

# Rheumatology Medications

## Actemra

<https://www.actemra.com/>

- 1 Indications- for AR only
- 2 Can be first line therapy
- 3 Doses- 4mg/kg (dosed for very first infusion), and 8mg/kg (up to MD if patient fails on 4mg/kg & they want to increase dose.)
- 4 Vial sizes: 80mg/4ml (green), 200mg/10ml (yellow), 400mg/20ml (red)
- 5 Use combination of vials for the least waste
- 6 **MAX DOSE**-800mg no matter patient's wt
- 7 Given in 100ml NS bag and given over 1 hour
- 8 No pre meds needed
- 9 Given every 4 weeks
- 10 Use with NON FILTERED tubing
- 11 If patient has "significant reaction"- PATIENT IS TO NEVER RECEIVE ACTEMRA AGAIN
- 12 Can cause GI perforation-use caution with patients that have history of diverticulitis

## Orencia

<http://www.orenciahcp.com/>

- 1 Indications: RA and Psoriatic Arthritis
- 2 Dosing:
  - a. <60kg = 500mg
  - b. 60kg-100kg 750 mg
  - c. >100kg 1000mg
- 3 Frequency and loading dose:
  - a. At weeks 0, 2, 4 and q 4 weeks thereafter
  - b. (0-initial, then 2 weeks later then again in 2 weeks (week 4) then evermonth.)
- 4 Vial size: 250mg/10ml
- 5 Mixing Instructions:
  - a. Use silicone free syringe that comes in Orencia kit (per manufacturer label)
  - b. Reconstitute using 10cc of sterile water wiping vials with alcohol (do not shake).
  - c. Vent Orencia vials.
  - d. Remove amount of NS from bag= to the amount of drug needed ex: 750 mg 30ml (10ml each vial) remove 30 ml from NS bag
  - e. Given in 100ml NS over 30 min
- 6 No premeds needed
- 7 Filtered tubing

## Simponi Aria

<https://www.simponiaria.com/>

1. Indications- for RA, Psoriatic Arthritis, Ankylosing Spondylitis
2. Dosing: 2mg/kg
3. Vial size: 50mg/4ml
4. Given in 100ml NS bag over 30 min
5. Simponi Aria **HAS TO BE GIVEN IN COMBINATION WITH METHOTREXATE** unless patient is allergic or another indication
6. Frequency and loading dose: 0,4 then every 8 weeks thereafter (0-initial, then 4 weeks later and every 8 weeks)
7. No premeds needed
8. Filtered Tubing (no reconstitution needed however per manufacturer label)

## Cimzia

<https://www.cimzia.com/>

- 1 Indications- Rheumatoid Arthritis, Crohn's Disease, Psoriatic Arthritis, Plaque Psoriasis, and Ankylosing Spondylitis
- 2 Dose: 200mg SQ every 2 weeks, or 400mg SQ every 4 week
- 3 Vial size: 200mg/ml
- 4 Loading dose and frequency: For Crohn's, RA, AS, PSA = week 0, week 2, week 4 then the doctor can choose to have the patient return every 2 weeks for a dose of 200mg or every 4 weeks for a dose of 400mg (Crohn's does not allow for an every 2 week frequency post loading dose); For PP < 90kg week 0, week 2, week 4 then q 2 weeks; if > 90kg 400mg every 2 weeks
- 5 Given SQ either in the abdomen or thighs, **NO ARMS**
- 6 No pre-meds needed
- 7 **This medication will take time to reconstitute. Please leave at room temperature at least 30 minutes prior to patient's arrival. Let completely dissolve with no floating particles**
- 8 Cimzia kit has everything inside for administration. Use the lot numbers that are on the vials not the kit with this medication.
- 9 Vital signs before and after monitor patient for 30 minutes after

