BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Aldesleukin 22 million units (1.3 mg) (Novartis) (F)(PFL) no preservative[1]	1.2 mL **SWI**[1,2] direct diluent against side of vial during reconstitution[1] do not shake[1]	18 million unit/mL (1.1 mg/mL)[1,2]	48 h **F**[1]	50 mL **D5W**[1] 30 – 70 mcg/mL[1] Less than 30 mcg/mL: dilute in D5W containing human albumin 0.1%[2]	48 h **F**[1]	- do not use in-line filter[1,2] - avoid bacteriostatic water for injection or NS due to increased aggregation[1]
				SC syringe[3,4]	14 d F[4] **(PFL)	
Alemtuzumab 30 mg/mL (Genzyme previously Bayer)[5] (F)(PFL) do not shake no preservative[6]	N/A	filter NOT required[6] 30 mg/mL[6]	discard unused portion[6]	SC syringe[7]	discard at the end of the day **F** or RT	- do not shake[8]
				100 mL **NS** or D5W[6]	8 h **F** or RT[6] **(PFL)[8]	
				100 mL **NS** or D5W[9]	8 h **F** or RT[8] **(PFL)[8]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Amifostine 500 mg (MedImmune) (RT) no preservative[10]	9.7 mL **NS only**[10]	50 mg/mL[10]	24 h F, 5 h RT[10]	25–50 mL* **NS only**[10]	5–40 mg/mL: 24 h F, 5 h RT[10]	- discard cloudy solution[11]
Amsacrine 75 mg/1.5 mL (Erfa Canada) (RT) no preservative[12]	glass syringes preferred during reconstitution; max. time in plastic syringe[12]: 15 min 13.5 mL supplied diluent (L-lactic acid)[1] transfer 1.5mL from ampoule into the diluent vial[12]	5 mg/mL[12]	24 h RT[12] PFL[12]	500 mL D5W[12] (plastic or glass container)[12]	7 d **F**, 48 h RT[12-14]	- contains DMA***
Arsenic 10 mg/10 mL (Lundbeck/Teva) (RT) no preservative[15]	N/A	1 mg/mL[15] (use filter needle to withdraw from ampoule)	discard unused portion[15]	100-250 mL **NS**, D5W[15]	24 h RT, 48 h **F**[15]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Asparaginase (asparaginase E. coli) 10,000 units (CGF/EUSA) (F) no preservative{[12004}}	4 mL SWI[16] do not shake; rotate gently[16]	2500 units/mL	3 h RT or 72 h F[16]	syringe	complete administration within 3 h RT or 72 h F[16]	
				50-250 mL **NS** or D5W[17]	complete administration within 3 h RT[16,18]	
Erwinia asparaginase (asparaginase *Erwinia* chrysanthemi) 10,000 units (CGF/EUSA) (F) no preservative[19]	1-2 mL NS[19] do not shake; mix gently to minimize bubbles and contact with stopper[19]	10 000-5000 units/mL (use 5 micron filter needle to withdraw from vial)[20]	15 min RT[19]	glass or polypropylene syringe[19]	4 h RT[19]	- contact with the rubber stopper may denature the reconstituted drug, creating filaments of insoluble material[19] - discard if particulate matter is present[20] - do not use sterile water for reconstitution as the resulting product is not isotonic[19]
PEG-asparaginase - see pegaspargase in L-Z chart (pegylated asparaginase E. *coli*)						

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Atezolizumab 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 only**[22]	complete administration within 8 h RT, 24 h F[21]	- discard vial if cloudy, discoloured (should be clear to pale yellow), or visible particles[22] - do NOT shake; mix by slow inversion[22]
Avelumab 200 mg (Merck Serono) (F)(PFL) do not shake no preservative[23]	N/A	20 mg/mL[23]	discard unused portion[18]	250 mL **NS**, 0.45% sodium chloride[24] dilute to final volume by withdrawing volume from bag equal to volume of drug to be added[24] mix by gentle inversion[24]	complete administration within 8 h RT, 24 h F[24]	- if refrigerated, allow vials/product to come to RT prior to use[24] - do not shake[24] - use 0.2 micron in-line filter[24]

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
azaCITIDine 100 mg (Celgene) (RT) no preservative[25]	4 mL SWI[25] shake vigorously[25] record time of reconstitution	25 mg/mL[25]	45 min RT, 8 h **F**[25]	SC syringe[25]	45 min RT (including preparation time), 8 h **F**[25] refrigerate syringe immediately after preparation if not to be used within 45 minutes of reconstitution[26]	- discard if contains large particles[25] - re-suspend syringe contents before injection by vigorously rolling syringe between palms[25] -if cold diluent reconstitution is used to extend stability, minimize exposure to RT; ensure proper refrigeration of diluent, reconstituted vial, and final product
	cold diluent reconstitution: 4 mL SWI at 2-8°C[27,28]	25 mg/mL[25]	22 h **F**[27,28]		22 h **F**[27,28]	
					Refrigerated syringes[25]: • allow up to 30 min prior to administration to reach a temperature of ~20-25°C • discard syringe if time elapsed at RT is greater than 30 min	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
azaCITIDine 100 mg (Dr. Reddy's) (RT) no preservative[29]	4 mL SWI[29] shake vigorously[29]	25 mg/mL[29]	45 min RT, 8 h F[29]	SC syringe[29]	45 min RT (including preparation time), 8 h F[29] refrigerate syringe immediately after preparation if not to be used within 45 minutes of reconstitution[29] **Refrigerated syringes[29]**: • allow up to 30 min prior to administration to reach a temperature of approximately 20-25°C • discard syringe if time elapsed at RT is greater than 30 min	- do not filter[29] - discard if contains large particles[29] - re-suspend syringe contents before injection by vigorously rolling syringe between palms[29]

