

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/Bioscript) (F)(PFL) no preservative ¹ | 1.2 mL SWI ¹ direct diluent against side of vial during reconstitution ¹ do NOT shake ¹ | 1.8 million units/mL (1.1 mg/mL) ¹ | 12 h F, RT ^{1,2} | 30-70 mcg/mL ¹ 25-100 mL D5W ¹ | 48 h F, RT ¹ bring to RT prior to use ¹ | - do NOT use in-line filter ¹ - avoid BWI and NS due to increased aggregation ¹ |
| | | | | SC syringe ^{3,4} | 10 d F, RT ^{2,4} **(PFL) | |
| Aldesleukin intralesional 22 million units (1.3 mg) (Iovance/Bioscript) (F)(PFL) no preservative ¹ | 1.2 mL SWI ¹ direct diluent against side of vial during reconstitution ¹ do NOT shake ¹ | 1.8 million units/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 ^{5,6} withdraw entire contents of vial into syringes for administration ^{5,6} | syringe: 48 h F ⁵ (discard any remaining unused syringes following procedure) | - avoid BWI and NS due to increased aggregation ¹ |

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| Aldesleukin 22 million units (1.3 mg) (SteriMax) (F)(PFL) no preservative ⁷ | 1.2 mL SWI ⁷ direct diluent against side of vial during reconstitution ⁷ do NOT shake ⁷ | 18 million unit/mL (1.1 mg/mL) ⁷ | 12 h F, RT ^{2,7} | 30-70 mcg/mL ⁷ 50 mL D5W ⁷ <30 mcg/mL: dilute in D5W containing human albumin 0.1% ⁸ | 48 h F, RT ⁷ bring to RT prior to use ⁷ | - do NOT use in-line filter ⁷ - avoid BWI or NS due to increased aggregation ⁷ |
| | | | | SC syringe ^{3,4} | 10 d F ^{2,4} ** (PFL) | |
| Aldesleukin intralesional 22 million units (1.3 mg) (SteriMax) (F)(PFL) no preservative ⁷ | 1.2 mL SWI ⁷ direct diluent against side of vial during reconstitution ⁷ do NOT shake ⁷ | 18 million unit/mL (1.1 mg/mL) ⁷ | 12 h F, RT ^{2,7} | add 3.2 mL D5W to reconstituted vial to give 5 million units/mL ^{5,6} withdraw entire contents of vial into syringes for administration ^{5,6} | syringe: 48 h F ⁵ (discard any remaining unused syringes following procedure) | - avoid BWI or NS due to increased aggregation ⁷ |

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| 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 350 mg (Janssen) (F)(PFL) no preservative ¹³ | N/A | 50 mg/mL ¹³ | discard unused portion ¹³ | 250 mL NS , D5W ¹³ dilute to final volume by withdrawing volume from bag equal to volume of drug to be added ¹³ mix by gentle inversion; do not shake ¹³ | complete administration within 10 h RT ¹³ | - each vial contains 0.5 mL overfill ¹³ - discard if discolouration or visible particles are present ¹³ - administer with 0.2 micron in-line filter ¹³ |

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| Amsacrine 75 mg/1.5 mL (Erfa Canada) (RT) no preservative ¹⁴ | glass syringes preferred for reconstitution; MAX time in plastic syringe ¹⁴ : 15 min 13.5 mL supplied diluent (L-lactic acid) ¹ to reconstitute: transfer 1.5 mL from ampoule into the diluent vial ¹⁴ | 5 mg/mL ¹⁴ | 12 h RT ^{2,14} **(PFL) ¹⁴ | 500 mL D5W ¹⁴ (plastic or glass container) ¹⁴ | 7 d F, 4 d RT ^{2,14} | - contains DMA*** |
| Arsenic trioxide 10 mg/10 mL (Phebra/ICON) (RT) no preservative ¹⁵ | N/A | 1 mg/mL ¹⁵ | discard unused portion ¹⁵ | 100-250 mL NS , D5W ¹⁵ | 48 h F, 24 h RT ¹⁵ | |
| Arsenic trioxide 10 mg/10 mL (Sandoz) (RT) no preservative ¹⁶ | N/A | 1 mg/mL ¹⁶ | discard unused portion ¹⁶ | 100-250 mL NS , D5W ¹⁶ | 48 h F, 24 h RT ¹⁶ | |

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| Arsenic trioxide 10 mg/10 mL (SteriMax) (RT) no preservative ¹⁷ | N/A | 1 mg/mL ¹⁷ | discard unused portion ¹⁷ | 100-250 mL NS, D5W ¹⁷ | 48 h F, 24 h RT ¹⁷ | |
| Asparaginase <i>E. Coli</i> pegylated - see Calaspargase pegol - see Pegaspargase in L-Z chart | | | | | | |
| Asparaginase-erwinia (asparaginase <i>Erwinia chrysanthemi</i>) - see Crisantaspase recombinant | | | | | | |
| PEG-asparaginase (pegylated asparaginase <i>E. coli</i>) - see Calaspargase pegol - see Pegaspargase in L-Z chart | | | | | | |

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| Atezolizumab 840 mg/14 mL 1200 mg/20 mL (Hoffman-La Roche) (F)(PFL) do not shake no preservative ¹⁸ | N/A | 60 mg/mL ¹⁸ | discard unused portion ¹⁸ | 250 mL NS ¹⁸ mix by gentle inversion ¹⁸ | 24 h F, 8 h RT ¹⁸ | - do NOT shake ¹⁸ |
| Atezolizumab subcutaneous (TECENTRIQ® SC) 1875 mg/15 mL Hoffman-La Roche) (F)(PFL) do not shake no preservative ¹⁹ | N/A | 125 mg/mL ¹⁹ | discard unused portion ² | SC syringe ¹⁹ | 10 d F, 8 h RT ^{2,19} | - contains hyaluronidase ¹⁹ - formulations are NOT interchangeable ¹⁹ |
| Avelumab 200 mg/10 mL (EMD) (F)(PFL) no preservative ²⁰ | N/A | 20 mg/mL ²⁰ | discard unused portion ²¹ | 250 mL NS, ½-NS ²⁰ mix by gentle inversion ²⁰ | complete administration within 24 h F, 8 h RT ²⁰ if refrigerated, bring bag to RT prior to administration ²⁰ | - do NOT shake ²⁰ - administer with 0.2 micron in-line filter ²⁰ |

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|---|--|-------------------------------|--|---|--|--|
| <p>azaCITIDine 100 mg (Celgene) (RT) no preservative ²²</p> | <p>4 mL SWI ²² shake vigorously ²² record time of reconstitution</p> | <p>25 mg/mL ²²</p> | <p>use within 45 min RT or 8 h F ²²</p> | <p>SC syringe ²²</p> | <p>45 min RT (including preparation time) or 8 h F ²² refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution ²² Refrigerated syringes ²²: <ul style="list-style-type: none"> allow up to 30 min prior to administration to reach temperature of ~20-25°C discard syringe if time elapsed at RT is greater than 30 min </p> | <p>- discard if contains large particles ²² - re-suspend syringe contents before injection by vigorously rolling syringe between palms ²² - if cold diluent reconstitution is used to extend stability, minimize exposure to RT; ensure proper refrigeration of diluent, reconstituted vial and final product ^{23,24}</p> |
| | <p>cold diluent reconstitution: 4 mL SWI at 2-8°C ^{23,24}</p> | <p>25 mg/mL ²²</p> | <p>12 h F ^{2,23,24}</p> | | <p>22 h F ^{23,24}</p> | |

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| <p>azaCITIDine 100 mg (Dr. Reddy's) (RT) no preservative ²⁵</p> | <p>4 mL SWI ²⁵ shake vigorously ²⁵</p> | <p>25 mg/mL ²⁵</p> | <p>use within 45 min RT or 8 h F ²⁵</p> | <p>SC syringe ²⁵</p> | <p>45 min RT (including preparation time) or 8 h F ²⁵</p> <p>refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution ²⁵</p> <p>Refrigerated syringes ²⁵:</p> <ul style="list-style-type: none"> • allow up to 30 min prior to administration to reach temperature of ~20-25°C • discard syringe if time elapsed at RT is greater than 30 min | <p>- do not filter ²⁵ - discard if contains large particles ²⁵ - re-suspend syringe contents before injection by vigorously rolling syringe between palms ²⁵</p> |

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| <p>azaCITIDine 100 mg (Hikma) (RT) no preservative ²⁶</p> | <p>4 mL SWI ²⁶ shake vigorously ²⁶</p> | <p>25 mg/mL ²⁶</p> | <p>use within 45 min RT or 8 h F ²⁶</p> | <p>SC syringe ²⁶</p> | <p>45 min RT (including preparation time) or 8 h F ²⁶</p> <p>refrigerate syringe immediately after preparation if not to be used within 45 min of reconstitution ²⁶</p> <p>Refrigerated syringes ²⁶:</p> <ul style="list-style-type: none"> • allow up to 30 min prior to administration to reach temperature of ~20-25°C • discard syringe if time elapsed at RT is greater than 30 min | <p>- do not filter ²⁶ - discard if contains large particles ²⁶ - re-suspend syringe contents before injection by vigorously rolling syringe between palms ²⁶</p> |

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| <p>BCG (Tice strain) (OncoTICE®) intravesical 50 mg (1 to 8 x 10⁸ CFU) (Merck Canada) (F)(PFL) no preservative ²⁷</p> | <p>1 mL preservative-free NS ²⁷</p> <p>allow to stand for a few min; gently swirl to suspend ²⁷</p> <p>do NOT shake ²⁷</p> <p>record time of reconstitution</p> | <p>1 to 8×10⁸ CFU/vial ²⁷</p> | <p>2 h F ²⁷</p> <p>** (PFL) ²⁷</p> | <p>transfer contents from vial to 50 mL syringe, rinse vial with 1 mL NS and transfer rinse solution to the 50 mL syringe, then qs up to 45 mL with NS ²⁷</p> <p>if a CSTD is used: transfer contents from vial to 50 mL syringe and qs up to 45 mL with NS; do NOT rinse vial ²⁷</p> | <p>use within 2 h F of reconstitution ^{27,28}</p> <p>** (PFL) ²⁷</p> | <p>- auxiliary info: biohazard ²⁸ - do NOT filter ²⁷ - do NOT shake ²⁷</p> |

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|--|---|--|--|---|--|---|
| BCG (<i>Russian strain</i>) (VERITY-BCG®) intravesical 40 mg (1 to 8 x 10 ⁸ CFU) (Verity) (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 1 st vial to 50 mL syringe, rinse vial with 1 mL NS and transfer rinse solution to the 50 mL syringe; then, repeat steps for 2 nd vial and qs up to 45 mL with NS ²⁹ | use within 2 h F of reconstitution ^{28,29} **(PFL) ²⁹ | - auxiliary info: biohazard ²⁸ - TWO vials must be used to achieve the recommended full dose ²⁹ - do NOT shake ²⁹ |
| Belantamab mafodotin 70 mg 100 mg (Glaxo) (F) no preservative ³⁰ | 70 mg ³⁰ : 1.4 mL SWI 100 mg ³⁰ : 2 mL SWI allow vial to come to RT for 10 min prior to use ³⁰ swirl gently to mix; do NOT shake ³⁰ | 50 mg/mL ³⁰ | 4 h F, RT ³⁰ | 0.2-2 mg/mL NS ³⁰ 250 mL* ³⁰ mix by gentle inversion; do NOT shake ³⁰ | 24 h F, complete administration within 6 h RT ³⁰ If refrigerated, bring bag to RT prior to administration ³⁰ | - may contain translucent to white proteinaceous particles ³⁰ - discard if contains other particulates ³⁰ - filtration is not required, but may be used (e.g., PES 0.2 micron) ³⁰ |

