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 **<u>intralesional</u>** 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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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) (Iovance **USA**) (F)(PFL) no preservative [1,8]	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) (Iovance **USA**) (F)(PFL) no preservative [1,8]	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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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**
Alemtuzumab 30 mg/mL (Genzyme/Bayer) [9] (F)(PFL) do not shake no preservative [10]	N/A	filter NOT required [10] 30 mg/mL [10]	discard unused portion [10]	SC syringe [11]	discard at the end of the day **F,** RT	- do NOT shake [12]
				100 mL **NS,** D5W [10]	8 h **F,** RT [10] **(PFL) [12]	
Amivantamab (JNJ-61186372) [13,14] 350 mg (Janssen) (F)(PFL) no preservative [15] (SAP)	N/A	50 mg/mL	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 [15]	complete administration within 10 h RT [15]	- do not shake [15] - discard if discolouration or visible particles are present [15] - administer with 0.2 micron in-line filter [15]

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

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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**
Arsenic trioxide 10 mg/10 mL (Phebra/ICON) (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 (Sandoz) (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]	
Arsenic trioxide 10 mg/10 mL (SteriMax) (RT) no preservative [20]	N/A	1 mg/mL [20]	discard unused portion [20]	100-250 mL **NS**, D5W [20]	48 h F, 24 h RT [20]	
Asparaginase *E. Coli* pegylated **- see Calaspargase pegol** **- see Pegaspargase in L-Z chart**						
Asparaginase-erwinia (asparaginase *Erwinia chrysanthemi*) **- see Crisantaspase recombinant**						

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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**
PEG-asparaginase (pegylated asparaginase *E. coli*) - **see Calaspargase pegol** **- see Pegaspargase in L-Z chart**						
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]
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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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**
azaCITIDine 100 mg (Celgene) (RT) no preservative [24]	4 mL SWI [24] shake vigorously [24] record time of reconstitution	25 mg/mL [24]	use within 45 min RT or 8 h F [24]	SC syringe [24]	45 min RT (including preparation time) or 8 h F [24] refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution [24] **Refrigerated syringes** [24]: • 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	- discard if contains large particles [24] - re-suspend syringe contents before injection by vigorously rolling syringe between palms [24] - 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]
	cold diluent reconstitution: 4 mL SWI at 2-8°C [25,26]	25 mg/mL [24]	12 h F [2,25,26]		22 h F [25,26]	

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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**
azaCITIDine 100 mg (Dr. Reddy's) (RT) no preservative [27]	4 mL SWI [27] shake vigorously [27]	25 mg/mL [27]	use within 45 min RT or 8 h F [27]	SC syringe [27]	45 min RT (including preparation time) or 8 h F [27] refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution [27] **Refrigerated syringes** [27]: • allow up to 30 min prior to administration to reach temperature of ~20-25°C • discard syringe if time elapsed at RT is greater than 30 min	- do not filter [27] - discard if contains large particles [27] - re-suspend syringe contents before injection by vigorously rolling syringe between palms [27]

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

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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**
BCG (*Tice* strain) **(OncoTICE®)** **intravesical** 50 mg (1 to 8 x 10^8 CFU) (Merck Canada) (F)(PFL) no preservative [29]	1 mL preservative-free NS [29] allow to stand for a few min; gently swirl to suspend [29] do NOT shake [29] record time of reconstitution	1 to 8×10^8 CFU/vial [29]	2 h F [29] **(PFL) [29]	transfer contents from vial to 50 mL syringe, rinse vial with 1 mL NS and transfer rinse solution to the 50 mL syringe, then qs up to 45 mL with NS [29] if a CSTD is used: transfer contents from vial to 50 mL syringe and qs up to 45 mL with NS; do NOT rinse vial [29]	use within 2 h F of reconstitution [29,30] **(PFL) [29]	- auxiliary info: biohazard [30] - do NOT filter [29] - do NOT shake [29]

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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**
BCG (*Russian* strain) **(VERITY-BCG®)** **intravesical** 40 mg (1 to 8 x 10^8 CFU) (Verity) (F)(PFL) no preservative [31]	1 mL preservative-free NS [31] allow to stand for a few min; gently swirl to suspend [31] do NOT shake [31] record time of reconstitution	1 to 8×10^8 CFU/vial [31]	2 h F [31] **(PFL) [31]	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 NS [31]	use within 2 h F of reconstitution [30,31] **(PFL) [31]	- auxiliary info: biohazard [30] - TWO vials must be used to achieve the recommended full dose [31] - do NOT shake [31]
Belantamab mafodotin 30 mg/1.5 mL (GSK) (frozen)(PFL) do not shake no preservative [32] (SAP)	n/a	20 mg/mL [32]	thaw up to 4 h RT, F before use [32] once thawed: **unpunctured** vial: 10 d F [32] once thawed: **punctured** vial: discard unused portion [30,32] **(PFL) [32] do NOT shake [32]	0.2-2 mg/mL NS [32] 250 mL* NS [32]	8 h RT [32]	- supplied as frozen liquid [32] - recommended freezer temp [32] is (-50°C to -15°C) - thawed drug cannot be refrozen [32]

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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**
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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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**
Bendamustine 25 mg 100 mg (Eugia) (RT)(PFL) no preservative [37]	25 mg vial: 5 mL SWI [37] 100 mg vial: 20 mL SW [37] shake well; dissolves completely in 5 minutes [37]	5 mg/mL [37]	30 minutes [37]	0.2-0.6 mg/mL **NS**, D2.5-½NS [37] 100-500 mL†	complete administration within 24 h F, 3 h RT [37]	
Bendamustine 25 mg 100 mg (Teva) (RT,F)(PFL) no preservative [38]	25 mg: 5 mL SWI [38] 100 mg: 20 mL SW [38] shake well; dissolves completely in 5 min [38]	5 mg/mL [38]	30 min [38]	0.2-0.6 mg/mL **NS**, D2.5-½NS [38] 100-500 mL†	complete administration within 24 h F, 3 h RT [39]	
Bevacizumab (AVASTIN®) 100 mg/4 mL 400 mg/16 mL (Roche) (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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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**
Bevacizumab (MVASI®) 100 mg/4 mL 400 mg/16 mL (Amgen) (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†	48 h **F**, RT [41]	- do NOT shake [41]
Bevacizumab (ZIRABEV®) 100 mg/4 mL 400 mg/16 mL (Pfizer) (F)(PFL) do not shake no preservative [42]	N/A	25 mg/mL [42]	discard unused portion [42]	1.4-16.5 mg/mL NS only [42] 100-250 mL†	10 d F, 48 h RT [2,42]	- do NOT shake [42]
Bleomycin 15 units (NB: dose in units only) (Fresenius Kabi) (F)(PFL) no preservative [43]	6 mL* NS [43]	2.5 units/mL	12 h F [2,43]	50 mL* NS [43]	24 h RT [43]	

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Bleomycin 15 units (NB: dose in units only) (Pfizer/Hospira) (F)(PFL) no preservative [44]	6 mL* **NS,** SWI [44]	2.5 units/mL	12 h **F**, RT [2,44]	50 mL* NS [44]	4 h RT [2,30,44]	
Blinatumomab 38.5 mcg (Amgen) (F)(PFL) do not shake no preservative [45]	3 mL SWI [45] do NOT use supplied IV solution stabilizer to reconstitute vials [45] direct diluent against side of vial during reconstitution [45] gently swirl to avoid excess foaming [45]	12.5 mcg/mL [45]	12 h F [2,46], 4 h RT [46]	250 mL NS [45] add supplied IV solution stabilizer to NS bag and gently mix to avoid foaming [45] add reconstituted drug to bag **following** addition of IV solution stabilizer [45]	complete administration within 10 d F, 96 h RT [46]	- use non-DEHP bag and IV administration set [45] - administer with 0.2 micron in-line filter [45] - prime lines with blinatumomab solution; do NOT use NS
Bortezomib **<u>SC injection</u>** 3.5 mg (Actavis) (RT)(PFL) no preservative [47]	1.4 mL NS [47]	2.5 mg/mL [47]	12 h **F**, RT [2,48]	SC syringe [47]	10 d F, 4 d RT [2,48]	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.

