



Drug Information Center (DIC)/ KAUH

Dilution of Chemotherapeutic Agents at KAUH

<u>Drug</u>	<u>Trade Name</u>	<u>Diluents</u>	<u>How to dilute</u>	<u>Final Concentration</u>
1- 5-fluorouracil	5-Fluorouracil "ebewe"1000 mg/20ml concentrate	NS, D5W (Lexicomp, Leaflet)	- A daily dose of 15 mg/kg body weight (600 mg/m ²), but not more than 800 mg per infusion, is diluted in 300-500 ml of D5W or NS and administered over 4 hours. (Leaflet) - The diluted solution should be administered via injection or infusion.	0.6-4.0 mg/ml (Leaflet)
2- BCG intravesical	No available leaflet in KAUH	Preservative free NS (Lexicomp)	TheraCys®: Reconstitute with 3 mL of sterile preservative free saline and shake gently to create a fine, even suspension (avoid foaming). Do not use if flocculation or clumping (that is not dispersed with gentle shaking) occurs after reconstitution. Withdraw contents (~3 mL) and further dilute with sterile preservative free saline to a final volume of 50 mL. (Leaflet)	

			TICE BCG®: Reconstitute with 1 mL sterile, preservative free saline using a 3 mL syringe. Add to vial and swirl gently to form a homogenous suspension (forceful agitation may cause clumping). Dilute to a final volume of 50 mL with sterile, preservative free saline. Mix gently prior to intravesical installation. <u>(Leaflet)</u>	
3- Bendamustine Hydrochloride	Ribomustin 25mg powder	NS, D _{2.5} ½NS <u>(Lexicomp)</u>	<p>- Reconstitute each vial of Ribomustin containing 25 mg bendamustine hydrochloride in 10 ml water for injection by shaking. <u>(Leaflet)</u></p> <p>- The reconstituted concentrate contains 2.5 mg / ml and appears as a clear colorless solution. <u>(Leaflet)</u></p> <p>- As soon as a clear solution is obtained (usually after 5-10 minutes) dilute the total recommended dose of Ribomustin immediately with NS solution to produce a final volume of about 500 ml. <u>(Leaflet)</u></p> <p>- After reconstitution and dilution, chemical and physical stability has been demonstrated for 3.5 hours at 25 °C and 2 days at 2 °C to 8 °C in polyethylene bags. <u>(Leaflet)</u></p>	0.2 - 0.6 mg/ml <u>(Lexicomp,Globalrph)</u>
4- Bevacizumab	Avastin 100 mg/4 ml concentrate	NS Do not administer or mix with dextrose-containing solutions.	<p>- Withdraw necessary amount of Avastin and dilute in a total volume of 100 mL of NS. <u>(Lexicomp, Global rph)</u></p> <p>- No incompatibilities between Avastin and polyvinylchloride or polyolefin bags have been</p>	1.4-16.5 mg/ml <u>(Leaflet)</u>

		(<u>Leaflet, Lexicomp</u>)	observed. (<u>Lexicomp, Leaflet</u>)	
5- Bleomycin	Bleomedac 15 IU powder	NS (<u>Leaflet, Lexicomp</u>)	Dissolve the required dose in 5 -200 mL with NS (<u>Leaflet</u>)	
6- Bortezomib	Veelbore 3.5 mg/vial powder	NS (<u>Leaflet, Lexicomp</u>)	- Reconstitute each 3.5 mg vial with 3.5 mL NS to a concentration of 1 mg/ml (<u>Leaflet, Lexicomp</u>) The reconstituted material may be stored for up to 8 hours in a syringe; however total storage time for the reconstituted material must not exceed 8 hours when exposed to normal indoor lighting. (<u>Leaflet, Lexicomp</u>)	
7- Calcium Folate	Calicum Folate injection 10mg/ml	-D5W or NS (<u>Leaflet</u>) - D5W, LR, Sterile water for injection, Bacterio static water for inj. (<u>Global rph</u>) - When doses >10 mg/m ² are required, reconstitute using SWFI, not a solution containing benzyl alcohol. (<u>Lexicomp</u>)	[Amount of drug] [Infusion volume] <u>Syringe:</u> [≤100 mg] [Usual concentration: ≤10mg/ml] <u>IVPB:</u> [101-500 mg] [50 ml] [>500 mg] [100-250ml] - Should not be mixed in the same infusion as 5-fluorouracil, since this may lead to the formation of a precipitate. (Globalrph)	
8- Carboplatin	Carboplan150mg/15 ml 450mg/45ml	D5W or NS (<u>Leaflet</u>)	- Dilute to concentrations as low as 0.5 mg/mL in NS or D ₅ W; however, most clinicians generally	Not lower than 0.5 mg/ml