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
BCG **intravesical** 81 mg (Sanofi Pasteur) (F)(PFL) preservative[30]	do not shake; roll to reconstitute[30] 3 mL supplied diluent[30] record time of reconstitution	10.5 ± 8.7×108 CFU/vial (Connaught strain)[30]	2 h **F**, RT[30]	50 mL NS[30]	2 h **F** or RT after reconstitution[30] **(PFL)[30]	- auxiliary label: biohazard[18]
BCG **(Tice substrain)** **intravesical** 50 mg = 1 to 8 x 10^8 CFU (Hospira/Organon) (F)(PFL) no preservative[31]	1 mL preservative free NS for injection[31] use reconstitution device provided allow to stand for a few minutes, then gently swirl to suspend[31]	1 to 8×10^8 CFU/vial[31]	2 h **F** (PFL)[31]	transfer from vial to 60 mL syringe, rinse vial with another 1 mL NS. Add rinse to same 60 mL syringe. qs to 50 mL with NS[31]	2 h **F**[31]	- auxiliary label: biohazard[18] - overfill unknown - protect from light[31] - do not filter[31]

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Bendamustine 25 mg 100 mg (Lundbeck/Teva) (RT)(PFL) no preservative[32]	25 mg vial: add 5 mL SWI[32] 100 mg vial: add 20 mL SWI[32] shake well; dissolves completely in 5 minutes[32]	5 mg/mL[32]	30 minutes[32]	500 mL NS[32] 0.2-0.6 mg/mL[32]	complete administration within 24 h **F,** 3 h RT[32]	
Bevacizumab 100 mg/4 mL 400 mg/16 mL (Roche) (F)(PFL) do not shake no preservative[33]	N/A	25 mg/mL[33]	discard unused portion[33]	1.4-16.5 mg/mL[34] 100-250 mL **NS only**[33,34]	48 h **F**, RT[33-35]	- do not shake[33]
Bleomycin 15 units (NB: dose in units only) (Bristol) (F) no preservative[36]	6 mL* **NS**[36]	2.5 units/mL	48 h F[36]	50 mL* **NS**[36]	24 h RT[36]	- no overfill[37]

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Bleomycin 15 units (NB: dose in units only) (Hospira) (F)(PFL) no preservative[38]	6 mL* **NS** or SWI[38]	2.5 units/mL[38]	48 h F, 24 h RT[38]	50 mL* **NS**, SWI[38]	24 h RT[39]	- no overfill[40]
Bleomycin 15 units (NB: dose in units only) (Fresenius Kabi) (F)(PFL) no preservative[41]	6 mL NS[41]	2.5 units/mL[41]	48 h F[41]	50 mL NS[41]	24 h RT[41]	
Blinatumomab 38.5 mcg (Amgen) (F)(PFL) do not shake no preservative[42]	3 mL SWI[42] do NOT use supplied IV solution stabilizer to reconstitute vials[42] direct diluent against side of vial during reconstitution[42] gently swirl to avoid excess foaming[42]	12.5 mcg/mL[42]	4 h RT, 24 h F[42]	250 mL NS[42] add supplied IV solution stabilizer to NS bag and gently mix to avoid foaming[42] add reconstituted drug to bag **following** addition of IV solution stabilizer[42]	complete administration within 96 h RT, 10 d F[42]	- use non-DEHP bag and IV administration set[42] - use 0.2 or 0.22 micron low protein binding in-line filter[42] - prime lines with blinatumomab solution; do NOT use NS

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Bortezomib **SC injection** 3.5 mg (Actavis) (RT)(PFL) no preservative[43]	1.4 mL NS[43]	2.5 mg/mL[43]	8 h RT[43]	SC syringe[43]	8 h RT[43]	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
Bortezomib 3.5 mg (Actavis) (RT)(PFL) no preservative[43]	3.5 mL NS[43]	1 mg/mL[43]	8 h RT[43]	IV syringe[43]	8 h RT[43]	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
Bortezomib **SC injection** 3.5 mg (Janssen) (RT)(PFL) no preservative[44]	1.4 mL NS[44]	2.5 mg/mL[44]	2 d RT, F[18,45]	SC syringe[44]	48 h RT, 14 d F[18,45]	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
Bortezomib 3.5 mg (Janssen) (RT)(PFL) no preservative[44]	3.5 mL NS[44]	1 mg/mL[44]	2 d RT, F[18,46]	IV syringe[44]	8 h RT[44]	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Bortezomib **SC injection** 3.5 mg (Teva) (RT)(PFL) no preservative[47]	1.4 mL NS[47]	2.5 mg/mL[47]	2 d RT, F[18,48]	SC syringe[47]	48 h RT, 14 d F[18,48]	- auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes.
Bortezomib 3.5 mg (Teva) (RT)(PFL) no preservative[47]	3.5 mL NS[47]	1 mg/mL[47]	2 d RT, F[47]	IV syringe[47]	48 h RT, 14 d F[18,48]	- auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes.
Brentuximab vedotin 50 mg (GMD Distribution for Seattle Genetics) (F)(PFL) no preservative[49]	10.5 mL SWI[49] Direct diluent against side of vial during reconstitution[49] Do NOT shake[49]	5 mg/mL[49]	24 h **F**[49]	0.4-1.8 mg/mL in **NS**, D5W, Lactated Ringer's (i.e. 100-250 mL)[49]	24 h **F**[49] Do NOT freeze[49]	- solution should be clear to slightly opalescent, colorless, and free of visible particulates[49]