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| Belinostat 500 mg (Spectrum) (RT) no preservative ³¹ (SAP) | 9 mL SWI ³¹ | 50 mg/mL ³¹ | 12 h RT ³¹ | 250 mL NS ³¹ | complete administration within 36 h RT ³¹ | - administer with 0.2 micron in-line filter ³¹ |
| Bendamustine 25 mg 100 mg (Natco) (RT)(PFL) no preservative ³² | 25 mg: 5 mL SWI ³² 100 mg: 20 mL SWI ³² shake well; dissolves completely in 5 min ³² | 5 mg/mL ³² | 30 min ³² | 0.2-0.6 mg/mL NS , D2.5-½NS ³² 100-500 mL† | complete administration within 24 h F, 3 h RT ³² | |
| Bendamustine 25 mg 100 mg (Eugia) (RT)(PFL) no preservative ³³ | 25 mg vial: 5 mL SWI ³³ 100 mg vial: 20 mL SW ³³ shake well; dissolves completely in 5 minutes ³³ | 5 mg/mL ³³ | 30 minutes ³³ | 0.2-0.6 mg/mL NS , D2.5-½NS ³³ 100-500 mL† | complete administration within 24 h F, 3 h RT ³³ | |

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| Bendamustine 25 mg 100 mg (Teva) (RT,F)(PFL) no preservative ³⁴ | 25 mg: 5 mL SWI ³⁴ 100 mg: 20 mL SW ³⁴ shake well; dissolves completely in 5 min ³⁴ | 5 mg/mL ³⁴ | 30 min ³⁴ | 0.2-0.6 mg/mL NS, D2.5-½NS ³⁴ 100-500 mL† | complete administration within 24 h F, 3 h RT ³⁵ | |
| Bevacizumab (AVASTIN®) 100 mg/4 mL 400 mg/16 mL (Roche) (F)(PFL) do not shake no preservative ³⁶ | N/A | 25 mg/mL ³⁶ | discard unused portion ³⁶ | 1.4-16.5 mg/mL NS only ³⁶ 100-250 mL† | 48 h F, RT ³⁶ | - do NOT shake ³⁶ |
| Bevacizumab (AYBINTIO®) 100 mg/4 mL 400 mg/16 mL (Organon/Samsung) (F)(PFL) do not shake no preservative ³⁷ | N/A | 25 mg/mL ³⁷ | discard unused portion ³⁷ | 1.4-16.5 mg/mL NS only ³⁷ 100-250 mL† | 10 d F, 72 h RT ^{2,37} | - do NOT shake ³⁷ |

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| Bevacizumab (MVASI®) 100 mg/4 mL 400 mg/16 mL (Amgen) (F)(PFL) do not shake no preservative ³⁸ | N/A | 25 mg/mL ³⁸ | discard unused portion ³⁸ | 1.4-16.5 mg/mL NS only ³⁸ 100-250 mL† | 48 h F, RT ³⁸ | - do NOT shake ³⁸ |
| Bevacizumab (ZIRABEV®) 100 mg/4 mL 400 mg/16 mL (Pfizer) (F)(PFL) do not shake no preservative ³⁹ | N/A | 25 mg/mL ³⁹ | discard unused portion ³⁹ | 1.4-16.5 mg/mL NS only ³⁹ 100-250 mL† | 10 d F, 48 h RT ^{2,39} | - do NOT shake ³⁹ |
| Bleomycin 15 units (NOTE: dose in units only) (Fresenius Kabi) (F)(PFL) no preservative ⁴⁰ | 6 mL* NS ⁴⁰ | 2.5 units/mL | 12 h F ^{2,40} | 50 mL* NS ⁴⁰ | 24 h RT ⁴⁰ | |

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| Bleomycin 15 units (NOTE: dose in units only) (Pfizer/Hospira) (F)(PFL) no preservative ⁴¹ | 6 mL* NS, SWI ⁴¹ | 2.5 units/mL | 12 h F, RT ^{2,41} | 50 mL* NS ⁴¹ | 4 h RT ^{2,28,41} | |
| 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 | 12 h F ^{2,43} , 4 h RT ⁴³ | 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 10 d F, 96 h RT ⁴³ | - use non-DEHP bag and IV administration set ⁴² - administer with 0.2 micron in-line filter ⁴² - prime lines with blinatumomab solution; do NOT use NS |

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| Bortezomib 3.5 mg (Actavis) (RT)(PFL) no preservative ⁴⁴ | 3.5 mL NS ⁴⁴ | 1 mg/mL ⁴⁴ | 12 h F, RT ^{2,45} | IV syringe ⁴⁴ | 10 d F, 4 d RT ^{2,45} | - auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes. |
| Bortezomib subcutaneous 3.5 mg (Actavis) (RT)(PFL) no preservative ⁴⁴ | 1.4 mL NS ⁴⁴ | 2.5 mg/mL ⁴⁴ | 12 h F, RT ^{2,45} | SC syringe ⁴⁴ | 10 d F, 4 d RT ^{2,45} | - auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes. |
| Bortezomib 3.5 mg (Apotex) (RT)(PFL) no preservative ⁴⁶ | 3.5 mL NS ⁴⁶ | 1 mg/mL ⁴⁶ | 12 h F, RT ^{2,47} | IV syringe ⁴⁶ | 10 d F, 4 d RT ^{2,47} | - auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes. |

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| Bortezomib subcutaneous 3.5 mg (Apotex) (RT)(PFL) no preservative ⁴⁶ | 1.4 mL NS ⁴⁶ | 2.5 mg/mL ⁴⁶ | 12 h F, RT ^{2,47} | SC syringe ⁴⁶ | 10 d F, 4 d RT ^{2,47} | - auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes. |
| Bortezomib 3.5 mg (Janssen) (RT)(PFL) no preservative ⁴⁸ | 3.5 mL NS ⁴⁸ | 1 mg/mL ⁴⁸ | 12 h F, RT ^{2,45} | IV syringe ⁴⁸ | 10 d F, 4 d RT ^{2,45} | - auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes. |
| Bortezomib subcutaneous 3.5 mg (Janssen) (RT)(PFL) no preservative ⁴⁸ | 1.4 mL NS ⁴⁸ | 2.5 mg/mL ⁴⁸ | 12 h F, RT ^{2,45} | SC syringe ⁴⁸ | 10 d F, 4 d RT ^{2,45} | - auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes. |

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| Bortezomib 1 mg 2.5 mg 3.5 mg (Juno/MDA) (RT)(PFL) no preservative ⁴⁹ | 1 mg: 1 mL NS ⁴⁹ 2.5 mg: 2.5 mL NS ⁴⁹ 3.5 mg: 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. |
| Bortezomib subcutaneous 2.5 mg 3.5 mg (Juno/MDA) (RT)(PFL) no preservative ⁴⁹ | 2.5 mg: 1 mL NS ⁴⁹ 3.5 mg: 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 (Marcan) (RT)(PFL) no preservative ⁵¹ | 3.5 mL NS ⁵¹ | 1 mg/mL ⁵¹ | 12 h F, RT ^{2,52,53} | IV syringe ⁵¹ | 10 d F, 2 d RT ^{2,52,53} | - auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes. |

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| Bortezomib subcutaneous 3.5 mg (Marcan) (RT)(PFL) no preservative ⁵¹ | 1.4 mL NS ⁵¹ | 2.5 mg/mL ⁵¹ | 12 h F, RT ^{2,52,53} | SC syringe ⁵¹ | 10 d F, 2 d RT ^{2,52,53} | - auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes. |
| Bortezomib 3.5 mg (PMS) (RT)(PFL) no preservative ⁵⁴ | 3.5 mL NS ⁵⁴ | 1 mg/mL ⁵⁴ | 8 h RT ⁵⁴ | IV syringe ⁵⁴ | 8 h RT ⁵⁴ | - auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes. |
| Bortezomib subcutaneous 3.5 mg (PMS) (RT)(PFL) no preservative ⁵⁴ | 1.4 mL NS ⁵⁴ | 2.5 mg/mL ⁵⁴ | 8 h RT ⁵⁴ | SC syringe ⁵⁴ | 8 h RT ⁵⁴ | - 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/Sun Pharma) (RT)(PFL) no preservative ⁵⁵ | 1 mg: 1 mL NS ⁵⁵ 2.5 mg: 2.5 mL NS ⁵⁵ 3.5 mg: 3.5 mL NS ⁵⁵ | 1 mg/mL ⁵⁵ | 8 h RT ⁵⁵ | IV syringe ⁵⁵ | 8 h RT ⁵⁵ | - auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes. |
| Bortezomib subcutaneous 1 mg 2.5 mg 3.5 mg (Taro/Sun Pharma) (RT)(PFL) no preservative ⁵⁵ | 1 mg: 0.4 mL NS ⁵⁵ 2.5 mg: 1 mL NS ⁵⁵ 3.5 mg: 1.4 mL NS ⁵⁵ | 2.5 mg/mL ⁵⁵ | 8 h RT ⁵⁵ | SC syringe ⁵⁵ | 8 h RT ⁵⁵ | - auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes. |
| Bortezomib 3.5 mg (Teva) (RT)(PFL) no preservative ⁵⁶ | 3.5 mL NS ⁵⁶ | 1 mg/mL ⁵⁶ | 12 h F, RT ^{2,45} | IV syringe ⁵⁶ | 10 d F, 4 d RT ^{2,45} | - auxiliary info: WARNING: INTRAVENOUS use only. Fatal if given by other routes. |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|--|-------------------------|--|--|---|--|
| Bortezomib subcutaneous 3.5 mg (Teva) (RT)(PFL) no preservative ⁵⁶ | 1.4 mL NS ⁵⁶ | 2.5 mg/mL ⁵⁶ | 12 h F, RT ^{2,45} | SC syringe ⁵⁶ | 10 d F, 4 d RT ^{2,45} | - auxiliary info: WARNING: SUBCUTANEOUS use only. Fatal if given by other routes. |
| Brentuximab vedotin 50 mg (Seagen/Pfizer) (F)(PFL) no preservative ⁵⁷ | 10.5 mL SWI ⁵⁷ direct diluent against side of vial during reconstitution ⁵⁷ do NOT shake ⁵⁷ | 5 mg/mL ⁵⁷ | 12 h F ^{2,57} | 0.4-1.8 mg/mL NS , D5W, LR ⁵⁷ 50-100 mL† gently invert to mix ⁵⁷ | 24 h F ^{2,57} | - solution should be colorless, clear to slightly opalescent, and free of visible particulates ⁵⁷ |
| Busulfan 60 mg/10 mL (PMS) (F) no preservative ⁵⁸ | N/A | 6 mg/mL ⁵⁸ | discard unused portion ^{28,58} | dilute to volume 10 times drug volume to achieve final concentration of ~0.5 mg/mL NS , D5W ⁵⁸ 250-1000 mL† | complete administration within 12 h F, 8 h RT ⁵⁸ | - contains DMA*** - always add busulfan to diluent to mix; do NOT add diluent to busulfan ⁵⁸ |