	solution		dilute dose in either 100 mL or 250 mL of NS or D ₅ W. <u>(Lexicomp)</u> - Needles or IV administration sets that contain aluminum should not be used in the preparation or administration of carboplatin. <u>(Leaflet, Lexicomp)</u>	<u>(Leaflet, Lexicomp)</u> 0.5 to 2 mg/ml <u>(Globalrph)</u>
9- Cetuximab	Erbitux 5 mg/ml solution	- Reconstitution is not required. - May add undiluted solution to an empty sterile container for infusion or may dilute in NS prior to infusion. <u>(Lexicomp)</u>	- Take an infusion bag of adequate size of NS solution. - Calculate the required volume of Erbitux. - Remove an adequate volume of the NS solution from the infusion bag, using an appropriate sterile syringe with a suitable needle. - Take an appropriate sterile syringe and attach a suitable needle. - Draw up the required volume of Erbitux from a vial. - Transfer the Erbitux into the prepared infusion bag. Repeat this procedure until the calculated volume has been reached. <u>(leaflet)</u>	5 mg/mL <u>(Leaflet)</u>
10- Cisplatin	Cisplatin "Ebewe" concentrate 0.5 mg /ml	- NS, D5 ¹ / ₂ NS or D5NS <u>(Lexicomp)</u> - Do NOT dilute in D5W - NS, D5NS, NS 0.9% with mannitol 5% <u>(leaflet)</u>	- The required amount (dose) of the cisplatin concentrate 0.5mg/ml calculated should be diluted in 1-2 liters of one of the mentioned solutions. <u>(leaflet)</u> - Do not use needles or IV administration sets that contain aluminum for cisplatin preparation or administration. <u>(Leaflet, Lexicomp)</u>	

11- Cyclophosphamide	Endoxan 500 , 1000 mg powder	NS, D5W, LR <u>(Leaflet)</u> D5W, 1/2 NS, or D5NS <u>(Lexicomp)</u> D5W, D5NS, D5LR, LR, 0.45NS, N S <u>(Globalrph)</u>	<ul style="list-style-type: none"> - Reconstitute with 25 mL for a 500 mg vial, 50 mL for a 1,000 mg vial, to a concentration of 20 mg/mL using NS or SWFI. <u>(Leaflet , Lexicomp)</u> - Solutions reconstituted in SWFI are hypotonic and should not be used for direct IV push administration. - May reconstitute with NS or SWFI for solutions that will be further diluted for IV infusion. <u>(Lexicomp)</u> - Swirl gently to mix. - For IV infusion, further dilute for infusion in D5W, 1/2 NS, or D5NS, to a minimum concentration of 2 mg/mL. May also dilute for infusion in NS at concentrations of 0.24 to 20 mg/mL. <u>(Lexicomp)</u>
12- Cytarabine	- Cyrabol 500mg lyophilized	NS, D5W, D5NS, LR <u>(Lexicomp, Globalrph)</u>	<ul style="list-style-type: none"> -Reconstitute 500 mg vial with 10 ml bacteriostatic water for injection (50 mg/mL). Solutions containing bacteriostatic agents may be used for SubQ and standard-dose (100 to 200 mg/m²) IV cytarabine preparations, but should not be used for the preparation of either intrathecal doses or high-dose IV therapies. <u>(Lexicomp)</u> - For IV infusion: Further dilute in 250 to 1,000 ml NS or D5W. <u>(Lexicomp)</u> -Reconstituted solutions should be stored at room temperature and used within 48 hours. <u>(Lexicomp)</u> -Solutions for IV infusion diluted in D5W or NS retained 94% to 100% of potency after 8 days when stored at room temperature, although the manufacturer recommends administration as soon as possible after