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DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Busulfan 60 mg/10 mL (Orphan Medical) (F) no preservative[50]	N/A	use 5-micron nylon filter provided with ampoule to withdraw drug[50] 6 mg/mL[50]	discard unused portion[50]	**NS** or D5W (dilute in volume 10 times the busulfan volume to ~0.5 mg/mL)[50]	complete administration within 12 h F: NS[50] 8 h RT: **NS**, D5W	- contains DMA***
Cabazitaxel 60 mg/1.5 mL (sanofi-aventis) (RT) no preservative[51]	supplied diluent: withdraw entire contents of diluent vial and inject into the concentrate vial[51] slowly direct diluent against inside of vial to limit foaming[51] mix by repeated inversions for 45 sec[51] do NOT shake[51] let sit for 5 min[51]	10 mg/mL[51]	1 h RT[51]	0.10 – 0.26 mg/mL **NS**, D5W[51] (e.g., 250 mL*)	complete administration within 8 h RT, 48 h **F**[51]	- concentrate and diluent vials contain overfill[51] - use non-DEHP bag and tubing[51] - use 0.22 micron in-line filter[51] - diluent contains 13% (w/w) ethanol in water[51] - discard if crystallization occurs[51]

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DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL (Accord) (RT)(PFL) no preservative[52]	N/A	10 mg/mL[52]	discard unused portion[52]	0.5-10 mg/mL[52] **NS**, D5W[52]	8 h RT, 24 h F[52]	- do NOT use aluminum-containing needle, syringe, or tubing[52]
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Hospira) (RT)(PFL) no preservative[53]	N/A	10 mg/mL[53]	discard unused portion[53]	0.3-10 mg/mL[54] **NS**, D5W[11,53]	24 h RT,[55] 48 h F[53]	- do NOT use aluminum-containing needle, syringe, or tubing[54]
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Omega) (RT)(PFL) no preservative[56]	N/A	10 mg/mL[56]	discard unused portion[56]	0.3-10 mg/mL[56] **NS**, D5W[56] do NOT use aluminum-containing needle or syringe[56]	24 h RT[57], 48 h F[56]	- do NOT use aluminum-containing needle, syringe or tubing[56]

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DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL (Teva/Novopharm) (RT)(PFL) no preservative[58]	N/A	10 mg/mL[58]	discard unused portion RT[58]	0.5-10 mg/mL[59] **NS**, D5W[11,58,60]	8 h RT[58]	- do NOT use aluminum-containing needle, syringe, or tubing[58]
Carfilzomib 10 mg 30 mg 60 mg (Amgen) (F)(PFL) no preservative[61]	10 mg: 5 mL SWI[61] 30 mg: 15 mL SWI[61] 60 mg: 29 mL SWI[61] direct diluent against side of vial during reconstitution[61] swirl gently; do NOT shake[61] if foaming occurs, allow to settle until clear (about 5 minutes)[61] record time of reconstitution	2 mg/mL[61]	24 h **F**, 4 h RT[61]	50 -100 mL **D5W only**[61] do NOT dilute in NS[61]	complete administration within 24 h **F**, 4 h RT after reconstitution[61]	

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DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Carmustine 100 mg (Bristol Labs) (F) no preservative[62]	3 mL diluent (supplied)[62] diluent to reach RT, then dissolve drug with 3 mL diluent; add 27 mL SWI[62] record time of reconstitution	3.3 mg/mL in 10% ethanol[62]	24 h F, 8 h RT[62]	glass[62] or polyolefin container[11] 500 mL **NS** or D5W[62]	24 h F: in glass[62] or polyolefin container[11] use within 4 h of reconstitution RT[62]	- do not use if product has oily droplets[62]
Cetuximab 100 mg/50 mL 200 mg/100 mL (ImClone/BMS) (F) do not dilute do not shake no preservative[63]	N/A	2 mg/mL[63]	discard unused portion after 12 h F, 8 h RT[63]	syringe[63]	12 h F, 8 h RT[63]	- administer with a 0.2 or 0.22 micron low protein binding in-line filter[63] - normal saline may be used to flush the line[63] - solution may contain white particulates which do not affect product quality[63]
				sterile evacuated container or bag e.g. polyolefin, polyethylene, ethylene vinyl acetate, DEHP plasticized PVC, PVC bag, or glass[63]	12 h F, 8 h RT[63]	

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DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Hospira) (RT)(PFL) no preservative[64]	N/A	1 mg/mL[64]	48 h RT[65]	Less than or equal to 60 mg: 100 mL* NS Greater than 60 mg: 250 mL* NS 500 or 1000 mL* **NS**, D5-NS, D5-1/2S, D5-NS with mannitol, D5-1/2S with mannitol[64,66]; D5W-1/3S with mannitol[64]	48 h RT[65]	- do NOT use aluminum-containing needle, syringe or tubing[64]
CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Sandoz) (RT)(PFL) no preservative[67]	N/A	1 mg/mL[67]	48 h RT[67,68]	Less than or equal to 60 mg: 100 mL NS* Greater than 60 mg: 250 mL NS* NS; 0.45% Sodium Chloride with or without mannitol[69] 2 L of D5 in one-half or one-third NS containing 37.5 g of mannitol[67]	24 h RT[67]	- do NOT use aluminum-containing needle, syringe or tubing[67]

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DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Teva) (RT)(PFL) no preservative[70]	N/A	1 mg/mL[70]	discard unused portion[18]	Less than or equal to 60 mg: 100 mL* NS Greater than 60 mg: 250 mL* NS 2 L of D5 in one-half or one-third NS containing 37.5 g of mannitol[70]	24 h RT[70]	- do NOT use aluminum-containing needle, syringe or tubing[70]

