OVAMC Pharmacy Services – Chemotherapy/Hazardous Medication Dilution Chart

****All products should have the following stickers at minimum: BUD, Chemo or Hazardous, REF or Room Temp****

Drug	Vial/Amp (Storage)	Route	Vial Reconstitution	Vial Final Conc.	VIAL BUD	Further Dilution	BUD REF	BUD RT	Infusion Rate	Comments
Abatacept (Orencia) **(hazardous-not chemo)**	250 mg (REF;PFL)	IV	SWFI 10 mL *Use silicone-free syringe provided* *Direct diluent down side of vial slowly*	25 mg/mL	6 hr REF	NS 100 mL **Final Conc**: ≤10 mg/mL *Use silicone-free syringe provided*	24 hr	24 hr	30 min	Tubing: 0.2 micron low protein binding in-line filter (10010454)
	125 mg SYR (REF;PFL	SubQ	N/A	125mg/mL	N/A Discard Unused	N/A			SubQ	Prefilled syringe
ADO-trastuzumab emtansine (Kadcyla) ***Not interchangeable with trastuzumab***	100 mg 160 mg (REF)	IV	SWFI 100 mg: 5 mL 160 mg: 8 mL *Direct diluent down side of vial slowly*	20 mg/mL	6 hr REF	NS 250 mL *NS ONLY*	24 hr	4 hr	Initial dose: 90 min Subsequent: 30 min	DO NOT SHAKE • Use 0.2 micron in-line filter • EP: Low
Aldesleukin (IL-2; Proleukin)	22 mill unit (REF;PFL)	IV	SWFI 1.2 mL *Direct diluent down side of vial slowly*	18 mill unit/mL	6 hr	QS with D5W (50ml) **Final Conc**: 0.49-1.1 mill units/mL *D5W ONLY*	48 hr	48 hr	15 min	DO NOT SHAKE • May be given SubQ undiluted • **Premedication**: acetaminophen, H2 antagonist • EP: ○ >12 MU/m2- moderate ○ ≤12 MU/m2- low
Alemtuzumab (Lemtrada) **(hazardous-not chemo)**	12mg (REF;PFL)	IV	Solution	10 mg/mL	6 hr	NS 100mL *Alternative: D5W*	8 hr	8 hr	4 hrs	DO NOT SHAKE
Arsenic Trioxide (Trisenox)	10 mg amp (RT)	IV	Solution	1 mg/mL	N/A Discard unused	NS 250 mL *Alternative: D5W*	48 hr	24 hr	First dose: 120 min Subsequent: 60 min (max 4 hr)	• Patient should have baseline and weekly EKG monitoring; hold for QTc>500ms • If acute vasomotor reactions occur, may infuse over 4 hours • Electrolyte (K and Mg) abnormalities should be corrected before infusion and K/Mg should be routinely monitored • Goal: K > 4, Mg > 1.8 • EP: Moderate

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Atezolizumab (Tecentriq) **(hazardous-not chemo)**	1200mg (REF; PFL)	IV	N/A	60 mg/mL	6 hr	NS 250 mL *NS ONLY*	24 hr	6 hr	30-60min	DO NOT SHAKE
Azacitidine (Vidaza) *Aux labels: Chemo/REF/BUD*	100 mg (RT)	IV	SWFI 10 mL	10 mg/mL	1 hr	NS 100 mL *Solution will be clear* *Alternative: LR*		1 hr	30 min	Incompatible with D5W EP: Moderate Tubing: secondary (MS3500-15)
		SubQ	COLD SWFI 4 mL *SubQ: solution will be cloudy but uniform*	25 mg/mL	1 hr RT 22 hr (syringe) REF	N/A	8hr *22 hr (if cold SWFI)*	N/A	SubQ	• SubQ inj: max 3 mL/syringe • Rotate injection sites • Resuspend by rolling syringe prior to injection • EP: Moderate
Belatacept (Nulojix) **(hazardous-not chemo)**	250 mg (REF;PFL)	IV	10.5 mL SWFI/NS/D5W *Use silicone-free syringe provided* *Direct diluent down side of vial slowly*	25 mg/mL	4 hr RT 24 hr REF	NS/D5W **Final Conc**: 2 - 10 mg/mL *Use silicone-free syringe provided*	24 hr	4 hr	30 min	DO NOT SHAKE Tubing: 0.2 micron low protein binding in-line filter (10010454)
Bendamustine **(Treanda) **LASA****	25mg 100mg (RT;PFL)	IV	SWFI: 25mg: 5mL 100mg: 20mg	5 mg/mL	30 min	NS 500 mL **Final Conc**: 0.2 - 0.7 mg/mL *Alt.: D2.5-1/2NS*	24 hr	2 hr	30 min	EP: Moderate Tubing: secondary (MS3500-15)
Bendamustine **(Bendeka) **LASA****	100mg* (REF;PFL)	IV	Solution	25mg/mL	**MDV:** 28d REF	NS 50mL **Final Conc:** 1.85-5.6mg/mL *Alt.:D5W or D2.5-1/2NS*	24	6 **D5W**: 3hrs	10 min	EP: Moderate Tubing: secondary (MS3500-15)
Bevacizumab (Avastin) **(hazardous-not chemo)**	100 mg 400 mg (REF; PFL)	IV	Solution	25 mg/mL	RT: Discard unused REF:6hr	NS 100 mL *NS ONLY*	24 hr	8 hr	30 min	DO NOT SHAKE Tubing: secondary (MS3500-15) • Monitor urine for protein • EP: Minimal