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 ⁵⁹ | N/A | 6 mg/mL ⁵⁹ | discard unused portion ^{21,59} | dilute to volume 10 times drug volume to achieve final concentration of ~0.5 mg/mL NS, D5W ⁵⁹ 250-1000 mL† | in NS : complete administration within 12 h F, 8 h RT ⁵⁹ in D5W : complete administration within 8 h RT ⁵⁹ | - contains DMA*** - always add busulfan to diluent to mix; do NOT add diluent to busulfan ⁵⁹ |
| Cabazitaxel 60 mg/1.5 mL (Dr. Reddy's) (RT) no preservative ⁶⁰ | supplied diluent: withdraw entire contents of diluent vial and inject into the concentrate vial ⁶⁰ slowly direct diluent against inside of vial to limit foaming ⁶⁰ mix by repeated inversions for 45 sec ⁶⁰ do NOT shake ⁶⁰ let sit for 5 min ⁶⁰ | 10 mg/mL ⁶⁰ | 1 h RT ⁶⁰ | 0.10-0.26 mg/mL NS, D5W ⁶⁰ 100-250 mL† | complete administration within 48 h F, 8 h RT ⁶⁰ | - use non-DEHP bag and tubing ⁶⁰ - administer with 0.2 micron in-line filter ⁶⁰ - concentrate and diluent vials contain overfill ⁶⁰ - diluent contains 13% (w/w) ethanol in water ⁶⁰ - discard if crystallization occurs ⁶⁰ |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-----------------------|------------------------|----------------------------------|---|---|--|
| Cabazitaxel 45 mg/4.5 mL 60 mg/6 mL (Formative) (RT) preservative ⁶¹ | N/A | 10 mg/mL ⁶¹ | 10 d F , RT ⁶¹ | 0.10-0.26 mg/mL NS , D5W ⁶¹ 100-250 mL† | complete administration within 48 F, 8 h RT ⁶¹ | <ul style="list-style-type: none"> - use non-DEHP bag and tubing ⁶¹ - administer with 0.2 micron in-line filter ⁶¹ - vials contains overfill ⁶¹ - discard if crystallization occurs ⁶¹ |
| Cabazitaxel 45 mg/4.5 mL 60 mg/6 mL (Sandoz) (RT) preservative ⁶² | N/A | 10 mg/mL ⁶² | 10 d F , RT ⁶² | 0.10-0.26 mg/mL NS , D5W ⁶² 100-250 mL† | complete administration within 48 h F, 8 h RT ⁶² | <ul style="list-style-type: none"> - use non-DEHP bag and tubing ⁶² - administer with 0.2 micron in-line filter ⁶² - vials contain overfill ⁶² - discard if crystallization occurs ⁶² |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|---|-------------------------------|-----------------------------|--|--|--|
| <p>Cabazitaxel 60 mg/1.5 mL (sanofi-aventis) (RT) no preservative ⁶³</p> | <p>supplied diluent: withdraw entire contents of diluent vial and inject into the concentrate vial ⁶³</p> <p>slowly direct diluent against inside of vial to limit foaming ⁶³</p> <p>mix by repeated inversions for 45 sec ⁶³</p> <p>do NOT shake ⁶³</p> <p>let sit for 5 min ⁶³</p> | <p>10 mg/mL ⁶³</p> | <p>1 h RT ⁶³</p> | <p>0.10-0.26 mg/mL NS, D5W ⁶³</p> <p>100-250 mL†</p> | <p>complete administration within 48 h F, 8 h RT ⁶³</p> | <ul style="list-style-type: none"> - 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 |

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 <i>E. coli</i>) 3750 units/5 mL (Servier) (F)(PFL) do not shake no preservative ⁶⁴ | N/A | 750 units/mL ⁶⁴ | discard unused portion ⁶⁴ | 100 mL NS , D5W ⁶⁴ | 24 h F, 4 h RT ⁶⁴ **(PFL) ⁶⁵ | - discard if discolouration, cloudiness, or visible particles are present ⁶⁴ - unopened vials may be stored at RT for 48 h ⁶⁴ - protect IV bag and tubing from light during administration ⁶⁵ |
| CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Accord) (RT)(PFL) no preservative ⁶⁶ | N/A | 10 mg/mL ⁶⁶ | discard unused portion ⁶⁶ | 0.5-10 mg/mL NS , D5W ⁶⁶ 50-250 mL† | 24 h F, 8 h RT ⁶⁶ | - do NOT use aluminum- containing needle, syringe, or tubing ⁶⁶ |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|-------------------------------|------------------------|--|---|--|--|
| CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL 600 mg/60 mL (Omega) (RT)(PFL) no preservative ⁶⁷ | N/A | 10 mg/mL ⁶⁷ | discard unused portion ⁶⁷ | 0.3-10 mg/mL NS , D5W ⁶⁷ 50-250 mL† | 48 h F ⁶⁷ , 24 h RT ⁶⁸ | - 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 (Pfizer/Hospira) (RT)(PFL) no preservative ⁶⁹ | N/A | 10 mg/mL ⁶⁹ | discard unused portion ⁶⁹ | 0.3-10 mg/mL NS , D5W ⁶⁹ 50-250 mL† | 48 h F ⁶⁹ | - do NOT use aluminum- containing needle, syringe, or tubing ⁶⁹ |
| CARBOplatin 50 mg/5 mL 150 mg/15 mL 450 mg/45 mL (Teva) (RT)(PFL) no preservative ⁷⁰ | N/A | 10 mg/mL ⁷⁰ | discard unused portion RT ⁷⁰ | 0.5-10 mg/mL ⁷¹ NS , D5W ^{70,72,73} 50-250 mL† | 8 h F ⁷⁴ , 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 (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|--|------------------------------|---------------------------------------|--|---------------------------------------|---|
| <p>Carfilzomib 10 mg 30 mg 60 mg (Amgen) (F)(PFL) no preservative ⁷⁵</p> | <p>10 mg: 5 mL SWI ⁷⁵</p> <p>30 mg: 15 mL SWI ⁷⁵</p> <p>60 mg: 29 mL SWI ⁷⁵</p> <p>direct diluent against side of vial during reconstitution ⁷⁵</p> <p>swirl gently; do NOT shake ⁷⁵</p> <p>if foaming occurs, allow to settle until clear (~5 min) ⁷⁵</p> | <p>2 mg/mL ⁷⁵</p> | <p>12 h F, 4 h RT ^{2,75}</p> | <p>50-100 mL* D5W only ⁷⁵</p> <p>do NOT dilute in NS ⁷⁵</p> | <p>24 h F, 4 h RT ^{2,75}</p> | <p>- if a CSTD is not used during compounding, a 21 gauge (or larger gauge) needle is recommended to prevent coring of the stopper ⁷⁶⁻⁷⁸ - do not use NS for reconstitution or dilution ⁷⁵ - discard if contains particulates ⁷⁵</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|--|---------------------------------|---|--|---|--|
| Carmustine (note concentration) 100 mg/1 mL 300 mg/3 mL (Marcan) (F)(PFL) no preservative ⁷⁹ | N/A | 100 mg/mL ⁷⁹ | discard unused portion ^{2,79} crystals may be re-dissolved by warming the vial to RT with shaking ⁷⁹ (PFL) ⁷⁹ | 0.2-3.06 mg/mL NS, D5W ^{79,80} 500-1000 mL* in glass or polypropylene containers ⁷⁹ | 10 h RT ⁸¹ or 48 h F plus an additional 8 h RT ⁸¹ **(PFL) ^{79,81} | - CAUTION: alternative concentration - unstable in PVC containers and tubing ⁷⁹ - use non-PVC bag and administration set ⁷⁹ - protect from light for administration ⁷⁹ |
| Carmustine (note concentration) 100 mg (Marcan) (F) no preservative ⁷⁹ | 3 mL supplied diluent ⁷⁹ bring drug and diluent vials to RT prior to mixing ⁷⁹ completely dissolve drug in diluent; solution should be clear when fully dissolved ⁷⁹ | 33.3 mg/mL ⁷⁹ | 20 d F, 24 h RT ⁷⁹ crystals may be re-dissolved by warming the vial to RT with shaking ⁷⁹ (PFL) ⁷⁹ | 0.2-3.06 mg/mL NS, D5W ^{79,82} 500-1000 mL* in glass or polypropylene containers ⁷⁹ | 8 h RT ⁸³ or 48 h F plus an additional 6 h RT ⁸³ **(PFL) ⁸³ | - CAUTION: alternative concentration after reconstitution - supplied diluent is propylene glycol ⁷⁹ - do not use vial if oily film is present - unstable in PVC containers and tubing ⁷⁹ - use non-PVC bag and administration set ⁷⁹ - protect from light for administration ⁷⁹ |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|--|---|---|--|---|---|
| <p>Carmustine 100 mg (SteriMax) (F) no preservative ⁸⁴</p> | <p>3mL supplied diluent ⁸⁴</p> <p>bring drug and diluent vials to RT prior to mixing ⁸⁴</p> <p>completely dissolve drug in diluent, then add 27 mL SWI ⁸⁴</p> | <p>3.3 mg/mL in ethanol 10% ⁸⁴</p> | <p>48 h F ⁸⁴</p> <p>precipitates can be re-dissolved by warming the vial to RT with gentle shaking ⁸⁴</p> | <p>500-1000 mL* NS, D5W ⁸⁴</p> <p>in glass or polypropylene containers ONLY ⁸⁴</p> | <p>8 h RT ⁸⁴</p> <p>or</p> <p>48 h F plus an additional 6 h RT ⁸⁴</p> <p>** (PFL) ⁸⁴</p> | <ul style="list-style-type: none"> - supplied diluent is dehydrated alcohol ⁸⁴ - do not use vial if oily film is present ⁸⁴ - to remix bag contents prior to administration, gently shake final product for ~10 sec ⁸⁴ - use non-PVC bag and administration set ⁸⁴ - protect from light for administration ⁸⁴ |
| <p>Cemiplimab 350 mg/7 mL (Regeneron) (F)(PFL) do not shake no preservative ⁸⁵</p> | <p>N/A</p> | <p>50 mg/mL ⁸⁵</p> | <p>discard unused portion ⁸⁵</p> | <p>1-20 mg/mL NS, D5W ⁸⁵</p> <p>50 mL†</p> <p>mix by gentle inversion ⁸⁵</p> | <p>complete administration within 10 d F, 8 h RT ⁸⁵</p> <p>bring to RT prior to use ⁸⁵</p> | <ul style="list-style-type: none"> - administer with 0.2-5 micron filter ^{2,85} - solution may contain white particulates which do not affect product quality ⁸⁵ |

