

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
Aldesleukin 22 million units (1.3 mg) (SteriMax) (F)(PFL) no preservative ¹	1.2 mL SWI ¹ direct diluent against side of vial during reconstitution ¹ do NOT shake ¹	18 million unit/mL (1.1 mg/mL) ¹	12 h F, RT ^{1,2}	30-70 mcg/mL ¹ 50 mL D5W ¹ <30 mcg/mL: dilute in D5W containing human albumin 0.1% ³	48 h F, RT ¹ bring to RT prior to use ¹	- do NOT use in- line filter ¹ - avoid bacteriostatic water for injection or NS due to increased aggregation ¹
				SC syringe ^{4,5}	10 d F ^{2,5} **(PFL)	
Aldesleukin intralesional 22 million units (1.3 mg) (SteriMax) (F)(PFL) no preservative ¹	1.2 mL SWI ¹ direct diluent against side of vial during reconstitution ¹ do NOT shake ¹	18 million unit/mL (1.1 mg/mL) ¹	12 h F, RT ^{1,2}	add 3.2 mL D5W to reconstituted vial to give 5 million units/mL ^{6,7} withdraw entire contents of vial into syringes for administration ^{6,7}	syringe: 48 h F ⁶ (discard any remaining unused syringes following procedure)	- avoid bacteriostatic water for injection or NS due to increased aggregation ¹

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

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

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Arsenic trioxide 10 mg/10 mL (Phebra/ICON) (RT) no preservative ¹⁷	N/A	1 mg/mL ¹⁷	discard unused portion ¹⁷	100-250 mL NS, D5W ¹⁷	48 h F, 24 h RT ¹⁷	
Arsenic trioxide 10 mg/10 mL (Sandoz) (RT) no preservative ¹⁸	N/A	1 mg/mL ¹⁸	discard unused portion ¹⁸	100-250 mL NS, D5W ¹⁸	48 h F, 24 h RT ¹⁸	
Arsenic trioxide 10 mg/10 mL (SteriMax) (RT) no preservative ¹⁹	N/A	1 mg/mL ¹⁹	discard unused portion ¹⁹	100-250 mL NS, D5W ¹⁹	48 h F, 24 h RT ¹⁹	

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

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Avelumab 200 mg/10 mL (EMD) (F)(PFL) no preservative ²²	N/A	20 mg/mL ²²	discard unused portion ²³	250 mL NS , ½-NS ²² mix by gentle inversion ²²	complete administration within 24 h F, 8 h RT ²² if refrigerated, bring bag to RT prior to administration ²²	- do NOT shake ²² - administer with 0.2 micron in-line filter ²²

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<p>azaCITIDine 100 mg (Celgene) (RT) no preservative²⁴</p>	<p>4 mL SWI²⁴ shake vigorously²⁴ record time of reconstitution</p>	<p>25 mg/mL²⁴</p>	<p>use within 45 min RT or 8 h F²⁴</p>	<p>SC syringe²⁴</p>	<p>45 min RT (including preparation time) or 8 h F²⁴ refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution²⁴ Refrigerated syringes²⁴: <ul style="list-style-type: none"> 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 </p>	<p>- discard if contains large particles²⁴ - re-suspend syringe contents before injection by vigorously rolling syringe between palms²⁴ - if cold diluent reconstitution is used to extend stability, minimize exposure to RT; ensure proper refrigeration of diluent, reconstituted vial and final product^{25,26}</p>
	<p>cold diluent reconstitution: 4 mL SWI at 2-8°C^{25,26}</p>	<p>25 mg/mL²⁴</p>	<p>12 h F^{2,25,26}</p>		<p>22 h F^{25,26}</p>	

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<p>azaCITIDine 100 mg (Dr. Reddy's) (RT) no preservative²⁷</p>	<p>4 mL SWI²⁷ shake vigorously²⁷</p>	<p>25 mg/mL²⁷</p>	<p>use within 45 min RT or 8 h F²⁷</p>	<p>SC syringe²⁷</p>	<p>45 min RT (including preparation time) or 8 h F²⁷</p> <p>refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution²⁷</p> <p>Refrigerated syringes²⁷:</p> <ul style="list-style-type: none"> • 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 	<p>- do not filter²⁷ - discard if contains large particles²⁷ - re-suspend syringe contents before injection by vigorously rolling syringe between palms²⁷</p>

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<p>azaCITIDine 100 mg (Hikma) (RT) no preservative²⁸</p>	<p>4 mL SWI²⁸ shake vigorously²⁸</p>	<p>25 mg/mL²⁸</p>	<p>use within 45 min RT or 8 h F²⁸</p>	<p>SC syringe²⁸</p>	<p>45 min RT (including preparation time) or 8 h F²⁸</p> <p>refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution²⁸</p> <p>Refrigerated syringes²⁸:</p> <ul style="list-style-type: none"> • 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 	<p>- do not filter²⁸ - discard if contains large particles²⁸ - re-suspend syringe contents before injection by vigorously rolling syringe between palms²⁸</p>

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<p>BCG (Tice strain) (OncoTICE®) intravesical 50 mg (1 to 8 x 10⁸ CFU) (Merck Canada) (F)(PFL) no preservative²⁹</p>	<p>1 mL preservative-free NS²⁹</p> <p>allow to stand for a few min; gently swirl to suspend²⁹</p> <p>do NOT shake²⁹</p> <p>record time of reconstitution</p>	<p>1 to 8x10⁸ CFU/vial²⁹</p>	<p>2 h F²⁹</p> <p>** (PFL)²⁹</p>	<p>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 NS²⁹</p> <p>if a CSTD is used: transfer contents from vial to 50 mL syringe and qs up to 45 mL with NS; do NOT rinse vial²⁹</p>	<p>use within 2 h F of reconstitution^{29,30}</p> <p>** (PFL)²⁹</p>	<p>- auxiliary info: biohazard³⁰ - do NOT filter²⁹ - do NOT shake²⁹</p>

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<p>BCG (<i>Russian strain</i>) (VERITY-BCG®) <u>intravesical</u> 40 mg (1 to 8 x 10⁸ CFU) (Verity) (F)(PFL) no preservative³¹</p>	<p>1 mL preservative-free NS³¹</p> <p>allow to stand for a few min; gently swirl to suspend³¹</p> <p>do NOT shake³¹</p> <p>record time of reconstitution</p>	<p>1 to 8x10⁸ CFU/vial³¹</p>	<p>2 h F³¹</p> <p>** (PFL)³¹</p>	<p>transfer contents from 1st vial to 50 mL syringe, rinse vial with 1 mL NS and transfer rinse solution to the 50 mL syringe; then, repeat steps for 2nd vial and qs up to 45 mL with NS³¹</p>	<p>use within 2 h F of reconstitution^{30,31}</p> <p>** (PFL)³¹</p>	<p>- auxiliary info: biohazard³⁰ - TWO vials must be used to achieve the recommended full dose³¹ - do NOT shake³¹</p>
<p>Belantamab mafodotin 30 mg/1.5 mL (GSK) (frozen)(PFL) do not shake no preservative³² (SAP)</p>	<p>n/a</p>	<p>20 mg/mL³²</p>	<p>thaw up to 4 h RT, F before use³²</p> <p>once thawed: unpunctured vial: 10 d F³²</p> <p>once thawed: punctured vial: discard unused portion^{30,32}</p> <p>** (PFL)³²</p> <p>do NOT shake³²</p>	<p>0.2-2 mg/mL NS³²</p> <p>250 mL * NS³²</p>	<p>8 h RT³²</p>	<p>- supplied as frozen liquid³² - recommended freezer temp³² is (- 50°C to -15°C) - thawed drug cannot be refrozen³²</p>

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Belantamab mafodotin 100 mg (GSK) (F)(PFL) no preservative ³³ (SAP)	allow vial to stand at RT for 10 min before reconstitution ³⁴ 2 mL SWI ³³ swirl gently to mix; do NOT shake ³⁴	50 mg/mL ³³	use immediately after reconstitution ³³ discard unused portion ³³	0.2-2 mg/mL NS ³³ 250 mL * NS ³³ mix by gentle inversion; do NOT shake ³⁴	complete administration within 8 h RT ³³	- discard if particulate matter is present ³³
Belinostat 500 mg (Spectrum) (RT) no preservative ³⁵ (SAP)	9 mL SWI ³⁵	50 mg/mL ³⁵	12 h RT ³⁵	250 mL NS ³⁵	complete administration within 36 h RT ³⁵	- administer with 0.2 micron in-line filter ³⁵
Bendamustine 25 mg 100 mg (Natco) (RT)(PFL) no preservative ³⁶	25 mg: 5 mL SWI ³⁶ 100 mg: 20 mL SWI ³⁶ shake well; dissolves completely in 5 min ³⁶	5 mg/mL ³⁶	30 min ³⁶	0.2-0.6 mg/mL NS, D2.5-½NS ³⁶ 100-500 mL†	complete administration within 24 h F, 3 h RT ³⁶	