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Bleomycin (Blenoxane)	15 unit 30 unit (REF)	IV	15 unit: NS 5 mL 30 unit: NS 10 mL	3 unit/mL	6 hr RT	N/A	14 days	24 hr	IVP over 10 min	• Pulmonary function tests may be used to monitor pulm toxicity • May be administered intrapleurally, see prescribing information • Note lifetime maximum • EP: Minimal
		IM SubQ	SWFI or NS: 15 unit: 1 mL 30 unit: 2 mL	15 unit/mL		N/A	N/A	24 hr	SubQ or IM	
Bortezomib (Velcade) - **criteria**	3.5 mg (RT;PFL)	IV	NS 3.5 mL	1 mg/mL	6 hr RT/REF	N/A	N/A	8 hr	IV push over 3-5 sec	• 72 hrs should elapse between doses • **For IV and SQ use only; fatal if given by other routes** • EP: Minimal
		SubQ	***BRAND ONLY*** NS 1.4 mL	2.5 mg/mL					SubQ	
Brentuximab vedotin (Adcetris)	50 mg (REF;PFL)	IV	SWFI 10.5 mL *Direct diluent down side of vial slowly*	5 mg/mL	6 hr REF	NS 100 mL **Final Conc**: 0.4 - 1.8 mg/mL *Alternative: D5W/LR*	24 hr	1 hr	30 min	DO NOT SHAKE Tubing: primary (2420-0500) • **Premedication:** only if prior infusion reaction (acetaminophen, diphenhydramine +/- corticosteroid) • Maximum 180 mg per dose • EP: Low
Cabazitaxel (Jevtana)	60 mg (RT)	IV	Use entire contents of supplied diluent. Direct down side of vial. Gently invert for 45 sec.	10 mg/mL	30 min	NS 250 mL **Final Conc**: 0.1 - 0.26 mg/mL *Alternative: D5W*	24 hr	8 hr	60 min	DO NOT SHAKE Use 0.2 micron in-line filter Use DEHP-free bags/tubing Discard if crystals seen • **Premedication**:diphenhydramine, corticosteroid and H2 antagonist • EP: Low
CARBOplatin (Paraplatin)	50 mg* 150 mg* 450 mg* 600 mg* (RT;PFL)	IV	Solution	10 mg/mL	**SDV**: 6 hr RT **MDV**: 14 day RT*	D5W 250 mL **Final Conc**: 0.5 – 4 mg/mL *Alternative: NS*		8 hr	30 min	Tubing: primary (2420-0500) EP: Moderate

PFL=protect from light; BUD=Beyond Use Date; REF=refrigeration; RT=room temperature; SWFI=sterile water for injection (preservative free); *multi-dose vial
SubQ=subcutaneous; IM=intramuscular; BWFI=bacteriostatic water for injection ; NS=0.9% saline solution; D5W=dextrose 5% in water; LR=lactated ringers solution;
EP: Emetogenic Potential; SDV: single-dose vial; MDV: multi-dose vial; **Use secondary tubing unless otherwise specified.**

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Carfilzomib (Kyprolis)	60 mg (REF;PFL)	IV	SWFI 29 mL *Direct diluent down side of vial slowly Gently swirl x 1 min to dissolve*	2 mg/mL	4 hr RT 6 hr REF	D5W 50-100 mL *D5W ONLY*	24 hr	4 hr	30 min	DO NOT SHAKE Tubing: secondary (MS3500-15) • Max BSA 2.2m^2 • Pre- and post-hydration for cycle 1 doses and then prn • **Premedication:** dexamethasone for C1 and C2, then prn • EP: Low
Cetuximab (Erbitux) **(hazardous-not chemo)**	100 mg 200 mg (REF)	IV	Solution	2 mg/mL	RT: Discard Unused 6 hr REF	DO NOT DILUTE *Use sterile, empty container*	12 hr	8 hr	Load: 120 min Maint.: 60 min *(max rate: 5 mL/min)*	DO NOT SHAKE Tubing: 0.2 micron low protein binding in-line filter (10010454) Prime line with saline • **Premedication**: diphenhydramine • Monitor magnesium • EP: Minimal
Cidofovir	375 mg (RT)	IV	Solution	75 mg/mL	6 hrs	NS 100 mL	24 hrs	24 hrs	60 min	Usual dose: 5 mg/kg
CISplatin (CDDP); Platinol-AQ)	50 mg* 100 mg* 200 mg * (RT;PFL)	IV	Solution	1 mg/mL	7 d* (not PFL) 28 d* (PFL)	NS 500 mL *Alternative: D5WNS; D5W1/2NS* *May be admixed with D5W1/3NS with 37.5 grams of mannitol*	72 hr	48 hr	≤ 80 mg/m^2: 60 min > 80 mg/m^2: 90 min	IRRITANT/VESICANT • For patients with heart failure, administer at a maximum rate of 1mg/min • Should be administered with pre- and post-hydration • EP: High
Cladribine	10mg (REF;PFL)	IV	Solution	1 mg/mL	6 hrs	NS 250 mL *NO D5W*	30 hr	24 hr	2 hr	Tubing: 0.2 micron low protein binding in-line filter (10010454)
Cyclophosphamide (Cytoxan) ****NOTE: U-LISTED****	500 mg 1 gram 2 gram (RT)	IV	NS or SWFI 500 mg: 25 mL 1 gram: 50 mL 2 gram: 100 mL	20 mg/mL	6 hr RT	NS 250 mL *Alt.: D5W. D5WNS, D5WLR, LR, 1/2NS*	72 hr D5W: 36hr	24 hr	60 min *Rate varies per protocol*	Do not use if signs of melting (clear/yellow thick liquid) Tubing: secondary (MS3500-15) EP: >1500mg/m2: high EP: ≤1500mg/m2: moderate