| 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 |
| Cemiplimab 250 mg/5 mL 350 mg/7 mL (sanofi) (F)(PFL) do not shake no preservative ⁸⁶ | N/A | 50 mg/mL ⁸⁶ | discard unused portion ^{28,86} | 1-20 mg/mL NS, D5W ⁸⁶ 50 mL† mix by gentle inversion | complete administration within 24 h F, 8 h RT ⁸⁶ | - administer with 0.2-5 micron filter ⁸⁶ - solution may contain white particulates which do not affect product quality ⁸⁶ |
| Cetuximab 100 mg/50 mL 200 mg/100 mL (Imclone/Lilly) (F) do not shake no preservative ⁸⁷ | N/A | 2 mg/mL ⁸⁷ | 12 h F, 8 h RT ⁸⁷ | syringe ⁸⁷ | 12 h F, 8 h RT ⁸⁷ | - administer with 0.2 micron filter ⁸⁷ - solution may contain white particulates which do not affect product quality ⁸⁷ |
| | | | | evacuated container or bag ⁸⁷ | | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-----------------------|------------------------------|---|---|------------------------------|--|
| <p>CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Accord) (RT)(PFL) no preservative ⁸⁸</p> | <p>N/A</p> | <p>1 mg/mL ⁸⁸</p> | <p>discard unused portion ²⁸</p> | <p>NS ⁸⁸ 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol ⁸⁸</p> | <p>24 h RT ⁸⁸</p> | <p>- do NOT use aluminum- containing needle, syringe or tubing ⁸⁸ - suggested dose limits relate to the physical limitations of the bag size and added drug volume; it is not a concentration- dependent property of the drug - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-----------------------|------------------------------|---|---|------------------------------|--|
| <p>CISplatin 50 mg/50 mL 100 mg/100mL (Pfizer/Hospira) (RT)(PFL) no preservative ⁸⁹</p> | <p>N/A</p> | <p>1 mg/mL ⁸⁹</p> | <p>discard unused portion ²⁸</p> | <p>NS ⁸⁹ 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol ⁸⁹</p> | <p>24 h RT ⁸⁹</p> | <p>- do NOT use aluminum- containing needle, syringe or tubing ⁸⁹ - suggested dose limits relate to the physical limitations of the bag size and added drug volume; it is not a concentration- dependent property of the drug - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-----------------------|------------------------------|--------------------------------|---|------------------------------|--|
| <p>CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Sandoz) (RT)(PFL) no preservative ⁹⁰</p> | <p>N/A</p> | <p>1 mg/mL ⁹⁰</p> | <p>12 h RT ^{2,91}</p> | <p>NS ⁹⁰ 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol ⁹⁰</p> | <p>24 h RT ⁹¹</p> | <p>- do NOT use aluminum-containing needle, syringe or tubing ⁹⁰ - suggested dose limits relate to the physical limitations of the bag size and added drug volume; it is not a concentration-dependent property of the drug - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-----------------------|------------------------------|---|---|------------------------------|--|
| <p>CISplatin 10 mg/10 mL 50 mg/50 mL 100 mg/100mL (Teva) (RT)(PFL) no preservative ⁹²</p> | <p>N/A</p> | <p>1 mg/mL ⁹²</p> | <p>discard unused portion ²¹</p> | <p>NS ⁹² 100-500 mL† or 2 L D5-½NS or D5-⅓NS containing 37.5 g of mannitol ⁹²</p> | <p>24 h RT ⁹²</p> | <p>- do NOT use aluminum- containing needle, syringe or tubing ⁹² - suggested dose limits relate to the physical limitations of the bag size and added drug volume; it is not a concentration- dependent property of the drug - for ULY0 D-PACE protocol, see entry for DPACE (3-in-1 solution containing etoposide, CISplatin, cyclophosphamide)</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|-----------------------|------------------------------|---|--|--|------------------------------|
| <p>Cladribine 10 mg/10 mL (Fresenius Kabi) (F)(PFL) no preservative ⁹³</p> | <p>N/A</p> | <p>1 mg/mL ⁹³</p> | <p>discard unused portion ⁹³</p> | <p>SC syringe ⁹⁴</p> | <p>48 h F, discard end of day RT ^{28,95,96}</p> | |
| | | | | <p>500 mL NS only ⁹³ do NOT use D5W ⁹³</p> | <p>24 h RT ⁹³</p> | |
| | | | | <p>Cassette: qs to 100 mL with bacteriostatic NS only via SIMS DELTEC INC. MEDICATION CASSETTES® ⁹³ filter drug and diluent through 0.22 micron filter as each solution is being introduced into the cassette ⁹³</p> | <p>at least 7 days ⁹³</p> | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-----------------------|------------------------------|--|--|--|------------------------------|
| <p>Cladribine 10 mg/10 mL (GMP) (F)(PFL) no preservative ⁹⁷</p> | <p>N/A</p> | <p>1 mg/mL ⁹⁷</p> | <p>discard unused portion ^{28,97}</p> | <p>SC syringe ⁹⁴</p> | <p>48 h F, discard end of day RT ^{28,95,96}</p> | |
| | | | | <p>500 mL NS only ⁹⁷ do NOT use D5W ⁹⁷</p> | <p>24 h RT ⁹⁷</p> | |
| | | | | <p>Cassette: qs to 100 mL with bacteriostatic NS only via SIMS DELTEC INC. MEDICATION CASSETTES® ⁹⁷ filter drug and diluent through 0.22 micron filter as each solution is being introduced into the cassette ⁹⁷</p> | <p>at least 7 days ⁹⁷</p> | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-----------------------|------------------------|---|--|------------------------------------|---|
| Crisantaspase recombinant (asparaginase <i>Erwinia chrysanthemum</i>) 10 mg/0.5 mL (Jazz) (F)(PFL) do not shake preservative free ⁹⁸ | N/A | 20 mg/mL ⁹⁸ | discard unused portion ⁹⁸ | IM syringe ⁹⁸ max volume: 2 mL if volume >2 mL, divide volume into separate syringes for administration ⁹⁸ | use within 4 h RT ⁹⁸ | - discard if cloudy, discoloured, or contains particulates ⁹⁸ - do NOT shake ⁹⁸ |

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 |
|---|---|------------------------|----------------------------|---|---------------------------------------|--|
| Cyclophosphamide 200 mg 500 mg 1000 mg 2000 mg (Baxter) (RT)(PFL) no preservative ⁹⁹ | 200 mg ⁹⁹ : 10 mL NS 500 mg ⁹⁹ : 25 mL NS 1000 mg ⁹⁹ : 50 mL NS 2000 mg ⁹⁹ : 100 mL NS | 20 mg/mL ⁹⁹ | 12 h F, RT ^{2,99} | NS , D5W, D5NS ⁹⁹ 100-250 mL† high dose in BMT: may need 500 mL* | 72 h F, 24 h RT ¹⁰⁰ | - 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) - do NOT use aluminum-containing needle, syringe, or tubing ⁹⁹ |