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

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

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

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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**
Bortezomib **SC injection** 3.5 mg (PMS) (RT)(PFL) no preservative [57]	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.
Bortezomib 3.5 mg (PMS) (RT)(PFL) no preservative [57]	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** 1 mg 2.5 mg 3.5 mg (Taro) (RT)(PFL) no preservative [58]	1 mg: 0.4 mL NS [58] 2.5 mg: 1 mL NS [58] 3.5 mg: 1.4 mL NS [58]	2.5 mg/mL [58]	8 h RT [58]	SC syringe [58]	8 h RT [58]	- 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 [58]	1 mg: 1 mL NS [58] 2.5 mg: 2.5 mL NS [58] 3.5 mg: 3.5 mL NS [58]	1 mg/mL [58]	8 h RT [58]	IV syringe [58]	8 h RT [58]	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
Bortezomib **SC injection** 3.5 mg (Teva) (RT)(PFL) no preservative [59]	1.4 mL NS [59]	2.5 mg/mL [59]	12 h **F**, RT [2,48]	SC syringe [59]	10 d F, 4 d RT [2,48]	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
Bortezomib 3.5 mg (Teva) (RT)(PFL) no preservative [59]	3.5 mL NS [59]	1 mg/mL [59]	12 h **F**, RT [2,48]	IV syringe [59]	10 d F, 4 d RT [2,48]	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.

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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**
Brentuximab vedotin 50 mg (Seagen) (F)(PFL) no preservative [60]	10.5 mL SWI [60] direct diluent against side of vial during reconstitution [60] do NOT shake [60]	5 mg/mL [60]	12 h F [2,60]	0.4-1.8 mg/mL **NS**, D5W, LR [60] 50-100 mL† gently invert to mix [60]	24 h F [2,60]	- solution should be colorless, clear to slightly opalescent, and free of visible particulates [60]
Busulfan 60 mg/10 mL (PMS) (F) no preservative [61]	N/A	6 mg/mL [61]	discard unused portion [30,61]	dilute to volume 10 times drug volume to achieve final concentration of ~0.5 mg/mL **NS**, D5W [61] 250-1000 mL†	complete administration within 12 h F, 8 h RT [61]	- contains DMA*** - always add busulfan to diluent to mix; do NOT add diluent to busulfan [61]

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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**
Busulfan 60 mg/10 mL (SteriMax) (F) no preservative [62]	N/A	6 mg/mL [62]	discard unused portion [23,62]	dilute to volume 10 times drug volume to achieve final concentration of ~0.5 mg/mL **NS**, D5W [62] 250-1000 mL†	in **NS**: complete administration within 12 h F, 8 h RT [62] in **D5W**: complete administration within 8 h RT [62]	- contains DMA*** - always add busulfan to diluent to mix; do NOT add diluent to busulfan [62]
Cabazitaxel 60 mg/1.5 mL (Dr. Reddy's) (RT) no preservative [63]	supplied diluent: withdraw entire contents of diluent vial and inject into the concentrate vial [63] slowly direct diluent against inside of vial to limit foaming [63] mix by repeated inversions for 45 sec [63] do NOT shake [63] let sit for 5 min [63]	10 mg/mL [63]	1 h RT [63]	0.10-0.26 mg/mL **NS**, D5W [63] 100-250 mL†	complete administration within 48 h F**,** 8 h RT [63]	- use non-DEHP bag and tubing [63] - administer with 0.2 micron in-line filter [63] - concentrate and diluent vials contain overfill [63] - diluent contains 13% (w/w) ethanol in water [63] - discard if crystallization occurs [63]

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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 [64]	N/A	10 mg/mL [64]	10 d **F**, RT [64]	0.10-0.26 mg/mL **NS**, D5W [64] 100-250 mL†	complete administration within 48 h F, 8 h RT [64]	- use non-DEHP bag and tubing [64] - administer with 0.2 micron in-line filter [64] - vials contain overfill [64]
Cabazitaxel 60 mg/1.5 mL (sanofi-aventis) (RT) no preservative [65]	supplied diluent: withdraw entire contents of diluent vial and inject into the concentrate vial [65] slowly direct diluent against inside of vial to limit foaming [65] mix by repeated inversions for 45 sec [65] do NOT shake [65] let sit for 5 min [65]	10 mg/mL [65]	1 h RT [65]	0.10-0.26 mg/mL **NS**, D5W [65] 100-250 mL†	complete administration within 48 h F**,** 8 h RT [65]	- use non-DEHP bag and tubing [65] - administer with 0.2 micron in-line filter [65] - concentrate and diluent vials contain overfill [65] - diluent contains 13% (w/w) ethanol in water [65] - discard if crystallization occurs [65]

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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**
Calaspargase pegol (pegylated asparaginase *E. coli*) 3750 units/5 mL (Servier) (F)(PFL) do not shake no preservative [66]	N/A	750 units/mL [66]	discard unused portion [66]	100 mL **NS**, D5W [66]	24 h **F**, 4 h RT [66]	- discard if discolouration, cloudiness, or visible particles are present [66] - unopened vials may be stored at RT for 48 h [66]
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Accord) (RT)(PFL) no preservative [67]	N/A	10 mg/mL [67]	discard unused portion [67]	0.5-10 mg/mL **NS**, D5W [67] 50-250 mL†	24 h F, 8 h RT [67]	- do NOT use aluminum-containing needle, syringe, or tubing [67]
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Omega) (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], 24 h RT [69]	- do NOT use aluminum-containing needle, syringe or tubing [68]

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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**
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Pfizer/Hospira) (RT)(PFL) no preservative [70]	N/A	10 mg/mL [70]	discard unused portion [70]	0.3-10 mg/mL **NS**, D5W [70] 50-250 mL†	48 h F [70]	- do NOT use aluminum-containing needle, syringe, or tubing [70]
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL (Teva) (RT)(PFL) no preservative [71]	N/A	10 mg/mL [71]	discard unused portion RT [71]	0.5-10 mg/mL [72] **NS**, D5W [71,73,74] 50-250 mL†	8 h F [75], RT [71]	- do NOT use aluminum-containing needle, syringe, or tubing [71]