			<p>preparation. (<u>Lexicomp</u>)</p> <p>-[Amount of drug] [Infusion volume]</p> <p>[Usual dose] [50-100mL NS (Preferred solution) or D5W]</p> <p>[Larger doses] [250mL NS (Preferred solution) or D5W]</p> <p>(<u>Globalrph</u>)</p>
13- Dacarbazine	Dacarbazine medac 200 mg powder	D5W or NS (<u>Lexicomp,Leaflet</u>)	<p>- Reconstitute with 20 mL of sterile water for injection.</p> <p>- May be further diluted with D5W or NS and administered as an intravenous infusion.(<u>leaflet</u>)</p>
14- Dactinomycin	Cosmegen Lyovac 500 mcg powder	D5W or NS (<u>Lexicomp, Globalrph</u>)	<p>- Reconstitute initially with 1.1 mL of preservative-free SWFI to yield a concentration of 500 mcg/ml.</p> <p>- Use of water containing preservatives (benzyl alcohol or parabens) to reconstitute COSMEGEN for Injection, results in the formation of a precipitate. (<u>Lexicomp, Globalrph</u>)</p> <p>- Further dilute in D5W or NS to a recommended concentration of >10 mcg/ml. (<u>Lexicomp, Globalrph</u>)</p> <p>- Cellulose ester membrane filters should not be used during preparation or administration. (<u>Lexicomp, Globalrph</u>)</p>
15- Denosumab	Xgeva 120 mg solution	NOT DILUTED	Use 27 gauge needle to withdraw dose from vial and administer subcutaneously
16- Docetaxel	Docetaxel Ebewe 80 mg/8 ml concentrate	NS or D5W (<u>Lexicomp,Leaflet</u>)	<p>- Based on the required dose for the patient expressed in mg, aseptically withdraw the corresponding volume containing 10 mg/ml</p>
			0.3 to 0.74 mg/mL (<u>Lexicomp</u>)

			<p>docetaxel from the appropriate number of vials using graduated syringes fitted with a needle.</p> <p><u>(Lexicomp,Leaflet)</u></p> <ul style="list-style-type: none"> - The required volume of concentrate for solution for infusion must be injected via a single injection (one shot) into a 250 ml non-DEHP infusion bag or bottle (eg, glass, polypropylene, polyolefin) containing either NS or D5W solution for infusion. If a dose greater than 200mg of docetaxel is required, use a larger volume of the infusion vehicle so that a concentration of 0.74 mg/ml docetaxel is not exceeded. <u>(Lexicomp,Leaflet)</u> - If the vials are stored under refrigeration, allow the required number of vials of Docetaxel Ebewe 10 mg/ml concentrate for solution for infusion to stand below 25°C until the solution has reached room temperature. <u>(Lexicomp,Leaflet)</u> - Mix the infusion bag or bottle manually by gentle inversion and rotation in a controlled manner and avoid foaming. <u>(Lexicomp,Leaflet)</u> - Avoid shaking or vigorous agitation. <u>(Lexicomp,Leaflet)</u> 	
17- Doxorubicin	Doxorubicin Ebewe 2 mg/ml concentrate	NS, D5W(<u>leaflet</u>)	<ul style="list-style-type: none"> - May further dilute doxorubicin solution in 50 to 1000 mL D₅W or NS for infusion. Unstable in solutions with a pH <3 or >7. <u>(Lexicomp)</u> 	0.1-1 mg/ml (<u>leaflet</u>)

			-[Amount of drug] [Infusion volume] [Doses ≤100 mg] [50 -1000ml] Doses >100 mg [100 -1000ml] (<u>Globalrph</u>)	
18- Etoposide	Etoposide "Ebewe" 20mg/ml concentrate	D5W, NS (<u>Leaflet, Lexicomp</u>)	- Etoposide should be diluted to a concentration of 0.2 to 0.4 mg/mL in D5W or NS for administration. (<u>Leaflet, Lexicomp</u>) The use of non-PVC containers and tubing is recommended due to the potential for polysorbate 80 leaching of diethylhexyl phthalate (DEHP), from polyvinyl chloride (PVC) containers and tubing into etoposide IV solution.(<u>Globalrph</u>) - [Amount of drug] [Infusion volume] [≤100 mg] [250 ml] [101 mg to ≤200 mg] [500 ml] [>200 mg] [1000 ml] (<u>Globalrph</u>)	0.2 to 0.4 mg/mL (<u>Lexicomp</u>)
19- Fludarabine	Fludarabine "ebewe" 25mg/ml concentrate	D5W or NS. (<u>leaflet</u>)	- The required dose is drawn up into a syringe. - For intravenous bolus injection this dose is further diluted in 10 ml of NS. - For infusion , the required dose may be diluted in 100 ml of NS and infused over approximately 30 minutes. (<u>leaflet</u>)	
20- Gemcitabine	Gemnil 1000 mg powder	- Preservative free NS (<u>Leaflet, Lexicomp</u>)	- To reconstitute 25 ml preservative free NS solution is added to the 1 g vial yielding a final concentration of 38 mg/ml (displacement volume	Upper gemcitabine concentration limit is 38 mg/ml