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Bendamustine 25 mg 100 mg (Teva) (RT,F)(PFL) no preservative ³⁷	25 mg: 5 mL SWI ³⁷ 100 mg: 20 mL SW ³⁷ shake well; dissolves completely in 5 min ³⁷	5 mg/mL ³⁷	30 min ³⁷	0.2-0.6 mg/mL NS , D2.5-½NS ³⁷ 100-500 mL†	complete administration within 24 h F, 3 h RT ³⁸	
Bevacizumab (AVASTIN®) 100 mg/4 mL 400 mg/16 mL (Roche) (F)(PFL) do not shake no preservative ³⁹	N/A	25 mg/mL ³⁹	discard unused portion ³⁹	1.4-16.5 mg/mL NS only ³⁹ 100-250 mL†	48 h F, RT ³⁹	- do NOT shake ³⁹
Bevacizumab (MVASI®) 100 mg/4 mL 400 mg/16 mL (Amgen) (F)(PFL) do not shake no preservative ⁴⁰	N/A	25 mg/mL ⁴⁰	discard unused portion ⁴⁰	1.4-16.5 mg/mL NS only ⁴⁰ 100-250 mL†	48 h F, RT ⁴⁰	- do NOT shake ⁴⁰

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Bevacizumab (ZIRABEV®) 100 mg/4 mL 400 mg/16 mL (Pfizer) (F)(PFL) do not shake no preservative ⁴¹	N/A	25 mg/mL ⁴¹	discard unused portion ⁴¹	1.4-16.5 mg/mL NS only ⁴¹ 100-250 mL†	10 d F, 48 h RT ^{2,41}	- do NOT shake ⁴¹
Bleomycin 15 units (NB: dose in units only) (Fresenius Kabi) (F)(PFL) no preservative ⁴²	6 mL* NS ⁴²	2.5 units/mL	12 h F ^{2,42}	50 mL* NS ⁴²	24 h RT ⁴²	
Bleomycin 15 units (NB: dose in units only) (Pfizer/Hospira) (F)(PFL) no preservative ⁴³	6 mL* NS, SWI ⁴³	2.5 units/mL	12 h F, RT ^{2,43}	50 mL* NS ⁴³	4 h RT ^{2,30,43}	

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<p>Blinatumomab 38.5 mcg (Amgen) (F)(PFL) do not shake no preservative⁴⁴</p>	<p>3 mL SWI⁴⁴</p> <p>do NOT use supplied IV solution stabilizer to reconstitute vials⁴⁴</p> <p>direct diluent against side of vial during reconstitution⁴⁴</p> <p>gently swirl to avoid excess foaming⁴⁴</p>	<p>12.5 mcg/mL⁴⁴</p>	<p>12 h F^{2,45}, 4 h RT⁴⁵</p>	<p>250 mL NS⁴⁴</p> <p>add supplied IV solution stabilizer to NS bag and gently mix to avoid foaming⁴⁴</p> <p>add reconstituted drug to bag following addition of IV solution stabilizer⁴⁴</p>	<p>complete administration within 10 d F, 96 h RT⁴⁵</p>	<p>- use non-DEHP bag and IV administration set⁴⁴ - administer with 0.2 micron in-line filter⁴⁴ - prime lines with blinatumomab solution; do NOT use NS</p>
<p>Bortezomib SC injection 3.5 mg (Actavis) (RT)(PFL) no preservative⁴⁶</p>	<p>1.4 mL NS⁴⁶</p>	<p>2.5 mg/mL⁴⁶</p>	<p>12 h F, RT^{2,47}</p>	<p>SC syringe⁴⁶</p>	<p>10 d F, 4 d RT^{2,47}</p>	<p>- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.</p>

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Bortezomib 3.5 mg (Actavis) (RT)(PFL) no preservative ⁴⁶	3.5 mL NS ⁴⁶	1 mg/mL ⁴⁶	12 h F, RT ^{2,47}	IV syringe ⁴⁶	10 d F, 4 d RT ^{2,47}	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
Bortezomib SC injection 3.5 mg (Apotex) (RT)(PFL) no preservative ⁴⁸	1.4 mL NS ⁴⁸	2.5 mg/mL ⁴⁸	12 h F, RT ^{2,49}	SC syringe ⁴⁸	10 d F, 4 d RT ^{2,49}	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
Bortezomib 3.5 mg (Apotex) (RT)(PFL) no preservative ⁴⁸	3.5 mL NS ⁴⁸	1 mg/mL ⁴⁸	12 h F, RT ^{2,49}	IV syringe ⁴⁸	10 d F, 4 d RT ^{2,49}	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.

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Bortezomib SC injection 3.5 mg (Janssen) (RT)(PFL) no preservative ⁵⁰	1.4 mL NS ⁵⁰	2.5 mg/mL ⁵⁰	12 h F, RT ^{2,47}	SC syringe ⁵⁰	10 d F, 4 d RT ^{2,47}	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
Bortezomib 3.5 mg (Janssen) (RT)(PFL) no preservative ⁵⁰	3.5 mL NS ⁵⁰	1 mg/mL ⁵⁰	12 h F, RT ^{2,47}	IV syringe ⁵⁰	10 d F, 4 d RT ^{2,47}	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
Bortezomib SC injection 2.5 mg 3.5 mg (Juno/MDA) (RT)(PFL) no preservative ⁵¹	2.5 mg: 1 mL NS ⁵¹ 3.5 mg: 1.4 mL NS ⁵¹	2.5 mg/mL ⁵¹	12 h F, RT ^{2,52}	SC syringe ⁵¹	10 d F, 4 d RT ^{2,52}	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.

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Bortezomib 1 mg 2.5 mg 3.5 mg (Juno/MDA) (RT)(PFL) no preservative ⁵¹	1 mg: 1 mL NS ⁵¹ 2.5 mg: 2.5 mL NS ⁵¹ 3.5 mg: 3.5 mL NS ⁵¹	1 mg/mL ⁵¹	12 h F, RT ^{2,52}	IV syringe ⁵¹	10 d F, 4 d RT ^{2,52}	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
Bortezomib SC injection 3.5 mg (Marcan) (RT)(PFL) no preservative ⁵³	1.4 mL NS ⁵³	2.5 mg/mL ⁵³	12 h F, RT ^{2,54,55}	SC syringe ⁵³	10 d F, 2 d RT ^{2,54,55}	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
Bortezomib 3.5 mg (Marcan) (RT)(PFL) no preservative ⁵³	3.5 mL NS ⁵³	1 mg/mL ⁵³	12 h F, RT ^{2,54,55}	IV syringe ⁵³	10 d F, 2 d RT ^{2,54,55}	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.

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Bortezomib SC injection 3.5 mg (PMS) (RT)(PFL) no preservative ⁵⁶	1.4 mL NS ⁵⁶	2.5 mg/mL ⁵⁶	8 h RT ⁵⁶	SC syringe ⁵⁶	8 h RT ⁵⁶	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
Bortezomib 3.5 mg (PMS) (RT)(PFL) no preservative ⁵⁶	3.5 mL NS ⁵⁶	1 mg/mL ⁵⁶	8 h RT ⁵⁶	IV syringe ⁵⁶	8 h RT ⁵⁶	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
Bortezomib SC injection 1 mg 2.5 mg 3.5 mg (Taro) (RT)(PFL) no preservative ⁵⁷	1 mg: 0.4 mL NS ⁵⁷ 2.5 mg: 1 mL NS ⁵⁷ 3.5 mg: 1.4 mL NS ⁵⁷	2.5 mg/mL ⁵⁷	8 h RT ⁵⁷	SC syringe ⁵⁷	8 h RT ⁵⁷	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.

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Bortezomib 1 mg 2.5 mg 3.5 mg (Taro) (RT)(PFL) no preservative ⁵⁷	1 mg: 1 mL NS ⁵⁷ 2.5 mg: 2.5 mL NS ⁵⁷ 3.5 mg: 3.5 mL NS ⁵⁷	1 mg/mL ⁵⁷	8 h RT ⁵⁷	IV syringe ⁵⁷	8 h RT ⁵⁷	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
Bortezomib SC injection 3.5 mg (Teva) (RT)(PFL) no preservative ⁵⁸	1.4 mL NS ⁵⁸	2.5 mg/mL ⁵⁸	12 h F, RT ^{2,47}	SC syringe ⁵⁸	10 d F, 4 d RT ^{2,47}	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
Bortezomib 3.5 mg (Teva) (RT)(PFL) no preservative ⁵⁸	3.5 mL NS ⁵⁸	1 mg/mL ⁵⁸	12 h F, RT ^{2,47}	IV syringe ⁵⁸	10 d F, 4 d RT ^{2,47}	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.