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Cyclosporine	250 mg (RT; PFL)	IV	Solution	50 mg/mL	6 hr	NS 100 mL *Alternative: D5W*		24 hr	2-6 hr	Use DEHP-free bags/device
Cytarabine (Ara-C/Cytosar-U)	100 mg 500 mg 1 gram 2 gram (RT;PFL)	IV	*Low dose (<500 mg/m²): BWFI or SWFI* *High dose (≥500 mg/m²): SWFI only* 100 mg: 5 mL 500 mg: 10 mL 1 gram: 10 mL 2 gram: 20 mL	20 mg/mL 50 mg/mL 100 mg/mL 100 mg/mL	6 hr	NS 500 mL		8 hr	≤ 1 gram: 60 min > 1 gram: 120 min *May be given as continuous infusion*	**High dose cytarabine(≥ 500 mg/m²)**: administer dexamethasone 0.1% eye drops Q6h starting prior to first dose and continuing for 48 hours after last dose EP: >200mg/m2: moderate EP: ≤200mg/m2: minimal
		SubQ IM	Solution	100 mg/mL		N/A	N/A	N/A	SubQ or IM PFL	
Dacarbazine (DTIC; DTIC-dome)	200 mg (REF;PFL)	IV	SWFI 19.7 mL	10 mg/mL	6 hr RT/REF	NS 500 mL *Alternative: D5W*		24 hr PFL	60 min *May be given as continuous infusion*	IRRITANT Tubing: secondary (MS3500-15) Decomposition signs: color change to pinkish/reddish EP: High
Daratumumab (Darzalex) **(hazardous-not chemo)**	100 mg 400 mg (REF;PFL)	IV	Solution	20mg/mL	6 hr REF	NS 500mL	24 hrs	*Warm to RT prior to admin*	**SEE FOOTNOTES** Max: 200mg/hr	DO NOT SHAKE Tubing: 0.2 micron low protein binding in-line filter (10010454) ***Do not use*** *if opaque particles or discolored; Small translucent protein particles are normal*
DAUNOrubicin (Cerubidine; Daunomycin) ***Not interchangeable with liposomal daunorubicin***	20 mg (REF;PFL)	IV	Solution	5 mg/mL	6 hr REF	*Dispense in a syringe*	48 hr (if powder vial used)	24 hr	IVP over 1-5 min	VESICANT Decomposition sign: color change to purple • Note lifetime maximum dose • Baseline LVEF • EP: Moderate

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Decitabine (Dacogen)	50 mg (RT)	IV	SWFI 10 mL	5 mg/mL	N/A Discard unused	NS 100 mL **Final Conc**: 0.1 – 1 mg/mL *Alternative: D5W; LR*	7 hr	1 hr	60 min	Doses not started within 15 minutes of preparation should be mixed in **COLD** solutions EP: Minimal
Dexrazoxane (Zinecard) **Not Chemotherapy**	500 mg (RT;PFL)	IV	Supplied diluent: 50 mL	10 mg/mL	30 min RT 3 hr REF	NS QS to final conc of 1.3 - 3 mg/mL *Alternative: D5W*	4 hr	1 hr Generic 6 hr Zinecard	10 min *Give immediately prior to doxorubicin*	Tubing: secondary (MS3500-15)
Dexrazoxane (Totect) **Not Chemotherapy**	500 mg (RT;PFL)	IV	Supplied diluent: 50 mL	10 mg/mL	2 hr RT	NS 1000 mL	4 hr	4 hr	90 min *Must begin within 6 hrs of extravasation*	• Used for anthracycline extravasation – 3 day regimen • Max doses: ○ Day 1 and 2: 2000 mg ○ Day 3: 1000 mg
DOCEtaxel (Taxotere)	20 mg 80 mg 160 mg (RT;PFL)	IV	Solution	20 mg/mL	**SDV**: 4 hr **MDV**: 28 d RT;PFL	NS 100-250 mL **final conc**: 0.3-0.74 mg/mL *Alternative: D5W*	48 hr	4 hr	60 min	IRRITANT DO NOT SHAKE Use DEHP-free bags/device Tubing: secondary (MS3500-15) • **Premedication**: dexamethasone • EP: Low
DOXOrubicin (Adriamycin) ****Not interchangeable with liposomal doxorubicin***	200 mg (REF;PFL)	IV	Solution	2 mg/mL	6 hr PFL	Dispense in a syringe Continuous infusion: Mix in NS 500 mL *Alternative: D5W*	Cont. Infuse 72hrs PFL	Syringe 24 hr PFL Cont. Infuse: 48hr PFL	IVP over 5-10 min *May be given as continuous infusion*	VESICANT • Baseline LVEF • Note lifetime maximum dose • EP: ≥60mg/m2: High • EP: <60mg/m2: Moderate
DOXOrubicin **LIPOSOMAL** (Doxil) ****Not interchangeable with doxorubicin***	20 mg 50 mg (REF)	IV	Solution	2 mg/mL	6 hr	D5W ≤90 mg: 250 mL >90 mg: 500 mL *D5W ONLY*	24 hr		60 min *Doses >60 mg: start infusion at 1mg/min X 5 min then titrate to complete the infusion in 1 hr.*	IRRITANT DO NOT FILTER Baseline LVEF recommended EP: Low