			<p>of the lyophilized powder 1.3 mL for the 1-g vial). (<u>Leaflet, Lexicomp</u>)</p> <ul style="list-style-type: none"> - During reconstitution of the solution, the diluent should be added slowly down the side of the vial. Then, shake to dissolve. (<u>Leaflet, Lexicomp</u>) - Further dilute reconstituted lyophilized powder in NS for infusion; to a minimum final concentration of at least 0.1 mg/mL. (<u>Lexicomp</u>). 	
21- Idarubicin	Zavedos 10 mg vial powder	NS or D ₅ W (<u>Lexicomp</u>)	<ul style="list-style-type: none"> - Reconstitute 10 mg vial with 10 mL SWFI (final concentration: 1 mg/mL). (<u>Leaflet, Lexicomp</u>) - Draw up 1 mg/mL solution into a syringe administered slowly into the tubing of a freely running intravenous infusion of NS or D₅W or further dilute in 50 ml NS or D₅W. (<u>Lexicomp, Globalrph</u>) 	
22- Ifosfamide	Holoxan powder 1g, 2g	NS, D ₅ W, LR - May also dilute in D _{2.5} W, ½NS, or D ₅ NS. (<u>Lexicomp</u>)	<ul style="list-style-type: none"> - Reconstitute powder with SWFI or bacteriostatic WFI (1 g in 25 mL) (2 g in 50 mL) to a concentration of 50 mg/mL. (<u>Lexicomp, Leaflet</u>) - Further dilution in 50 to 1,000 mL D₅W, NS, or lactated Ringer's (to a final concentration of 0.6 to 20 mg/mL) is recommended for IV infusion. (<u>Lexicomp</u>) 	0.6 to 20 mg/mL (<u>Lexicomp</u>)
23- Irinotecan	Irinotecan thymoorgan 100mg/5 ml	D ₅ W (preferred) or NS (<u>Lexicomp, Leaflet</u>)	Withdraw the required amount of irinotecan solution from the vial with a calibrated syringe and inject into a 250 ml infusion bag or bottle containing either	0.12 to 2.8 mg/mL. (<u>Lexicomp, Globalrph</u>)

			D ₅ W (preferred) or NS. <u>(leaflet)</u>	
24- L- asparaginase	Asparaginase 10000 U medac powder	Preservative free NS <u>(Leaflet)</u>	<p>-Reconstitute the contents of each vial by slowly injecting 1 or 2 mL of preservative free NS against the inner vial wall.</p> <p>- Do not forcefully inject solution for reconstitution directly onto or into the powder. When reconstituted with 1 mL the resultant concentration is 10,000 IU units/mL. When reconstituted with 2 mL the resultant concentration is 5,000 IU units/mL.</p> <p>- Dissolve contents by gentle mixing or swirling. Do not shake or invert vial.</p> <p>- When reconstituted, L-Asparaginase Medac should be a clear, colorless solution. Inspect the solution after reconstitution and discard if any visible particles or protein aggregates are present.</p> <p>- Withdraw the volume containing the calculated dose from the vial into a polypropylene syringe within 15 minutes of reconstitution.</p> <p>- For intravenous use, slowly inject the reconstituted L-Asparaginase Medac into an IV infusion bag containing 100 mL of NS acclimatized to room temperature. Do not shake or squeeze the IV bag.</p> <p><u>(Leaflet)</u></p>	
25- Mesna	Mecen 400mg /4 ml solution	D5W, NS, D5 ¹ / ₄ NS, D5 ¹ / ₃ NS, D5 ¹ / ₂ NS, or LR <u>(Lexicomp,Globalrph)</u> - No information in	- Dilute in D5W, NS, D5 ¹ / ₄ NS, D5 ¹ / ₃ NS, D5 ¹ / ₂ NS, or lactated Ringer's to a final concentration of 20 mg/mL. <u>(Lexicomp,Globalrph)</u> - Mesna is not compatible with cisplatin or carboplatin._	20 mg/mL <u>(Lexicomp)</u>