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Brentuximab vedotin 50 mg (Seagen) (F)(PFL) no preservative ⁵⁹	10.5 mL SWI ⁵⁹ direct diluent against side of vial during reconstitution ⁵⁹ do NOT shake ⁵⁹	5 mg/mL ⁵⁹	12 h F ^{2,59}	0.4-1.8 mg/mL NS , D5W, Lactated Ringer's ⁵⁹ 50-100 mL† gently invert to mix ⁵⁹	24 h F ^{2,59}	- solution should be colorless, clear to slightly opalescent, and free of visible particulates ⁵⁹
Busulfan 60 mg/10 mL (PMS) (F) no preservative ⁶⁰	N/A	6 mg/mL ⁶⁰	discard unused portion ^{30,60}	dilute to volume 10 times drug volume to achieve final concentration of ~0.5 mg/mL NS , D5W ⁶⁰ 250-1000 mL†	complete administration within 12 h F, 8 h RT ⁶⁰	- contains DMA*** - always add busulfan to diluent to mix; do not add diluent to busulfan ⁶⁰

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
<p>Busulfan 60 mg/10 mL (SteriMax) (F) no preservative⁶¹</p>	<p>N/A</p>	<p>6 mg/mL⁶¹</p>	<p>discard unused portion^{23,61}</p>	<p>dilute to volume 10 times drug volume to achieve final concentration of ~0.5 mg/mL NS, D5W⁶¹ 250-1000 mL†</p>	<p>in NS: complete administration within 12 h F, 8 h RT⁶¹ in D5W: complete administration within 8 h RT⁶¹</p>	<p>- contains DMA*** - always add busulfan to diluent to mix; do not add diluent to busulfan⁶¹</p>
<p>Cabazitaxel 60 mg/1.5 mL (Dr. Reddy's) (RT) no preservative⁶²</p>	<p>supplied diluent: withdraw entire contents of diluent vial and inject into the concentrate vial⁶² slowly direct diluent against inside of vial to limit foaming⁶² mix by repeated inversions for 45 sec⁶² do NOT shake⁶² let sit for 5 min⁶²</p>	<p>10 mg/mL⁶²</p>	<p>1 h RT⁶²</p>	<p>0.10-0.26 mg/mL NS, D5W⁶² 100-250 mL†</p>	<p>complete administration within 48 h F, 8 h RT⁶²</p>	<p>- use non-DEHP bag and tubing⁶² - administer with 0.2 micron in-line filter⁶² - concentrate and diluent vials contain overfill⁶² - diluent contains 13% (w/w) ethanol in water⁶² - discard if crystallization occurs⁶²</p>

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
Cabazitaxel 45 mg/4.5 mL 60 mg/6 mL (Sandoz) (RT) preservative ⁶³	N/A	10 mg/mL ⁶³	10 d F, RT ⁶³	0.10-0.26 mg/mL NS , D5W ⁶³ 100-250 mL†	complete administration within 48 h F, 8 h RT ⁶³	<ul style="list-style-type: none"> - use non-DEHP bag and tubing⁶³ - administer with 0.2 micron in-line filter⁶³ - vials contain overfill⁶³
Cabazitaxel 60 mg/1.5 mL (sanofi-aventis) (RT) no preservative ⁶⁴	<p>supplied diluent: withdraw entire contents of diluent vial and inject into the concentrate vial⁶⁴</p> <p>slowly direct diluent against inside of vial to limit foaming⁶⁴</p> <p>mix by repeated inversions for 45 sec⁶⁴</p> <p>do NOT shake⁶⁴</p> <p>let sit for 5 min⁶⁴</p>	10 mg/mL ⁶⁴	1 h RT ⁶⁴	0.10-0.26 mg/mL NS , D5W ⁶⁴ 100-250 mL†	complete administration within 48 h F, 8 h RT ⁶⁴	<ul style="list-style-type: none"> - use non-DEHP bag and tubing⁶⁴ - administer with 0.2 micron in-line filter⁶⁴ - concentrate and diluent vials contain overfill⁶⁴ - diluent contains 13% (w/w) ethanol in water⁶⁴ - discard if crystallization occurs⁶⁴

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
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Accord) (RT)(PFL) no preservative ⁶⁵	N/A	10 mg/mL ⁶⁵	discard unused portion ⁶⁵	0.5-10 mg/mL NS , D5W ⁶⁵ 50-250 mL†	24 h F, 8 h RT ⁶⁵	- do NOT use aluminum- containing needle, syringe, or tubing ⁶⁵
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Omega) (RT)(PFL) no preservative ⁶⁶	N/A	10 mg/mL ⁶⁶	discard unused portion ⁶⁶	0.3-10 mg/mL NS , D5W ⁶⁶ 50-250 mL†	48 h F ⁶⁶ , 24 h RT ⁶⁷	- do NOT use aluminum- containing needle, syringe or tubing ⁶⁶
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Pfizer/Hospira) (RT)(PFL) no preservative ⁶⁸	N/A	10 mg/mL ⁶⁸	discard unused portion ⁶⁸	0.3-10 mg/mL NS , D5W ⁶⁸ 50-250 mL†	48 h F ⁶⁸	- do NOT use aluminum- containing needle, syringe, or tubing ⁶⁸

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
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL (Teva) (RT)(PFL) no preservative ⁶⁹	N/A	10 mg/mL ⁶⁹	discard unused portion RT ⁶⁹	0.5-10 mg/mL ⁷⁰ NS , D5W ^{69,71,72} 50-250 mL†	8 h F ⁷³ , RT ⁶⁹	- do NOT use aluminum- containing needle, syringe, or tubing ⁶⁹
Carfilzomib 10 mg 30 mg 60 mg (Amgen) (F)(PFL) no preservative ⁷⁴	10 mg: 5 mL SWI ⁷⁴ 30 mg: 15 mL SWI ⁷⁴ 60 mg: 29 mL SWI ⁷⁴ direct diluent against side of vial during reconstitution ⁷⁴ swirl gently; do NOT shake ⁷⁴ if foaming occurs, allow to settle until clear (~5 min) ⁷⁴	2 mg/mL ⁷⁴	12 h F, 4 h RT ^{2,74}	50-100 mL* D5W only ⁷⁴ do NOT dilute in NS ⁷⁴	24 h F, 4 h RT ^{2,74}	- if a CSTD is not used in compounding, a 21 gauge (or larger gauge) needle is recommended to prevent coring of the vial stopper ⁷⁵⁻⁷⁷ - do not use NS for reconstitution or dilution ⁷⁴ - discard if contains particulates ⁷⁴

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
<p>Carmustine 100 mg (SteriMax) (F) no preservative⁷⁸</p>	<p>3mL supplied diluent⁷⁸</p> <p>bring drug and diluent vials to RT prior to mixing⁷⁸</p> <p>completely dissolve drug in diluent, then add 27 mL SWI⁷⁸</p>	<p>3.3 mg/mL in ethanol 10%⁷⁸</p>	<p>48 h F⁷⁸</p> <p>precipitates can be re-dissolved by warming the vial to RT with gentle shaking⁷⁸</p>	<p>500 mL NS, D5W⁷⁸</p> <p>in glass or polypropylene containers ONLY⁷⁸</p>	<p>8 h RT⁷⁸</p> <p>or</p> <p>48 h F plus an additional 6 h RT⁷⁸</p> <p>** (PFL)⁷⁸</p>	<ul style="list-style-type: none"> - supplied diluent is dehydrated alcohol⁷⁸ - do not use vial if oily film is present⁷⁸ - final product should be gently shaken for ~10 sec to remix bag contents prior to administration⁷⁸ - administer with PVC-free infusion set⁷⁸ - protect from light for administration⁷⁸
<p>Cemiplimab 250 mg/5 mL 350 mg/7 mL (sanofi) (F)(PFL) do not shake no preservative⁷⁹</p>	<p>N/A</p>	<p>50 mg/mL⁷⁹</p>	<p>discard unused portion^{30,79}</p>	<p>1-20 mg/mL NS, D5W⁷⁹</p> <p>50 mL†</p> <p>mix by gentle inversion</p>	<p>complete administration within 24 h F, 8 h RT⁷⁹</p>	<ul style="list-style-type: none"> - administer with 0.2 micron filter⁷⁹ - solution may contain white particulates which do not affect product quality⁷⁹

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
Cetuximab 100 mg/50 mL 200 mg/100 mL (Imclone/Lilly) (F) do not shake no preservative ⁸⁰	N/A	2 mg/mL ⁸⁰	12 h F, 8 h RT ⁸⁰	syringe ⁸⁰	12 h F, 8 h RT ⁸⁰	- administer with 0.2 micron filter ⁸⁰ - solution may contain white particulates which do not affect product quality ⁸⁰
				evacuated container or bag ⁸⁰		
CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Accord) (RT)(PFL) no preservative ⁸¹	N/A	1 mg/mL ⁸¹	discard unused portion ³⁰	NS ⁸¹ 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol ⁸¹	24 h RT ⁸¹	- do NOT use aluminum- containing needle, syringe or tubing ⁸¹ - 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
<p>CISplatin 50 mg/50 mL 100 mg/100mL (Pfizer/Hospira) (RT)(PFL) no preservative⁸²</p>	<p>N/A</p>	<p>1 mg/mL⁸²</p>	<p>discard unused portion³⁰</p>	<p>NS⁸² 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol⁸²</p>	<p>24 h RT⁸²</p>	<p>- do NOT use aluminum- containing needle, syringe or tubing⁸² - 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)</p>