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Durvalumab (Imfinzi)	120mg 500mg (REF;PFL)	IV	Solution	50mg/mL	Discard unused	NS 100mL **Final Conc**: 1-15 mg/mL *Alt.: D5W*	24 hrs	4 hrs	60 min	DO NOT SHAKE Tubing: 0.2 micron low protein binding in-line filter (10010454) EP: minimal
Eculizumab (Soliris) **(hazardous-not chemo)**	300 mg (REF;PFL)	IV	Solution	10 mg/mL	N/A Discard Unused	NS QS to final conc of 5 mg/mL *ADD DRUG FIRST* *Alt.: D5W; 1/2NS*	24 hr PFL		35 min Warm to RT before admin *Never exceed 2 hrs duration*	Tubing: secondary (MS3500-15) • DO NOT SHAKE • Monitor for at least 1 hr after infusion • Vaccines required at least 2 weeks prior to treatment initiation or prophylaxis needed
Epirubicin (Ellence)	50 mg 200 mg (REF;PFL)	IV	Solution	2 mg/mL	6 hr REF	Dispense in a syringe	24 hr PFL		IVP over 10-15 min *Administer into free-flowing IV*	VESICANT • Baseline LVEF • Note lifetime maximum dose • EP: >90mg/m2: High • EP:≤90mg/m2: Moderate
Eribulin Mesylate (Halaven)	1 mg (RT; PFL)	IV	Solution	0.5 mg/mL	4 hr RT 6 hr REF	N/A	N/A	N/A	IVP over 2 – 5 minutes	May dilute in NS 100 mL EP: Low
Etoposide (Toposar; VePesid; VP-16)	100 mg 1000 mg* (RT;PFL)	IV	Solution	20 mg/mL	48 RT **MDV**: 14 day REF	NS QS to final conc 0.2 - 0.4 mg/mL *Alternative: D5W*		30 hr	60 min	IRRITANT Use DEHP-free bags/device Tubing: 0.2 micron low protein binding in-line filter (10010454) May be administered CIVI EP: Low
Fludarabine (Fludara)	50 mg (REF)	IV	SWFI 2 mL -or- Solution	25 mg/mL	6 hr	NS 100 mL *Alternative: D5W*	48 hr	48 hr	30 min	Tubing: secondary (MS3500-15) EP: Minimal
Fluorouracil (5FU; Adrucil)	500 mg 1 gram 5 gram (RT;PFL)	IV	Solution	50 mg/mL	4 hr PFL	*Intermittent:* Dispense in syringe *CIVI*: NS QS to pump conc		72 hr (PFL) 8 days	*IVP undiluted over 10-15 min* Continuous via pump (range 24-168 hrs)	IRRITANT CIVI: infusion per protocol EP: Low

PFL=protect from light; BUD=Beyond Use Date; REF=refrigeration; RT=room temperature; SWFI=sterile water for injection (preservative free); *multi-dose vial
SubQ=subcutaneous; IM=intramuscular; BWFI=bacteriostatic water for injection ; NS=0.9% saline solution; D5W=dextrose 5% in water; LR=lactated ringers solution;
EP: Emetogenic Potential; SDV: single-dose vial; MDV: multi-dose vial; **Use secondary tubing unless otherwise specified.**