		leaflet.	(Lexicomp,Globalrph)	
26- Methotrexate	Trexol 50 mg/2ml - No information in leaflet.	D5W or NS (Lexicomp,Globalrph)	[Amount of drug] [Infusion volume] [Infusion rate] Syringe: [0-100 mg] [≤ 25 mg/ml] [5 minutes - into free flowing IV D5W or NS] [100-300 mg] [≤ 25 mg/ml] [15 minutes into free flowing IV D5W or NS] IV admixture: [100 - 200 mg] [50 - 100ml] [30-60 minutes] [200 - 500 mg] [250 - 500ml] [30 - 120 minutes] [>500 mg] [500 - 1000ml] [1 - 4 hours] [High dose > 1 gram/m ²] [1000 ml] [2 - 4 hours - follow local protocol] (Globalrph)	
27- Mitoxantrone	No available leaflet in KAUH	D5W, NS (Lexicomp,Globalrph)	Dilute in at least 50 mL of NS or D5W. May further dilute in D5W, NS, or D5NS, use immediately after preparation.(Lexicomp,Globalrph)	
28- <u>Nivolumab</u>	Opdivo(10 mg/ml)as concentrate	NS or D5W (Lexicomp, Leaflet)	- Withdraw the required volume and transfer into an IV container. Dilute with either NS or D5W to a final concentration of 1 to 10 mg/mL; the total volume of infusion must not exceed 160 mL for patients ≥40 kg (or 4 mL/kg for patients <40 kg). - Mix by gentle inversion; do not shake._ (Lexicomp, Leaflet)	1 to 10 mg/mL (Lexicomp, Leaflet)
29- Oxaliplatin	Oxaviatin 5mg/ml concentrate for solution for infusion	D5W - Don't prepare using a chloride-containing solution such as NaCl.	- Dilution with D5W (250 or 500 mL) is required prior to administration. (Lexicomp,Leaflet) - After dilution with 250-500 mL of 5% Dextrose, the shelf life is 24 hours at room temperature or up	0.2 to 0.7 mg/mL (Leaflet,Globalrph)

		(Lexicomp, leaflet)	<p>to 48 hours under refrigeration. After final dilution, protection from light is not required.(leaflet)</p> <ul style="list-style-type: none"> - Do not use needles or administration sets containing aluminum during preparation. - Don't mix with alkaline medications and solutions. (Lexicomp) 	
30- Paclitaxel	Pataxel6 mg/ml concentrate	D5W, D5LR, D5NS, or NS (Lexicomp, leaflet)	<ul style="list-style-type: none"> - Dilute for infusion in 250 to 1,000 mL D₅W, D₅LR, D₅NS, or NS to a concentration of 0.3 to 1.2 mg/mL, use a non-PVC container (glass or polyethylene). (Lexicomp) - Chemotherapy dispensing devices (eg, Chemo Dispensing Pin) should not be used to withdraw paclitaxel from the vial; closed system transfer devices may not be compatible with undiluted paclitaxel. - Pataxel should be administered through an in-line filter with a microporous membrane ≤0.22μm. - The diluted solution is stable at 2-8°C and ≤25°C for 7 days when diluted in D5W or for 14 days when diluted in NS. (Leaflet) 	0.3 to 1.2 mg/mL (Lexicomp, leaflet)
31- <u>Panitumumab</u>	<u>Vectibix</u> <u>20mg/ml concentrate</u>	NS (Lexicomp, leaflet)	<ul style="list-style-type: none"> -Use a 21-gauge (or larger gauge/smaller bore) needle to withdraw appropriate volume from vial; do not use needle-free devices or vial adapters to withdraw vial contents. - The manufacturer recommends diluting to a total volume of 100 mL (for doses ≤1,000 mg) or 150 mL (doses >1,000 mg) of NS. Gently invert to mix; do not shake. (Lexicomp, leaflet) 	Should not exceed 10 mg/ML (Lexicomp, leaflet)

