



CardinalHealth™

# Cornerstone Rheumatology™ GPO

Rheumatology products requiring dilution  
reference guide





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Drug	Last updated	Vial strength	Diluent and concentration	Further dilute in	Final concentration	Stability	Infusion/storage/precaution information
Abatacept (Orencia)	01/2022	IV: 250 mg lyophilized powder SDV  SQ: 125 mg/mL solution in a single-dose prefilled syringe	For powder vial: using only the silicone-free disposable syringe provided with each vial  10mL SWFI (25 mg/mL)	100 mL NS	Max 10 mg/mL	Solution is stable at room temperature or refrigerated up to 24 hours before use	IV infusion is 30 minutes for RA, pJIA, and PsA 60 minutes infusion for GvHD
Belimumab (Benlysta)	01/2022	IV: 120 mg or 400 mg lyophilized powder  SQ: 200 mg/mL autoinjector or pre-filled syringe	IV: 120 mg vial – 1.5 mL SWFI (80 mg/mL)  400 mg vial 4.8 mL SWFI (80 mg/mL)	250 mL NS, ½ NS or Lactated Ringers		Use reconstituted solution immediately or store protected from light and refrigerated.  Diluted solutions may be stored refrigerated or at room temperature	The total time from reconstitution of BENLYSTA to completion of infusion should not exceed 8 hours
Bevacizumab (Avastin, Mvasi, Zirabev)	01/2022	100 or 400 mg vial (25 mg/mL)	N/A	100 mL NS  Do NOT mix with dextrose containing solutions.		Solutions stable for up to 8 hours under refrigeration	Administer as IV infusion over 90 minutes – if tolerated second infusion may be given over 60 minutes, if tolerated the subsequent infusions may be given over 30 minutes  Protect from light
Certolizumab pegol (Cimzia)	01/2022	IV: 200 mg lyophilized powder package contains everything required to reconstitute and inject  SQ: 200 mg/mL solution in a single-dose prefilled syringe	For powder vial: 1 mL SWFI (200 mg/mL)			Solution is stable after reconstitution at refrigerated temperature for up to 24 hours	SubQ injection - Prior to injecting, reconstituted drug should be at room temperature but do not leave reconstituted drug at room temperature for more than two hours prior to administration



Drug	Last updated	Vial strength	Diluent and concentration	Further dilute in	Final concentration	Stability	Infusion/storage/precaution information
Cyclophosphamide (Cytoxan)	01/2022	IV: 500, 1000 or 2000 mg vial powder for injection; 500 mg/2.5 mL, 1 g/5 mL, 2 g/10 mL solution	For powder form: 25, 50 or 100 mL of SWFI or NS depending on dose (20 mg/mL)	100 to 250 mL NS, ½ NS, D5W or D5NS	Minimum 2 mg/mL	Reconstituted solution in NS is stable for 24 hours at room temp and 6 days refrigerated Solutions diluted for infusion in ½ NS are stable for 24 hours at room temperature and for 6 days refrigerated; solutions diluted D5W or D5NS are stable for 24 hours at room temperature and for 36 hours refrigerated	Administer as IV infusion over 1 to 24 hours  Doses >500 mg to 2 g may be administered over 20-30 minutes. Ensure adequate hydration to minimize bladder toxicity
Denosumab (Prolia)	01/2022	SQ: Single-dose prefilled syringe containing 60 mg in a 1 mL solution	NA	NA		Store refrigerated, stable at room temperature for 14 days	
Golimumab (Simponi Aria)	01/2022	SQ: 50 mg/4 mL (12.5 mg/mL) solution SDV	NA	100mL NS		Diluted solution is stable at room temperature for up to 4 hours	Use in-line LPB filter Infuse the diluted solution over 30 minutes
Infliximab (Remicade, Inflectra, Avsola, Renflexis)	01/2022	IV: 100 mg lyophilized powder SDV	10 mL SWFI (10 mg/mL)  *Use a syringe equipped with a 21-gauge or smaller needle	250 mL NS May use 500 mL NS if high dose  Discard any unused portion of the reconstituted solution remaining in the vial(s).	Max concentration 4 mg/mL	Unopened vials may be stored at room temperatures up to a maximum of 30°C (86°F) for a single period of up to 6 months but not exceeding the original expiration date. The new expiration date must be written in the space provided on the carton. Once removed from the refrigerator, vials cannot be returned to the refrigerator. Once reconstituted, Infusion must begin within 3 hours	Administer IV using LPB in-line filter. Begin infusion within 3 hours of reconstitution and dilution. Infusion must last at least 2 hours.



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Mepolizumab (Nucala)	01/2022	SQ: 100 mg of lyophilized powder SDV; 100 mg/mL, single-dose, prefilled autoinjector or single-dose prefilled syringe	For powder form: 1.2 mL SWFI (100mg/mL)	NA		store reconstituted solution below 30°C (86°F), Do not freeze, and discard if not used within 8 hours of reconstitution	For 100mg dose remove 1 mL of reconstituted solution  For 40mg dose remove 0.4 mL of reconstituted solution
Methotrexate	01/2022	50 mg/2 mL (25 mg/mL), 250 mg/10 mL (25 mg/mL), and 1 g/40mL (25 mg/mL) solutions  1 gm Lyophilized powder  There are many manufacturers so this list may not be complete	For powder form: NS or D5W to concentration of less than 25-50 mg/mL  Use preservative-free for IT	D5W for IV injection Sterile NS for IT	Max of 50 mg/mL	IT solutions should be given immediately  Diluted solutions stable for 24 hrs at room temp	Protect from light  May be given IV, SubQ or IM
Ocrelizumab (Ocrevus)	01/2022	IV: 300 mg/10 mL (30 mg/mL) SDV	NA	10 mL (300 mg) of solution in 250 mL NS or 20 mL (600 mg) of solution in 500 mL NS	1.2 mg/mL	Diluted solution is stable up to 24 hours refrigerated or 8 hours at room temperature	Use in-line filter
Omalizumab (Xolair)	01/2022	SQ: 75 mg/0.5 mL and 150 mg/mL solution SDV; 150 mg lyophilized powder SDV	For powder - 1.4 mL SWFI	N/A		Protect from Light  Stable for 8 hours following reconstitution when refrigerated or for 4 hours after reconstitution when stored at room temperature	Administer SubQ