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Ganciclovir **(hazardous-not chemo)**	500 mg (RT)	IV	SWFI 10 mL *No bacteriostatic saline*	50 mg/mL	6 hrs **RT only**	100 mL NS **Final Conc**: ≤10 mg/mL *Alternative: D5W*	24 hrs	24 hrs *D5W: 12 hrs*	60 min	Thrombophlebitis risk Usual dose: 5 mg/kg Max: 1000 mg
Gemcitabine (Gemzar)	200 mg 1 gram 2 gram (RT) Solution: (REF)	IV	NS 200 mg: 5 mL 1 gram: 25 mL 2 gram: 50 mL **-or-** Solution	38 mg/mL	6 hr RT (REF solution)	NS 250 mL *Alternative: D5W*		24 hr	30 min 90 min for Doce/Gem protocol	May use intravesically Tubing: secondary (MS3500-15) EP: Low
IDArubicin (Idamycin)	5 mg 10 mg 20 mg (REF;PFL)	IV	Solution	1 mg/mL	6 hr	Dispense undiluted in a syringe	72 hr	48 hr	IVP over 10-15 min	VESICANT • Baseline LVEF • Note lifetime maximum dose • EP: Moderate
Ifosfamide (Ifex)	1 gram 3 gram (RT)	IV	SWFI 1 gram: 20 mL 3 gram: 60 mL	50 mg/mL	6 hr REF	NS 500 mL *Alternative: D5W*	24 hr	24 hr	60 min *May be given as continuous infusion*	• Monitor urine for blood • Hydration and mesna required • EP: ≥2g/m2: High • EP:<2g/m2: Moderate
Infliximab **(Remicade BRAND)** / Infliximab-dyyb **(Inflectra - *preferred*)**	100mg (REF)	IV	SWFI 10 mL *Direct diluent down side of vial*	10 mg/mL	3 hr	NS 250 mL **Final Conc:** 0.4-4 mg/mL		6 hrs	2 hrs	DO NOT SHAKE Begin inf. w/in 3hrs of mixing Use 0.2 micron in-line filter
Interferon alfa-2b (Intron-A)	10 mill unit 18 mill unit 50 mill unit (REF)	IV	Supplied diluent: 1 mL	Varies	6 hr REF	NS 100 mL **Final Conc**: ≥10 mill unit/100mL *Alternative: LR*	Per package insert (≤ 24 hrs REF)		20 min	Premix vials NOT recommended for IV admin Ophthalmic solution: 14 days EP: ≥10 million units/m²: Moderate >5 - <10 million units/m²: Low ≤ 5million/units/m²: Minimal
		SubQ IM				N/A	N/A	N/A	IM or SubQ	

PFL=protect from light; BUD=Beyond Use Date; REF=refrigeration; RT=room temperature; SWFI=sterile water for injection (preservative free); *multi-dose vial
SubQ=subcutaneous; IM=intramuscular; BWFI=bacteriostatic water for injection ; NS=0.9% saline solution; D5W=dextrose 5% in water; LR=lactated ringers solution;
EP: Emetogenic Potential; SDV: single-dose vial; MDV: multi-dose vial; **Use secondary tubing unless otherwise specified.**

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Ipilimumab (Yervoy)	50 mg 200 mg (REF;PFL)	IV	Solution *Warm vials to RT for 5 min prior to admixing*	5 mg/mL	N/A Discard Unused	NS QS to final conc: 1-2 mg/mL *Alternative: D5W*	24 hr	24 hr	90 min	DO NOT SHAKE Tubing: 0.2 micron low protein binding in-line filter (10010454) • All 4 doses should be administered within 16 weeks • EP: Minimal
Irinotecan (Camptosar; CPT-11)	40 mg 100 mg 300 mg (RT;PFL)	IV	Solution	20 mg/mL	6 hr	D5W 500 mL **Final Conc**: 0.12–2.8 mg/mL *Alternative: NS*	48 hr	24 hr **NS:** RT only	90 min	NS: do not refrigerate Tubing: secondary (MS3500-15) • Atropine may be administered IVP as a premed or as treatment for acute onset diarrhea. • EP: Moderate
Methotrexate **INTRAMUSCULAR** *Ectopic Pregnancy*	50 mg 100 mg 250 mg 1 gram (RT;PFL)	IM	Solution	25 mg/mL	6 hr PFL	N/A	N/A	N/A	IM ONLY	Dose = 50 mg/m^2 EP: Minimal
Methotrexate (Trexall; MTX) **INTRAVENOUS**	Powder: 1 gram (RT;PFL)	IV	NS 19.4 mL	50 mg/mL	6 hr PFL	NS ≤100 mg: 100 mL 101-1000mg: 250 mL >1000 mg: 500 mL Continuous Infusion: NS 1000 mL *Alternative: D5W*	72 hr	30 hr	**Check Protocol** ≤100 mg: 15 min 101-1000 mg: 2 hr > 1000 mg: 4 hr	Max syringe volume: 22.5 mL in 30 mL syringe **Higher methotrexate doses** • maintenance of urine pH > 7 helps prevent renal dysfunction • Start after at least 6 hrs of prehydration when urine pH ≥ 7 • leucovorin rescue should be used EP: • ≥250mg/m2: Moderate • >50mg/m2 <250mg/m2: Low • ≤50mg/m2: Minimal
	Solution: 50 mg 100 mg 250 mg 1 gram (RT;PFL)		Solution	25 mg/mL						

