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Pharmacist Continuing Education: 2021 Rheumatoid Arthritis Guideline Update and Therapy Review

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TABLE 4 ONLY

Table 4: bDMARDs

TNF inhibitors

Medication	Typical Dosing	Dosing Adjustments	Additional Information
Etanercept (Enbrel ®)[15]	SUBQ: 50mg subcutaneously once weekly or 25mg subcutaneously twice weekly. Available as a prefilled syringe, cartridge system, pen injector, and vial.	No renal or hepatic dosing adjustments recommended per package insert.	Monitor patients for hypersensitivity reactions, demyelinating CNS disease, heart failure, blood dyscrasias, and hepatitis B reactivation. Screen for tuberculosis, hepatitis B prior to initiation. Avoid live vaccines during use. <u>US Boxed Warnings:</u> Increased risk of severe infections. Lymphoma and other malignancies have been reported in children and adolescents receiving
Adalimumab (Humira ®)[16]	SUBQ: initial 40mg every other week May increase to 40mg every week or 80mg every other week. Available as a prefilled syringe and pen-injector kit.		
Certolizumab (Cimzia ®)[17]	SUBQ: initial 400mg, on weeks 0, 2, and 4, then 200mg every other week; alternatively may dose 400mg every 4 weeks. Available as a prefilled syringe.		
Golimumab (Simponi®,	SUBQ: 50mg once a month.		

Simponi Aria ®)[18]	IV: 2mg/kg at weeks 0, 4, and every 8 weeks thereafter. Available as a prefilled syringe, autoinjector and intravenous solution.		Active TB, including reactivation of latent TB.
Infliximab (Avsola®, Inflectra®, Remicade®, Renflexis®)[19]	IV: 3mg/kg at 0, 2, and 6 weeks, followed by 3mg/kg every 8 weeks thereafter. May be titrated up to 10mg/kg every 8 weeks or treated as often as every 4 weeks. Available as an intravenous solution. Several biosimilars available.		
T cell costimulatory inhibitor			
Abatacept (Orencia ®)[20]	SUBQ: 125mg once weekly. IV: Dosing is according to body weight. Dose at 0, 2, and 4 weeks and then every 4 weeks thereafter. <60 kg: 500mg 60mg to 100kg: 750mg >100kg: 1,000mg Available as a prefilled syringe, autoinjector, and intravenous solution.	No renal or hepatic dosing adjustments recommended per package insert.	Monitor patients for hypersensitivity reactions, infections, and malignancy. Screen for tuberculosis, hepatitis B prior to initiation. Avoid live vaccines during use.
IL-6 receptor inhibitors			
Tocilizumab (Actemra ®)[21]	SUBQ: <100kg: 162mg once every other week; ≥100kg: 162mg once every week. IV: 4mg/kg once every 4 weeks; may be increase to 8mg/kg once every 4 weeks (maximum 800mg/dose).	No renal dosing adjustments recommended per package insert. Dosage modification and hold strategies available for infection, elevated	Monitor patients for gastrointestinal perforation, neutropenia, thrombocytopenia, hepatic effects, herpes zoster reactivation, hyperlipidemia, hypersensitivity reactions, and malignancy.

	Available as a prefilled syringe, autoinjector, and intravenous solution.	liver function tests, low absolute neutrophil count, and low platelets.	<u>US Boxed Warnings:</u> Increased risk of severe infections. Active TB, including reactivation of latent TB.
Sarilumab (Kevzara ®)[22]	SUBQ: 200mg once every 2 weeks. Available as a prefilled syringe and pen-injector kit.	No renal dosing adjustments recommended per package insert. Dosage modification and hold strategies available for infection, elevated liver function tests, low absolute neutrophil count, and low platelets.	
Anti-CD20 antibody			
Rituximab (Rituxan®, Truxima®)[23]	IV: 1,000mg on days 1 and 15. Available as an intravenous solution.	No renal or hepatic dosing adjustments recommended per package insert. It is recommended to hold the infusion if a patient develops a cardiac arrhythmia, hepatitis B reactivation, serious infection, severe mucocutaneous reaction, or progressive multifocal leukoencephalopathy. If a patient develops an infusion reaction the following are recommended strategies: Mild: after symptoms resolve, infusion may be resumed with at	Premedication with methylprednisolone 100mg IV is recommended 30 minutes prior to each infusion. Monitor patients for bowel obstruction/perforation, cardiovascular effects, cytopenias, hepatitis B reactivation, infections, infusion-related reactions, mucocutaneous reactions, progressive multifocal leukoencephalopathy, renal toxicity, and tumor lysis syndrome.

		least a 50% infusion rate reduction. Severe: discontinue infusion.	