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
<p>CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Sandoz) (RT)(PFL) no preservative⁸³</p>	<p>N/A</p>	<p>1 mg/mL⁸³</p>	<p>12 h RT^{2,84}</p>	<p>NS⁸³ 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol⁸³</p>	<p>24 h RT⁸⁴</p>	<p>- do NOT use aluminum-containing needle, syringe or tubing⁸³ - 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)</p>

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
<p>CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Teva) (RT)(PFL) no preservative⁸⁵</p>	<p>N/A</p>	<p>1 mg/mL⁸⁵</p>	<p>discard unused portion²³</p>	<p>NS⁸⁵ 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol⁸⁵</p>	<p>24 h RT⁸⁵</p>	<p>- do NOT use aluminum- containing needle, syringe or tubing⁸⁵ - 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)</p>

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
<p>Cladribine 10 mg/10 mL (Fresenius Kabi) (F)(PFL) no preservative⁸⁶</p>	<p>N/A</p>	<p>1 mg/mL⁸⁶</p>	<p>discard unused portion⁸⁶</p>	<p>SC syringe⁸⁷</p>	<p>48 h F, discard end of day RT^{30,88,89}</p>	
				<p>500 mL NS only⁸⁶ do NOT use D5W⁸⁶</p>	<p>24 h RT⁸⁶</p>	
				<p>Cassette: qs to 100 mL with bacteriostatic NS only via SIMS DELTEC INC. MEDICATION CASSETTES®⁸⁶</p> <p>filter drug and diluent through 0.22 micron filter as each solution is being introduced into the cassette⁸⁶</p>	<p>at least 7 days⁸⁶</p>	

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
<p>Cladribine 10 mg/10 mL (GMP) (F)(PFL) no preservative⁹⁰</p>	<p>N/A</p>	<p>1 mg/mL⁹⁰</p>	<p>discard unused portion^{30,90}</p>	<p>SC syringe⁸⁷</p>	<p>48 h F, discard end of day RT^{30,88,89}</p>	
				<p>500 mL NS only⁹⁰ do NOT use D5W⁹⁰</p>	<p>24 h RT⁹⁰</p>	
				<p>Cassette: qs to 100 mL with bacteriostatic NS only via SIMS DELTEC INC. MEDICATION CASSETTES®⁹⁰</p> <p>filter drug and diluent through 0.22 micron filter as each solution is being introduced into the cassette⁹⁰</p>	<p>at least 7 days⁹⁰</p>	

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
Crisantaspase (recombinant asparaginase <i>Erwinia chrysanthemum</i>) 10 mg/0.5 mL (Jazz) (F)(PFL) do not shake preservative free ⁹¹	N/A	20 mg/mL ⁹¹	discard unused portion ⁹¹	IM syringe ⁹¹ max volume: 2 mL if volume >2 mL, use multiple sites ⁹¹	use within 4 h RT ⁹¹ (PFL NOT required for syringe) ⁹¹	- discard if cloudy, discoloured, or contains particulates ⁹¹ - do NOT shake ⁹¹
Cyclophosphamide 200 mg 500 mg 1000 mg 2000 mg (Baxter) (RT)(PFL) no preservative ⁹²	200 mg ⁹² : 10 mL NS 500 mg ⁹² : 25 mL NS 1000 mg ⁹² : 50 mL NS 2000 mg ⁹² : 100 mL NS	20 mg/mL ⁹²	12 h F, RT ^{2,92}	NS , D5W, D5NS ⁹² 100-250 mL† high dose in BMT: may need 500 mL*	36 h F, 24 h RT ⁹³⁻⁹⁵	- 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
Cytarabine 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative ⁹⁶	N/A	100 mg/mL ⁹⁶	12 h RT ^{2,96}	0.1-37.5 mg/mL NS , D5W, SWI ⁹⁶ 100 mL†	in NS: 4 d RT ^{2,96} other solutions: 72 h F, 24 h RT ⁹⁶ **(PFL) ⁹⁶	
Cytarabine IT injection 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative ⁹⁶	N/A record time of puncture	100 mg/mL ⁹⁶	use within 4 h of initial puncture ²	IT syringe qs to 6 mL with preservative free NS ⁹⁷⁻⁹⁹ diluent containing preservatives should NOT be used for intrathecal administration ¹⁰⁰	use within 4 h of initial puncture ² **(PFL) ⁹⁶	- auxiliary info ² : IT - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag ⁹⁹
Cytarabine SC injection 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative ⁹⁶	N/A	100 mg/mL ⁹⁶	12 h RT ^{2,96}	SC syringe	10 d F, 4 d RT ^{2,101-103} **(PFL) ⁹⁶	

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
Cytarabine 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative ¹⁰⁴	N/A	100 mg/mL ¹⁰⁴	discard unused portion ^{30,104}	0.1-37.5 mg/mL NS, D5W, SWI ¹⁰⁴ 100 mL†	10 d F, 48 h RT ¹⁰⁴ **(PFL)	
Cytarabine IT injection 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative ¹⁰⁴	N/A record time of puncture	100 mg/mL ¹⁰⁴	use within 4 h of initial puncture ³⁰	IT syringe qs to 6 mL with preservative free NS ^{97,98} diluents containing preservatives should NOT be used for intrathecal administration ¹⁰⁰	use within 4 h of initial puncture ³⁰ **(PFL)	- auxiliary info: IT ³⁰ - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag ⁹⁹
Cytarabine SC injection 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative ¹⁰⁴	N/A	100 mg/mL ¹⁰⁴	discard unused portion ^{30,104}	SC syringe	10 d F, 48 h RT ¹⁰⁴ **(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
Cytarabine 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative ¹⁰⁵	N/A	100 mg/mL ¹⁰⁵	12 h RT ^{2,105}	0.1-37.5 mg/mL NS , D5W, SWI, LR ¹⁰⁵ 100 mL*	in NS: 4 d RT ^{2,105} other solutions: 72 h F, 24 h RT ¹⁰⁵ **(PFL) ¹⁰⁵	
Cytarabine IT injection 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative ¹⁰⁵	N/A record time of puncture	100 mg/mL ¹⁰⁵	use within 4 h of initial puncture ²	IT syringe qs to 6 mL with preservative free NS ⁹⁷⁻⁹⁹ diluent containing preservatives should NOT be used for intrathecal administration ¹⁰⁰	use within 4 h of initial puncture ² **(PFL) ¹⁰⁵	- auxiliary info: IT ² - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag ⁹⁹
Cytarabine SC injection 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative ¹⁰⁵	N/A	100 mg/mL ¹⁰⁵	12 h RT ^{2,105}	SC syringe	10 d F, 4 d RT ^{2,101-103} **(PFL) ¹⁰⁵	

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
Dacarbazine 600 mg (Pfizer) (F)(PFL) no preservative ¹⁰⁶	59.1 mL SWI ¹⁰⁶	10 mg/mL ¹⁰⁶	12 h F, 8 h RT ^{2,106}	0.19-3.0 mg/mL NS, D5W ¹⁰⁶ 500-1000 mL†	24 h F ¹⁰⁶ **(PFL) ¹⁰⁷	- protect container from light during administration ¹⁰⁷
DACTINomycin 0.5 mg (GMD Pharma for Recordati) (RT)(PFL) no preservative ¹⁰⁸ (SAP)	1.1 mL SWI (preservative-free) ¹⁰⁸ do NOT use SWI with preservative (may form precipitate) ¹⁰⁸	0.5 mg/mL (500 mcg/mL) ¹⁰⁸	discard unused portion ¹⁰⁹	syringe ¹⁰⁸	use within 4 h of initial vial puncture ¹⁰⁹	- drug loss reported with some cellulose ester membrane in- line filters ¹⁰⁸
				10 mcg/mL or greater ¹⁰⁸ NS, D5W ^{108,110}		
Daratumumab 100 mg/5mL 400 mg/20mL (Janssen) (F)(PFL) do not shake no preservative ¹¹¹	N/A	20 mg/mL ¹¹¹	discard unused portion ¹¹¹	500-1000 mL NS dilute to final volume by withdrawing volume from bag equal to volume of drug to be added ¹¹¹ mix by gentle inversion ¹¹¹	24 h F , followed by 15 h infusion (total 39 h) ¹¹¹ allow bag to come to RT, then use immediately ¹¹¹ **(PFL)	- administer with 0.2 micron in-line filter ¹¹¹ - discard if visible particles are observed ¹¹¹ - complete infusion within 15 h ¹¹¹

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
Daratumumab subcutaneous (DARZALEX SC®) 1800 mg/15 mL (Janssen) (F)(PFL) do not shake no preservative ¹¹²	N/A	120 mg/mL ¹¹² allow vial to come to RT prior to use ¹¹²	discard unused portion ^{2,112}	SC syringe ¹¹²	24 h F, plus an additional 12 h RT ¹¹² bring to RT prior to use ¹¹²	- contains hyaluronidase ¹¹² - formulations are NOT interchangeable ¹¹² - discard if opaque particles or discolouration are present ¹¹² - unpunctured vial may be stored up to 24 h at RT ¹¹²
DAUNOrubicin 20 mg (Erfa) (RT)(PFL) no preservative ¹¹³	4 mL SWI ¹¹³	5 mg/mL ¹¹³	12 h F, RT ^{2,113} **(PFL) ¹¹³	100-250 mL NS, D5W ¹¹³	48 h F, 24 h RT ¹¹⁴ **(PFL) ¹¹³	