## Remicade

<http://www.remicade.com/>

- 1 Indications- Rheumatoid Arthritis, Crohn's Disease, Ankylosing Spondylitis, Ulcerative Colitis, Psoriatic Arthritis, Plaque Psoriasis
- 2 Dose:
  - a. Crohn's 5mg/kg OR 10mg/kg
  - b. RA 3mg/kg-10mg/kg
  - c. AS 5mg/kg
  - d. UC 5mg/kg
  - e. PSA & Psoriasis 5mg/kg
- 3 Dosing for RA (Remicade) for a patient receiving for the 1st time is 3mg/kg. Patient may be on 3-10mg/kg only if they were receiving prior treatment.
- 4 Vial size: 100mg/10ml
- 5 Loading dose and frequency:
  - a RA at week 0, 2, 6 then every 4 to 8 weeks there after
  - b Crohn's at week 0, 2, 6 then every 8 weeks there after.
  - c UC at week 0, 2, 6 then every 8 weeks there after
  - d AS at week 0, 2, 6 then every 6 weeks there after
  - e PSA and Psoriasis at week 0, 2, 6 then every 8 weeks there after
- 6 Remicade is given in a 250/ml of normal saline over 2 hours; if dose is over 1000mg than the medication is given in a 500ml bag of NS
- 7 Premedication needed (Preferred, but some patients may not take, and some MD's may not order, follow order)
- 8 Filtered tubing used (medication reconstituted)
- 9 Infusion to titrated up every 15 minutes for the first hour
- 10 Use drip rate schedule provided
- 11 Remicade needs to sit 5 minutes to activate, do not shake
- 12 Each vial is reconstituted with 10ml of **Sterile water**
- 13 A dose given for RA **and** less than 10 mg/kg will be rounded up or down to the nearest 100mg dose allowing complete vials to be used with no waste. A dose of 10mg/kg will not be rounded and will be considered a medication error if treated otherwise according to FDA label.

## Inflectra

[www.pfizerpro.com/INFLECTRA/hc](http://www.pfizerpro.com/INFLECTRA/hc)

- 1 Indications- Rheumatoid Arthritis, Crohn's Disease, Ankylosing Spondylitis, Ulcerative Colitis, Psoriatic Arthritis, Plaque Psoriasis
- 2 Dose:
  - a. RA 3mg/kg-10mg/kg
  - b. Crohn's 5mg/mg OR 10mg/kg
  - c. AS 5mg/kg
  - d. UC 5mg/kg
  - e. PSA & Psoriasis 5mg/kg
- 3 Dosing for RA (Inflectra) for a patient receiving for the 1st time is 3mg/kg. Patient may be on 3-10mg/kg only if they were receiving prior treatment.
- 4 Vial size: 100mg/10ml
- 5 Loading dose and frequency:
  - a. RA at week 0, 2, 6 then every 4 to 8 weeks there after
  - b. Crohn's at week 0, 2, 6 then every 8 weeks there after
  - c. UC at week 0, 2, 6 then every 8 weeks there after
  - d. AS at week 0, 2, 6 then every 6 weeks there after
  - e. PSA and Psoriasis at week 0, 2, 6 then every 8 weeks there after
- 6 Inflectra is given in a 250/ml of normal saline over 2 hours; if dose is over 1000mg than the medication is given in a 500ml bag of NS
- 7 Premedication needed (Preferred, but some patients may not take, and some MD's may not order, follow order)
- 8 Filtered tubing used (medication reconstituted)
- 9 Infusion to titrated up every 15 minutes for the first hour
- 10 Use drip rate schedule provided
- 11 Each vial is reconstituted with 10 ml of Sterile water
- 12 No rounding of doses (mg) for Inflectra regardless of indication

## Prolia

<https://www.prolia.com/>

- 1 Indications- Post Menopausal Osteoporosis
- 2 Dose: 60mg/ml
- 3 Vial: prefilled syringe SQ injection
- 4 Monitor patient for 30 minutes after infusion
- 5 Given every 6 months
- 6 Patient needs to consult with MD on what dose of Vitamin D and Calcium supplements the patient should be on. Given in the abdomen, arm or thigh
- 7 Vitals signs before and after
- 8 Can cause Osteo Necrosis of the Jaw (Dental Checkups)
- 9 If patient has a fracture that is less than 6 weeks old consult with physician- MD may hold
- 10 If patient is noted with Psoriasis/eczema (contraindicated)

## Boniva

- 1 Indications- Post Menopausal Osteoporosis
- 2 Dose: 3mg/3ml
- 3 Vial: IVP prefilled syringe kit comes with butterfly