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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**
Carfilzomib 10 mg 30 mg 60 mg (Amgen) (F)(PFL) no preservative [76]	10 mg: 5 mL SWI [76] 30 mg: 15 mL SWI [76] 60 mg: 29 mL SWI [76] direct diluent against side of vial during reconstitution [76] swirl gently; do NOT shake [76] if foaming occurs, allow to settle until clear (~5 min) [76]	2 mg/mL [76]	12 h **F**, 4 h RT [2,76]	50-100 mL* **D5W** only [76] do NOT dilute in NS [76]	24 h **F**, 4 h RT [2,76]	- if a CSTD is not used during compounding, a 21 gauge (or larger gauge) needle is recommended to prevent coring of the stopper [77-79] - do not use NS for reconstitution or dilution [76] - discard if contains particulates [76]

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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**
Carmustine 100 mg (SteriMax) (F) no preservative [80]	3mL supplied diluent [80] bring drug and diluent vials to RT prior to mixing [80] completely dissolve drug in diluent, then add 27 mL SWI [80]	3.3 mg/mL in ethanol 10% [80]	48 h F [80] precipitates can be re-dissolved by warming the vial to RT with gentle shaking [80]	500 mL NS, D5W [80] in glass or polypropylene containers ONLY [80]	8 h RT [80] or 48 h F plus an additional 6 h RT [80] **(PFL) [80]	- supplied diluent is dehydrated alcohol [80] - do not use vial if oily film is present [80] - to remix bag contents prior to administration, gently shake final product for ~10 sec [80] - administer with PVC-free infusion set [80] - protect from light for administration [80]

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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**
Cemiplimab 250 mg/5 mL 350 mg/7 mL (sanofi) (F)(PFL) do not shake no preservative [81]	N/A	50 mg/mL [81]	discard unused portion [30,81]	1-20 mg/mL **NS**, D5W [81] 50 mL† mix by gentle inversion	complete administration within 24 h F, 8 h RT [81]	- administer with 0.2 micron filter [81] - solution may contain white particulates which do not affect product quality [81]
Cetuximab 100 mg/50 mL 200 mg/100 mL (Imclone/Lilly) (F) do not shake no preservative [82]	N/A	2 mg/mL [82]	12 h F, 8 h RT [82]	syringe [82] evacuated container or bag [82]	12 h F, 8 h RT [82]	- administer with 0.2 micron filter [82] - solution may contain white particulates which do not affect product quality [82]

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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**
CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Accord) (RT)(PFL) no preservative [83]	N/A	1 mg/mL [83]	discard unused portion [30]	NS [83] 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol [83]	24 h RT [83]	- do NOT use aluminum-containing needle, syringe or tubing [83] - 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)

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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**
CISplatin 50 mg/50 mL 100 mg/100mL (Pfizer/Hospira) (RT)(PFL) no preservative [84]	N/A	1 mg/mL [84]	discard unused portion [30]	NS [84] 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol [84]	24 h RT [84]	- do NOT use aluminum-containing needle, syringe or tubing [84] - 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)

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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**
CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Sandoz) (RT)(PFL) no preservative [85]	N/A	1 mg/mL [85]	12 h RT [2,86]	NS [85] 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol [85]	24 h RT [86]	- do NOT use aluminum-containing needle, syringe or tubing [85] - 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)

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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**
CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Teva) (RT)(PFL) no preservative [87]	N/A	1 mg/mL [87]	discard unused portion [23]	NS [87] 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol [87]	24 h RT [87]	- do NOT use aluminum-containing needle, syringe or tubing [87] - 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)

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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**
Cladribine 10 mg/10 mL (Fresenius Kabi) (F)(PFL) no preservative [88]	N/A	1 mg/mL [88]	discard unused potion [88]	SC syringe [89]	48 h F, discard end of day RT [30,90,91]	
				500 mL **NS only** [88] do NOT use D5W [88]	24 h **RT** [88]	
				Cassette: qs to 100 mL with **bacteriostatic NS only** via SIMS DELTEC INC. MEDICATION CASSETTES® [88] filter drug and diluent through 0.22 micron filter as each solution is being introduced into the cassette [88]	at least 7 days [88]	

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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**
Cladribine 10 mg/10 mL (GMP) (F)(PFL) no preservative [92]	N/A	1 mg/mL [92]	discard unused portion [30,92]	SC syringe [89]	48 h F, discard end of day RT [30,90,91]	
				500 mL NS only [92] do NOT use D5W [92]	24 h RT [92]	
				Cassette: qs to 100 mL with **bacteriostatic NS only** via SIMS DELTEC INC. MEDICATION CASSETTES® [92] filter drug and diluent through 0.22 micron filter as each solution is being introduced into the cassette [92]	at least 7 days [92]	

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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 *Erwinia chrysanthemum*) 10 mg/0.5 mL (Jazz) (F)(PFL) do not shake preservative free [93]	N/A	20 mg/mL [93]	discard unused portion [93]	IM syringe [93] max volume: 2 mL if volume >2 mL, divide volume into separate syringes for administration [93]	use within 4 h RT [93]	- discard if cloudy, discoloured, or contains particulates [93] - do NOT shake [93]
Cyclophosphamide 200 mg 500 mg 1000 mg 2000 mg (Baxter) (RT)(PFL) no preservative [94]	200 mg [94]: 10 mL NS 500 mg [94]: 25 mL NS 1000 mg [94]: 50 mL NS 2000 mg [94]: 100 mL NS	20 mg/mL [94]	12 h **F**, RT [2,94]	**NS**, D5W, D5NS [94] 100-250 mL† high dose in BMT: may need 500 mL*	36 h F, 24 h RT [95-97]	- 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)

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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**
Cytarabine 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative [98]	N/A	100 mg/mL [98]	12 h RT [2,98]	0.1-37.5 mg/mL **NS,** D5W, SWI [98] 100 mL†	in NS: 4 d RT [2,98] other solutions: 72 h F, 24 h RT [98] **(PFL) [98]	
Cytarabine **IT injection** 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative [98]	N/A record time of puncture	100 mg/mL [98]	use within 4 h of initial puncture [2]	IT syringe qs to 6 mL with preservative free NS [99-101] diluents containing preservatives should **NOT** be used for intrathecal administration [102]	use within 4 h of initial puncture [2] **(PFL) [98]	- auxiliary info [2]: IT - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag [101]
Cytarabine **SC injection** 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative [98]	N/A	100 mg/mL [98]	12 h RT [2,98]	SC syringe	10 d F, 4 d RT [2,103-105] **(PFL) [98]	

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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**
Cytarabine 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative [106]	N/A	100 mg/mL [106]	discard unused portion [30,106]	0.1-37.5 mg/mL **NS,** D5W, SWI [106] 100 mL†	10 d F, 48 h RT [106] **(PFL)	
Cytarabine **IT injection** 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative [106]	N/A record time of puncture	100 mg/mL [106]	use within 4 h of initial puncture [30]	IT syringe qs to 6 mL with preservative free NS [99,100] diluents containing preservatives should **NOT** be used for intrathecal administration [102]	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 [101]
Cytarabine **SC injection** 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative [106]	N/A	100 mg/mL [106]	discard unused portion [30,106]	SC syringe	10 d F, 48 h RT [106] **(PFL)	