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 |
|--|--|--------------------------|---------------------------|--|---|---|
| Cyclophosphamide 500 mg 1000 mg 2000 mg (SteriMax) (RT)(PFL) no preservative ¹⁰¹ | 500 mg ¹⁰¹ : 25 mL NS 1000 mg ¹⁰¹ : 50 mL NS 2000 mg ¹⁰¹ : 100 mL NS | 20 mg/mL ¹⁰¹ | 12 h F, RT ¹⁰¹ | NS , D5W, D5NS ¹⁰¹ 100-250 mL† high dose in BMT: may need 500 mL* | 72 h F, 24 h RT ¹⁰⁰ | - 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) - do NOT use aluminum-containing needle, syringe, or tubing ¹⁰¹ |
| Cytarabine 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative ¹⁰² | N/A | 100 mg/mL ¹⁰² | 12 h RT ^{2,102} | 0.1-37.5 mg/mL NS , D5W, SWI ¹⁰² 100 mL† | in NS: 4 d RT ^{2,102} other solutions: 72 h F, 24 h RT ¹⁰² **(PFL) ¹⁰² | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|---------------------------------------|--------------------------|---|---|---|--|
| Cytarabine intrathecal 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative ¹⁰² | N/A record time of puncture | 100 mg/mL ¹⁰² | use within 4 h of initial puncture ² | IT syringe qs to 6 mL with preservative free NS ¹⁰³⁻¹⁰⁵ diluent containing preservatives should NOT be used for intrathecal administration ¹⁰⁶ | use within 4 h of initial puncture ² **(PFL) ¹⁰² | - auxiliary info ² : IT - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag ¹⁰⁵ |
| Cytarabine subcutaneous 1000 mg/10mL 2000 mg/20mL (Pfizer/Hospira) (RT)(PFL) no preservative ¹⁰² | N/A | 100 mg/mL ¹⁰² | 12 h RT ^{2,102} | SC syringe | 10 d F, 4 d RT ^{2,107-109} **(PFL) ¹⁰² | |
| Cytarabine 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative ¹¹⁰ | N/A | 100 mg/mL ¹¹⁰ | discard unused portion ^{28,110} | 0.1-37.5 mg/mL NS, D5W, SWI ¹¹⁰ 100 mL† | 10 d F, 48 h RT ¹¹⁰ **(PFL) | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|---------------------------------------|--------------------------|--|--|---|--|
| Cytarabine intrathecal 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative ¹¹⁰ | N/A record time of puncture | 100 mg/mL ¹¹⁰ | use within 4 h of initial puncture ²⁸ | IT syringe qs to 6 mL with preservative free NS ^{103,104} diluents containing preservatives should NOT be used for intrathecal administration ¹⁰⁶ | use within 4 h of initial puncture ²⁸ **(PFL) | - auxiliary info: IT ²⁸ - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag ¹⁰⁵ |
| Cytarabine subcutaneous 1000 mg/10mL 2000 mg/20mL (PMS) (RT)(PFL) no preservative ¹¹⁰ | N/A | 100 mg/mL ¹¹⁰ | discard unused portion ^{28,110} | SC syringe | 10 d F, 48 h RT ¹¹⁰ **(PFL) | |
| Cytarabine 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative ¹¹¹ | N/A | 100 mg/mL ¹¹¹ | 12 h RT ^{2,111} | 0.1-37.5 mg/mL NS , D5W, SWI, LR ¹¹¹ 100 mL* | in NS: 4 d RT ^{2,111} other solutions: 72 h F, 24 h RT ¹¹¹ **(PFL) ¹¹¹ | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|---------------------------------------|--------------------------|---|---|---|---|
| Cytarabine intrathecal 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative ¹¹¹ | N/A record time of puncture | 100 mg/mL ¹¹¹ | use within 4 h of initial puncture ² | IT syringe qs to 6 mL with preservative free NS ¹⁰³⁻¹⁰⁵ diluent containing preservatives should NOT be used for intrathecal administration ¹⁰⁶ | use within 4 h of initial puncture ² **(PFL) ¹¹¹ | - auxiliary info: IT ² - label to include route in full (i.e., INTRATHECAL injection) attached to both syringe and outer ziplock bag ¹⁰⁵ |
| Cytarabine subcutaneous 2000 mg/20mL (SteriMax) (RT)(PFL) no preservative ¹¹¹ | N/A | 100 mg/mL ¹¹¹ | 12 h RT ^{2,111} | SC syringe | 10 d F, 4 d RT ^{2,107-109} **(PFL) ¹¹¹ | |
| Dacarbazine 600 mg (Pfizer) (F)(PFL) no preservative ¹¹² | 59.1 mL SWI ¹¹² | 10 mg/mL ¹¹² | 12 h F, 8 h RT ^{2,112} | 0.19-3.0 mg/mL NS , D5W ¹¹² 500-1000 mL† | 24 h F ¹¹² **(PFL) ¹¹³ | - protect container from light during administration ¹¹³ |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|--|--|--|--|--|---|
| DACTINomycin 0.5 mg (GMD/Recordati) (RT)(PFL) no preservative ¹¹⁴ (SAP) | 1.1 mL SWI ¹¹⁴ do NOT use SWI with preservative (may form precipitate) ¹¹⁴ | 0.5 mg/mL (500 mcg/mL) ¹¹⁴ | discard unused portion ¹¹⁵ | syringe ¹¹⁴ | use within 4 h of initial vial puncture ¹¹⁵ | - drug loss reported with some cellulose ester membrane in- line filters ¹¹⁴ |
| | | | | 10 mcg/mL or greater ¹¹⁴ NS, D5W ^{114,116} | | |
| Daratumumab 100 mg/5mL 400 mg/20mL (Janssen) (F)(PFL) do not shake no preservative ¹¹⁷ | N/A | 20 mg/mL ¹¹⁷ | discard unused portion ¹¹⁷ | 500-1000 mL NS dilute to final volume by withdrawing volume from bag equal to volume of drug to be added ¹¹⁷ mix by gentle inversion ¹¹⁷ | 24 h F , followed by 15 h infusion (total 39 h) ¹¹⁷ allow bag to come to RT, then use immediately ¹¹⁷ **(PFL) | - administer with 0.2 micron in-line filter ¹¹⁷ - discard if visible particles are observed ¹¹⁷ - complete infusion within 15 h ¹¹⁷ |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|---|---|--|---|--|--|
| <p>Daratumumab subcutaneous (DARZALEX SC®) 1800 mg/15 mL (Janssen) (F)(PFL) do not shake no preservative ¹¹⁸</p> | <p>N/A</p> | <p>120 mg/mL ¹¹⁸ allow vial to come to RT prior to use ¹¹⁸</p> | <p>discard unused portion ^{2,118}</p> | <p>SC syringe ¹¹⁸</p> | <p>24 h F, plus an additional 12 h RT ¹¹⁸ bring to RT prior to use ¹¹⁸</p> | <p>- contains hyaluronidase ¹¹⁸ - formulations are NOT interchangeable ¹¹⁸ - discard if opaque particles or discolouration are present ¹¹⁸ - unpunctured vial may be stored up to 24 h at RT ¹¹⁸</p> |
| <p>Datopotamab deruxtecan 100 mg (Daiichi) (F)(PFL) no preservative ¹¹⁹</p> | <p>5 mL SWI ¹¹⁹ gently swirl to mix do not shake ¹¹⁹ record time of reconstitution ¹¹⁹</p> | <p>20 mg/mL ¹¹⁹</p> | <p>discard unused portion ¹¹⁹</p> | <p>0.1-6.7 mg/mL D5W ONLY ¹¹⁹ 100 mL * gently invert to mix do not shake ¹¹⁹ do NOT use sodium chloride solution ¹¹⁹</p> | <p>24 h F from initial vial puncture ¹¹⁹ **(PFL) ¹¹⁹ bring to RT prior to use ¹¹⁹ MAX time at RT = 4.5 h from initial vial puncture (including preparation, storage at RT, and administration time) ¹¹⁹</p> | <p>- NOT compatible with saline ¹¹⁹ - administer with 0.2 micron in-line filter ¹¹⁹ - protect infusion bag from light for administration ¹¹⁹</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|-------------------------|------------------------|---|---|--|------------------------------|
| DAUNOrubicin 20 mg (Erfa) (RT)(PFL) no preservative ¹²⁰ | 4 mL SWI ¹²⁰ | 5 mg/mL ¹²⁰ | 12 h F, RT ^{2,120} **(PFL) ¹²⁰ | 100-250 mL NS, D5W ¹²⁰ | 48 h F, 24 h RT ¹²¹ **(PFL) ¹²⁰ | |
| DAUNOrubicin 20 mg/4 mL (Hikma) (F)(PFL) no preservative ¹²² | N/A | 5 mg/mL ¹²² | discard unused portion ² | 100-250 mL ¹²² NS, D5W | 7 d F, 30 h RT ¹²³ **(PFL) ¹²² | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|---|--|---|---|--|--|
| <p>Daunorubicin-cytarabine liposome 44 mg-100 mg (Jazz) (F)(PFL) no preservative ¹²⁴</p> | <p>19 mL SWI ¹²⁴</p> <p>allow vial to come to RT for 30 min prior to use ¹²⁴</p> <p>swirl gently for 5 min, inverting the vial every 30 sec; do NOT shake ¹²⁴</p> <p>allow vial to rest for 15 min after reconstitution ¹²⁴</p> <p>gently invert each vial 5 times prior to withdrawing concentrate for dilution ¹²⁴</p> <p>record time of reconstitution</p> | <p>2.2 mg/mL daunorubicin- 5 mg/mL cytarabine ¹²⁴</p> | <p>4 h F ¹²⁴</p> <p>max <i>combined</i> storage time for reconstituted vial and diluted product is 4 h F¹²⁴ (NOT 4 h F each)</p> | <p>500 mL NS, D5W ¹²⁴</p> <p>mix by gentle inversion ¹²⁴</p> | <p>use within 4h F ¹²⁴ of initial vial puncture</p> <p>max <i>combined</i> storage time for reconstituted vial and diluted product is 4 h F¹²⁴ (NOT 4 h F each)</p> | <p>- reconstituted product is an opaque, purple, homogenous dispersion ¹²⁴</p> <p>- before administration, final product should be gently inverted to remix solution after refrigeration ¹²⁴</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|--|-------------------------|-----------------------|---|-----------------------|------------------------------|
| Degarelix 80 mg 120 mg (Ferring) (RT) do not shake ¹²⁵ no preservative ¹²⁶ | 80 mg: 4.2 mL SWI (supplied diluent) ¹²⁵ | 20 mg/mL ¹²⁵ | 2 h RT ¹²⁵ | SC syringe ¹²⁵ | 2 h RT ¹²⁵ | |
| | 120 mg: 3 mL SWI (supplied diluent) ¹²⁵ | 40 mg/mL ¹²⁵ | | | | |
| | swirl gently; avoid shaking to prevent foam formation ¹²⁵ reconstitution may take up to 15 min ¹²⁵ | | | | | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|-----------------------|--------------------------------|--|---|---|--|
| <p>Denosumab (WYOST®) 120 mg/1.7 mL (Sandoz) (F)(PFL) do not shake no preservative ¹²⁷</p> | <p>N/A</p> | <p>71 mg/mL ¹²⁷</p> | <p>discard unused portion ¹²⁷</p> | <p>SC syringe ¹²⁷</p> | <p>use within 4 h F, RT of initial puncture ¹¹⁵</p> <p>bring to RT 15-30 min prior to use ¹²⁷</p> | <ul style="list-style-type: none"> - NOT interchangeable with PROLIA® or JUBBONTI® - do not use if solution is cloudy or contains visible particles ¹²⁷ - avoid vigorous shaking ¹²⁷ - use a 27 gauge needle to withdraw drug from vial ¹²⁷ |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|--|-------------------------|--|--|--|---|
| Denosumab (XGEVA®) 120 mg/1.7 mL (Amgen) (F)(PFL) do not shake no preservative ¹²⁸ | N/A | 71 mg/mL ¹²⁸ | discard unused portion ^{115,128} | SC syringe ¹²⁸ | use within 4 h F, RT of initial puncture ¹¹⁵ bring to RT 15-30 min prior to use ¹²⁸ | - NOT interchangeable with PROLIA® ¹²⁸ or JUBBONTI® - do not use if solution is cloudy ¹²⁸ -trace amounts of translucent to white proteinaceous particles are acceptable ¹²⁸ - avoid vigorous shaking ¹²⁸ - use a 27 gauge needle to withdraw drug from vial ¹²⁹ |
| Dexrazoxane 250 mg 500 mg (Juno) (RT) no preservative ¹³⁰ | 250 mg ¹³⁰ : 25 mL SWI 500 mg ¹³⁰ : 50 mL SWI | 10 mg/mL ¹³⁰ | 3 h F, 30 min RT ¹³⁰ | dilute with LR in empty infusion bag to final concentration of 1.3-3.0 mg/mL ¹³⁰ qs to 110-600 mL† | 4 h F, 1 h RT ¹³⁰ | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|---|---------------------------------|---|---|---|--------------------------------------|
| <p>Dexrazoxane 250 mg 500 mg (Pfizer) (RT) no preservative ¹³¹</p> | <p>250 mg: 25 mL SWI ¹³¹</p> <p>500 mg: 50 mL SWI ¹³¹</p> | <p>10 mg/mL ¹³¹</p> | <p>3 h F, 30 min RT ¹³¹</p> | <p>dilute with LR in empty infusion bag to final concentration of 1.3-3.0 mg/mL ¹³¹</p> <p>qs to 110-600 mL†</p> | <p>4 h F, 1 h RT ¹³¹</p> | |
| <p>Dinutuximab 17.5 mg/5 mL (Unither/United) (F)(PFL) do not shake no preservative ¹³²</p> | <p>N/A</p> | <p>3.5 mg/mL ¹³²</p> | <p>discard unused portion ²⁸</p> | <p>100 mL NS ¹³²</p> <p>mix by gentle inversion ¹³²</p> | <p>initiate infusion within 4 h of dilution; refrigerate bag if not hung immediately ¹³²</p> <p>complete administration within 24 h of dilution ¹³²</p> | <p>- do NOT shake ¹³²</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|-----------------------|--------------------------------|---|---|--|---|
| <p>DOCEtaxel 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Pfizer/Hospira) (F, RT)(PFL) preservative ¹³³</p> | <p>N/A</p> | <p>10 mg/mL ¹³³</p> | <p>20mg: discard unused portion ^{2,133}</p> <p>80 mg or 160 mg: 28 d F ^{2,133}</p> <p>** (PFL) ¹³³</p> <p>(max number of punctures: up to 3 doses can be removed when a filtered venting needle [e.g., Chemo- Vent®] is also inserted, i.e., 6 punctures total) ¹³⁴</p> | <p>0.3-0.74 mg/mL NS, D5W ¹³³</p> <p>25-500 mL†</p> | <p>10 d F, 4 d RT ^{2,135}</p> <p>** (PFL) ¹³⁵ during F storage</p> | <p>- use non-DEHP bag and IV administration sets ¹³³</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-----------------------|--------------------------------|--|--|---|---|
| <p>DOCEtaxel intravesical 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Pfizer/Hospira) (F, RT)(PFL) preservative ¹³³</p> | <p>N/A</p> | <p>10 mg/mL ¹³³</p> | <p>20 mg: discard unused portion ^{2,133}</p> <p>80 mg or 160 mg: 28 d F ^{2,133}</p> <p>** (PFL) ¹³³</p> <p>(max number of punctures: up to 3 doses can be removed when a filtered venting needle [e.g., Chemo- Vent®] is also inserted, i.e., 6 punctures total) ¹³⁴</p> | <p>syringe</p> <p>dilute with NS to final volume of 45 mL ^{136,137}</p> | <p>up to 0.9 mg/mL: 10 d F, 4 d RT ^{2,135}</p> <p>** (PFL) ¹³⁵ during F storage</p> | |
| <p>DOCEtaxel 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Sandoz) (F,RT)(PFL) preservative ¹³⁸</p> | <p>N/A</p> | <p>10 mg/mL ¹³⁸</p> | <p>28 d F, RT ^{2,139}</p> | <p>0.3-0.74 mg/mL NS, D5W ¹³⁸</p> <p>25-500 mL†</p> | <p>24 h F, 4 h RT ^{2,140}</p> | <p>- use non-DEHP bag and IV administration sets ¹³⁸</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-------------------------------|-------------------------|--|---|---|--|
| DOCetaxel intravesical 20 mg/2 mL 80 mg/8 mL 160 mg/16 mL (Sandoz) (F,RT)(PFL) preservative ¹³⁸ | N/A | 10 mg/mL ¹³⁸ | 28 d F, RT ^{2,139} | syringe dilute with NS to final volume of 45 mL ^{136,137} | up to 0.9 mg/mL ^{141,142} ; use immediately after preparation to prevent particle formation ^{2,140} | - particle formation occurs earlier with higher temperature and higher concentrations ¹⁴⁰ |
| Dostarlimab 500 mg/10 mL (Glaxo) (F)(PFL) no preservative ¹⁴³ | N/A | 50 mg/mL ¹⁴³ | discard unused portion ¹⁴³ | 2-10 mg/mL NS, D5W ¹⁴³ 100 mL* mix by gentle inversion ¹⁴³ | complete administration within 24 h F, 6 h RT ¹⁴³ if refrigerated, bring bag to RT prior to administration ¹⁴³ | - do not shake ¹⁴³ - discard if visible particles are present ¹⁴³ - administer with 0.2 micron in-line filter ¹⁴³ |