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MitoMYCIN (Mutamycin) ****NOTE: U-LISTED****	5 mg 20 mg 40 mg (RT;PFL)	IV	SWFI: 5 mg: 10 mL 20 mg: 40 mL	0.5 mg/mL	6 hr PFL	N/A *Dispense in syringe* *May dilute in NS to 20-40 mcg/mL*	14 d PFL	7 d PFL *Diluted 12 hr*	IVP over 10 – 15 min	VESICANT Max syringe volume: 22.5 mL in 30 mL syringe EP: Low
		IRR/ Intravesical	20 mg: NS 20 mL 40 mg: NS 40 mL	1 mg/mL		N/A *Dispense in slip-tip (catheter) syringe*	N/A	24 hr	Bladder dwell (max 2 hrs)	
Mycophenolate (Cellcept)	500 mg (RT)	IV	D5W: 14 mL	33.3 mg/mL	4 hr	D5W to 6 mg/mL 500 mg: 85 mL 1000 mg: 140 mL 1500 mg: 210 mL		4 hr	2 hr	
Natalizumab (Tysabri) - **criteria** *Restricted to neurology*	300 mg (REF;PFL)	IV	Solution	20 mg/mL	N/A Discard Unused	NS 100 mL	8 hr	Immediate	60 min	DO NOT SHAKE May warm to RT prior to admin
Nivolumab (Opdivo)	40 mg 100 mg (REF; PFL)	IV	Solution	10 mg/mL	N/A Discard Unused	Add drug to empty container and then further dilute with NS to **final conc** of 1-10 mg/mL *Alternative: D5W*	24 hr	4 hr	30 min	DO NOT SHAKE Tubing: 0.2 micron low protein binding in-line filter (10010454) 0.2-1.2 micron filter EP: Minimal
OBINutuzumab (Gazyva)	1 gram (REF;PFL)	IV	Solution	25 mg/mL	N/A Discard Unused	NS 100 mg: 100 mL 900 mg: 250 mL 1 gram: 250 mL *NS ONLY*	72 hr *(24 hr REF then 48 hr RT)*	48 hr	Titrated – see PI	DO NOT SHAKE Use dilution to prime line • **Premedication**: ○ First dose: acetaminophen, diphenhydramine, decadron ○ Subsequent doses: acetaminophen +/- diphenhydramine +/- decadron • EP: Minimal

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Drug	Vial/Amp (Storage)	Route	Vial Reconstitution	Vial Final Conc.	VIAL BUD	Further Dilution	BUD REF	BUD RT	Infusion Rate	Comments
Ocrelizumab (Ocrevus) **(hazardous-not chemo)**	300mg (REF;PFL)	IV	Solution	30mg/mL	6 hr REF	NS 300mg: 250mL 600mg: 500mL *NS ONLY*	24 hr	8 hr	**SEE FOOTNOTES** Max: 200mg/hr	DO NOT SHAKE Tubing: 0.2 micron low protein binding in-line filter (10010454) ***Do not use*** *if discrete particles or discolored;*
OFATumumab (Arzerra)	100mg 1 gram (REF;PFL)	IV	Solution	20 mg/mL	N/A Discard Unused	NS 1000 mL *Withdraw volume from bag equal to drug volume to be added prior to dilution*	24 hr	24 hr	Titrated – see PI *Begin within 12 hrs of prep*	DO NOT SHAKE Use dilution to prime line Use supplied in-line set • **Premedication**: acetaminophen, diphenhydramine, corticosteroid • EP: Minimal
Omacetaxine Mepesuccinate (Synribo)	3.5 mg (RT;PFL)	SubQ	NS 1 mL	3.5 mg/mL	6 hr RT;PFL	N/A	N/A	N/A	SubQ ONLY	EP: Low
Oxaliplatin (Eloxatin)	50 mg 100 mg 200 mg (RT;PFL)	IV	Solution	5 mg/mL	6 hr RT	D5W 500 mL *D5W ONLY*	24 hr	6 hr	120 min	VESICANT Tubing: primary (2420-0500) EP: Moderate
PACLItaxel (Taxol) ***Not interchangeable with paclitaxel protein bound-albumin***	100 mg* 300 mg* (RT;PFL)	IV	Solution	6 mg/mL	**MDV**: 28 day RT	NS <300mg: 250 mL ≥300 mg: 500 mL **Final conc**: 0.3-1.2 mg/mL *Alt: D5W*		72 hr	<100 mg/m^2 60 min ≥100 mg/m^2 3 hours *May be given as continuous infusion*	IRRITANT Use DEHP-free bags/device Tubing: 0.2 micron low protein binding in-line filter (10010454) • **Premedication**: H2 antagonist, diphenhydramine, and dexamethasone • EP: Low
PACLItaxel plasma protein bound-albumin (Abraxane) ***NOT interchangeable w/ paclitaxel***	100 mg (RT;PFL)	IV	NS 20 mL *Direct diluent down side of vial over ≥1 min*	5 mg/mL	6 hr REF	DO NOT DILUTE *Place in empty bag*	24 hr PFL	8 hr	30 min	DO NOT SHAKE DO NOT FILTER EP: Low