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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**
Cytarabine 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative [107]	N/A	100 mg/mL [107]	12 h RT [2,107]	0.1-37.5 mg/mL **NS,** D5W, SWI, LR [107] 100 mL*	in NS: 4 d RT [2,107] other solutions: 72 h F, 24 h RT [107] **(PFL) [107]	
Cytarabine **IT injection** 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative [107]	N/A record time of puncture	100 mg/mL [107]	use within 4 h of initial puncture [2]	IT syringe qs to 6 mL with preservative free NS [99-101] diluents containing preservatives should **NOT** be used for intrathecal administration [102]	use within 4 h of initial puncture [2] **(PFL) [107]	- auxiliary info: IT [2] - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag [101]
Cytarabine **SC injection** 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative [107]	N/A	100 mg/mL [107]	12 h RT [2,107]	SC syringe	10 d F, 4 d RT [2,103-105] **(PFL) [107]	

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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**
Dacarbazine 600 mg (Pfizer) (F)(PFL) no preservative [108]	59.1 mL SWI [108]	10 mg/mL [108]	12 h F, 8 h RT [2,108]	0.19-3.0 mg/mL **NS**, D5W [108] 500-1000 mL†	24 h F [108] **(PFL) [109]	- protect container from light during administration [109]
DACTINomycin 0.5 mg (GMD Pharma for Recordati) (RT)(PFL) no preservative [110] (SAP)	1.1 mL SWI [110] do **NOT** use SWI with preservative (may form precipitate) [110]	0.5 mg/mL (500 mcg/mL) [110]	discard unused portion [111]	syringe [110] 10 mcg/mL or greater [110] **NS**, D5W [110,112]	use within 4 h of initial vial puncture [111]	- drug loss reported with some cellulose ester membrane in- line filters [110]
Daratumumab 100 mg/5mL 400 mg/20mL (Janssen) (F)(PFL) do not shake no preservative [113]	N/A	20 mg/mL [113]	discard unused portion [113]	500-1000 mL NS dilute to final volume by withdrawing volume from bag equal to volume of drug to be added [113] mix by gentle inversion [113]	24 h **F,** followed by 15 h infusion (total 39 h) [113] allow bag to come to RT, then use immediately [113] **(PFL)	- administer with 0.2 micron in-line filter [113] - discard if visible particles are observed [113] - complete infusion within 15 h [113]

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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**
Daratumumab <u>subcutaneous</u> (DARZALEX SC®) 1800 mg/15 mL (Janssen) (F)(PFL) do not shake no preservative [114]	N/A	120 mg/mL [114] allow vial to come to RT prior to use [114]	discard unused portion [2,114]	SC syringe [114]	24 h F, plus an additional 12 h RT [114] bring to RT prior to use [114]	- contains hyaluronidase [114] - formulations are NOT interchangeable [114] - discard if opaque particles or discolouration are present [114] - unpunctured vial may be stored up to 24 h at RT [114]
Datopotamab deruxtecan 100 mg (Daiichi) (F)(PFL) no preservative[115]	5 mL SWI[115] gently swirl to mix do not shake[115] record time of reconstitution[115]	20 mg/mL[115]	discard unused portion[115]	0.1-6.7 mg/mL **D5W** ONLY[115] 100 mL* gently invert to mix do not shake[115] do NOT use sodium chloride solution[115]	24 h F from initial vial puncture[115] **(PFL)[115] bring to RT prior to use[115] MAX time at RT = 4.5 h from initial vial puncture (including preparation, storage at RT, and administration time)[115]	- NOT compatible with saline[115] - administer with 0.2 micron in-line filter[115] - protect infusion bag from light for administration[115]

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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**
DAUNOrubicin 20 mg (Erfa) (RT)(PFL) no preservative [116]	4 mL SWI [116]	5 mg/mL [116]	12 h **F**, RT [2,116] **(PFL) [116]	100-250 mL **NS**, D5W [116]	48 h F, 24 h RT [117] **(PFL) [116]	
DAUNOrubicin 20 mg/4 mL (Hikma) (F)(PFL) no preservative[118]	N/A	5 mg/mL[118]	discard unused portion[2]	100-250 mL[118] **NS**, D5W	7 d F, 30 h RT[119] **(PFL)[118]	

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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**
Daunorubicin-cytarabine liposome 44 mg-100 mg (Jazz) (F)(PFL) no preservative [120]	19 mL **SWI** [120] allow vial to come to RT for 30 min prior to use [120] swirl gently for 5 min, inverting the vial every 30 sec; do NOT shake [120] allow vial to rest for 15 min after reconstitution [120] gently invert each vial 5 times prior to withdrawing concentrate for dilution [120] record time of reconstitution	2.2 mg/mL daunorubicin-5 mg/mL cytarabine [120]	4 h **F** [120] max *combined* storage time for reconstituted vial and diluted product is 4 h **F**[120] (NOT 4 h **F** each)	500 mL **NS**, D5W [120] mix by gentle inversion [120]	use within 4h **F** [120] of initial vial puncture max *combined* storage time for reconstituted vial and diluted product is 4 h **F**[120] (NOT 4 h **F** each)	- reconstituted product is an opaque, purple, homogenous dispersion [120] - before administration, final product should be gently inverted to remix solution after refrigeration [120]

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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**
Degarelix 80 mg 120 mg (Ferring) (RT) do not shake [121] no preservative [122]	80 mg: 4.2 mL SWI (supplied diluent) [121]	20 mg/mL [121]	2 h RT [121]	SC syringe [121]	2 h RT [121]	
	120 mg: 3 mL SWI (supplied diluent) [121]	40 mg/mL [121]				
	swirl gently; avoid shaking to prevent foam formation [121] reconstitution may take up to 15 min [121]					

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 (WYOST®) 120 mg/1.7 mL (Sandoz) (F)(PFL) do not shake no preservative [123]	N/A	71 mg/mL [123]	discard unused portion [123]	SC syringe [123]	use within 4 h **F**, RT of initial puncture [111] bring to RT 15-30 min prior to use [123]	- not interchangeable with PROLIA® or JUBBONTI® - do not use if solution is cloudy or contains visible particles [123] - avoid vigorous shaking [123] - use a 27 gauge needle to withdraw drug from vial [123]

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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**
Denosumab (XGEVA®) 120 mg/1.7 mL (Amgen) (F)(PFL) do not shake no preservative [124]	N/A	71 mg/mL [124]	discard unused portion [111,124]	SC syringe [124]	use within 4 h **F**, RT of initial puncture [111] bring to RT 15-30 min prior to use [124]	- not interchangeable with PROLIA® [124] or JUBBONTI® - do not use if solution is cloudy [124] -trace amounts of translucent to white proteinaceous particles are acceptable [124] - avoid vigorous shaking [124] - use a 27 gauge needle to withdraw drug from vial [125]
Dexrazoxane 250 mg 500 mg (Hikma **USA**) (RT) no preservative [126,127]	250 mg: 25 mL SWI [127] 500 mg: 50 mL SWI [127]	10 mg/mL [127]	3 h F, 30 min RT [127]	dilute with LR in empty infusion bag to final concentration of 1.3-3.0 mg/mL [127] qs to 110-600 mL†	4 h F, 1 h RT [127]	