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
<p>Daunorubicin-cytarabine liposome 44 mg-100 mg (Jazz) (F)(PFL) no preservative¹¹⁵</p>	<p>19 mL SWI¹¹⁵</p> <p>allow vial to come to RT for 30 min prior to use¹¹⁵</p> <p>swirl gently for 5 min, inverting the vial every 30 sec; do NOT shake¹¹⁵</p> <p>allow vial to rest for 15 min after reconstitution¹¹⁵</p> <p>gently invert each vial 5 times prior to withdrawing concentrate for dilution¹¹⁵</p> <p>record time of reconstitution</p>	<p>2.2 mg/mL daunorubicin-5 mg/mL cytarabine¹¹⁵</p>	<p>4 h F¹¹⁵</p> <p>max <i>combined</i> storage time for reconstituted vial and diluted product is 4 h F (NOT 4 h F each)¹¹⁵</p>	<p>500 mL NS, D5W¹¹⁵</p> <p>mix by gentle inversion¹¹⁵</p>	<p>4h F¹¹⁵</p> <p>max <i>combined</i> storage time for reconstituted vial and diluted product is 4 h F (NOT 4 h F each)¹¹⁵</p>	<p>- reconstituted product is an opaque, purple, homogenous dispersion¹¹⁵</p> <p>- before administration, final product should be gently inverted to remix solution after refrigeration¹¹⁵</p>

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
Degarelix 80 mg 120 mg (Ferring) (RT) do not shake ¹¹⁶ no preservative ¹¹⁷	80 mg: 4.2 mL SWI (supplied diluent) ¹¹⁶	20 mg/mL ¹¹⁶	2 h RT ¹¹⁶	SC syringe ¹¹⁶	2 h RT ¹¹⁶	
	120 mg: 3 mL SWI (supplied diluent) ¹¹⁶	40 mg/mL ¹¹⁶				
	swirl gently; avoid shaking to prevent foam formation ¹¹⁶ reconstitution may take up to 15 min ¹¹⁶					

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
Denosumab (XGEVA®) 120 mg/1.7 mL (Amgen) (F)(PFL) do not shake no preservative ¹¹⁸	N/A	71 mg/mL ¹¹⁸	discard unused portion ^{109,118}	SC syringe ¹¹⁸	use within 4 h F, RT of initial puncture ¹⁰⁹ bring to RT 15-30 min prior to use ¹¹⁸	- not interchangeable with PROLIA ¹¹⁸ - do not use if solution is cloudy; trace amounts of translucent to white proteinaceous particles are acceptable ¹¹⁸ - avoid vigorous shaking ¹¹⁸
Dexrazoxane 250 mg 500 mg (Hikma USA) (RT) no preservative ^{119,120}	250 mg: 25 mL SWI ¹²⁰ 500 mg: 50 mL SWI ¹²⁰	10 mg/mL ¹²⁰	3 h F, 30 min RT ¹²⁰	dilute with Lactated Ringers in empty infusion bag to final concentration of 1.3-3.0 mg/mL ¹²⁰	4 h F, 1 h RT ¹²⁰	
Dexrazoxane 250 mg 500 mg (Pfizer) (RT) no preservative ¹²¹	250 mg: 25 mL SWI ¹²¹ 500 mg: 50 mL SWI ¹²¹	10 mg/mL ¹²¹	3 h F, 30 min RT ¹²¹	dilute with Lactated Ringers in empty infusion bag to final concentration of 1.3-3.0 mg/mL ¹²¹	4 h F, 1 h RT ¹²¹	

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<p>Dinutuximab 17.5 mg/5 mL (Unither/United Therapies) (F)(PFL) do not shake no preservative¹²²</p>	<p>N/A</p>	<p>3.5 mg/mL¹²²</p>	<p>discard unused portion³⁰</p>	<p>100 mL NS¹²² mix by gentle inversion¹²²</p>	<p>initiate infusion within 4 h of dilution; refrigerate bag if not hung immediately¹²² complete administration within 24 h of dilution¹²²</p>	<p>- do NOT shake¹²²</p>

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<p>DOCEtaxel 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Pfizer/Hospira) (F, RT)(PFL) preservative¹²³</p>	<p>N/A</p>	<p>10 mg/mL¹²³</p>	<p>20mg: discard unused portion^{2,123}</p> <p>80 mg or 160 mg: 28 d F^{2,123}</p> <p>** (PFL)¹²³</p> <p>(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)¹²⁴</p>	<p>0.3-0.74 mg/mL NS, D5W¹²³</p> <p>100-500 mL†</p>	<p>10 d F, 4 d RT^{2,125}</p> <p>** (PFL)¹²⁵ during F storage</p>	<p>- use non-DEHP bag and IV administration set¹²³</p>

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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
<p>DOCEtaxel intravesical 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Pfizer/Hospira) (F, RT)(PFL) preservative¹²³</p>	N/A	10 mg/mL ¹²³	<p>20 mg: discard unused portion^{2,123}</p> <p>80 mg or 160 mg: 28 d F^{2,123}</p> <p>** (PFL)¹²³</p> <p>(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)¹²⁴</p>	<p>syringe</p> <p>dilute with NS to final volume of 45 mL^{126,127}</p>	<p>up to 0.9 mg/mL: 10 d F, 4 d RT^{2,125}</p> <p>** (PFL)¹²⁵ during F storage</p>	
<p>DOCEtaxel 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Sandoz) (F,RT)(PFL) preservative¹²⁸</p>	N/A	10 mg/mL ¹²⁸	28 d F, RT ^{2,129}	<p>0.3-0.74 mg/mL NS, D5W¹²⁸</p> <p>100-500 mL†</p>	24 h F, 4 h RT ^{2,130}	- use non-DEHP bag and IV administration set ¹²⁸

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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
<p>DOCEtaxel intravesical 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Sandoz) (F,RT)(PFL) preservative¹²⁸</p>	<p>N/A</p>	<p>10 mg/mL¹²⁸</p>	<p>28 d F, RT^{2,129}</p>	<p>syringe dilute with NS to final volume of 45 mL^{126,127}</p>	<p>up to 0.9 mg/mL^{131,132}; use immediately after preparation to prevent particle formation^{2,130}</p>	<p>- particle formation occurs earlier with higher temperature and higher concentrations¹³⁰</p>
<p>Dostarlimab 500 mg/10 mL (Glaxo) (F)(PFL) no preservative¹³³</p>	<p>N/A</p>	<p>50 mg/mL¹³³</p>	<p>discard unused portion¹³³</p>	<p>2-10 mg/mL NS, D5W¹³³ 100 mL* mix by gentle inversion¹³³</p>	<p>complete administration within 24 h F, 6 h RT¹³³ if refrigerated, bring bag to RT prior to administration¹³³</p>	<p>- do not shake¹³³ - discard if visible particles are present¹³³ - administer with 0.2 micron in-line filter¹³³</p>

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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
DOXOrubicin 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 200 mg/100 mL (Accord) (F)(PFL) no preservative ¹³⁴	N/A	2 mg/mL ¹³⁴	8 h ¹³⁴	syringe ¹³⁴	24 h F, RT from initial vial puncture ¹³⁴	- 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 ^{135,136} 1000 mL ¹³⁷⁻¹³⁹	24 h RT ^{135,136}	
DOXOrubicin 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 200 mg/100 mL (Teva) (F)(PFL) no preservative ¹⁴⁰	N/A	2 mg/mL ¹⁴⁰	8 h ¹⁴⁰	syringe ¹⁴⁰	48 h F, 24 h RT ¹⁴⁰ 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 ^{135,136} 1000 mL ¹³⁷⁻¹³⁹	24 h RT ^{135,136}	

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DOXOrubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Pfizer) (F) no preservative ¹⁴¹	N/A	2 mg/mL ¹⁴¹	discard unused portion ^{109,141}	syringe ¹⁴¹	48 h F, 24 h RT ¹⁴¹	- for LYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing either etoposide or etoposide phosphate AND DOXOrubicin and vinCRISine)
				0.01–2 mg/mL NS ^{135,136} 1000 mL ¹³⁷⁻¹³⁹	24 h RT ^{135,136}	
DOXOrubicin Pegylated Liposomal 20 mg/10 mL (Janssen) (F) no preservative ¹⁴²	N/A	2 mg/mL ¹⁴²	discard unused portion ¹⁴²	D5W only ¹⁴² <90 mg: 250 mL ¹⁴² ≥90 mg: 500mL ¹⁴²	24 h F ¹⁴²	- do not filter ¹⁴²
DOXOrubicin Pegylated Liposomal 20 mg/10 mL 50 mg/25 mL (Taro) (F) no preservative ¹⁴³	N/A	2 mg/mL ¹⁴³	discard unused portion ¹⁴³	D5W only ¹⁴³ <90 mg: 250 mL ¹⁴³ ≥90 mg: 500mL ¹⁴³	24 h F ¹⁴³	- do not filter ¹⁴³