32- Pegaspargase	Oncaspar 750 U/ml powder	NS or D5W. <u>(leaflet, Lexicomp)</u>	<ul style="list-style-type: none"> - To reconstitute add 5.2 ml water for injections to the vial using a syringe and 21 gauge needle. <u>(leaflet)</u> - The vial should be gently swirled until the powder is reconstituted. After reconstitution, the solution should be clear, colorless and free from visible foreign particles. Do not shake. <u>(leaflet)</u> - The solution should be used within 24 hours after reconstitution, when stored below 25°C. <u>(leaflet)</u> -For intravenous administration, the reconstituted solution should be diluted in 100 ml NS or D5W solution. <u>(leaflet)</u> - After dilution, the solution should be used immediately. If immediate use is not possible, the diluted solution can be stored at 2°C-8°C for up to 48 hours. <u>(leaflet)</u> 	
33- Pemetrexed disodium	Pemitra 500 mg powder	NS <u>(leaflet, Lexicomp)</u>	<ul style="list-style-type: none"> - Reconstitute with NS (preservative free); add 20 mL to the 500 mg vial, resulting in a 25 mg/mL concentration. Gently swirl until powder is completely dissolved. Solution may be colorless to green-yellow. <u>(leaflet, Lexicomp)</u> - Further dilute in 100 mL NS prior to infusion. <u>(leaflet, Lexicomp)</u> - Chemical and physical stability of reconstituted and infusion solutions of Pemitra were demonstrated for up to 24 hours following initial reconstitution, when stored refrigerated, 2-8°C or at 25°C . <u>(leaflet)</u> 	
34- Rituximab	Truxima 100mg/10ml, 500mg/50ml concentrate	NS, D5W <u>(leaflet, Lexicomp)</u>	<ul style="list-style-type: none"> - Withdraw necessary amount of rituximab and dilute to a final concentration of 1 to 4 mg/mL with NS or D5W. <u>(leaflet, Lexicomp)</u> 	1 to 4 mg/mL <u>(leaflet, Lexicomp)</u>

	Tromax 100mg/10ml, 500mg/50ml concentrate		<p>- Gently invert the bag to mix the solution. Do not shake.</p> <p>- Do not mix or dilute with other medications.</p> <p>- Diluted Truxima, Tromax solutions for infusion may be stored at 2°C to 8° for 24 hours. Diluted Truxima, Tromax solutions for infusion have been shown to be stable for an additional 24 hours at room temperature. However, since Truxima, Tromax solutions do not contain a preservative, diluted solutions should be stored refrigerated (2°C to 8°C).</p> <p><u>(leaflet, Lexicomp)</u></p> <p>- No incompatibilities between Truxima, Tromax and polyvinylchloride or polyethylene bags have been observed <u>.(leaflet)</u></p>	
35- Tocilizumab	Actemra 20 mg/ml solution	NS or 1/2 NS <u>(Lexicomp)</u>	<ul style="list-style-type: none"> • Systemic Juvenile Idiopathic Arthritis (SJIA) Patients less than 30 kg: utilize a 50 mL infusion bag or bottle, and then follow steps 1 and 2 below. • Adult Rheumatoid Arthritis and SJIA patients at or above 30 kg weight: utilize a 100 mL infusion bag or bottle, and then follow steps 1 and 2 below. <ul style="list-style-type: none"> –Step 1: Withdraw a volume of 0.9% Sodium Chloride Injection, USP, equal to the volume of the ACTEMRA solution required for the patient's dose from the infusion bag or bottle. –Step 2: Slowly add ACTEMRA for intravenous infusion from each vial into the infusion bag or bottle. To mix the solution, gently invert the bag to avoid foaming. <u>.(Leaflet, Globalrph)</u> <p>- Diluted solutions are compatible with polypropylene (PP), polyethylene (PE), polyvinyl chloride (PVC), and glass infusion containers.<u>(Leaflet, Globalrph)</u></p>	