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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**
Dexrazoxane 250 mg 500 mg (Pfizer) (RT) no preservative [128]	250 mg: 25 mL SWI [128] 500 mg: 50 mL SWI [128]	10 mg/mL [128]	3 h F, 30 min RT [128]	dilute with LR in empty infusion bag to final concentration of 1.3-3.0 mg/mL [128] qs to 110-600 mL†	4 h F, 1 h RT [128]	
Dinutuximab 17.5 mg/5 mL (Unither/United Therapies) (F)(PFL) do not shake no preservative [129]	N/A	3.5 mg/mL [129]	discard unused portion [30]	100 mL NS [129] mix by gentle inversion [129]	initiate infusion within 4 h of dilution; refrigerate bag if not hung immediately [129] complete administration within 24 h of dilution [129]	- do NOT shake [129]

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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**
DOCEtaxel 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Pfizer/Hospira) (**F**, RT)(PFL) preservative [130]	N/A	10 mg/mL [130]	20mg: discard unused portion [2,130] 80 mg or 160 mg: 28 d F [2,130] **(PFL) [130] (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) [131]	0.3-0.74 mg/mL **NS,** D5W [130] 100-500 mL†	10 d F, 4 d RT [2,132] **(PFL) [132] during F storage	- use non-DEHP bag and IV administration sets [130]

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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**
DOCEtaxel **intravesical** 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Pfizer/Hospira) (**F**, RT)(PFL) preservative [130]	N/A	10 mg/mL [130]	20 mg: discard unused portion [2,130] 80 mg or 160 mg: 28 d F [2,130] **(PFL) [130] (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) [131]	syringe dilute with NS to final volume of 45 mL [133,134]	up to 0.9 mg/mL: 10 d F, 4 d RT [2,132] **(PFL) [132] during F storage	
DOCEtaxel 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Sandoz) (F,RT)(PFL) preservative [135]	N/A	10 mg/mL [135]	28 d **F**, RT [2,136]	0.3-0.74 mg/mL **NS**, D5W [135] 100-500 mL†	24 h F, 4 h RT [2,137]	- use non-DEHP bag and IV administration sets [135]

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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**
DOCEtaxel **intravesical** 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Sandoz) (F,RT)(PFL) preservative [135]	N/A	10 mg/mL [135]	28 d **F**, RT [2,136]	syringe dilute with NS to final volume of 45 mL [133,134]	up to 0.9 mg/mL [138,139]: use immediately after preparation to prevent particle formation [2,137]	- particle formation occurs earlier with higher temperature and higher concentrations [137]
DOCEtaxel 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Sandoz **USA**) (F, RT)(PFL) preservative [140,141]	N/A	10 mg/mL [140]	28 d F, RT [140]	0.3-0.74 mg/mL NS, D5W [140] 100-500 mL†	complete administration within 4 h F, 4 h RT [140] mix with gentle inversion, avoid vigorous shaking [140]	- if a CSTD is not used during compounding, a 21 gauge needle is recommended to withdraw drug from the vial [140] - use non-DEHP bag and IV administration sets [140]

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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**
DOCEtaxel intravesical 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Sandoz **USA**) (F, RT)(PFL) preservative [140,141]	N/A	10 mg/mL [140]	28 d F, RT [140]	syringe dilute with NS to final volume of 45 mL [133,134]	up to 0.9 mg/mL [138,139]: use immediately after preparation to prevent particle formation [2,137]	- if a CSTD is not used during compounding, a 21 gauge needle is recommended to withdraw drug from the vial [140] - particle formation occurs earlier with higher temperature and higher concentrations [137]
Dostarlimab 500 mg/10 mL (Glaxo) (F)(PFL) no preservative [142]	N/A	50 mg/mL [142]	discard unused portion [142]	2-10 mg/mL **NS**, D5W [142] 100 mL* mix by gentle inversion [142]	complete administration within 24 h F, 6 h RT [142] if refrigerated, bring bag to RT prior to administration [142]	- do not shake [142] - discard if visible particles are present [142] - administer with 0.2 micron in-line filter [142]

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DOXOrubicin 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 200 mg/100 mL (Accord) (F)(PFL) no preservative [143]	N/A	2 mg/mL [143]	8 h [143]	syringe [143]	24 h **F**, RT from initial vial puncture [143]	- 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 [144,145] 1000 mL [146-148]	24 h RT [144,145]	
DOXOrubicin 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 200 mg/100 mL (Teva) (F)(PFL) no preservative [149]	N/A	2 mg/mL [149]	8 h [149]	syringe [149]	48 h F, 24 h RT [149] 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 [144,145] 1000 mL [146-148]	24 h RT [144,145]	

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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 50 mg/25 mL 200 mg/100 mL (Pfizer) (F) no preservative [150]	N/A	2 mg/mL [150]	discard unused portion [111,150]	syringe [150]	48 h F, 24 h RT [150]	- 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 [144,145] 1000 mL [146-148]	24 h RT [144,145]	
DOXOrubicin Pegylated Liposomal 20 mg/10 mL (Janssen) (F) no preservative [151]	N/A	2 mg/mL [151]	discard unused portion [151]	**D5W** only [151] <90 mg [151]: 250 mL ≥90 mg [151]: 500mL	24 h F [151]	- do not filter [151]
DOXOrubicin Pegylated Liposomal 20 mg/10 mL 50 mg/25 mL (Taro) (F) no preservative [152]	N/A	2 mg/mL [152]	discard unused portion [152]	**D5W** only [152] <90 mg [152]: 250 mL ≥90 mg [152]: 500mL	24 h F [152]	- do not filter [152]

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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 Pegylated Liposomal 20 mg/10 mL 50 mg/25 mL (Sun Pharm [153] **USA**) (F) no preservative [152,154]	N/A	2 mg/mL [152]	discard unused portion [152]	**D5W** only [152] <90 mg [152]: 250 mL ≥90 mg [152]: 500mL	24 h F [152]	- do not filter [152] - discard if discoloured or contains particulates [152]
DPACE (ULY0D-PACE protocol) (RT) no preservative [2,148,155,156]	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 [147,155,156]	≤0.2 mg/mL: 24 h RT [2,155,156]	- 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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Durvalumab 120 mg/2.4 mL 500 mg/10 mL (AstraZeneca) (F)(PFL) do not shake no preservative [157]	N/A	50 mg/mL [157]	discard unused portion [157]	1-15 mg/mL **NS**, D5W [157] 100 mL† mix by gentle inversion [157]	10 d F, 12 h RT [2,157]	- do NOT shake [157] - administer with 0.2 micron in-line filter [157] - discard vial if solution is cloudy, discolored, or visible particles are present [157] - use filtered venting needle (e.g., Chemo-Vent®) in place of CSTD for compounding [158]
Elranatamab 44 mg/1.1 mL 76 mg/1.9 mL (Pfizer) (F)(PFL) do not shake no preservative [159]	N/A	40 mg/mL [159] allow vials to reach RT before using [159]	discard unused portion [159]	SC syringe [159]	use within 4 h **F**, RT [159]	- do not use if contains particulates [159]