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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
DPACE (ULY0D-PACE protocol) (RT) no preservative ^{2,139,144,145}	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 ^{138,144,145}	≤ 0.2 mg/mL: 24 h RT ^{2,144,145}	- 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

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<p>Durvalumab 120 mg/2.4 mL 500 mg/10 mL (AstraZeneca) (F)(PFL) do not shake no preservative¹⁴⁶</p>	<p>N/A</p>	<p>50 mg/mL¹⁴⁶</p>	<p>discard unused portion¹⁴⁶</p>	<p>1-15 mg/mL NS, D5W¹⁴⁶ 100 mL† mix by gentle inversion¹⁴⁶</p>	<p>10 d F, 12 h RT^{2,146}</p>	<ul style="list-style-type: none"> - do NOT shake¹⁴⁶ - administer with 0.2 micron in-line filter¹⁴⁶ - discard vial if solution is cloudy, discolored, or visible particles are present¹⁴⁶ - use filtered venting needle (e.g., Chemo-Vent®) in place of CSTD for compounding¹⁴⁷
<p>Elranatamab 44 mg/1.1 mL 76 mg/1.9 mL (Pfizer) (F)(PFL) do not shake no preservative¹⁴⁸</p>	<p>N/A</p>	<p>40 mg/mL¹⁴⁸ allow vials to reach RT before using¹⁴⁸</p>	<p>discard unused portion¹⁴⁸</p>	<p>SC syringe¹⁴⁸</p>	<p>use within 4 h F, RT¹⁴⁸</p>	<ul style="list-style-type: none"> - do not use if contains particulates¹⁴⁸

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<p>Elranatamab 76 mg/1.9 mL (Pfizer) (F)(PFL) no preservative¹⁴⁹ (SAP)</p>	<p>N/A</p>	<p>40 mg/mL¹⁴⁹ allow vials up to 15 min to reach RT before using¹⁴⁹</p>	<p>discard unused portion^{2,149}</p>	<p>SC syringe¹⁴⁹</p>	<p>use immediately after preparation^{2,149}</p>	<ul style="list-style-type: none"> - supplied diluent to be used only for doses <8 mg¹⁴⁹ - solution colour may be colourless to yellow/brown¹⁴⁹ - unpunctured vials can be kept at RT up to 8 h before returning to F; discard if longer than 8 h RT¹⁴⁹ - solutions can be prepared in normal room light; avoid direct sunlight¹⁴⁹ - CSTD cannot be used during storage of prepared doses^{149,150} - to prepare 76 mg dose ONLY: use filtered venting needle (e.g., Chemo-Vent®) in place of CSTD¹⁵¹

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<p>Enfortumab vedotin 20 mg 30 mg (Seagen) (F)(PFL) do not shake no preservative¹⁵²</p>	<p>20 mg¹⁵²: 2.3 mL SWI</p> <p>30 mg¹⁵²: 3.3 mL SWI</p> <p>slowly swirl until completely dissolved; do not shake¹⁵²</p> <p>allow to settle until bubbles are gone (≥1 min)¹⁵²</p>	<p>10 mg/mL¹⁵²</p>	<p>12 h F^{2,152}</p>	<p>0.3-4 mg/mL NS, D5W, Lactated Ringer's¹⁵²</p> <p>50 mL*</p> <p>mix by gentle inversion¹⁵²</p>	<p>16 h F¹⁵²</p> <p>** (PFL)¹⁵²</p>	<p>- discard if visible particles are present or solution is discolored¹⁵² - do not shake¹⁵²</p>

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<p>Epcoritamab (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative¹⁵³</p>	<p>N/A</p> <p>bring vial to RT prior to use (<1 h)¹⁵³</p> <p>gently swirl vial prior to use¹⁵³</p> <p>do not invert, vortex, or shake¹⁵³</p>	<p>5 mg/mL¹⁵³</p> <p>For Step-up Dose 1 (0.16 mg)¹⁵³</p> <p>To create intermediate vial (0.8 mg/mL): using 4 mg vial: transfer 0.8 mL drug solution into empty vial and add 4.2 mL NS; gently swirl for 30-45 sec</p>	<p>discard unused portion¹⁵³</p>	<p>SC syringe¹⁵³</p> <p>For Step-up Dose 1 (0.16 mg)¹⁵³</p> <p>To create dosing vial (0.16 mg/mL): transfer 2.0 mL from intermediate vial into the dosing vial and add 8.0 mL NS; gently swirl for 30-45 sec</p> <p>withdraw 1.0 mL into syringe for administration¹⁵³</p> <p>mix gently; do not invert, vortex, or shake¹⁵³</p>	<p>24 h F, 12 h RT¹⁵³ (RT storage includes preparation)</p> <p>**(PFL)¹⁵³</p>	<p>- CAUTION: two concentrations are available - use 4 mg vial for step-up doses only¹⁵³ - do not use CSTD for volumes less than 1 mL²; use filtered venting needle (Chemo- Vent®) for preparation - minimize exposure to daylight¹⁵³</p>

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<p>Epcoritamab (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative¹⁵³</p>	<p>N/A</p> <p>bring vial to RT prior to use (<1 h)¹⁵³</p> <p>gently swirl vial prior to use¹⁵³</p> <p>do not invert, vortex, or shake¹⁵³</p>	<p>5 mg/mL¹⁵³</p> <p>For Step-up Dose 2 (0.8 mg)¹⁵³</p> <p>To create intermediate vial (0.8 mg/mL): using 4 mg vial: transfer 0.8 mL drug solution into empty vial and add 4.2 mL NS; gently swirl for 30-45 sec</p>	<p>discard unused portion¹⁵³</p>	<p>SC syringe¹⁵³</p> <p>For Step-up Dose 2 (0.8 mg)¹⁵³</p> <p>withdraw 1.0 mL from the intermediate vial into syringe for administration</p> <p>mix gently; do not invert, vortex, or shake¹⁵³</p>	<p>24 h F, 12 h RT¹⁵³ (RT storage includes preparation)</p> <p>**(PFL)¹⁵³</p>	<p>- CAUTION: two concentrations are available¹⁵³ - use 4 mg vial for step-up doses only¹⁵³ - do not use CSTD for volumes less than 1 mL²; use filtered venting needle (Chemo- Vent®) for preparation - minimize exposure to daylight¹⁵³</p>

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<p>Epcoritamab (AbbVie) 48 mg/0.8 mL (F)(PFL) do not shake no preservative¹⁵³</p>	<p>N/A</p> <p>bring vial to RT prior to use (<1 h)¹⁵³</p> <p>gently swirl vial prior to use¹⁵³</p> <p>do not invert, vortex, or shake¹⁵³</p>	<p>60 mg/mL¹⁵³</p>	<p>discard unused portion¹⁵³</p>	<p>SC syringe¹⁵³</p> <p>do not invert, vortex, or shake¹⁵³</p>	<p>24 h F, 12 h RT¹⁵³ (RT storage includes preparation)</p> <p>** (PFL)¹⁵³</p>	<p>- CAUTION: two concentrations are available - use 48 mg vial for full doses only¹⁵³ - do not use CSTD for volumes less than 1 mL²; use filtered venting needle (Chemo- Vent®) for preparation - minimize exposure to daylight¹⁵³</p>

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<p>Epcoritamab (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative¹⁵⁴ (SAP)</p>	<p>N/A</p> <p>bring vial to RT prior to use¹⁵⁴</p> <p>gently swirl vial prior to use¹⁵⁴</p>	<p>5 mg/mL¹⁵⁴</p> <p>For Step-up Dose 1¹⁵⁴ (0.16 mg)</p> <p>To create intermediate vial (0.8 mg/mL): using 4 mg vial: 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)</p>	<p>discard unused portion¹⁵⁴</p>	<p>SC syringe¹⁵⁴</p> <p>For Step-up Dose 1¹⁵⁴ (0.16 mg)</p> <p>To create dosing vial (0.16 mg/mL): 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)</p> <p>withdraw 1.0 mL into syringe for administration</p>	<p>24 h¹⁵⁴; to a maximum of 20 h F, 4 h RT¹⁵⁴</p> <p>mix gently; do not invert, vortex, or shake¹⁵⁴</p>	<p>- CAUTION: two concentrations are available¹⁵⁴ - use 4 mg vial for step-up doses only¹⁵⁴ - do not use if visible particles are observed¹⁵⁴ - do not use CSTD for preparation or administration¹⁵⁴; use filtered venting needle (Chemo- Vent®) for preparation</p>