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 |
|---|-----------------------|------------------------|--------------------|---|---|--|
| DOXOrubicin 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 200 mg/100 mL (Accord) (F)(PFL) no preservative ¹⁴⁴ | N/A | 2 mg/mL ¹⁴⁴ | 8 h ¹⁴⁴ | syringe ¹⁴⁴ | 24 h F, RT from initial vial puncture ¹⁴⁴ | - for LYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing either etoposide or etoposide phosphate AND DOXOrubicin and vinCRISine) |
| | | | | 0.01–2 mg/mL NS ^{145,146} 1000 mL ¹⁴⁷⁻¹⁴⁹ | 24 h RT ^{145,146} | |
| DOXOrubicin 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 200 mg/100 mL (Teva) (F)(PFL) no preservative ¹⁵⁰ | N/A | 2 mg/mL ¹⁵⁰ | 8 h ¹⁵⁰ | syringe ¹⁵⁰ | 48 h F, 24 h RT ¹⁵⁰ from initial vial puncture | - for LYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing either etoposide or etoposide phosphate AND DOXOrubicin and vinCRISine) |
| | | | | 0.01–2 mg/mL NS ^{145,146} 1000 mL ¹⁴⁷⁻¹⁴⁹ | 24 h RT ^{145,146} | |

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 |
|--|-----------------------|------------------------|--|---|--------------------------------|--|
| DOXOrubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Pfizer) (F) no preservative ¹⁵¹ | N/A | 2 mg/mL ¹⁵¹ | discard unused portion ^{115,151} | syringe ¹⁵¹ | 48 h F, 24 h RT ¹⁵¹ | - for LYEPOCHR protocol, see entry for EPOCHR (3-in-1 solution containing either etoposide or etoposide phosphate AND DOXOrubicin and vinCRISine) |
| | | | | 0.01–2 mg/mL NS ^{145,146} 1000 mL ¹⁴⁷⁻¹⁴⁹ | 24 h RT ^{145,146} | |
| DOXOrubicin Pegylated Liposomal 20 mg/10 mL (Janssen) (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 |
| DOXOrubicin Pegylated Liposomal 20 mg/10 mL 50 mg/25 mL (Taro/Sun Pharma) (F) no preservative ¹⁵³ | N/A | 2 mg/mL ¹⁵³ | discard unused portion ¹⁵³ | D5W only ¹⁵³ <90 mg ¹⁵³ : 250 mL ≥90 mg ¹⁵³ : 500mL | 24 h F ¹⁵³ | - do not filter ¹⁵³ |

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 |
|--|---|--|--|---|---|--|
| DOXOrubicin Pegylated Liposomal 20 mg/10 mL 50 mg/25 mL (Sun Pharma ¹⁵⁴ USA) (F) no preservative ^{153,155} | N/A | 2 mg/mL ¹⁵³ | discard unused portion ¹⁵³ | D5W only ¹⁵³ <90 mg ¹⁵³ : 250 mL ≥90 mg ¹⁵³ : 500mL | 24 h F ¹⁵³ | - do not filter ¹⁵³ - discard if discoloured or contains particulates ¹⁵³ |
| DPACE (ULY0D-PACE protocol) (RT) no preservative ^{2,149,156,157} | 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 ^{148,156,157} | ≤0.2 mg/mL: 24 h RT ^{2,156,157} | - final product is a 3-in-1 solution containing etoposide, CISplatin, cyclophosphamide (see ULY0D-PACE protocol) - use non-DEHP bag and tubing only - administer with 0.2 micron in-line filter |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|-----------------------|---|--|--|--|--|
| <p>Durvalumab 120 mg/2.4 mL 500 mg/10 mL (AstraZeneca) (F)(PFL) do not shake no preservative ¹⁵⁸</p> | <p>N/A</p> | <p>50 mg/mL ¹⁵⁸</p> | <p>discard unused portion ¹⁵⁸</p> | <p>1-15 mg/mL NS, D5W ¹⁵⁸ 100 mL† mix by gentle inversion ¹⁵⁸</p> | <p>10 d F, 12 h RT ^{2,158}</p> | <p>- do NOT shake ¹⁵⁸ - administer with 0.2 micron in-line filter ¹⁵⁸ - discard vial if solution is cloudy, discolored, or visible particles are present ¹⁵⁸ - use filtered venting needle (e.g., Chemo- Vent®) in place of CSTD for compounding ¹⁵⁹</p> |
| <p>Elranatamab 44 mg/1.1 mL 76 mg/1.9 mL (Pfizer) (F)(PFL) do not shake no preservative ¹⁶⁰</p> | <p>N/A</p> | <p>40 mg/mL ¹⁶⁰ allow vials to reach RT before using ¹⁶⁰</p> | <p>discard unused portion ¹⁶⁰</p> | <p>SC syringe ¹⁶⁰</p> | <p>use within 4 h F, RT ¹⁶⁰</p> | <p>- do not use if contains particulates ¹⁶⁰</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|---|-------------------------|-------------------------|---|---|---|
| Enfortumab vedotin 20 mg 30 mg (Seagen) (F)(PFL) do not shake no preservative ¹⁶¹ | 20 mg ¹⁶¹ : 2.3 mL SWI 30 mg ¹⁶¹ : 3.3 mL SWI slowly swirl until completely dissolved; do not shake ¹⁶¹ allow to settle until bubbles are gone (≥1 min) ¹⁶¹ | 10 mg/mL ¹⁶¹ | 12 h F ^{2,161} | 0.3-4 mg/mL NS , D5W, LR ¹⁶¹ 50 mL* mix by gentle inversion ¹⁶¹ | 16 h F ¹⁶¹ **(PFL) ¹⁶¹ | - discard if visible particles are present or solution is discolored ¹⁶¹ - do not shake ¹⁶¹ |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|---|---|--|--|--|---|
| <p>Epcoritamab (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative ¹⁶²</p> | <p>N/A</p> <p>bring vial to RT prior to use (<1 h) ¹⁶²</p> <p>gently swirl vial prior to use ¹⁶²</p> <p>do not invert, vortex, or shake ¹⁶²</p> | <p>5 mg/mL ¹⁶²</p> <p>For Step-up Dose 1 (0.16 mg) ¹⁶²</p> <p>To create intermediate vial (0.8 mg/mL): using 4 mg vial: transfer 0.8 mL drug solution into empty vial and add 4.2 mL NS; gently swirl for 30-45 sec</p> | <p>discard unused portion ¹⁶²</p> | <p>SC syringe ¹⁶²</p> <p>For Step-up Dose 1 (0.16 mg) ¹⁶²</p> <p>To create dosing vial (0.16 mg/mL): transfer 2.0 mL from intermediate vial into the dosing vial and add 8.0 mL NS; gently swirl for 30-45 sec</p> <p>withdraw 1.0 mL into syringe for administration ¹⁶²</p> <p>mix gently; do not invert, vortex, or shake ¹⁶²</p> | <p>24 h F, 12 h RT ¹⁶² (RT storage includes preparation)</p> <p>** (PFL) ¹⁶²</p> | <p>- CAUTION: two concentrations are available - use 4 mg vial for step-up doses only ¹⁶² - do not use CSTD for volumes less than 1 mL ²; use filtered venting needle (Chemo- Vent®) for preparation - minimize exposure to daylight ¹⁶²</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|---|--|--|---|--|--|
| <p>Epcoritamab (AbbVie) 4 mg/0.8 mL (F)(PFL) do not shake no preservative ¹⁶²</p> | <p>N/A</p> <p>bring vial to RT prior to use (<1 h) ¹⁶²</p> <p>gently swirl vial prior to use ¹⁶²</p> <p>do not invert, vortex, or shake ¹⁶²</p> | <p>5 mg/mL ¹⁶²</p> <p>For Step-up Dose 2 (0.8 mg) ¹⁶²</p> <p>To create intermediate vial (0.8 mg/mL): using 4 mg vial: transfer 0.8 mL drug solution into empty vial and add 4.2 mL NS; gently swirl for 30-45 sec</p> | <p>discard unused portion ¹⁶²</p> | <p>SC syringe ¹⁶²</p> <p>For Step-up Dose 2 (0.8 mg) ¹⁶²</p> <p>withdraw 1.0 mL from the intermediate vial into syringe for administration</p> <p>mix gently; do not invert, vortex, or shake ¹⁶²</p> | <p>24 h F, 12 h RT ¹⁶² (RT storage includes preparation)</p> <p>** (PFL) ¹⁶²</p> | <p>- CAUTION: two concentrations are available ¹⁶² - use 4 mg vial for step-up doses only ¹⁶² - do not use CSTD for volumes less than 1 mL ²; use filtered venting needle (Chemo- Vent®) for preparation - minimize exposure to daylight ¹⁶²</p> |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|---|--------------------------------|--|--|--|---|
| <p>Epcoritamab (AbbVie) 48 mg/0.8 mL (F)(PFL) do not shake no preservative ¹⁶²</p> | <p>N/A</p> <p>bring vial to RT prior to use (<1 h) ¹⁶²</p> <p>gently swirl vial prior to use ¹⁶²</p> <p>do not invert, vortex, or shake ¹⁶²</p> | <p>60 mg/mL ¹⁶²</p> | <p>discard unused portion ¹⁶²</p> | <p>SC syringe ¹⁶²</p> <p>do not invert, vortex, or shake ¹⁶²</p> | <p>24 h F, 12 h RT ¹⁶² (RT storage includes preparation)</p> <p>** (PFL) ¹⁶²</p> | <p>- CAUTION: two concentrations are available - use 48 mg vial for full doses only ¹⁶² - do not use CSTD for volumes less than 1 mL ²; use filtered venting needle (Chemo- Vent®) for preparation - minimize exposure to daylight ¹⁶²</p> |
| <p>Epirubicin 10 mg/5 mL 20 mg/10 mL 50 mg/25 mL 150 mg/75 mL 200 mg/100 mL (Teva/Novopharm) (F)(PFL) no preservative ¹⁶³</p> | <p>N/A</p> | <p>2 mg/mL ¹⁶³</p> | <p>8 h F, RT ¹⁶³</p> | <p>syringe ¹⁶³</p> | <p>48 h F, 24 h RT from initial vial puncture ¹⁶³</p> | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|---------------------------------------|------------------------|---------------------------|--|---|--------------------------------------|
| Epirubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Fresenius Kabi) (F)(PFL) no preservative ¹⁶⁴ | N/A record time of puncture | 2 mg/mL ¹⁶⁴ | 8 h ¹⁶⁴ | syringe ¹⁶⁴ | 48 h F , 24 h RT from initial vial puncture ¹⁶⁴ | |
| | | | | 100 mL* NS , D5W | 48 h F , RT ^{21,164} | |
| Epirubicin 10 mg/5 mL 50 mg/25 mL 200 mg/100 mL (Pfizer) (F)(PFL) no preservative ¹⁶⁵ | N/A record time of puncture | 2 mg/mL ¹⁶⁵ | 8 h ¹⁶⁵ | syringe ¹⁶⁵ | 48 h F , 24 h RT from initial vial puncture ¹⁶⁵ | |
| | | | | 100 mL* NS , D5W ⁷² | 48 h F , RT ¹⁶⁶ | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|--|--|--|---|---|--|
| EPOCHR (LYEPOCHR protocol) (RT) no preservative ^{21,167-170} | 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 ^{171,172} | 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 ¹⁷³ | 4 d RT, 5 d F ^{2,171} | - final product is a 3-in-1 solution containing etoposide phosphate , DOXOrubicin, and vinCRISTine (refer to LYEPOCHR protocol) |