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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**
Elranatamab 76 mg/1.9 mL (Pfizer) (F)(PFL) no preservative [160] (SAP)	N/A	40 mg/mL [160] allow vials up to 15 min to reach RT before using [160]	discard unused portion [2,160]	SC syringe [160]	use immediately after preparation [2,160]	- supplied diluent to be used only for doses <8 mg [160] - solution colour may be colourless to yellow/brown [160] - unpunctured vials can be kept at RT up to 8 h before returning to F; discard if longer than 8 h RT [160] - solutions can be prepared in normal room light; avoid direct sunlight [160] - CSTD cannot be used during storage of prepared doses [160,161] - to **prepare** 76 mg dose ONLY: use filtered venting needle (e.g., Chemo-Vent®) in place of CSTD [162]

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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**
Enfortumab vedotin 20 mg 30 mg (Seagen) (F)(PFL) do not shake no preservative [163]	20 mg [163]: 2.3 mL SWI 30 mg [163]: 3.3 mL SWI slowly swirl until completely dissolved; do not shake [163] allow to settle until bubbles are gone (≥1 min) [163]	10 mg/mL [163]	12 h F [2,163]	0.3-4 mg/mL **NS**, D5W, LR [163] 50 mL* mix by gentle inversion [163]	16 h F [163] **(PFL) [163]	- discard if visible particles are present or solution is discolored [163] - do not shake [163]

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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**
Epcoritamab (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative [164]	N/A bring vial to RT prior to use (<1 h) [164] gently swirl vial prior to use [164] do not invert, vortex, or shake [164]	5 mg/mL [164] **For Step-up Dose 1 (0.16 mg)** [164] 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	discard unused portion [164]	SC syringe [164] **For Step-up Dose 1 (0.16 mg)** [164] 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 withdraw 1.0 mL into syringe for administration [164] mix gently; do not invert, vortex, or shake [164]	24 h F, 12 h RT [164] (RT storage includes preparation) **(PFL) [164]	- **CAUTION:** two concentrations are available - **use 4 mg vial for step-up doses only** [164] - do not use CSTD for volumes less than 1 mL [2]; use filtered venting needle (Chemo-Vent®) for preparation - minimize exposure to daylight [164]

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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**
Epcoritamab (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative [164]	N/A bring vial to RT prior to use (<1 h) [164] gently swirl vial prior to use [164] do not invert, vortex, or shake [164]	5 mg/mL [164] For **Step-up Dose 2 (0.8 mg)** [164] 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	discard unused portion [164]	SC syringe [164] For **Step-up Dose 2 (0.8 mg)** [164] withdraw 1.0 mL from the intermediate vial into syringe for administration mix gently; do not invert, vortex, or shake [164]	24 h F, 12 h RT [164] (RT storage includes preparation) **(PFL) [164]	- **CAUTION:** two concentrations are available [164] - **use 4 mg vial for step-up doses only** [164] - do not use CSTD for volumes less than 1 mL [2]; use filtered venting needle (Chemo-Vent®) for preparation - minimize exposure to daylight [164]

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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**
Epcoritamab (AbbVie) 48 mg/0.8 mL (F)(PFL) do not shake no preservative [164]	N/A bring vial to RT prior to use (<1 h) [164] gently swirl vial prior to use [164] do not invert, vortex, or shake [164]	60 mg/mL [164]	discard unused portion [164]	SC syringe [164] do not invert, vortex, or shake [164]	24 h F, 12 h RT [164] (RT storage includes preparation) **(PFL) [164]	- **CAUTION:** two concentrations are available - **use 48 mg vial for full doses only** [164] - do not use CSTD for volumes less than 1 mL [2]; use filtered venting needle (Chemo-Vent®) for preparation - minimize exposure to daylight [164]
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 preservative [165]	N/A	2 mg/mL [165]	8 h **F**, RT [165]	syringe [165]	48 h **F**, 24 h RT from initial vial puncture [165]	

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Epirubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Fresenius Kabi) (F)(PFL) no preservative [166]	N/A record time of puncture	2 mg/mL [166]	8 h [166]	syringe [166]	48 h **F**, 24 h RT from initial vial puncture [166]	
				100 mL***** **NS,** D5W	48 h **F**, RT [23,166]	
Epirubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Pfizer) (F)(PFL) no preservative [167]	N/A record time of puncture	2 mg/mL [167]	8 h [167]	syringe [167]	48 h **F**, 24 h RT from initial vial puncture [167]	
				100 mL* **NS,** D5W [73]	48 h **F**, RT [168]	

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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**
EPOCHR (LYEPOCHR protocol) (RT) no preservative [23,169-172]	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 [173,174]	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** [175]	4 d RT, 5 d F [2,173]	- 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) [176] preservative [23]	N/A	0.5 mg/mL [176]	discard unused portion [23,176]	IV syringe [176]	24 h **F**, 6 h RT [176]	- do not administer through dextrose containing lines [176] - vials contain dehydrated alcohol USP (5% v/v) [176]
eriBULin 1 mg/2 mL (Natco) (RT)(PFL) [177] preservative [23]	N/A	0.5 mg/mL [177]	discard unused portion [177]	IV syringe [177]	24 h F, 6 h RT [177]	- do not dilute or administer with dextrose containing solutions [177] - vials contain dehydrated alcohol USP (5% v/v) [177]

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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 100 mg/5 mL 200 mg/10 mL 500 mg/25 mL 1000 mg/50 mL (Teva) (RT)(PFL) no preservative [178]	N/A	20 mg/mL [178]	discard unused portion [178]	0.2-0.4 mg/mL NS [178] 100-1000 mL†	stability is concentration dependent **0.2-0.3 mg/mL:** 7 d F, [179] 2 d RT [179,180] **0.4-0.5 mg/mL**: 1 d F, [179] 1d RT [179] **0.6-9.0 mg/mL**: generally unstable **9.5 mg/mL:** 2 d F, [179] 1d RT [179] **10-12 mg/mL:** 7 d F, [179] 2 d RT [179,180]	- use non-DEHP bag and tubing only - administer with 0.2 micron in-line filter [181] - for LYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing either etoposide or etoposide phosphate AND DOXOrubicin and vinCRIStine) - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)
				D5W [178]	4 h RT [178,182]	

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**
Etoposide phosphate (**ETOPOPHOS®**) 100 mg (Xediton/Cheplapharm) (F)(PFL) no preservative [183-185] (SAP)	5 mL **NS**, D5W, SWI, BWI [186]	20 mg/mL [186]	in **NS**, D5W, SWI: 12 h F, RT [2,186] in BWI: 7 d F, 48 h RT [186]	500 mL **NS**, D5W [186] (do not dilute to less than 0.1 mg/mL) [186]	24 h **F**, RT [186]	- 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 [186]	10 mg/mL [186]				
Filgrastim (NEUPOGEN®) 300 mcg/1 mL 480 mcg/1.6 mL (Amgen) (F)(PFL) do not shake no preservative [187]	N/A	300 mcg/mL [187]	discard unused portion [187]	SC syringe [187]	10 d F [2,188]	- albumin is added to D5W to prevent filgrastim adsorption to plastic [187] - incompatible with saline [187,189] - do NOT dilute to concentration less than 5 mcg/mL [187]
				50-100 mL **D5W** only [189] in PVC, polyolefin, or glass [187] (for filgrastim concentrations of 5-15 mcg/mL in D5W, add albumin 2 mg/mL) [187]	7 d F [188]	