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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
<p>Epcoritamab (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative¹⁵⁴ (SAP)</p>	<p>N/A</p> <p>bring vial to RT prior to use¹⁵⁴</p> <p>gently swirl vial prior to use¹⁵⁴</p>	<p>5 mg/mL¹⁵⁴</p> <p>For Step-up Dose 2 (0.8 mg)¹⁵⁴</p> <p>To create intermediate vial (0.8 mg/mL): using 4 mg vial: 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)</p>	<p>discard unused portion¹⁵⁴</p>	<p>SC syringe¹⁵⁴</p> <p>For Step-up Dose 2 (0.8 mg)¹⁵⁴</p> <p>withdraw 1.0 mL from the intermediate vial into syringe for administration</p>	<p>24 h¹⁵⁴; to a maximum of 20 h F, 4 h RT¹⁵⁴</p> <p>mix gently; do not invert, vortex, or shake¹⁵⁴</p>	<p>- CAUTION: two concentrations are available¹⁵⁴ - use 4 mg vial for step-up doses only¹⁵⁴ - do not use if visible particles are observed¹⁵⁴ - do not use CSTD for preparation or administration¹⁵⁴; use filtered venting needle (Chemo- Vent®) for preparation</p>

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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
<p>Epcoritamab (AbbVie) 48 mg/0.8 mL (F)(PFL) do not shake no preservative¹⁵⁴ (SAP)</p>	<p>N/A bring vial to RT prior to use¹⁵⁴ gently swirl vial prior to use¹⁵⁴</p>	<p>60 mg/mL¹⁵⁴</p>	<p>discard unused portion¹⁵⁴</p>	<p>SC syringe¹⁵⁴</p>	<p>24 h¹⁵⁴; to a maximum of 20 h F, 4 h RT¹⁵⁴ mix gently; do not invert, vortex, or shake¹⁵⁴</p>	<p>- CAUTION: two concentrations are available¹⁵⁴ - use 48 mg vial for full doses only¹⁵⁴ - do not use if visible particles are observed¹⁵⁴ - do not use CSTD for preparation or administration¹⁵⁴; use filtered venting needle (Chemo- Vent®) for preparation</p>
<p>Epirubicin 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 preservative¹⁵⁵</p>	<p>N/A</p>	<p>2 mg/mL¹⁵⁵</p>	<p>8 h F, RT¹⁵⁵</p>	<p>syringe¹⁵⁵</p>	<p>48 h F, 24 h RT from initial vial puncture¹⁵⁵</p>	

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Epirubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Fresenius Kabi) (F)(PFL) no preservative ¹⁵⁶	N/A record time of puncture	2 mg/mL ¹⁵⁶	8 h ¹⁵⁶	syringe ¹⁵⁶	48 h F , 24 h RT from initial vial puncture ¹⁵⁶	
				100 mL* NS , D5W	48 h F , RT ^{23,156}	
Epirubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Pfizer) (F)(PFL) no preservative ¹⁵⁷	N/A record time of puncture	2 mg/mL ¹⁵⁷	8 h ¹⁵⁷	syringe ¹⁵⁷	48 h F , 24 h RT from initial vial puncture ¹⁵⁷	
				100 mL* NS , D5W ⁷¹	48 h F , RT ¹⁵⁸	

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EPOCHR (LYEPOCHR protocol) (RT) no preservative ^{23,159-162}	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 etoposide , DOXOrubicin, and vinCRISTine (refer to LYEPOCHR protocol) - use non-DEHP bag and tubing only - administer with 0.2 micron in-line filter
EPOCHR with etoposide phosphate (LYEPOCHR protocol) (RT) no preservative ^{163,164}	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 NS ¹⁶⁵	4 d RT, 5 d F ^{2,163}	- final product is a 3-in-1 solution containing etoposide phosphate , DOXOrubicin, and vinCRISTine (refer to LYEPOCHR protocol)

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eriBULin 1 mg/2 mL (Eisai Limited) (RT)(PFL) ¹⁶⁶ no preservative ²³	N/A	0.5 mg/mL ¹⁶⁶	discard unused portion ^{23,166}	IV syringe ¹⁶⁶	24 h F, 6 h RT ¹⁶⁶	- do not administer through dextrose containing lines ¹⁶⁶ - vials contain dehydrated alcohol USP (5% v/v) ¹⁶⁶

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
<p>Etoposide 100 mg/5 mL 200 mg/10 mL 500 mg/25 mL 1000 mg/50 mL (Teva) (RT)(PFL) no preservative¹⁶⁷</p>	<p>N/A</p>	<p>20 mg/mL¹⁶⁷</p>	<p>discard unused portion¹⁶⁷</p>	<p>0.2-0.4 mg/mL NS¹⁶⁷ 100-1000 mL†</p>	<p>stability is concentration dependent 0.2-0.3 mg/mL: 7 d F,¹⁶⁸ 2 d RT^{168,169} 0.4-0.5 mg/mL: 1 d F,¹⁶⁸ 1d RT¹⁶⁸ 0.6-9.0 mg/mL: generally unstable 9.5 mg/mL: 2 d F,¹⁶⁸ 1d RT¹⁶⁸ 10-12 mg/mL: 7 d F,¹⁶⁸ 2 d RT^{168,169}</p>	<p>- use non-DEHP bag and tubing only - administer with 0.2 micron in-line filter¹⁷⁰ - 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)</p>
				<p>D5W¹⁶⁷</p>	<p>4 h RT^{167,171}</p>	

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

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
Filgrastim (NIVESTYM®) 300 mcg/1 mL 480 mcg/1.6 mL (Pfizer) (F)(PFL) do not shake no preservative ¹⁷⁹	N/A	300 mcg/mL ¹⁷⁹	discard unused portion ¹⁷⁹	SC syringe	10 d F, 24 h RT ^{2,180}	- albumin is added to D5W to prevent filgrastim adsorption to plastic ¹⁷⁹ - incompatible with saline ¹⁷⁹ - do NOT dilute to concentration less than 5 mcg/mL ¹⁷⁹
				50-100 mL D5W only ¹⁷⁸ in PVC, polyolefin, or glass ¹⁷⁹ (for filgrastim concentrations of 5-15 mcg/mL in D5W, add albumin 2 mg/mL) ¹⁷⁹	complete administration within 24 h RT ¹⁸¹	
Fludarabine 50 mg (Accord) (F) no preservative ¹⁸²	N/A	25 mg/mL ¹⁸²	discard unused portion ¹⁸²	dilute to maximum of 1 mg/mL NS , D5W ¹⁸² 100 mL†	72 h F, 24 h RT ¹⁸²	

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
Fludarabine 50 mg (Teva) (F) no preservative ¹⁸³	N/A	25 mg/mL ¹⁸³	discard unused portion ¹⁸³	dilute to maximum of 1 mg/mL NS, D5W ¹⁸³ 100 mL†	72 h F, 24 h RT ¹⁸³	
Fluorouracil 5000 mg/100 mL (Accord) (RT)(PFL) no preservative ¹⁸⁴	N/A	50 mg/mL ¹⁸⁴	12 h RT ^{2,185}	syringe ¹⁸⁴	4 d RT ¹⁸⁵	
				0.5-10 mg/mL D5W ¹⁸⁵ 500 mL†	4 d RT ¹⁸⁵	
				CIV: ambulatory pump ¹⁸⁶	complete within 8 d ¹⁸⁵	

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
Fluorouracil 500 mg/10 mL 5000 mg/100 mL (Sandoz) (RT)(PFL) no preservative ¹⁸⁷	N/A	50 mg/mL ¹⁸⁷	12 h RT ^{2,188}	syringe	4 d RT ^{2,188}	
				0.35-15 mg/mL D5W ¹⁸⁸ 500 mL†	10 d F, 4 d RT ^{2,188}	
				CIVI: ambulatory pump ¹⁸⁶	complete within 8 d ¹⁸⁹⁻¹⁹¹	
Gemcitabine 1000 mg 2000 mg (Accord) (RT) no preservative ¹⁹²	1000 mg: 25 mL NS ¹⁹² 2000 mg: 50 mL NS ¹⁹²	38 mg/mL ¹⁹²	12 h RT ^{2,192} refrigeration may cause crystallization ¹⁹²	syringe ¹⁹²	24 h RT ^{2,192}	
				0.1-38 mg/mL NS ¹⁹² 250 mL†	4 d RT ^{2,193,194}	
Gemcitabine intravesical 1000 mg 2000 mg (Accord) (RT) no preservative ¹⁹²	1000 mg: 25 mL NS ¹⁹² 2000 mg: 50 mL NS ¹⁹²	38 mg/mL ¹⁹²	12 h RT ^{2,192} refrigeration may cause crystallization ¹⁹²	syringe dilute with NS to final volume of 45-90 mL ^{126,127,195-197}	up to 38 mg/mL ^{2,192} 24 h RT	

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
Gemcitabine 200 mg/5.3 mL 1000 mg/26.3 mL 2000 mg/52.6 mL (Pfizer/Hospira) (F) no preservative ¹⁹⁷	N/A	38 mg/mL ¹⁹⁷	discard unused portion ¹⁹⁷	syringe ¹⁹⁷	0.1-26 mg/mL: 10 d F, 24 h RT **(PFL) ^{2,198,199}	
				0.1–38 mg/mL NS, D5W¹⁹⁷ 250 mL†	27-38 mg/mL: 24 h RT ¹⁹⁹	
Gemcitabine intravesical 200 mg/5.3 mL 1000 mg/26.3 mL 2000 mg/52.6 mL (Pfizer/Hospira) (F) no preservative ¹⁹⁷	N/A	38 mg/mL ¹⁹⁷	discard unused portion ¹⁹⁷	syringe dilute with NS to final volume of 45-90 mL ^{126,127,195-197}	0.1-26 mg/mL: 10 d F, 24 h RT **(PFL) ^{2,198,199} 27-38 mg/mL: 24 h RT ¹⁹⁹	
Gemcitabine (NOTE: concentration) 200 mg/5 mL 1000 mg/25 mL 2000 mg/50 mL (Sandoz) (F) no preservative ²⁰⁰	N/A	40 mg/mL ²⁰⁰	discard unused portion ²⁰⁰	syringe ²⁰⁰	1-25 mg/mL: 10 d F, 4 d RT ^{2,200,201}	CAUTION: alternative concentration
				0.1–40 mg/mL NS, D5W²⁰⁰ 250 mL†	26-40 mg/mL: 24 h RT ²⁰⁰	