- 4 Monitor patient for 30 minutes after infusion
- 5 Given every 3 months
- 6 Patient needs to consult with MD on what dose of Vitamin D and Calcium supplements the patient should be on.
- 7 Instruct patient on good oral hygiene due to Osteo necrosis of the jaw. Assess for any jaw pain.
- 8 Cannot Buy and Bill. Drug must be SPP

### **Reclast (Zoledronic Acid)**

- 1 Indications- Senile Osteoporosis, Low Trauma Hip Fracture, Glucocorticoid-induced osteoporosis, Disorder of bone and cartilage, Prevention of glucocorticoid-induced osteoporosis, Paget's disease of bone.
- 2 Dose: 5mg
- 3 Vial: Reclast comes in its own 100ml Glass bottle
- 4 Administer no less than 15 minutes
- 5 Vent IV tubing at chamber
- 6 Monitor patient for 30 minutes after infusion
- 7 Given every once a year
- 8 Patient needs to consult with MD on what dose of Vitamin D and Calcium supplements the patient should be on.
- 9 SPP for Reclast
- 10 Buy and Bill Zoledronic Acid (Generic)

### **Krystexxa**

<http://www.krystexxa.com/>

- 1 Indications- Gout
- 2 Dose: 8mg
- 3 Vial size: 8mg/ml
- 4 Given every 2 weeks
- 5 Given in 250 ml bag over 2 hours
- 6 Pre-meds needed including Solumedrol or another corticosteroid.
- 7 Non-filtered tubing (no reconstitution needed)

### **Benlysta**

<http://www.benlysta.com/about/>

- 1 Indications- Systemic Lupus Erythematosus (SLE)
- 2 Dose: 10mg/kg
- 3 Vial sizes: 400mg/5ml (after reconstitution); 120mg/1.5ml (after reconstitution)
- 4 Mix Benlysta with Sterile water: 400mg vial mix with 4.8 ml sterile water; 120mg vial mix with 1.5 ml sterile water
- 5 Given in 250 ml bag over 1 hour
- 6 Loading dose and frequency: 0,2,4 then every 4 weeks thereafter (0-initial, then 2 weeks later, then 2 weeks (week 4) then every month after(q 4 wks)
- 7 Premeds needed (preferred, but follow physician order)
- 8 Filtered tubing
- 9 Benlysta takes a while to reconstitute (at least 20 min) do not shake vials, roll between hands and let dissolve till clear with no floating particles

1. Indications- Rheumatoid Arthritis, Wegener's Granulomatosis/MPA, and Pemphigus vulgaris
2. Doses:
  - a. **RA:** 1000mg
  - b. **Wegener's/MPA:** 375mg/m<sup>2</sup> x BSA (Body Surface Area) during initiation; then 500mg during follow up and maintenance
  - c. **Pemphigus Vulgaris:** 1000mg or 500mg (depending on treatment number or relapse)
3. Vial sizes:
  - a. 100mg/10ml (No reconstitution needed)
  - b. 500mg/50ml
4. Mixing: Use a 250ml bag regardless of indication
  - a. **RA:** 250ml NS bag used - withdraw 100ml of NS and waste prior to adding drug to bag
  - b. **WG/MPA:** amount of NS that remains in the 250ml NS bag will depend on dose (per Rituxan chart for WG/MPA) use chart during initiation only. All subsequent doses will follow the procedure of withdrawing the amount of NS from the bag and wasting it that is equivalent to the amount of drug in mL being provided to the patient. This is done prior to adding the medication to the bag
  - c. **Pemphigus Vulgaris:** 1000mg dose mixes in 250ml using the same procedure as with RA; the 500mg dose- withdraw 50ml of NS and waste prior to adding drug to bag
- Rate:
  - a. **RA:** Very first infusion for Rituxan is 4:15, second and subsequent is 3:15; set pump using chart provided
  - b. **WG/MPA:** Pump set at 4:15 for very first infusion, medication may run out before this time depending on how much medication/NS is in the bag per the Rituxan chart. Second and subsequent at 3:15, however may run out sooner depending on amount of medication/NS in the bag per Rituxan chart. All 500mg doses are to be provided over 2 hours.
  - c. **Pemphigus Vulgaris:** Very first infusion 4:15, second and all subsequent 1000mg dose is 3:15; 500mg dose over 2 hours
- Frequency:
  - a. **RA:** 1000mg at week 0 and 1000mg 14 days later. Then patient repeats the cycle 4-6 months later (depending on MD)
  - b. **WG/MPA:** Initiation: 375mg/M<sup>2</sup> x BSA (see dosing chart) patient comes every week for 4 weeks  
**Follow up:** 6 months later patient returns for 500mg on day 1 then again 14 days later  
**Maintenance:** 500mg every 6 mo. thereafter
  - c. **Pemphigus Vulgaris:** 1000mg on day 1 then 14 days later; 500mg dose 12 months later then q 6 mo. thereafter. Upon relapse 1000mg dose may be administered if it has been greater than 16 weeks since last infusion

