide, DOXOrubicin, vinCRISTine)

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>vinCRISStine</b> 1 mg/1 mL 2 mg/2 mL 5 mg/5 mL (Teva) (F)(PFL) no preservative <sup>138</sup>	N/A	1 mg/mL <sup>138</sup>	8 h F, RT <sup>138</sup>	0.01-0.1 mg/mL <b>NS</b> , D5W <sup>138</sup>  25-50 mL <b>NS</b> , D5W <sup>139</sup>	24 h F, RT <sup>138</sup>	- auxiliary info: <b>WARNING: FOR            INTRAVENOUS            USE ONLY –            FATAL IF GIVEN            BY OTHER            ROUTES</b> <sup>136,137</sup> - for ULYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing etoposide, DOXOrubicin, vinCRISStine)
<b>Vinorelbine</b> 10 mg/1 mL 50 mg/5mL (Fresenius Kabi) (F)(PFL) no preservative <sup>140</sup>	N/A	10 mg/mL <sup>140</sup>	discard unused portion <sup>140</sup>	0.5-2.0 mg/mL <sup>140</sup>  <b>NS</b> , D5W, ½NS, D5-½NS, Ringer's, Ringer's Lactate <sup>140</sup>	24 h F, RT <sup>140</sup>	- auxiliary info: <b>WARNING: FOR            INTRAVENOUS            USE ONLY –            FATAL IF GIVEN            BY OTHER            ROUTES</b> <sup>133,136</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Vinorelbine</b> 10 mg/1 mL 50 mg/5 mL (GMP) (F)(PFL) no preservative <sup>141</sup>	N/A	10 mg/mL <sup>141</sup>	discard unused portion <sup>2</sup>	0.5-2.0 mg/mL <sup>141</sup>  50 mL* <b>NS</b> , D5W, ½NS, D5-½NS, Ringer's, Ringer's Lactate <sup>141</sup>	24 h <b>F</b> , RT <sup>141</sup>	- auxiliary info: WARNING: FOR INTRAVENOUS USE ONLY – FATAL IF GIVEN BY OTHER ROUTES <sup>133,136</sup>
<b>Vinorelbine</b> 10 mg/1 mL 50 mg/5 mL (Pfizer/Hospira) (F)(PFL) no preservative <sup>142</sup>	N/A	10 mg/mL <sup>142</sup>	discard unused portion <sup>142</sup>	0.5–2.0 mg/mL <sup>142</sup>  50 mL* <b>NS</b> , D5W, ½NS, D5-½NS, Ringer's, Ringer's Lactate <sup>142</sup>	24 h <b>F</b> , RT <sup>142</sup>	- auxiliary info: WARNING: FOR INTRAVENOUS USE ONLY – FATAL IF GIVEN BY OTHER ROUTES <sup>133,136</sup>
<b>Vinorelbine</b> 10 mg/1 mL 50 mg/5 mL (Teva) (F)(PFL) no preservative <sup>143</sup>	N/A	10 mg/mL <sup>143</sup>	discard unused portion <sup>143</sup>	0.5–2.0 mg/mL <sup>143</sup>  50 mL* <b>NS</b> , D5W, ½NS, D5-½NS, Ringer's, Ringer's Lactate <sup>143</sup>	24 h <b>F</b> , RT <sup>143</sup>	- auxiliary info: WARNING: FOR INTRAVENOUS USE ONLY – FATAL IF GIVEN BY OTHER ROUTES <sup>133,136</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Zoledronic acid</b> 4 mg/5 mL (Dr Reddy's) (RT) no preservative <sup>144</sup>	N/A	0.8 mg/mL <sup>144</sup>	discard unused portion <sup>144</sup>	100 mL <b>NS</b> , D5W <sup>144</sup>	complete infusion within 24 h of preparation <sup>144</sup>  <b>refrigerate</b> diluted product if not used immediately after preparation; bring to RT prior to administration <sup>144</sup>	- do <b>NOT</b> mix with calcium containing solutions <sup>144</sup>
<b>Zoledronic acid</b> 4 mg/5 mL (Marcan) (RT) no preservative <sup>145</sup>	N/A	0.8 mg/mL <sup>145</sup>	discard unused portion <sup>145</sup>	100 mL <b>NS</b> , D5W <sup>145</sup>	complete infusion within 24 h of preparation <sup>145</sup>  <b>refrigerate</b> diluted product if not used immediately after preparation; bring to RT prior to administration <sup>145</sup>	- do <b>NOT</b> mix with calcium containing solutions (e.g., Lactated Ringer's) <sup>145</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Zoledronic acid</b> 4 mg/5 mL (MDA) (RT) no preservative <sup>146</sup>	N/A	0.8 mg/mL <sup>146</sup>	discard unused portion <sup>146</sup>	100 mL <b>NS</b> , D5W <sup>146</sup>	complete infusion within 24 h of preparation <sup>146</sup>  <b>refrigerate</b> diluted product if not used immediately after preparation; bring to RT prior to administration <sup>146</sup>	- do <b>NOT</b> mix with calcium containing solutions <sup>146</sup>
<b>Zoledronic acid</b> (ZOMETA) 4 mg/ 5 mL (Novartis) (RT) no preservative <sup>147</sup>	N/A	0.8 mg/mL <sup>147</sup>	discard unused portion <sup>39</sup>	100 mL <b>NS</b> , D5W <sup>147</sup>	complete infusion within 24 h of preparation <sup>147</sup>  <b>refrigerate</b> diluted product if not used immediately after preparation; bring to RT prior to administration <sup>147</sup>	- do NOT mix with calcium containing solutions <sup>147</sup>

**BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART**

DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	Reconstitute With:	To Give:	Vial Stability	Product	Product Stability	Special Precautions/Notes
<b>Zoledronic acid</b> 4 mg/5 mL (Sandoz) (RT) no preservative <sup>148</sup>	N/A	0.8 mg/mL <sup>148</sup>	discard unused portion <sup>148</sup>	100 ml <b>NS</b> , D5W <sup>148</sup>	complete infusion within 24 h of preparation <sup>148</sup>  <b>refrigerate</b> diluted product if not used immediately after preparation; bring to RT prior to administration <sup>148</sup>	- do NOT mix with calcium- or other divalent cation- containing infusion solutions (e.g., Lactated Ringer's) <sup>148</sup>

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

\*\* 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 Under the Special Precautions/Notes column.

\*\*\* Contains DMA (N,N dimethylacetamide). Product may be incompatible with closed system transfer devices 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>149,150</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.

"*overflow known*" is stated if the manufacturer states overflow 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.



## Abbreviations:

BWI = bacteriostatic water for injection  
CIVI: ambulatory pump = Continuous Intravenous Infusion (e.g., elastomeric infusor)  
D5W = dextrose 5% in water  
DMA = N,N dimethylacetamide  
F = refrigerate  
Non-DEHP = not containing Di(2-ethylhexyl) phthalate (DEHP)  
NS = normal saline  
PFL = protect from light  
RT = room temperature  
SWI = sterile water for injection

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