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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 [190]	N/A	300 mcg/mL [190]	discard unused portion [190]	SC syringe	10 d F, 24 h RT [2,191]	- albumin is added to D5W to prevent filgrastim adsorption to plastic [190] - incompatible with saline [190] - do NOT dilute to concentration less than 5 mcg/mL [190]
				50-100 mL **D5W** only [189] in PVC, polyolefin, or glass [190] (for filgrastim concentrations of 5-15 mcg/mL in D5W, add albumin 2 mg/mL) [190]	complete administration within 24 h RT [192]	
Fludarabine 50 mg (Accord) (F) no preservative [193]	N/A	25 mg/mL [193]	discard unused portion [193]	dilute to maximum of 1 mg/mL **NS**, D5W [193] 100 mL†	72 h F, 24 h RT [193]	

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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 [194]	N/A	25 mg/mL [194]	discard unused portion [194]	dilute to maximum of 1 mg/mL **NS,** D5W [194] 100 mL†	72 h F, 24 h RT [194]	
Fluorouracil 5000 mg/100 mL (Accord) (RT)(PFL) no preservative [195]	N/A	50 mg/mL [195]	12 h RT [2,196]	syringe [195]	4 d RT [196]	
				0.5-10 mg/mL **D5W** [196] 500 mL†	4 d RT [196]	
				CIVI: ambulatory pump [197]	complete within 8 d [196]	

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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 [198]	N/A	50 mg/mL [198]	12 h RT [2,199]	syringe	4 d RT [2,199]	
				0.35-15 mg/mL **D5W** [199] 500 mL†	10 d F, 4 d RT [2,199]	
				CIVI: ambulatory pump [197]	complete within 8 d [200-202]	
Gemcitabine 1000 mg 2000 mg (Accord) (RT) no preservative [203]	1000 mg: 25 mL NS [203] 2000 mg: 50 mL NS [203]	38 mg/mL [203]	12 h RT [2,203] refrigeration may cause crystallization [203]	syringe [203]	24 h RT [2,203]	
				0.1-38 mg/mL NS [203] 250 mL†	4 d RT [2,204,205]	

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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**
Gemcitabine **intravesical** 1000 mg 2000 mg (Accord) (RT) no preservative [203]	1000 mg: 25 mL NS [203] 2000 mg: 50 mL NS [203]	38 mg/mL [203]	12 h RT [2,203] refrigeration may cause crystallization [203]	syringe dilute with NS to final volume of 45-90 mL [133,134,206-208]	up to 38 mg/mL: 24 h RT [2,203]	
Gemcitabine 200 mg/5.3 mL 1000 mg/26.3 mL 2000 mg/52.6 mL (Pfizer/Hospira) (F) no preservative [208]	N/A	38 mg/mL [208]	discard unused portion [208]	syringe [208] 0.1-38 mg/mL NS, D5W [208] 250 mL†	0.1-26 mg/mL: 10 d F, 24 h RT **(PFL) [2,209,210] 27-38 mg/mL: 24 h RT [210]	
Gemcitabine **intravesical** 200 mg/5.3 mL 1000 mg/26.3 mL 2000 mg/52.6 mL (Pfizer/Hospira) (F) no preservative [208]	N/A	38 mg/mL [208]	discard unused portion [208]	syringe dilute with NS to final volume of 45-90 mL [133,134,206-208]	0.1-26 mg/mL: 10 d F, 24 h RT **(PFL) [2,209,210] 27-38 mg/mL: 24 h RT [210]	

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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) 200 mg/5 mL 1000 mg/25 mL 2000 mg/50 mL (Sandoz) (F) no preservative [211]	N/A	**40** mg/mL [211]	discard unused portion [211]	syringe [211] 0.1–40 mg/mL **NS**, D5W [211] 250 mL†	1-25 mg/mL: 10 d F, 4 d RT [2,211,212] 26-40 mg/mL: 24 h RT [211]	**CAUTION: alternative concentration**
Gemcitabine (NOTE: concentration) **<u>intravesical</u>** 200 mg/5 mL 1000 mg/25 mL 2000 mg/50 mL (Sandoz) (F) no preservative [211]	N/A	**40** mg/mL [211]	discard unused portion [211]	syringe dilute with NS to final volume of 45-90 mL [133,134,206-208]	1-25 mg/mL: 10 d F, 4 d RT [2,211,212] 26-40 mg/mL: 24 h RT [211]	**CAUTION: alternative concentration**

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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**
Gemtuzumab ozogamicin 4.5 mg (Pfizer) (F)(PFL) no preservative [213]	5 mL SWI [213] allow vial to come to RT prior to use (~5 min) [213] swirl gently to mix; do NOT shake [213]	1 mg/mL [213]	6 h F**,** 3 h RT [213] protect from light if not used immediately [213]	0.075-0.234 mg/mL **NS** [213] 25-50 mL† mix by gentle inversion; do NOT shake [213]	complete administration within 12 h F, 6 h RT [213] (PFL)** if refrigerated, bring bag to RT over 1 h prior to administration [213]	- administer with 0.2 micron in-line filter [213] - protect infusion **bag** from light (including UV) for administration [213] - protect administration **line** from light ONLY if hang time will be longer than 2 h [213,214] - solution may contain white particulates which do not affect product quality [213]

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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**
Glofitamab 2.5 mg/2.5 mL (Roche) (F)(PFL) no preservative [215]	N/A	1 mg/mL [215]	discard unused portion [215]	0.1-0.6 mg/mL **NS**, ½NS [215] 25 mL† [215,216] **For Step-up Dose 1 (2.5 mg)** withdraw 7 mL from infusion bag prior to adding drug volume [215,216] gently invert to mix do NOT shake [215]	64 h F, plus an additional 12 h RT including infusion time [215] if refrigerated, bring bag to RT prior to administration (max 4 h RT prior to infusion) [215]	**- use 2.5 mg vials for 2.5 mg dose only** [215] - do not use if contains visible particulates or is cloudy or discoloured [215] - in-line filter is not required, but may be used [215] (e.g., 0.2 micron [217])
Glofitamab 10 mg/10 mL (Roche) (F)(PFL) no preservative [215]	N/A	1 mg/mL [215]	discard unused portion [215]	0.1-0.6 mg/mL **NS**, ½NS [215] 50-100 mL† gently invert to mix do NOT shake [215]	64 h F, plus an additional 12 h RT including infusion time [215] if refrigerated, bring bag to RT prior to administration (max 4 h RT prior to infusion) [215]	**- use 10 mg vials for 10 mg and 30 mg doses only** [215] - do not use if contains visible particulates or is cloudy or discoloured [215] - in-line filter is not required, but may be used [215] (e.g., 0.2 micron [217])