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 |
|---|-----------------------|--------------------------|---|---|-------------------------------|--|
| eriBULin 1 mg/2 mL (Dr Reddy) (RT) ¹⁷⁴ preservative ² | N/A | 0.5 mg/mL ¹⁷⁴ | discard unused portion ¹⁷⁴ | IV syringe ¹⁷⁴ | 24 h F, 6 h RT ¹⁷⁴ | - do not dilute or administer with dextrose containing solutions ¹⁷⁴ - vials contain dehydrated alcohol USP (5% v/v) ¹⁷⁴ |
| eriBULin 1 mg/2 mL (Eisai Limited) (RT) ¹⁷⁵ preservative ² | N/A | 0.5 mg/mL ¹⁷⁵ | discard unused portion ^{21,175} | IV syringe ¹⁷⁵ | 24 h F, 6 h RT ¹⁷⁵ | - do not administer through dextrose containing lines ¹⁷⁵ - vials contain dehydrated alcohol USP (5% v/v) ¹⁷⁵ |
| eriBULin 1 mg/2 mL (Natco) (RT) ¹⁷⁶ preservative ² | N/A | 0.5 mg/mL ¹⁷⁶ | discard unused portion ¹⁷⁶ | IV syringe ¹⁷⁶ | 24 h F, 6 h RT ¹⁷⁶ | - do not dilute or administer with dextrose containing solutions ¹⁷⁶ - vials contain dehydrated alcohol USP (5% v/v) ¹⁷⁶ |

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 ¹⁷⁷ | N/A | 20 mg/mL ¹⁷⁷ | discard unused portion ¹⁷⁷ | 0.2-0.4 mg/mL NS ¹⁷⁷ 100-1000 mL† | stability is concentration dependent 0.2-0.3 mg/mL: 7 d F, ¹⁷⁸ 2 d RT ^{178,179} 0.4-0.5 mg/mL: 1 d F, ¹⁷⁸ 1d RT ¹⁷⁸ 0.6-9.0 mg/mL: generally unstable 9.5 mg/mL: 2 d F, ¹⁷⁸ 1d RT ¹⁷⁸ 10-12 mg/mL: 7 d F, ¹⁷⁸ 2 d RT ^{178,179} | - use non-DEHP bag and tubing only - administer with 0.2 micron in-line filter ¹⁸⁰ - 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 ¹⁷⁷ | 4 h RT ^{177,181} | |

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 ¹⁸²⁻¹⁸⁴ (SAP) | 5 mL NS , D5W, SWI, BWI ¹⁸⁵ | 20 mg/mL ¹⁸⁵ | in NS , D5W, SWI: 12 h F, RT ^{2,185} in BWI: 7 d F, 48 h RT ¹⁸⁵ | 500 mL NS , D5W ¹⁸⁵ (do not dilute to less than 0.1 mg/mL) ¹⁸⁵ | 24 h F, RT ¹⁸⁵ | - 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 ¹⁸⁵ | 10 mg/mL ¹⁸⁵ | | | | |
| Filgrastim (NEUPOGEN®) 300 mcg/1 mL 480 mcg/1.6 mL (Amgen) (F)(PFL) do not shake no preservative ¹⁸⁶ | N/A | 300 mcg/mL ¹⁸⁶ | discard unused portion ¹⁸⁶ | SC syringe ¹⁸⁶ | 10 d F ^{2,187} | - albumin is added to D5W to prevent filgrastim adsorption to plastic ¹⁸⁶ - incompatible with saline ^{186,188} - do NOT dilute to concentration less than 5 mcg/mL ¹⁸⁶ |
| | | | | 50-100 mL D5W only ¹⁸⁸ in PVC, polyolefin, or glass ¹⁸⁶ (for filgrastim concentrations of 5-15 mcg/mL in D5W, add albumin 2 mg/mL) ¹⁸⁶ | 7 d F ¹⁸⁷ | |

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 ¹⁸⁹ | N/A | 300 mcg/mL ¹⁸⁹ | discard unused portion ¹⁸⁹ | SC syringe | 10 d F, 24 h RT ^{2,190} | - albumin is added to D5W to prevent filgrastim adsorption to plastic ¹⁸⁹ - incompatible with saline ¹⁸⁹ - do NOT dilute to concentration less than 5 mcg/mL ¹⁸⁹ |
| | | | | 50-100 mL D5W only ¹⁸⁸ in PVC, polyolefin, or glass ¹⁸⁹ (for filgrastim concentrations of 5-15 mcg/mL in D5W, add albumin 2 mg/mL) ¹⁸⁹ | complete administration within 24 h RT ¹⁹¹ | |
| Fludarabine 50 mg (Accord) (F) no preservative ¹⁹² | N/A | 25 mg/mL ¹⁹² | discard unused portion ¹⁹² | dilute to maximum of 1 mg/mL NS , D5W ¹⁹² 100 mL† | 72 h F, 24 h RT ¹⁹² | |

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 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 | |
| Fluorouracil 5000 mg/100 mL (Accord) (RT)(PFL) no preservative ¹⁹⁴ | N/A | 50 mg/mL ¹⁹⁴ | 12 h RT ^{2,195} | syringe ¹⁹⁴ | 4 d RT ¹⁹⁵ | |
| | | | | 0.5-10 mg/mL D5W ¹⁹⁵ 500 mL† | 4 d RT ¹⁹⁵ | |
| | | | | CIVI: ambulatory pump ¹⁹⁶ | complete within 8 d ¹⁹⁵ | |

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 ¹⁹⁷ | N/A | 50 mg/mL ¹⁹⁷ | 12 h RT ^{2,198} | syringe | 4 d RT ^{2,198} | |
| | | | | 0.35-15 mg/mL D5W ¹⁹⁸ 500 mL† | 10 d F, 4 d RT ^{2,198} | |
| | | | | CIVI: ambulatory pump ¹⁹⁶ | complete within 8 d ¹⁹⁹⁻²⁰¹ | |
| Gemcitabine 1000 mg 2000 mg (Accord) (RT) no preservative ²⁰² | 1000 mg: 25 mL NS ²⁰² 2000 mg: 50 mL NS ²⁰² | 38 mg/mL ²⁰² | 12 h RT ^{2,202} refrigeration may cause crystallization ²⁰² | syringe ²⁰² | 24 h RT ^{2,202} | |
| | | | | 0.1-38 mg/mL NS ²⁰² 50-250 mL† | 4 d RT ^{2,203,204} | |
| Gemcitabine intravesical 1000 mg 2000 mg (Accord) (RT) no preservative ²⁰² | 1000 mg: 25 mL NS ²⁰² 2000 mg: 50 mL NS ²⁰² | 38 mg/mL ²⁰² | 12 h RT ^{2,202} refrigeration may cause crystallization ²⁰² | syringe dilute with NS to final volume of 45-90 mL ^{136,137,205-207} | up to 38 mg/mL: 24 h RT ^{2,202} | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-----------------------|-------------------------|--|---|---|---|
| Gemcitabine 200 mg/5.3 mL 1000 mg/26.3 mL 2000 mg/52.6 mL (Pfizer/Hospira) (F) no preservative ²⁰⁷ | N/A | 38 mg/mL ²⁰⁷ | discard unused portion ²⁰⁷ | syringe ²⁰⁷ | 0.1-26 mg/mL: 10 d F, 24 h RT ** (PFL) ^{2,208,209} 27-38 mg/mL: 24 h RT ²⁰⁹ | |
| | | | | 0.1-38 mg/mL NS, D5W ²⁰⁷ 50-250 mL† | | |
| Gemcitabine intravesical 200 mg/5.3 mL 1000 mg/26.3 mL 2000 mg/52.6 mL (Pfizer/Hospira) (F) no preservative ²⁰⁷ | N/A | 38 mg/mL ²⁰⁷ | discard unused portion ²⁰⁷ | syringe dilute with NS to final volume of 45-90 mL ^{136,137,205-207} | 0.1-26 mg/mL: 10 d F, 24 h RT ** (PFL) ^{2,208,209} 27-38 mg/mL: 24 h RT ²⁰⁹ | |
| Gemcitabine (NOTE: concentration) 200 mg/5 mL 1000 mg/25 mL 2000 mg/50 mL (Sandoz) (F) no preservative ²¹⁰ | N/A | 40 mg/mL ²¹⁰ | discard unused portion ²¹⁰ | syringe ²¹⁰ | 1-25 mg/mL: 10 d F, 4 d RT ^{2,210,211} 26-40 mg/mL: 24 h RT ²¹⁰ | CAUTION: alternative concentration |
| | | | | 0.1-40 mg/mL NS, D5W ²¹⁰ 50-250 mL† | | |

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) <u>intravesical</u> 200 mg/5 mL 1000 mg/25 mL 2000 mg/50 mL (Sandoz) (F) no preservative ²¹⁰ | N/A | 40 mg/mL ²¹⁰ | discard unused portion ²¹⁰ | syringe dilute with NS to final volume of 45-90 mL ^{136,137,205-207} | 1-25 mg/mL: 10 d F, 4 d RT ^{2,210,211} 26-40 mg/mL: 24 h RT ²¹⁰ | CAUTION: alternative concentration |
| Gemtuzumab ozogamicin 4.5 mg (Pfizer) (F)(PFL) no preservative ²¹² | 5 mL SWI ²¹² allow vial to come to RT prior to use (~5 min) ²¹² swirl gently to mix; do NOT shake ²¹² | 1 mg/mL ²¹² | 6 h F, 3 h RT ²¹² protect from light if not used immediately ²¹² | 0.075-0.234 mg/mL NS ²¹² 25-50 mL† mix by gentle inversion; do NOT shake ²¹² | complete administration within 12 h F, 6 h RT ²¹² (PFL)** if refrigerated, bring bag to RT over 1 h prior to administration ²¹² | - administer with 0.2 micron in-line filter ²¹² - protect infusion bag from light (including UV) for administration ²¹² - protect administration line from light ONLY if hang time will be longer than 2 h ^{212,213} - solution may contain white particulates which do not affect product quality ²¹² |