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Cladribine 10 mg/10 mL (Fresenius Kabi) (F)(PFL) no preservative[71]	N/A	1 mg/mL[71]	discard unused potion[71]	SC syringe[72]	discard end of day[13,71,73]	
				500 mL **NS only** Do NOT use D5W	24 h **RT**	
				Cassette: qs to 100 mL with **bacteriostatic NS only** via SIMS DELTEC INC. MEDICATION CASSETTES®[71] filter drug and diluent through 0.22 micron filter as each solution is being introduced into the cassette	at least 7 days[71]	
Clodronate 300 mg/10 mL (Oryx) (RT) no preservative[74]	N/A	30 mg/mL[74]	discard unused portion[74]	500 mL **NS** or D5W[74]	12 h RT[74]	- do **NOT** mix with calcium containing solution (e.g., Ringer's)[75]

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DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Cyclophosphamide 200 mg 500 mg 1000 mg 2000 mg (Baxter) (RT)(PFL) no preservative[76]	**NS**[77] 200 mg: 10 mL 500 mg: 25 mL 1000 mg: 50 mL 2000 mg: 100 mL[76]	20 mg/mL[76]	48 h F,[68,76,78] 24 h RT[76]	Less than or equal to 1 g: 100 mL NS* Greater than 1 g: 250 mL NS* high dose in BMT: may need 500 NS* **NS**, D5W, D5NS[76]	72 h F,[76,78] 24 h RT[76]	
Cytarabine 100 mg/1 mL 1000 mg/10mL 2000 mg/20mL (Hospira) (RT)(PFL) no preservative[79]	N/A record time of puncture	100 mg/mL[79]	24 h RT[79]	100 mL* **NS**, Water for Injection, D5W, Lactated Ringer's[79]	72 h **F**, 24 h RT from initial vial puncture[79]	- do not use for IT injection
Cytarabine **<u>IT injection</u>** 100 mg/1 mL 1000 mg/10mL 2000 mg/20mL (Hospira) (RT)(PFL) no preservative[79]	N/A record time of puncture	100 mg/mL[79]	24 h RT[79]	diluents containing preservatives should **NOT** be used for intrathecal administration[79] qs to 6 mL with preservative free NS[80]	use within 4 h of initial vial puncture[18]	- auxiliary label: IT injection[18] - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag[18]

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DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Cytarabine **SC injection** 100 mg/1 mL 1000 mg/10mL 2000 mg/20mL (Hospira) (RT)(PFL) no preservative[79]	N/A record time of puncture	100 mg/mL[79]	24 h RT[79]	syringe	14 d **F**, 48 h RT[18,81]	- do not use for IT injection
Dacarbazine 100 mg 200 mg (Abraxis) (F)(PFL) no preservative[82]	100 mg: 9.9 mL SWI[82] 200 mg: 19.7 mL SWI[82]	10 mg/mL[82]	72 h F, 8 h RT[82]	250-1000 mL* **NS** or D5W	24 h **F**, 8 h RT[82] **(PFL)[11,82] see Special Precautions/Notes Column	- protect container from light during storage and administration[83] - overfill unknown
Dacarbazine 200 mg 600 mg (Hospira) (F)(PFL) no preservative[84]	200 mg: 19.7 mL SWI[84] 600 mg: 59.1 mL SWI[84]	10 mg/mL[84]	48 h F, 8 h RT[84] (PFL)[85]	0.19–3.0 mg/mL[13,84] 250-1000 mL* **NS** or D5W	24 h F[84] **(PFL)[83] see Special Precautions/Notes Column	- protect container from light during storage and administration[83] - no overfill[40,85]

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
DACTINomycin 0.5 mg (GMD Pharma for Recordati) (RT)(PFL) no preservative[86]	1.1 mL SWI (preservative-free)[86] Do **NOT** use SWI with preservative (may form precipitate)[86]	0.5 mg/mL (500 mcg/mL)[86]	discard unused portion[68]	syringe[86] 10 mcg/mL or greater[86] **NS**, D5W[86,87]	use within 4 h of initial vial puncture[68]	- drug loss reported with some cellulose ester membrane in-line filters[86]
Daratumumab 100 mg/5mL 400 mg/20mL (Janssen) (F)(PFL) do not shake no preservative[88]	N/A	20 mg/mL[88]	discard unused portion[88]	500-1000 mL NS dilute to final volume by withdrawing volume from bag equal to volume of drug to be added[88] mix by gentle inversion[88]	24 h **F,** followed by 15 h infusion (total 39 h)[88] allow bag to come to room temperature, then use immediately[88] **(PFL)	- administer with a 0.22 or 0.2 micron low protein binding in-line filter[88] - discard if visible particles are observed[88] - complete infusion within 15 hours[88]
DAUNOrubicin 20 mg (Erfa Canada Inc.)[89] (RT)(PFL)[90] no preservative[91]	4 mL SWI[89]	5 mg/mL[89,92]	48 h F, 24 h RT[91]	100-250 mL in isotonic solution e.g., NS[89] no data for D5W[91]	24 h RT, 48 h F[89]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
DAUNOrubicin 20 mg (Teva/Novopharm) (RT)(PFL) no preservative[93]	4 mL SWI[93]	5 mg/mL[93]	24 h RT, 48 h F[93] (PFL)[93]	100-250 mL **NS** or D5W[11]	48 h F, 24 h RT[93] **(PFL)[93]	
Degarelix 80 mg 120 mg (Ferring) (RT) do not shake[94] no preservative[95]	80 mg: 4.2 mL **SWI** (supplied diluent)[94]	20 mg/mL[94]	2 h RT[94]	SC syringe[94]	2 h RT[94]	
	120 mg: 3 mL **SWI** (supplied diluent)[94]	40 mg/mL[94]				
	swirl gently; avoid shaking to prevent foam formation[94] reconstitution may take up to 15 min[94]					