Premedication required: Tylenol 500mg; Benadryl 25 mg IVP; Solumedrol 125mg IVP (\*\*PV patients should be receiving a tapering dose of glucocorticoid steroids during initial loading dose)

Must wait 30 minutes after administration of solumedrol before starting Rituxan

Nonfiltered tubing (medication does not require reconstitution) **MEDICATION MUST GO ON A PUMP OR FLOW METER**

**Entyvio**

<https://www.entyvio.com/>

1. Indications- Crohn's Disease, Ulcerative Colitis
2. Dose: 300mg (regardless of patient's weight)
3. Vial size: 300mg/5ml (after reconstitution)
4. Entyvio needs to be reconstituted
5. Mix Entyvio with 4.8 ml of Sterile water
6. Given in 250ml NS bag over 30 minutes
7. Loading dose and frequency: week 0, week 2, week 6 then every 8 weeks thereafter (week 0-initial, 2 weeks later, 4 weeks later (for week 6) then every 8 weeks thereafter)
8. Premedication needed
9. Use with filter tubing

1. Indication: Crohn's Disease
2. Dose:
  - a. 55kg or less Dose: 260mg (2 vials of 130mg/26ml)
  - b. More than 55kg to 85kg = Dose: 390 mg (3 vials of 130mg/26ml)
  - c. More than 85kg= 520mg (4 vials of 130/26ml)
3. Vial size: 130mg/26ml
4. Stelara requires no reconstitution
5. Given in 250ml bag over 1 hour
6. Given as a onetime IV dose then 8 weeks later patient will self inject with 90mg SQ and every 8 weeks thereafter
7. Premedication as needed and ordered by MD
8. Use with filter tubing

**IVIG**

1. Indications- Many Indications (Per MD)
2. **DO NOT USE NS WITH IVIG D5W IS TO BE USED FOR FLUSHING AND MIXING**
3. Non- filtered tubing
4. No Reconstitution needed on most IVIG products. There are many used by Altus infusion
5. Needs to be given on a pump
6. Loading dose (Depends on IVIG)
7. Time of infusion depends on the patient's weight and how much IVIG is given
8. Can use IVIG spreadsheet to calculate ml/hr and total volume for infusing.

**Cytosan**

1. Indications- Many Different
2. **USE ON PUMP**
3. Dose verified by physician
4. 1gram Solumedrol given to patient 30 minutes before infusion (consult with physician if patient is diabetic)
5. 8mg Zofran given IVP before infusion
6. Infuse over 4 hours
7. PPE needs to be worn when administering Cytosan
8. Cytosan needs to be out of direct sunlight

**Solumedrol**

1. Indications- Anti-inflammatory, Status Asthmaticus, Acute Exacerbation of Multiple Sclerosis, Severe Lupus Nephritis
2. Dose: 40mg, 125mg, 1 gram
3. Vial sizes: 40mg/1ml, 125mg/2ml, 1000mg(1g)/16ml
4. May be given direct IV, IVP or diluted in NS