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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**
IDArubicin PFS 5 mg/5 mL 10 mg/10 mL 20 mg/20 mL (Pfizer) (F)(PFL) no preservative [218]	N/A	1 mg/mL [218]	discard unused portion [218] **(PFL) [218]	syringe [218]	use within 4 h from initial puncture [218,219]	- avoid alkaline solutions [218]
Ifosfamide 1000 mg 3000 mg (Baxter) (RT) no preservative [220]	1000 mg: 20 mL SWI [220] 3000 mg: 60 mL SWI [220] shake well	50 mg/mL [220]	12 h **F,** RT [2,221]	0.6-20 mg/mL **NS**, D5W, LR [220] 500 mL†	72 h F, 24 h RT [221] 24 h **F,** RT when mixed with mesna [73]	
Ifosfamide 1000 mg 3000 mg (Fresenius Kabi) (RT) no preservative [222]	1000 mg: 20 mL SWI [222] 3000 mg: 60 mL SWI [222] shake well	50 mg/mL [222]	12 h **F,** RT [2,223]	0.6-20 mg/mL **NS,** D5W, LR [222] 500 mL†	72 h F, 24 h RT [223] 24 h **F,** RT when mixed with mesna [73]	

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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**
Iniparib 100 mg/10 mL (sanofi-aventis) (F) no preservative [224] (SAP)	N/A	10 mg/mL [224]	discard unused portion [224]	250 mL **NS**, D5W dilute to 250 mL final volume by withdrawing volume from bag equal to volume of drug to be added [224] (OR undiluted in empty infusion bag and qs to final volume of 250 mL with **NS**, D5W [224])	24 h RT [224]	

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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**
Inotuzumab ozogamicin 0.9 mg (Pfizer) (F)(PFL) no preservative [225]	4 mL **SWI** [225] gently swirl vial to mix [225]	0.25 mg/mL [225] record time of reconstitution	4 h **F** [225] dilute dose within 4 h of reconstitution [225] protect from light if not used immediately [226]	0.01-0.1 mg/mL **NS** [225] 25-50 mL† mix by gentle inversion [225]	complete administration within 8 h of reconstitution **F,** RT [225] (PFL) [225] if refrigerated, bring bag to RT over 1 h prior to administration [225]	- do NOT shake [225] - protect container from UV and fluorescent light during storage and administration[225,226] - protect administration line from light ONLY if hang time will be longer than 1 h [225,226]
Ipilimumab 50 mg/10 mL 200 mg/40 mL (BMS Canada) (F)(PFL) no preservative [227]	N/A	5 mg/mL [227]	12 h F, RT [2,228]	1-4 mg/mL **NS**, D5W [227] 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) [227]	24 h **F**, RT [228]	- do NOT shake [227] - administer with 0.2 micron in-line filter [227] - vials may contain translucent-to-white amorphous particles [227] - discard if cloudy or has pronounced colour change (should be clear to pale yellow) [227]

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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**
Irinotecan 40 mg/2 mL 100 mg/5 mL 500 mg/25 mL (Accord) (RT)(PFL) no preservative [229]	N/A	20 mg/mL [229]	discard unused portion [229]	0.12-3.0 mg/mL **D5W** (preferred), NS [229] 250-500 mL†	48 h F, 24 h RT **(PFL) [229]	
Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Auro) (RT)(PFL) no preservative [230]	N/A	20 mg/mL [230]	discard unused portion [230]	0.12-3.0 mg/mL **D5W** (preferred), NS [230] 250-500 mL†	10 d F, 4 d RT [2,230] **(PFL) [230] **if NOT protected from light:** 72 h RT [230]	
Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Eugia) (RT)(PFL) no preservative [231]	N/A	20 mg/mL [231]	discard unused portion [231]	0.12-3.0 mg/mL **D5W** (preferred), NS [231] 250-500 mL†	10 d F, 4 d RT [2,231] **(PFL) [231] **if NOT protected from light:** 72 h RT [231]	

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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**
Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (GMP) (RT)(PFL) no preservative [232]	N/A	20 mg/mL [232]	discard unused portion [232]	0.12-3.0 mg/mL **D5W** (preferred), NS [232] 250-500 mL†	10 d F, 4 d RT [232] **(PFL) [232] **if NOT protected from light:** 72 h RT [232]	
Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Pfizer/Hospira) (RT)(PFL) no preservative [233]	N/A	20 mg/mL [233]	discard unused portion [233]	0.12-3.0 mg/mL **D5W** (preferred), NS [233] 250-500 mL†	10 d F, 4 d RT [2,233] **(PFL) [233] **if NOT protected from light:** 72 h RT [233]	
Irinotecan liposomal 43 mg/10 mL (Ipsen) (F)(PFL) no preservative [234]	N/A	4.3 mg/mL [234]	discard unused portion [234]	500 mL **NS**, D5W [234] mix by gentle inversion [234]	24 h F, 4 h RT [234] **(PFL) if refrigerated, bring bag to RT prior to administration [234]	- if a CSTD is not used during compounding, use a 21 gauge (or lower gauge) needle to withdraw drug from vial [234] - do not use in-line filter [234]

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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**
Isatuximab 100 mg/5 mL 500 mg/25 mL (sanofi-aventis) (F)(PFL) do not shake no preservative [235]	N/A	20 mg/mL [235] inspect vial and discard if discolouration or visible particles are present [235]	discard unused portion [235]	250 mL **NS**, D5W [235] mix by gentle inversion; do NOT shake [235]	48 h F plus an additional 8 h RT including infusion time [235]	- administer with a 0.2 micron in-line filter [235]
Ixabepilone 15 mg (contains 16 mg) 45 mg (contains 47 mg) (BMS) (F)(PFL) no preservative [236] (SAP)	15 mg: 8 mL diluent (supplied) [236] 45 mg: 23.5 mL diluent (supplied) [236]	2 mg/mL [236]	1 h RT [236]	0.2-0.6 mg/mL LR [236]	6 h RT [236]	- use non-DEHP bag and administration set [236] - administer with 0.2 micron in-line filter [236]

* 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.

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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. [237,238]
Vial stability**:** Stability of solution after first puncture or reconstituted solution.
Storage temperature*:* If information states same stability with refrigerator and room temperature storage, then fridge stability is bolded as preferred (ie, to minimize growth of micro-organisms).
Discard unused portion**:** Unused portion from single use vials should be discarded at the end of the day.
"overfill known" is stated if the manufacturer states overfill that is present is within acceptable limits.
"Complete administration within __" is stated if the manufacturer specifies that the infusion must be completed in a specific time frame following preparation, usually including entire time required for preparation (from first puncture), storage, and administration of infusion.
Nomenclature for ***In-line filters*** has been standardized in the chart to 0.2 micron filter size. For more information, refer to CDM drug monograph.

Abbreviations:

BWI = bacteriostatic water for injection
CIVI: ambulatory pump = Continuous Intravenous Infusion (e.g., elastomeric infusor)
CSTD = closed system transfer device
D5W = dextrose 5% in water
DMA = N,N dimethylacetamide
F = refrigerate
LR = lactated ringer's solution
non-DEHP = not containing Di(2-ethylhexyl) phthalate (DEHP)
non-PVC = not containing polyvinyl chloride (PVC)
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 (SAP)
SWI = sterile water for injection

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