36- Trastuzumab	<p>Herzuma 440 mg powder for concentrate for solution for infusion</p> <p>Herceptin 440 mg for multiple injection use</p>	<p>BWFI , SWFI, NS (leaflet, Lexicomp)</p>	<ul style="list-style-type: none"> - Reconstitute vial with 20 mL bacteriostatic sterile water for injection (SWFI may be used if a patient has a known hypersensitivity to benzyl alcohol) to a concentration of 21 mg/mL. (leaflet, Lexicomp) - Swirl vial gently to mix; do not shake. Slight foaming may occur during reconstitution. Allow vial to rest undisturbed for ~5 minutes. (leaflet, Lexicomp) - Prior to administration, further dilute the appropriate volume for the trastuzumab dose in PVC or polyethylene bags containing 250 mL NS; do not use D5W. (leaflet, Lexicomp) - Gently invert bag to mix; do not shake. Do not mix trastuzumab products with other medications. (leaflet, Lexicomp) - Herzuma vial reconstituted with bacteriostatic water for injection are stable for 28 days at 2-8°C. (leaflet) - Herzuma solution for infusion in PVC, PE or PP bags containing 0.9% NS is stable for 24 hours in 2-8°C. (leaflet) - If Herzuma is reconstituted with SWFI without preservative, the reconstituted solution is considered single-dose. (Leaflet, Globalrph) 	<p>21 mg/mL (leaflet, Lexicomp)</p>

37- Vinblastine	Vinblastine Sulfate 1 mg/ml solution for injection Hospira <u>No information in leaflet</u>	NS, D5W, or LR <u>(Lexicomp)</u>	<p>- For infusion, dilute in 25 to 50 mL NS, D5W, or LR; dilution in larger volumes (≥ 100 mL) of IV fluids is not recommended. <u>(Lexicomp)</u></p> <p>- Dispensing vinblastine in a minibag (NOT in a syringe). <u>(Lexicomp)</u></p>	
38- Vincristine	Vincristine hospira 2mg/2ml solution	-NS, D5W <u>(Lexicomp)</u> - NS <u>(leaflet)</u>	<p>- In a minibag, dilute dose with NS or D5W to a final concentration of 0.0015 to 0.08 mg/mL; typically, doses are diluted in a 25 or 50 mL minibag. (<u>Lexicomp</u>)</p> <p>- Do not add extra fluid to the vial prior to removal of the dose. Withdraw the solution of Vincristine Sulfate Injection, USP into an accurate dry syringe, measuring the dose carefully. Do not add extra fluid to the vial in an attempt to empty it completely. <u>(Lexicomp)</u></p>	0.0015 to 0.08 mg/mL <u>(Lexicomp)</u>
39- Vinorelbine	Vinorelbine "ebewe" 50 mg /5 ml concentrate	D5W, NS, $\frac{1}{2}$ NS, D5 $\frac{1}{2}$ NS, LR, or Ringer's <u>(Lexicomp, Globalrph)</u> D5W, NS <u>(Leaflet)</u>	<p>- It is recommended to administer vinorelbine as an infusion over the course of 6-10 minutes after dilution in 20-50 ml of D5W, NS solution for injection or by a short infusion (20-30 minutes) after dilution in 125 ml of D5W, NS solution for injection. <u>(leaflet)</u></p> <p>- Vinorelbine should NOT be prepared during the preparation of any intrathecal medications. <u>(Lexicomp)</u></p>	0.5 to 2 mg/mL <u>(Lexicomp,</u> <u>Globalrph)</u>
40- Zoledronic acid	Zoledronic acid Hikma concentrate(4 mg/5ml)	NS, D5W <u>(Leaflet, Lexicomp)</u>	- 5 ml concentrate from one vial or the volume of the concentrate withdrawn as required must be further diluted with 100 ml of calcium-free infusion solution (NS, D5W). <u>(Leaflet, Lexicomp)</u>	

			<ul style="list-style-type: none">- Don't mix with Ca⁺² containing solutions.- Diluted solutions are compatible with polypropylene (PP), polyethylene (PE), polyvinyl chloride (PVC), and glass infusion containers. <u>(Leaflet)</u>
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- References:

-Lexicomp.

- Leaflets.

- Globalrph.

Prepared by clinical pharmacist in DIC : Eshraq Al-abweeny

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