DRUG NAME	DIAGNOSIS	DOSAGE	RUN TIME	PREMEDS	LOADING DOSE & FREQUENCY	LABS	SPECIAL CONSIDERATIONS
Actemra	RA	4mg/kg OR 8mg/kg Vials: 80mg/4mL 200mg/10mL 400mg/20mL	1 hour Continuous (100mL/100mL) *Non-Filtered Tubing	None/Per MD	No Loading Dose Q 4 weeks	- Basic Labs - LFTs with CMP initially, then 4-8 weeks thereafter, then Q 3 months. - Lipid Panel initially, then 4-8 weeks thereafter, then Q 6 months thereafter. - TB & Hep Panel	Max Dose = 800mg  If patient has a significant reaction they should not receive Actemra ever again in the future.
Orencia	RA PA	< 60kg = 500mg (2) 60-100kg = 750mg (3) > 100kg = 1000mg (4)  Vial: 250mg/10mL	30 minutes continuous (200mL/100mL)  * Filtered Tubing	None/Per MD	Week 0, 2, 4  THEN  Q 4 weeks	Basic Labs TB Hep Panel	Mix with silicone-free syringe (comes in kit).  Max Dose = 1000mg
Simponi Aria	RA PA AS	2mg/kg Vial:  50mg/4mL	30 minutes continuous (200mL/100mL)  * Filtered	None/Per MD	0,4  THEN  Q 8 weeks	Basic Labs TB Hep Panel	<b>RA Only-</b> MUST be taking MTX concurrently OR have documented clinical reason contraindicating use (allergy, intolerant, abnormal labs).
Boniva	Osteoporosis	3mg/3mL (pre-filled syringe)	IVP - at least 45 seconds	None/Per MD	No Loading Dose  Q 3 months	CMP (within last 3 months) + D25 (within last year)	MUST be on CA + Vitamin D.  DEXA within last 2 years.
Prolia	Osteoporosis	60mg/ml (pre-filled syringe)	Subcutaneous injection - monitor for 30 min. post injection	None/Per MD	No Loading Dose  Q 6 months	CMP (within last 3 months) + D25 (within last year)	MUST be on CA + Vitamin D.  DEXA within last 2 years.
Zoledronic Acid (Reclast)	Osteoporosis	5mg/100mL (ventable glass vial)	15 minutes continuous- monitor for 30 min. post infusion.	None/Per MD	No Loading Dose  Once annually	CMP (within last 3 months) + D25 (within last year)	MUST be on CA + Vitamin D.  DEXA within last 2 years.

DRUG NAME	DIAGNOSIS	DOSAGE	RUN TIME	PREMEDS	LOADING DOSE & FREQUENCY	LABS	SPECIAL CONSIDERATIONS
			* Non-filtered				
Benlysta	Lupus	10mg/kg  Vials:  120mg/1.5mL 400mg/5mL	1 hour continuous (250mL/250mL) * Filtered	None/Per MD	0, 2, 4  THEN  Q 4 weeks	Basic Labs  TB Hep Panel ANA initially (positive result required to indicate)	Remove from refrigerator 30 minutes prior to patient arrival.  *Reconstitute 400mg vial with only 4.8ml sterile water.
Cytosan	Lupus; Multiple Diagnoses per MD	Per MD	4 hours - rate and titration dependent on indication	Yes- typically Solumedrol 1gm, Mesna, & an anti-emetic	Per MD	ANA initially (positive result required to indicate Lupus); Multiple additional per MD	Mixed under hooded system in pharmacy. Must wear PPE. Caution while handling. No pregnancy!
Cimzia	RA Crohn's OR AS	200mg (Q 2 weeks) OR 400mg (Q 4 weeks)  Vial: 200mg/1mL	Subcutaneous injection - abdomen or thigh ONLY.	None/Per MD	400mg at week 0,2,4  THEN 200mg Q 2 weeks  OR	Basic Labs TB Hep Panel	Remove from refrigerator 30 minutes prior to patient arrival.  Use Lot # from vial, not box.  Abdomen or thigh ONLY- NO ARMS.
Remicade	RA	RA-3 to 10mg/kg	2 hours titrated:	None/Per MD	ALL: 0, 2, 6 THEN:	Basic Labs TB Hep Panel	For RA only - DO NOT WASTE. Round up or down to nearest 100mg unless dose is 10mg/kg - then keep as is. 1000mg max dose.  **Inflectra - biosimilar to Remicade; treat just like Remicade except: RA loading dose and freq, is 0, 2, 6, and q 8
	Crohn's   AS PA PP UC	Crohn's- 5mg OR 10mg/kg	<u>Rate/Volume:</u> 10mL/2mL 20mL/5mL 40mL/10mL 80mL/20mL 125mL/75mL 250mL/125mL		AR Q4-8 weeks		
		AS, PA, PP, UC- 5mg/kg			AS Q 6 weeks		
		Vial: 100mg/10mL			Crohn's, PA, PP, UC-		