OVAMC Pharmacy Services – Chemotherapy/Hazardous Medication Dilution Chart

****All products should have the following stickers at minimum: BUD, Chemo or Hazardous, REF or Room Temp****

Drug	Vial/Amp (Storage)	Route	Vial Reconstitution	Vial Final Conc.	VIAL BUD	Further Dilution	BUD REF	BUD RT	Infusion Rate	Comments
Pamidronate (Aredia)	30mg 60mg 90mg (RT)	IV	SWFI 10 mL	Varies	6 hr	NS 500 mL *Alternative: D5W*		24 hr	2 hr	Monitor Ca May be infused over 2-24 hrs
Panitumumab (Vectibix) **(hazardous-not chemo)**	100 mg 400 mg (REF;PFL)	IV	Solution	20 mg/mL	N/A Discard Unused	NS ONLY ≤ 1 gram: 100 mL > 1 gram: 150 mL **Final conc**: ≤ 10 mg/mL	24 hr	6 hr	≤ 1 gram: 60 min > 1 gram: 90 min	DO NOT SHAKE Tubing: 0.2 micron low protein binding in-line filter (10010454) • Monitor magnesium • EP: Minimal
Pembrolizumab (Keytruda)	50 mg (REF)	IV	SWFI 2.3 mL *Direct diluent down side of vial slowly*	25 mg/mL	4 hr RT 6 hr REF	NS 50 mL **Final conc**: 1 – 10 mg/mL *NS ONLY*	24 hr	4 hr	30 min	DO NOT SHAKE Use 0.2 - 5 micron low protein in-line filter EP: Minimal
Pemetrexed (Alimta)	100 mg 500 mg (RT)	IV	NS 100 mg: 4.2 mL 500 mg: 20 mL	25 mg/mL	6 hrs	NS 100 mL *Alternative: D5W*	24 hr	24 hr	10 min	Solution may be colorless, yellow or yellow-green Tubing: secondary (MS3500-15) • Vitamin B_{12} and folic acid supplementation routinely started 1 week prior to first dose • Dexamethasone should be started the day before to decrease rash • EP: Low
Pentamidine	300 mg (RT;PFL)	IV	SWFI 5 mL	60 mg/mL	48 hrs RT;PFL	D5W ≤250 mg: 100 mL >250 mg: 250 mL **Final Conc**: ≤2.5 mg/mL		24 hrs PFL	60 min	Usual dose: 4 mg/kg Incompatible with NS Avoid extravasation
Pertuzumab (Perjeta)	420 mg (REF;PFL)	IV	Solution	30 mg/mL	N/A Discard Unused	NS 250 mL *NS ONLY*	24 hr	4 hr	Load: 60min Maint.: 30 min	DO NOT SHAKE EP: Minimal

OVAMC Pharmacy Services – Chemotherapy/Hazardous Medication Dilution Chart

****All products should have the following stickers at minimum: BUD, Chemo or Hazardous, REF or Room Temp****

Drug	Vial/Amp (Storage)	Route	Vial Reconstitution	Vial Final Conc.	VIAL BUD	Further Dilution	BUD REF	BUD RT	Infusion Rate	Comments
Ramucirumab (Cyramza)	100 mg 500 mg (REF; PFL)	IV	Solution	10 mg/mL	N/A Discard Unused	NS 250 mL *Total volume* *NS ONLY*	24 hr	4 hr	60 min	DO NOT SHAKE 0.22 micron filter • **Monitor urine for protein** • **Premedication:** diphenhydramine ○ If prior reaction, add dexamethasone and acetaminophen • EP: Minimal
Rituximab (Rituxan) **(hazardous-not chemo)** (restricted - Onc) (criteria – Rheum)	100 mg 500 mg (REF;PFL)	IV	Solution	10 mg/mL	6 hrs	First/subsequent NS QS to final conc of 1 mg/mL Rapid infusion: NS 500 mL *Alternative: D5W*	24 hrs + additional 24 hours at RT	24 hrs	**SEE FOOTNOTES** Max: 400mg/hr	DO NOT SHAKE Hypersensitivity risk Tubing: primary (2420-0500) EP: Minimal
RomiDEPsin (Istodex)	10 mg (RT)	IV	Supplied diluent 2 mL	5 mg/mL	6 hr RT	NS 500 mL		24 hr	4 hr	• Baseline and periodic EKG monitoring recommended – known to cause QTc prolongation • Monitor K, Mg, Phos • EP: Low
Tacrolimus DRIP	5 mg (RT)	IV	Solution	5 mg/mL	6 hr	NS QS to final conc **Final Conc**: 4-20 mcg/mL *Alternative: D5W*		24 hrs	Continuous infusion	Use DEHP free bags Hypersensitivity risk
Temsirolimus (Torisel)	25 mg (REF;PFL)	IV	Provided diluent: 1.8 mL Protect from light during all steps	10 mg/mL	6 hr RT	NS 250 mL		6 hrs PFL	30-60 min	DO NOT SHAKE Use DEHP free bags/tubing Use 5 micron in-line filter Hypersensitivity risk • **Premedication**: Diphenhydramine • EP: Minimal