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Pegloticase (Krystexxa)	01/2022	IV: 8 mg/1 mL sterile concentrate	N/A	250 mL NS or ½ NS		Diluted solution in infusion bags is stable for 4 hours refrigerated and at room temperature, however, it is recommended that diluted solutions be stored under refrigeration, not frozen, protected from light, and used within 4 hours of dilution.	Before administration, allow the diluted solution to reach room temperature. solution in a vial or in an intravenous infusion fluid should never be heated artificially (e.g., hot water, microwave).
Reslizumab (Cinqlair)	01/2022	IV: 100 mg/10 mL (10 mg/mL) solution SDV	N/A	50 mL NS		Administer immediately after preparation. If not used immediately, store diluted solutions in the refrigerator or at room temperature up to 25°C (77°F), protected from light, for up to 16 hours	For IV infusion only The time between preparation of CINQAIR and administration should not exceed 16 hours. Use an infusion set with an in-line, LPB filter. Flush with NS after infusion is complete. s compatible with polyethersulfone (PES), polyvinylidene fluoride (PVDF), nylon, and cellulose acetate in-line infusion filters.
Rituximab (Rituxan, Ruxience, Truxima, Riabni)	01/2022	IV: 100 or 500 mg vial solution for injection (10 mg/mL)	N/A	NS or D5W to final concentration of 1 mg/mL to 4 mg/mL	1 to 4 mg/mL	Solutions stable for 24 hours under refrigeration and additional 24 hours at room temp	Administer as IV infusion: initial infusion should start at 50 mg/hour and if no reaction the rate should be increased by 50 mg/hour every 30 minutes to a max rate of 400 mg/hr



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Rituximab and hyaluronidase (Rituxan Hycela)	01/2022	SQ: 1,400 mg rituximab and 23,400 Units hyaluronidase human per 11.7 mL (120 mg/2,000 Units per mL) 1,600 mg rituximab and 26,800 Units hyaluronidase human per 13.4 mL (120 mg/2,000 Units per mL)	N/A		120 mg/2,000 Units per mL 120 mg/2,000 Units per mL	Stable in the refrigerator up to 48 hours and then for 8 hours at room temperature up to 30°C (86°F) in diffuse light	Administer SubQ in the abdomen 11.7 mL from 1,400 mg/23,400 Units vial over 5 minutes 13.4 mL from 1,600 mg/26,800 Units vial over 7 minutes  Observe 15 minutes following administration
Romosozumab-aqqg (Evenity)	01/2022	SQ: 105 mg/1.17 mL solution in a single-use prefilled syringe	N/A	N/A		Stable at room temperature in original container for 30 days	A full dose of EVENITY requires two single-use prefilled syringes.
Tocilizumab IV (Actemra)	01/2022	IV: 80 mg/4 mL (20 mg/mL), 200 mg/10 mL (20 mg/mL), 400 mg/20 mL (20 mg/mL) SDV	N/A	Patients less than 30 kg: use a 50 mL infusion bag or bottle of NS, or ½ NS Patients at or above 30 kg weight: use a 100 mL infusion bag or bottle of NS, or ½ NS		Diluted solution in NS may be stored refrigerated or at room temperature for 24 hours  Diluted solution in ½ NS may be stored refrigerated for 24 hours or at room temperature for 4 hours	Protect from light
Ustekinumab IV (Stelara)	01/2022	IV: 130 mg/26 mL SDV (5 mg/mL) SQ: 45 mg/0.5 mL or 90 mg/mL syringe or SDV	NA	IV: 250 mL NS or 250 mL ½ NS		Diluted infusion is stable at room temperature for up to 7 hours	Complete infusion within 8 hours of dilution. Do not use SQ injection in IV drip
Vedolizumab (Entyvio)	01/2022	IV: 300 mg of lyophilized powder/20mL	4.8 mL SWFI (300mg/5mL)	250 mL NS		If necessary, the infusion solution may be stored for up to four hours refrigerated	Once reconstituted and diluted, use the infusion solution as soon as possible.

**Key:**

SW or SWFI = sterile water or sterile water for injection

½ NS = Half-Normal Saline (0.45NaCl)

D5W = 5% dextrose in water

SQ = subcutaneous

IVPB = IV piggy back

refrigerator temperature = 2°C–8°C (36°F–46°F)

PVC = polyvinyl chloride

PE = polyethylene

PES = polyethersulfone

LPB = Low Protein Binding

EVA = ethylene vinyl acetate

room temperature = 20°C-25°C (68°-77 °F)

NS = normal saline (0.9% NaCl)

PO = polyolefin

IV = intravenous

SubQ = subcutaneous

IM = intramuscular

References: Various medication specific package inserts <http://dailymed.nlm.nih.gov/dailymed/about.cfm>