DRUG NAME	DIAGNOSIS	DOSAGE	RUN TIME	PREMEDS	LOADING DOSE & FREQUENCY	LABS	SPECIAL CONSIDERATIONS
			* Filtered		Q 8 weeks		For RA must be given with MTX Consider pts w/ CHF - no dose > 5mg/kg Additional lab - LFT q 3 mo.
Rituxan	RA Wegener's	RA – 1000mg	1st Dose: 4 hours 15 min titrated: <u>Rate/Volume:</u> 13mL/7mL 25mL/13mL 38mL/19mL 50mL/25mL 63mL/32mL 75mL/38mL 88mL/44mL 100mL/75mL	Benadryl IVP 50mg + Solumedrol IVP 125mg  OR  Per MD	RA- No Loading Dose  Day 0 Day 14  Repeat Q 4-6 months	Basic Labs Hep Panel	<ul style="list-style-type: none"> <li>- MTX MUST be given concomitantly, or clinical reason documented if not.</li> </ul> Wegener's: <ul style="list-style-type: none"> <li>- Use online BSA calculator, Mosteller formula.</li> <li>- Use 'Mixing Table' provided online from Genentech/Biogen.</li> </ul>
		Wegener's 375mg/m2 (BSA)					
		Vials: 100mg/10mL 500mg/50mL	2nd Dose: 3 hours 15 min titrated: <u>Rate/Volume:</u> 25mL/13mL 50mL/25mL 75mL/38mL 100mL/175mL  * Non-filtered		Wegener's- No Loading Dose  Once Q week for 4 weeks ONLY.		
Entyvio	Crohn's UC	300mg/5mL	30 minutes continuous (500mL/250mL)  * Filtered	Yes - typically Tylenol and Benadryl	Week 0, 2, 6 THEN  Q 8 weeks	Basic Labs TB Hep	Reconstitute with 4.8ml sterile water
Krystexxa	Gout	8mg/1mL	2 hours (125mL/250ml)  * Non-filtered	Yes - per MD but typically Tylenol and Benadryl;	No Loading Dose  Q 2 weeks	G6PD initially Uric Acid with each visit. Basic Labs	Contraindicated for positive G6PD-MUST have negative G6PD to proceed.

DRUG NAME	DIAGNOSIS	DOSAGE	RUN TIME	PREMEDS	LOADING DOSE & FREQUENCY	LABS	SPECIAL CONSIDERATIONS
							Consult with MD if uric acid level is > 6, two consecutive times - may DC per MD discretion.
Stelara IV (with subcutaneous maintenance)	Crohn's	Initial IV Dose: 55kg or less = 260mg (2) > 55kg - 85kg = 390mg (3) > 85kg = 520mg (4) Vial: 130mg/26mL	1 hour (250mL/250mL)	None	One IV dose initially	Basic Labs TB Hep Panel (some physicians)	If it has been > 3 months since last infusion, patient must be seen and approved by provider prior to restarting infusions.
		Maintenance:  90mg Subcutaneously (pre-filled syringe OR 2x45mg/0.5mL single-dose vials)			Subcutaneously Q 8 weeks		
Stelara SubQ	PP PSA *with PSA dose is always 45mg unless they 100kg and have mod-sev. PP	< 101kg = 45mg > 100kg = 90mg  Vials: - 45mg/0.5mL pre-filled syringe weigh over - 90mg/mL pre-filled syringe - 45mg/0.5mL single-dose vial	Subcutaneous injection		Week 0, 4  THEN  Q, 12 weeks		

"Basic Labs" Include: CBC, CMP, CRP, ESR Q 3 Months.  
TB Test -- Annually  
Hepatitis Panel – Annually or initially per MD order