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Denosumab (XGEVA) 120 mg/1.7 mL (Amgen) (F)(PFL) do not shake no preservative[96]	N/A	71 mg/mL[96]	discard unused portion[68,96]	SC syringe[96]	use within 4 h of initial puncture[68]	- not interchangeable with PROLIA[96] - do not use if solution is cloudy; trace amounts of translucent to white proteinaceous particles are acceptable[96] - avoid vigorous shaking[96] - bring to room temperature 15-30 minutes prior to administration[96]
Dexrazoxane 250 mg 500 mg (Pfizer) (RT) no preservative[97]	SWI[97] 250 mg: 25 mL 500 mg: 50 mL	10 mg/mL[97]	30 min RT, 3 h F[98]	MUST BE FURTHER DILUTED With Lactated Ringers Injection to 1.3 – 3.0 mg/mL[97]	1 h RT, 4 h F[97]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
DOCEtaxel 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Hospira) (**F**, RT)(PFL) preservative[99]	N/A	10 mg/mL[99]	20mg/2 mL vial: discard unused portion[18,99]	0.3-0.74 mg/mL[99] (250 mL **NS** or D5W)[99]	complete administration within 4 h **F**,[99] 48 h RT[18,100]	- use non-DEHP bag and IV administration set[99]
			80 mg/8 mL or 160 mg/16 mL vial (maximum number of punctures: up to 3 doses can be removed when a venting needle is also inserted, i.e., 6 punctures total)[101] 14 d **F**[18,99] ******(PFL)[18,99]			

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
DOCEtaxel 20 mg/0.5 mL 80 mg/2 mL (sanofi-aventis) (**F**, RT)(PFL) no preservative[102]	supplied diluent : - if vials were refrigerated, allow to warm for 5 min at RT. Withdraw entire contents of the diluent and inject the entire contents of the syringe into the corresponding concentrate vial. Mix by repeated inversions for 45 sec[102] DO NOT SHAKE[102] Let sit for 5 minutes[102]	10 mg/mL[102]	48 h **F,** RT[18,102,103]	0.3-0.74 mg/mL[102] (250 mL **NS** or D5W)[102]	complete administration within 4 h **F**,[102] 48 h RT[18,103]	- use non-DEHP bag and IV administration set[102]
DOXOrubicin 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 200 mg/100 mL (Accord) (F)(PFL) no preservative[104]	N/A	2 mg/mL[104]	8 h[104]	syringe[104]	24 h **F**, RT from initial vial puncture[104]	- for ULYEPOCHR protocol, see entry for EPOCHR (3-in-1solution containing etoposide, DOXOrubicin, vinCRIStine)

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
DOXOrubicin 10 mg 50 mg 150 mg (Hospira) (RT)(PFL) no preservative[105]	NS, SWI, D5W[105] (NS reconstitution takes longer) 10 mg: 5 mL 50 mg: 25 mL 150 mg: 75 mL	2 mg/mL[105]	48 h F, 24 h RT[13,105]	syringe[105]	48 h F, 24 h RT[13,106]	- for ULYEPOCHR protocol, see entry for EPOCHR (3-in-1solution containing etoposide, DOXOrubicin, vinCRIStine)
DOXOrubicin 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 200 mg/100 mL (Teva/Novopharm) (F)(PFL) no preservative[107]	N/A record time of puncture	2 mg/mL[107]	8 h[107]	syringe[107]	48 h F, 24 h RT[107] from initial vial puncture	- for ULYEPOCHR protocol, see entry for EPOCHR (3-in-1solution containing etoposide, DOXOrubicin, vinCRIStine)
DOXOrubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Pfizer) (F) no preservative[108]	N/A	2 mg/mL[108]	discard unused portion[68,108]	syringe[108]	48 h F, 24 h RT[108]	- for ULYEPOCHR protocol, see entry for EPOCHR (3-in-1solution containing etoposide, DOXOrubicin, vinCRIStine)

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
DOXOrubicin Pegylated Liposomal 20 mg/10 mL (Janssen) (F) no preservative[109]	N/A	2 mg/mL[109]	discard unused portion[109]	Less than 90 mg: 250 mL **D5W only**[109] Greater than or equal to 90 mg: 500mL **D5W only**[109]	24 h F[109]	- do not filter[109]
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[110]	N/A	2 mg/mL[110]	8 h **F**, RT[110]	syringe[110]	48 h **F**, 24 h RT from initial vial puncture[110]	
Epirubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Fresenius Kabi) (F)(PFL) no preservative[111]	N/A record time of puncture	2 mg/mL[111]	8 h[111]	syringe[111]	48 h **F**, 24 h RT from initial vial puncture[111]	
				100 mL***** **NS** or D5W	2 d **F**, RT: NS or D5W[18,111]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Epirubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Pfizer) (F)(PFL) no preservative[112]	N/A record time of puncture	2 mg/mL[112]	8 h[112]	syringe[112]	48 h **F**, 24 h RT from initial vial puncture[112]	
				100 mL* **NS** or D5W[11]	2 d **F**, RT: NS or D5W[65]	
EPOCHR (ULYEPOCHR protocol) (RT)(PFL) no preservative[18,113-116]	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 **(PFL) see Special Precautions/Notes column	- final product is a 3-in-1 solution containing etoposide, DOXOrubicin, vinCRIStine (refer to ULYEPOCHR protocol) - use non-DEHP bag and tubing only - use inline filter - protect container from light during administration and storage