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 |
|---|-----------------------|------------------------|--|---|---|--|
| Glofitamab 2.5 mg/2.5 mL (Roche) (F)(PFL) no preservative ²¹⁴ | N/A | 1 mg/mL ²¹⁴ | discard unused portion ²¹⁴ | 0.1-0.6 mg/mL NS, ½NS ²¹⁴ 25 mL† ^{214,215} For Step-up Dose 1 (2.5 mg) withdraw 7 mL from infusion bag prior to adding drug volume ^{214,215} gently invert to mix do NOT shake ²¹⁴ | 64 h F, plus an additional 12 h RT including infusion time ²¹⁴ if refrigerated, bring bag to RT prior to administration (max 4 h RT prior to infusion) ²¹⁴ | - use 2.5 mg vials for 2.5 mg dose only ²¹⁴ - do not use if contains visible particulates or is cloudy or discoloured ²¹⁴ - in-line filter is not required, but may be used ²¹⁴ (e.g., 0.2 micron ²¹⁶) |
| Glofitamab 10 mg/10 mL (Roche) (F)(PFL) no preservative ²¹⁴ | N/A | 1 mg/mL ²¹⁴ | discard unused portion ²¹⁴ | 0.1-0.6 mg/mL NS, ½NS ²¹⁴ 50-100 mL† gently invert to mix do NOT shake ²¹⁴ | 64 h F, plus an additional 12 h RT including infusion time ²¹⁴ if refrigerated, bring bag to RT prior to administration (max 4 h RT prior to infusion) ²¹⁴ | - use 10 mg vials for 10 mg and 30 mg doses only ²¹⁴ - do not use if contains visible particulates or is cloudy or discoloured ²¹⁴ - in-line filter is not required, but may be used ²¹⁴ (e.g., 0.2 micron ²¹⁶) |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|--|-------------------------|--|---|--|--|
| IDArubicin PFS 5 mg/5 mL 10 mg/10 mL 20 mg/20 mL (Pfizer) (F)(PFL) no preservative ²¹⁷ | N/A | 1 mg/mL ²¹⁷ | discard unused portion ²¹⁷ **(PFL) ²¹⁷ | syringe ²¹⁷ | use within 4 h from initial puncture ^{217,218} | - avoid alkaline solutions ²¹⁷ |
| Ifosfamide 1000 mg 3000 mg (Baxter) (RT) no preservative ²¹⁹ | 1000 mg: 20 mL SWI ²¹⁹ 3000 mg: 60 mL SWI ²¹⁹ shake well | 50 mg/mL ²¹⁹ | 12 h F , RT ^{2,220} | 0.6-20 mg/mL NS , D5W, LR ²¹⁹ 500 mL† | 72 h F , 24 h RT ²²⁰ 24 h F , RT when mixed with mesna ⁷² | |
| Ifosfamide 1000 mg 3000 mg (Baxter USA) (RT) no preservative ²²¹ | 1000 mg ²²¹ : 20 mL SWI 3000 mg ²²¹ : 60 mL SWI shake well | 50 mg/mL ²²¹ | 12 h F , RT | 0.6-20 mg/mL NS , D5W, LR, SWI ²²¹ 500 mL† | 24 h F , RT ²²¹ 24 h F , RT when mixed with mesna ⁷² | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-----------------------|--------------------------------|--|--|-------------------------------|------------------------------|
| <p>Iniparib 100 mg/10 mL (sanofi-aventis) (F) no preservative ²²² (SAP)</p> | <p>N/A</p> | <p>10 mg/mL ²²²</p> | <p>discard unused portion ²²²</p> | <p>250 mL NS, D5W</p> <p>dilute to 250 mL final volume by withdrawing volume from bag equal to volume of drug to be added ²²²</p> <p>or</p> <p>undiluted in empty infusion bag and qs to final volume of 250 mL with NS, D5W ²²²</p> | <p>24 h RT ²²²</p> | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|--|---|--|--|--|---|
| Inotuzumab ozogamicin 0.9 mg (Pfizer) (F)(PFL) no preservative ²²³ | 4 mL SWI ²²³ gently swirl vial to mix ²²³ | 0.25 mg/mL ²²³ record time of reconstitution | 4 h F ²²³ dilute dose within 4 h of reconstitution ²²³ protect from light if not used immediately ²²⁴ | 0.01-0.1 mg/mL NS ²²³ 25-50 mL† mix by gentle inversion ²²³ | complete administration within 8 h of reconstitution F, RT ²²³ (PFL) ²²³ if refrigerated, bring bag to RT over 1 h prior to administration ²²³ | - do NOT shake ²²³ - protect container from UV and fluorescent light during storage and administration ^{223,224} - protect administration line from light ONLY if hang time will be longer than 1 h ^{223,224} |
| Ipilimumab 50 mg/10 mL 200 mg/40 mL (BMS Canada) (F)(PFL) no preservative ²²⁵ | N/A | 5 mg/mL ²²⁵ | 12 h F, RT ^{2,226} | 1-4 mg/mL NS, D5W ²²⁵ 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) ²²⁵ | 24 h F, RT ²²⁶ | - do NOT shake ²²⁵ - administer with 0.2 micron in-line filter ²²⁵ - vials may contain translucent-to- white amorphous particles ²²⁵ - discard if cloudy or has pronounced colour change (should be clear to pale yellow) ²²⁵ |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|--|-----------------------|-------------------------|--|---|---|------------------------------|
| Irinotecan 40 mg/2 mL 100 mg/5 mL 500 mg/25 mL (Accord) (RT)(PFL) no preservative ²²⁷ | N/A | 20 mg/mL ²²⁷ | discard unused portion ²²⁷ | 0.12-3.0 mg/mL D5W (preferred), NS ²²⁷ 250-500 mL† | 48 h F, 24 h RT **(PFL) ²²⁷ | |
| Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Auro) (RT)(PFL) no preservative ²²⁸ | N/A | 20 mg/mL ²²⁸ | discard unused portion ²²⁸ | 0.12-3.0 mg/mL D5W (preferred), NS ²²⁸ 250-500 mL† | 10 d F, 4 d RT ^{2,228} **(PFL) ²²⁸ if NOT protected from light: 72 h RT ²²⁸ | |
| Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Eugia) (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† | 10 d F, 4 d RT ^{2,229} **(PFL) ²²⁹ if NOT protected from light: 72 h RT ²²⁹ | |

BC CANCER CHEMOTHERAPY PREPARATION AND STABILITY CHART

| DRUG & STRENGTH (Storage Prior to Use, Manufacturer, Preservative Status) | Reconstitute With: | To Give: | Vial Stability | Product (for IV bag size selection, see Notes†) | Product Stability | Special Precautions/Notes |
|---|-------------------------------|--------------------------|--|--|--|---|
| Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (GMP) (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 ²³⁰ **(PFL) ²³⁰ if NOT protected from light: 72 h RT ²³⁰ | - due to bung curvature, filtered venting needle (e.g., Chemo- Vent®) must be used in place of CSTD for compounding ²³¹ |
| Irinotecan 40 mg/2 mL 100 mg/5 mL 300 mg/15 mL 500 mg/25 mL (Pfizer/Hospira) (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 ^{2,232} **(PFL) ²³² if NOT protected from light: 72 h RT ²³² | |
| Irinotecan liposomal 43 mg/10 mL (Ipsen) (F)(PFL) no preservative ²³³ | N/A | 4.3 mg/mL ²³³ | discard unused portion ²³³ | 500 mL NS, D5W ²³³ mix by gentle inversion ²³³ | 24 h F, 4 h RT ²³³ **(PFL) if refrigerated, bring bag to RT prior to administration ²³³ | - if a CSTD is not used during compounding, use a 21 gauge (or lower gauge) needle to withdraw drug from vial ²³³ - do not use in-line filter ²³³ |

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 |
|--|---|---|--|---|---|---|
| Isatuximab 100 mg/5 mL 500 mg/25 mL (sanofi-aventis) (F)(PFL) do not shake no preservative ²³⁴ | N/A | 20 mg/mL ²³⁴ inspect vial and discard if discolouration or visible particles are present ²³⁴ | discard unused portion ²³⁴ | 250 mL NS, D5W ²³⁴ mix by gentle inversion; do NOT shake ²³⁴ | 48 h F plus an additional 8 h RT including infusion time ²³⁴ | - administer with a 0.2 micron in-line filter ²³⁴ |
| Ixabepilone 15 mg (contains 16 mg) 45 mg (contains 47 mg) (BMS) (F)(PFL) no preservative ²³⁵ (SAP) | 15 mg: 8 mL diluent (supplied) ²³⁵ 45 mg: 23.5 mL diluent (supplied) ²³⁵ | 2 mg/mL ²³⁵ | 1 h RT ²³⁵ | 0.2-0.6 mg/mL LR ²³⁵ | 6 h RT ²³⁵ | - use non-DEHP bag and administration set ²³⁵ - administer with 0.2 micron in-line filter ²³⁵ |

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

† see [BC Cancer IV Bag Selection table](#); standardized bag sizes are provided for select Benefit Drugs with concentration-dependent stability or large drug volume

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

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

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

Explanatory Notes:

Stability data assumes products prepared using standard aseptic technique in biological safety cabinet at low risk for contamination according to the classification outlined in USP 797. ^{236,237}

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

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

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

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

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

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

Abbreviations:

BMT = bone marrow transplant

BWI = bacteriostatic water for injection

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

CSTD = closed system transfer device

D2.5-½NS = dextrose 2.5% in half saline (i.e., dextrose 2.5% in sodium chloride 0.45%)

D²/₃-¹/₃NS = two-thirds dextrose in one-third saline or two-thirds/one-third (i.e., dextrose 3.3% in sodium chloride 0.3%)

D5LR = dextrose 5% in lactated ringer's

D5NS = dextrose 5% in normal saline (i.e., dextrose 5% in sodium chloride 0.9%)

D5-¹/₃NS = dextrose 5% in one-third saline (i.e., dextrose 5% in sodium chloride 0.3%)

D5-½NS = dextrose 5% in half saline (i.e., dextrose 5% in sodium chloride 0.45%)

D5W = dextrose 5% in water

D10W = dextrose 10% in water

DEHP = Di(2-ethylhexyl) phthalate (DEHP)

DMA = N,N dimethylacetamide

F = refrigerate

h = hour(s)

IM = intramuscular

IT = intrathecal

IV = intravenous

LR = lactated ringer's solution

min = minute(s)
non-DEHP = not containing Di(2-ethylhexyl) phthalate (DEHP)
non-PVC = not containing polyvinyl chloride (PVC)
NS = normal saline (i.e., sodium chloride 0.9%)
½NS = half saline (i.e., sodium chloride 0.45%)
PES = polyethersulfone
PFL = protect from light
PFS = preservative free solution
PVC = polyvinyl chloride (PVC)
RT = room temperature
SAP = drug is approved for use through the Health Canada Special Access Program (SAP)
SC = subcutaneous
sec = second(s)
SWI = sterile water for injection

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