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
Gemcitabine (NOTE: concentration) intravesical 200 mg/5 mL 1000 mg/25 mL 2000 mg/50 mL (Sandoz) (F) no preservative ²⁰⁰	N/A	40 mg/mL ²⁰⁰	discard unused portion ²⁰⁰	syringe dilute with NS to final volume of 45-90 mL ^{126,127,195-197}	1-25 mg/mL: 10 d F, 4 d RT ^{2,200,201} 26-40 mg/mL: 24 h RT ²⁰⁰	CAUTION: alternative concentration
Gemtuzumab ozogamicin 4.5 mg (Pfizer) (F)(PFL) no preservative ²⁰²	5 mL SWI ²⁰² allow vial to come to RT prior to use (~5 min) ²⁰² swirl gently to mix; do NOT shake ²⁰²	1 mg/mL ²⁰²	6 h F, 3 h RT ²⁰² protect from light if not used immediately ²⁰²	0.075-0.234 mg/mL NS ²⁰² 25-50 mL† mix by gentle inversion; do NOT shake ²⁰²	complete administration within 12 h F, 6 h RT ²⁰² (PFL)** if refrigerated, bring bag to RT over 1 h prior to administration ²⁰²	- administer with 0.2 micron in-line filter ²⁰² - protect infusion bag from light (including UV) for administration ²⁰² - protect administration line from light ONLY if hang time will be longer than 2 h ^{202,203} - solution may contain white particulates which do not affect product quality ²⁰²

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
IDArubicin PFS 5 mg/5 mL 10 mg/10 mL 20 mg/20 mL (Pfizer) (F)(PFL) no preservative ²⁰⁴	N/A	1 mg/mL ²⁰⁴	discard unused portion ²⁰⁴ **(PFL) ²⁰⁴	syringe ²⁰⁴	use within 4 h from initial puncture ^{204,205}	- avoid alkaline solutions ²⁰⁴
Ifosfamide 1000 mg 3000 mg (Baxter) (RT) no preservative ²⁰⁶	1000 mg: 20 mL SWI ²⁰⁶ 3000 mg: 60 mL SWI ²⁰⁶ shake well	50 mg/mL ²⁰⁶	12 h F, RT ^{2,207}	0.6-20 mg/mL NS , D5W, Lactated Ringer's ²⁰⁶ 500 mL†	72 h F, 24 h RT ²⁰⁷ 24 h F, RT when mixed with mesna ⁷¹	
Ifosfamide 1000 mg 3000 mg (Fresenius Kabi) (RT) no preservative ²⁰⁸	1000 mg: 20 mL SWI ²⁰⁸ 3000 mg: 60 mL SWI ²⁰⁸ shake well	50 mg/mL ²⁰⁸	12 h F, RT ^{2,209}	0.6-20 mg/mL NS , D5W, Lactated Ringer's ²⁰⁸ 500 mL†	72 h F, 24 h RT ²⁰⁹ 24 h F, RT when mixed with mesna ⁷¹	

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
<p>Iniparib 100 mg/10 mL (sanofi-aventis) (F) no preservative²¹⁰ (SAP)</p>	<p>N/A</p>	<p>10 mg/mL²¹⁰</p>	<p>discard unused portion²¹⁰</p>	<p>250 mL NS, D5W dilute to 250 mL final volume by withdrawing volume from bag equal to volume of drug to be added²¹⁰ (OR undiluted in empty infusion bag and qs to final volume of 250 mL with NS, D5W²¹⁰)</p>	<p>24 h RT²¹⁰</p>	
<p>Inotuzumab ozogamicin 0.9 mg (Pfizer) (F)(PFL) no preservative²¹¹</p>	<p>4 mL SWI²¹¹ gently swirl vial to mix²¹¹</p>	<p>0.25 mg/mL²¹¹ record time of reconstitution</p>	<p>4 h F²¹¹ dilute dose within 4 h of reconstitution²¹¹ protect from light if not used immediately²¹²</p>	<p>0.01-0.1 mg/mL NS²¹¹ 25-50 mL† mix by gentle inversion²¹¹</p>	<p>complete administration within 8 h of reconstitution F, RT²¹¹ (PFL)²¹¹ if refrigerated, bring bag to RT over 1 h prior to administration²¹¹</p>	<p>- do NOT shake²¹¹ - protect container from UV and fluorescent light during storage and administration^{211,212} - protect administration line from light ONLY if hang time will be longer than 1 h^{211,212}</p>

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
Ipilimumab 50 mg/10 mL 200 mg/40 mL (BMS Canada) (F)(PFL) no preservative ²¹³	N/A	5 mg/mL ²¹³	12 h F, RT ^{2,214}	1-4 mg/mL NS, D5W ²¹³ 25-250 mL† OR undiluted in empty infusion bag or glass bottle (allow vials to stand at RT for ~5 min prior to withdrawal of contents) ²¹³	24 h F, RT ²¹⁴	- do NOT shake ²¹³ - administer with 0.2 micron in-line filter ²¹³ - vials may contain translucent-to- white amorphous particles ²¹³ - discard if cloudy or has pronounced colour change (should be clear to pale yellow) ²¹³
Irinotecan 40 mg/2 mL 100 mg/5 mL 500 mg/25 mL (Accord) (RT)(PFL) no preservative ²¹⁵	N/A	20 mg/mL ²¹⁵	discard unused portion ²¹⁵	0.12-3.0 mg/mL D5W (preferred), NS ²¹⁵ 250-500 mL†	48 h F, 24 h RT **(PFL) ²¹⁵	

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
Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Auro) (RT)(PFL) no preservative ²¹⁶	N/A	20 mg/mL ²¹⁶	discard unused portion ²¹⁶	0.12-3.0 mg/mL D5W (preferred), NS ²¹⁶ 250-500 mL†	10 d F, 4 d RT ^{2,216} **(PFL) ²¹⁶ if NOT protected from light: 72 h RT ²¹⁶	
Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Eugia) (RT)(PFL) no preservative ²¹⁷	N/A	20 mg/mL ²¹⁷	discard unused portion ²¹⁷	0.12-3.0 mg/mL D5W (preferred), NS ²¹⁷ 250-500 mL†	10 d F, 4 d RT ^{2,217} **(PFL) ²¹⁷ if NOT protected from light²¹⁷: 72 h RT	
Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Pfizer/Hospira) (RT)(PFL) no preservative ²¹⁸	N/A	20 mg/mL ²¹⁸	discard unused portion ²¹⁸	0.12-3.0 mg/mL D5W (preferred), NS ²¹⁸ 250-500 mL†	10 d F, 4 d RT ^{2,218} **(PFL) ²¹⁸ if NOT protected from light: 72 h RT ²¹⁸	

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
Irinotecan liposomal 43 mg/10 mL (Ipsen) (F)(PFL) no preservative ²¹⁹	N/A	4.3 mg/mL ²¹⁹	discard unused portion ²¹⁹	500 mL NS, D5W ²¹⁹ mix by gentle inversion ²¹⁹	24 h F, 4 h RT ²¹⁹ ** (PFL) if refrigerated, bring bag to RT prior to administration ²¹⁹	- use a 21 gauge (or lower gauge) needle to withdraw drug from vial ²¹⁹ - do not use in-line filter ²¹⁹
Isatuximab 100 mg/5 mL 500 mg/25 mL (sanofi-aventis) (F)(PFL) do not shake no preservative ²²⁰	N/A	20 mg/mL ²²⁰ inspect vial and discard if discolouration or visible particles are present ²²⁰	discard unused portion ²²⁰	250 mL NS, D5W ²²⁰ mix by gentle inversion; do NOT shake ²²⁰	48 h F plus an additional 8 h RT including infusion time ²²⁰	- administer with a 0.2 micron in-line filter ²²⁰

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
Ixabepilone 15 mg (contains 16 mg) 45 mg (contains 47 mg) (BMS) (F)(PFL) no preservative ²²¹ (SAP)	15 mg: 8 mL diluent (supplied) ²²¹ 45 mg: 23.5 mL diluent (supplied) ²²¹	2 mg/mL ²²¹	1 h RT ²²¹	0.2-0.6 mg/mL Lactated Ringer's ²²¹	6 h RT ²²¹	- use non-DEHP bag and administration set ²²¹ - administer with 0.2 micron in-line filter ²²¹

* 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.^{222,223}

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.

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

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