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
eriBULin 1 mg/2 mL (Eisai Limited) (RT)(PFL)[117] no preservative[18]	N/A	0.5 mg/mL[117]	discard unused portion[18,117]	IV syringe[117]	24 h **F**, 6 h RT[117]	- do not administer through dextrose containing lines[117] - vials contain dehydrated alcohol USP (5% v/v)[117]
Etoposide 100 mg/5 mL 200 mg/10 mL 500 mg/25 mL 1000 mg/50 mL (Sandoz) (RT)(PFL) preservative[118]	N/A	20 mg/mL[118]	14 d RT[118]	0.2-0.4 mg/mL **NS**, D5W[118] 500 mL* **NS** or D5W	**0.2 mg/mL:** 7 d **F**, RT[118] **0.4 mg/mL:** 12 h **F**, RT[118]	- use non-DEHP bag and tubing only - use 0.22 micron in-line filter[119] - for ULYEPOCHR protocol, see entry for EPOCHR (3-in-1solution containing etoposide, DOXOrubicin, vinCRIStine)

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Etoposide 100 mg/5 mL 200 mg/10 mL 500 mg/25 mL 1000 mg/50 mL (Teva/Novopharm) (RT)(PFL) no preservative[120]	N/A	20 mg/mL[120]	discard unused portion[120]	**NS** Stability is concentration dependent	**0.2-0.3 mg/mL:** 7 d **F,**[121] 2 d RT[121,122] **0.4-0.5 mg/mL**: 1 d **F,**[121] 1d RT[121] **0.6-9.0mg/mL**: generally unstable **9.5 mg/mL:** 2 d **F,**[121] 1d RT[121] **10-12 mg/mL:** 7 d **F,**[121] 2 d RT[121,122]	- use non-DEHP bag and tubing only - use 0.22 micron in-line filter[119] - for ULYEPOCHR protocol, see entry for EPOCHR (3-in-1solution containing etoposide, DOXOrubicin, vinCRIStine)
				D5W[120]	4 h RT[120,123]	
Etoposide phosphate (ETOPOPHOS®) 100 mg (BMS) (F)(PFL) no preservative[124]	5 mL NS, D5W, SWI, BWI[124,125]	20 mg/mL[124,125]	24 h RT[124,125], 48 h F[18,124,125]	500 mL* **NS**, D5W[124,125] (do not dilute to less than 0.1 mg/mL)[124,125]	24 h **F**, RT[124,125]	
	10 mL NS, D5W, SWI, BWI[124,125]	10 mg/mL[124,125]				

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Filgrastim (NEUPOGEN®) 300 mcg/1 mL 480 mcg/1.6 mL (Amgen) (F)(PFL) do not shake no preservative[126]	N/A	300 mcg/mL[126]	discard unused portion[18]	SC syringe[126]	14 d F[18,127]	- albumin is added to D5W to prevent filgrastim adsorption to plastic[126] - incompatible with saline[126,128] - do NOT dilute to less than 5 mcg/mL[126]
				50-100 mL **D5W only**[128] in PVC, polyolefin, or glass[126] (for filgrastim concentrations of 5-15 mcg/mL in D5W, add albumin 2 mg/mL)[126]	48 h RT, 7 d F[18,127]	
Fludarabine 50 mg (Berlex) (F) no preservative[129]	2 mL SWI[129]	25 mg/mL[129]	48 h **F** or RT[13,65]	dilute to maximum of 1 mg/mL[129,130] 50-100 mL* **NS** or D5W[129]	48 h **F**, RT[13,65]	
Fludarabine 50 mg (Teva/Novopharm) (F) no preservative[131]	N/A	25 mg/mL[131]	discard unused portion[131]	dilute to maximum of 1 mg/mL[131] 50-100 mL* **NS** or D5W	48 h **F**, 24 h RT[131]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Fluorouracil 5000 mg/100 mL (Accord) (RT)(PFL) no preservative[132]	N/A	50 mg/mL[132]	48 h RT[18,133]	syringe[132]	48 h RT[18,133]	
				0.5-10 mg/mL[133] 50-1000 mL* D5W	48 h RT[18,133]	
				CIVI: ambulatory pump[134]	complete within 8 d[133]	
Fluorouracil 5000 mg/100 mL (Hospira) (RT)(PFL) no preservative[135]	N/A	50 mg/mL[135]	8 h RT[134,135]	syringe[13]	48 h RT[13,35,134]	
				2-10 mg/mL[134,135] 50-1000 mL* D5W	24 h RT[134,135]	
				CIVI: ambulatory pump[134]	complete within 8 d[11,13,136,137]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Fluorouracil 500 mg/10 mL 5000 mg/100 mL (Sandoz) (RT)(PFL) no preservative[138]	N/A	50 mg/mL[138]	4 h RT[18]	syringe	4 h RT[18]	
				300-500 mL* D5W[138]	24 h RT[138]	
				CIVI: ambulatory pump[134]	complete within 8 d[11,13,136,137]	
Gemcitabine 200 mg 1000 mg 2000 mg (Accord) (RT) no preservative[139]	200 mg: 5 mL NS 1000 mg: 25 mL NS 2000 mg: 50 mL NS[139]	38 mg/mL[139]	24 h RT[139]	0.1-10 mg/mL NS[139]	48 h RT[18,140,141]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Gemcitabine 200 mg 1000 mg (Eli-Lilly) (RT) no preservative[142]	200 mg: 5 mL NS 1000 mg: 25 mL NS[142]	38 mg/mL[142]	48 h RT[142,143]	syringe[142]	48 h RT[13,142,143]	
				0.1–10 mg/mL NS[142,143]	48 h **F**, RT[13,142,143]	
Gemcitabine 200 mg 1000 mg 2000 mg (Hospira) (RT)[144] no preservative[145]	200 mg: 5 mL NS 1000 mg: 25 mL NS 2000 mg: 50 mL NS[144]	38 mg/mL[144]	48 RT[68,144,146]	syringe[144]	24 h RT[144,146]	
				0.1 - 26 mg/mL NS[144,146]	48 h RT[68,146]	
Gemcitabine 200 mg/5.3 mL 1000 mg/26.3 mL 2000 mg/52.6 mL (Hospira) (F) no preservative[147]	N/A	38 mg/mL[148]	discard unused portion[18]	0.1 – 38 mg/mL **NS**, D5W[148]	24 h RT[148]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Gemcitabine 200 mg 1000 mg (Teva/Novopharm) (RT) no preservative[149]	200 mg: 5mL NS 1000 mg: 25 mL NS[149]	38 mg/mL[149]	24 h RT[149]	0.1 - 38 mg/mL NS[149]	24 RT[149]	
Gemcitabine 200 mg 1000 mg (Sandoz Standard) (RT) no preservative[150]	200 mg: 5 mL NS 1000 mg: 25 mL NS[150]	38 mg/mL[150]	48 h RT[150,151]	syringe[150]	48 h RT[150-152]	
				0.1 - 38 mg/mL **NS** or D5W[150,153]	48 h RT[13,154]	
IDArubicin 5 mg 10mg (Pfizer) (RT)(PFL) no preservative[155]	5 mg: 5 mL **SWI**[155] 10 mg: 10 mL **SWI**[155] vial contents under negative pressure[155] do NOT use BWI to reconstitute[155]	1 mg/mL[155]	48 h **F**, 24 h RT[155] **(PFL)[155]	syringe[155]	48 h **F**, 24 h RT[155]	- avoid alkaline solutions[155]