OVAMC Pharmacy Services – Chemotherapy/Hazardous Medication Dilution Chart

****All products should have the following stickers at minimum: BUD, Chemo or Hazardous, REF or Room Temp****

Drug	Vial/Amp (Storage)	Route	Vial Reconstitution	Vial Final Conc.	VIAL BUD	Further Dilution	BUD REF	BUD RT	Infusion Rate	Comments
Tocilizumab (Actemra)	80mg 200mg 400mg (REF;PFL)	IV	Solution	20 mg/mL	24 hr REF	NS 100 mL	24 hrs PFL	24 hrs PFL	60min	DO NOT SHAKE
Topotecan (Hycamtin)	4 mg (Solution: RT;PFL) (Powder: REF, PFL)	IV	Powder: SWFI 4 mL	1 mg/mL	6 hr RT	NS 100 mL *Alternative: D5W*	7 days	24 hr	30 min	EP: Low
Trastuzumab (Herceptin) **(hazardous-not chemo)**	150mg (REF)	IV	SWFI 7.4mL	21 mg/mL	**SDV**: 24 hrs REF	NS 250 mL *NS ONLY*	24 hr		Initial: 90 min Maint: 30 min	DO NOT SHAKE Tubing: secondary (MS3500-15) Baseline and periodic LVEF required EP: Minimal
Valproate sodium **(non-form) (hazardous-not chemo)**	500mg (RT)	IV	Solution	100mg/mL	6 hr	50 mL NS *Alternative: D5W*		24 hr	60min	Dose: 5-15mg/kg/day
Valrubicin (Valstar)	200 mg (REF; PFL)	Intravesical	Solution	40 mg/mL	N/A	Dilute with 55mL NS for total volume of 75 mL		12 hr	Dwell time: 2 hours	Use non-DEHP containing devices
Vedolizumab (Entyvio) **(hazardous-not chemo)**	300mg (REF;PFL)	IV	SWFI 4.8mL	60 mg/mL	4hr REF	NS 250mL	4 hr		30 min	DO NOT SHAKE
VinBLASTine (Velban)	10 mg (REF;PFL)	IV	NS 10 mL **-or-** Solution	1 mg/mL	6 hr	NS 50 mL *Alternative: D5W*	24 hr	24 hr	10 min *Peripheral line: infuse via gravity*	VESICANT NEVER INTRATHECAL (fatal) EP: Minimal
VinCRISTine (Oncovin; Vincasar)	1 mg 2 mg (REF;PFL)	IV	Solution	1 mg/mL	24 hr REF	NS 50 mL *Alternative: D5W*	7 days	48 hr	10 min *Peripheral line: infuse via gravity*	VESICANT NEVER INTRATHECAL (fatal) Tubing: secondary (MS3500-15) EP: Minimal

OVAMC Pharmacy Services – Chemotherapy/Hazardous Medication Dilution Chart

****All products should have the following stickers at minimum: BUD, Chemo or Hazardous, REF or Room Temp****

Drug	Vial/Amp (Storage)	Route	Vial Reconstitution	Vial Final Conc.	VIAL BUD	Further Dilution	BUD REF	BUD RT	Infusion Rate	Comments
VinORELBine (Navelbine)	10 mg 50 mg (REF;PFL)	IV	Solution	10 mg/mL	6 hr	NS 50 mL (0.5-2 mg/mL) *Alternative: D5W*		24 hr	10 min *Peripheral line: infuse via gravity*	IRRITANT NEVER INTRATHECAL (fatal) Tubing: secondary (MS3500-15) EP: Minimal
ZIV-aflibercept (Zaltrap)	100 mg 200 mg (REF;PFL]	IV	Solution	25 mg/mL	6 hr	NS QS to final conc **Final Conc**: 0.6 – 8 mg/mL *Alternative: D5W*	24 hr	4 hr	60 min	Infuse with 0.2 micron polyethersulfone filter Tubing: primary (2420-0500)
Zoledronic acid (Zometa, Reclast) – **criteria (hazardous-not chemo)**	Premix: 4 mg 5mg (RT) Vial: 4 mg 5 mg (RT)	IV	Premix (100 mL) **-or-** SWFI: 5 mL	Varies	Premix N/A Vial: 6 hrs	Premix: none (0.04-0.05 mg/mL) Vial: 100 mL NS *Alternative: D5W*	24 hrs		15 min	Monitor Ca

Daratumumab infusions:

- **First infusion:** total dose (16mg/kg) divided between day 1 and day 2 (8mg/kg each day in 500mL NS); begin infusion at 50ml/hr; increase by 50ml/hr every hour to maximum of 200ml/hr.
- **Second infusion**: mix in 500mL; begin infusion at 50ml/hr; increase by 50ml/hr every hour to maximum of 200ml/hr.
- **Subsequent infusions**: mix in 500mL; begin infusion at 100m/hr; increase by 50ml/hr every hour to maximum of 200ml/hr

Ocrelizumab infusions:

- **300mg:** begin infusion at 30mL/hr; increase by 30mL/hr every 30 minutes to maximum of 180mL/hr [duration 2.5 hours or LONGER]
- **600mg:** begin infusion at 40mL/hr; increase by 40mL/hr every 30 minutes to maximum of 200mL/hr [duration 3.5 hours or LONGER]

Rituximab infusions:

- **First infusion:** In equal volume of NS (1mg/ml); Begin infusion at 50ml/hr; increase by 50ml/hr every 30 minutes to maximum of 400ml/hr.
- **Rapid infusion (only if tolerated first infusion)**: In NS 500ml; initiate infusion at 200ml/hr for 30 minutes; if patient tolerates, infuse the remaining 400ml over 1 hour.
- **Subsequent infusions, not rapid infusion**: In equal volume of NS (1mg/ml); Begin infusion at 100ml/hr; increase by 100mg/hr every 30 minutes to maximum of 400ml/hr.