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
IDArubicin PFS 5 mg/5 mL 10 mg/10 mL 20 mg/20 mL (Pfizer) (F)(PFL) no preservative[155]	N/A	1 mg/mL[155]	24 h RT, 48 h **F** **(PFL)[155]	syringe[155]	4 h from initial puncture[18]	- avoid alkaline solutions[155]
IDArubicin 5 mg/5 mL 10 mg/10 mL 20 mg/20 mL (Fresenius Kabi**)** (F)(PFL) no preservative[156]	N/A	1 mg/mL[156]	discard unused solution[156]	syringe[156]	4 h from initial puncture[18]	- avoid alkaline solutions[156]
Ifosfamide 1000 mg 3000 mg (Baxter) (RT) no preservative[157]	1000 mg: 20 mL SWI[157] 3000 mg: 60 mL SWI[157] shake well	50 mg/mL[157]	24 h RT, 48 h F[18,157]	0.6–20 mg/mL[157] 500–1000 mL* **NS**, D5W, Lactated Ringer's[157]	24 h RT, 72 h F[157] 24 h **F,** RT when mixed with mesna[11]	
Ifosfamide 1000 mg 3000 mg (Fresenius Kabi) (RT) no preservative[158]	1000 mg: 20 mL SWI 3000 mg: 60 mL SWI[158] shake well	50 mg/mL[158]	24 h RT, 48 h F[18,158]	0.6-20 mg/mL[158] 500-1000 mL*** NS** D5W, Lactated Ringer's[158]	24 h RT, 72 h F[158] 24 h **F,** RT when mixed with mesna[11]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Iniparib 100 mg/10 mL (sanofi-aventis) (F) no preservative[159]	N/A	10 mg/mL[159]	discard unused portion[159]	250 mL **NS**, D5W dilute to 250 mL final volume by withdrawing volume from bag equal to volume of drug to be added*[159]	24 h RT[159]	- *may also use empty IV bag and qs to final volume of 250 mL with **NS**, D5W[159]
Interferon Alfa -2b 10 million units/1 mL (Merck) (F) preservative[160,161]	N/A	10 million units/mL[160]	7 d F[160]	syringe[160]	7 d F[18]	- vials can be kept at RT for up to 7 days before use; discard if not used within this time[160]
				final concentration ≥ 0.3 million IU/mL[160] 50 mL NS[160]	24 h **F**, RT[160]	
Interferon Alfa -2b 18 million units/3 mL (Merck) (F) preservative[160,161]	N/A	6 million units/mL[160]	14 d F[18,160]	syringe[160]	14 d F[18,161]	- vials can be kept at RT for up to 7 days before use; discard if not used within this time[160]
				final concentration ≥ 0.3 million IU/mL[160] 50 mL NS[160]	24 h **F**, RT[160]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Interferon Alfa -2b 25 million units/2.5 mL (Merck) (F) preservative[160,161]	N/A	10 million units/mL[160]	14 d F[18,160]	syringe[160]	14 d F[18,161]	- vials can be kept at RT for up to 7 days before use; discard if not used within this time[160]
				final concentration ≥ 0.3 million IU/mL[160] 50 mL NS[160]	24 h **F**, RT[160]	
Interferon Alfa -2b 10 million units (Merck) (F) no preservative (unless reconstituted with BWI)[160]	1 mL supplied diluent (SWI)[160] do not shake; roll to reconstitute[160]	10 million units/mL[160]	24 h F[160]	syringe[160]	24 h F[18,161]	- after reconstitution, provides an isotonic solution which may be used for intralesional injection[160] - non-reconstituted vials can be kept at RT for up to 4 weeks before use; discard if not reconstituted for use within this time[160]
				final concentration ≥ 0.1 million IU/mL[160] 100 mL NS[160]	24 h F, RT[161]	
	1 mL BWI[160] do not shake; roll to reconstitute[160]		14 d F[18,160]	syringe[160]	14 d F[18,160]	
				final concentration ≥ 0.1 million IU/mL[160] 100 mL NS[160]	24 h F, RT[161]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Interferon Alfa -2b 18 million units (Merck) (F) no preservative (unless reconstituted with BWI)[160]	1 mL supplied diluent[160] do not shake; roll to reconstitute[160]	18 million units/mL[160]	24 h F[160]	syringe[160]	24 h F[18,161]	- non-reconstituted vials can be kept at RT for up to 4 weeks before use; discard if not reconstituted for use within this time[160]
				final concentration $\geq$ 0.1 million IU/mL[160] 100 mL NS[160]	24 h F, RT[161]	
	1 mL BWI[160] do not shake; roll to reconstitute[160]		14 d F[18,160]	syringe[160]	14 d F[18,160]	
				final concentration $\geq$ 0.1 million IU/mL[160] 100 mL NS[160]	24 h F, RT[161]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Ipilimumab 50 mg/10 mL 200 mg/40 mL (BMS Canada) (F)(PFL) no preservative[162]	N/A	5 mg/mL[162]	24 h **F**,RT[162]	1 – 4 mg/mL in **NS**, D5W 100 mL[162] OR undiluted in empty viaflex bag or glass bottle (allow vials to stand at RT for ~5 min prior to withdrawal of contents)[162]	24 h **F**,RT[162]	- do NOT shake[162] - administer with 0.2 or 0.22 low protein binding in-line filter[162] - vials may contain translucent-to-white amorphous particles[162] - discard if cloudy or has pronounced colour change (should be clear to pale yellow)[162] - flush line with NS or D5W after infusion[162]
Irinotecan 40 mg/2 mL 100 mg/5 mL 500 mg/25 mL (Accord) (RT)(PFL) no preservative[163]	N/A	20 mg/mL[163]	discard unused portion[163]	0.12 – 2.8 mg/mL[163] 500 mL* **D5W** (preferred), NS[163]	48 h F, 24 h RT **(PFL)[163]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Irinotecan 40 mg/2 mL 100 mg/5 mL 500 mg/25 mL (Hospira) (RT)(PFL) no preservative[164]	N/A	20 mg/mL[164]	2 days RT[13,165,166]	0.12– 2.8 mg/mL[164] 500 mL[11] **D5W** (preferred), NS[164]	24 h RT: D5W, NS[164] 48 h F: D5W **(PFL)[164]	- do NOT refrigerate if in NS[167]
Irinotecan 40 mg/2 mL 100 mg/5 mL (Pfizer) (RT)(PFL) no preservative[167]	N/A	20 mg/mL[167]	discard unused portion[167]	0.12– 2.8 mg/mL[167] 500 mL[11] **D5W** (preferred), NS[167]	24 h RT: D5W, NS[167] 48 h F: D5W **(PFL)[167]	- do NOT refrigerate if in NS[167]
Irinotecan 40 mg/2 mL 100 mg/5 mL 500 mg/25 mL (Sandoz) (RT)(PFL) no preservative[168]	N/A	20 mg/mL[168]	discard unused portion[68,168]	0.12-2.8 mg/mL[168] **D5W** (recommended), NS[168]	24 h RT: D5W, NS[168] 48 h F: D5W[168] **(PFL)[168]	

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART						
DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status)	**Reconstitute With:**	**To Give:**	**Vial Stability**	**Product**	**Product Stability**	**Special Precautions/Notes**
Irinotecan Liposome SAP supply 50 mg/10 mL (Baxalta/Baxter) (F)(PFL) no preservative[1]	N/A	5 mg/mL[169]	discard unused portion[169]	dilute to a final volume of 500 mL with **NS**, D5W[169]	6 h RT, 24 h F[169] **(PFL) (allow product to come to RT prior to administration if stored in F)[170]	- do not use in-line filter[170]
Irinotecan Liposome commercial supply 43 mg/10 mL (Baxalta) (F)(PFL) no preservative[171]	N/A	4.3 mg/mL[171]	discard unused portion[171]	to a final volume of 500 mL with **NS**, D5W[171]	4 h RT, 24 h F[171] **(PFL) (allow product to come to RT prior to administration if stored in F)[171]	- do not use in-line filter[171] - expressed as irinotecan free base
Ixabepilone 15 mg (contains 16 mg) 45 mg (contains 47 mg) (BMS) (F)(PFL) no preservative[172]	15 mg: 8 mL supplied diluent[172] 45 mg: 23.5 mL supplied diluent[172]	2 mg/mL[172]	1 h RT[172]	0.2 – 0.6 mg/mL in Lactated Ringer's Injection USP (use non-DEHP infusion container)[172]	6 h RT[172]	- use 0.2-1.2 micron in-line filter[172] - use non-DEHP bag and administration set[172]

* Suggested volume based on usual dose range and any concentration range of stability data
** Protect from light means minimizing exposure to direct sunlight over a *storage* period. More specific information on protection from light (eg, protecting container and tubing during *administration*) will be indicated in the Special Precautions/Notes column.
*** Contains DMA (N,N dimethylacetamide). Product may be incompatible with closed system transfer devices such as ChemoLock.

Centres are not to change the content locally but should forward suggestions to the Cancer Drug Manual staff.

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.[35,173]
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.

Abbreviations

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

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