Magellan Rx MANAGEMENT℠

Magellan Medicaid Administration

Washington Drug Utilization Review (DUR) Board Meeting

April 17th, 2024

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Agenda Topics

- Overview of Disease State
- Indications
- Dosage & Formulations
- Guideline Updates

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Anticonvulsants:

- ANTICONVULSANTS : AMPA GLUTAMATE RECEPTOR ANTAGONISTS
- ANTICONVULSANTS : BENZODIAZEPINES - RESCUE AGENTS
- ANTICONVULSANTS : MISC
- ANTICONVULSANTS : NEUROACTIVE STEROID - GABA MODULATOR
- ANTICONVULSANTS : SUCCUNIMIDES

Anticonvulsants - Disease State Description

- Epilepsy is one of the most common disorders of the central nervous system (CNS)
  - Defined when a person has 2 or more seizures
  - It affects 2.2 million Americans, with 150,000 new cases diagnosed each year
  - The risk is estimated to be 1% from birth to age 20 years and 3% at age 75 years
- Isolated seizures may also occur during a febrile illness, after head trauma, or as a result of withdrawal from alcohol or sedative/hypnotics
- A seizure is traceable to an unstable cell membrane or cluster of cells. Excessive excitability spreads either locally (partial seizure) or more widely (generalized seizure)
- Partial seizures begin in 1 hemisphere of the brain and, unless they become secondarily generalized, they can cause alterations in motor functioning, sensory symptoms, or automatisms
- If there is no loss of consciousness, they are called simple partial. If there is loss or impairment of consciousness, they are called complex partial
- About 70% of patients with epilepsy can be maintained on 1 drug
  - Noncompliance and evolving refractory epilepsy are common reasons for treatment failure
  - If control is not achieved with 1 drug, an alternative medication should be attempted before others are added to current therapy

Epilepsy Foundation, 2017

Anticonvulsants - Disease State Description

- **International League Against Epilepsy - 2022**
  - The ILAE developed classifications of epilepsy syndromes in 2022
  - An epilepsy syndrome is defined as a characteristic cluster of clinical and electroencephalography (EEG) features, often supported by specific etiological findings (structural, genetic, metabolic, immune, and infectious)
  - Through a series of publications, ILAE provides definitions and classifications of syndromes according to categories divided by age of onset
  - Syndromes commonly have age-dependent presentations, features, and specific comorbidities
  - Diagnostic criteria include age at onset, neurological exam, genetic studies, and course of illness
  - The classification of epilepsy syndromes in neonates and infants focuses on the clinical and laboratory features of epilepsy syndromes with onset from birth to 2 years of age and includes 2 major groups of syndromes: self-limited epilepsy syndromes (e.g., myoclonic epilepsy in infancy) and developmental and epileptic encephalopathies (e.g., Dravet syndrome)
  - Generally, children with epilepsy developing very early in life experience significant cognitive and behavioral comorbidity and have higher rates of drug resistance
  - The classification of syndromes with an onset between ages 2 and 12 years are categorized broadly as self-limited focal epilepsies, generalized epilepsy syndromes (theorized to have a genetic cause), and developmental and/or epileptic encephalopathies (e.g., Lennox-Gastaut syndrome)
  - Childhood syndromes may evolve from syndromes of infancy or may present with a severe, acute encephalopathy following prior normal development. Idiopathic generalized epilepsy syndromes and syndromes that occur with a variable age of onset, either in childhood or beyond the age of 18 years (e.g., generalized epilepsy syndromes, focal epilepsy syndromes), are further described and categorized by ILAE

Anticonvulsants - Disease State Description

- **Lennox-Gastaut syndrome**
  - One of the most severe forms of childhood epilepsy and is one of the hardest forms to treat
  - Characterized by mental retardation and multiple seizure types
  - Patients have seizures daily, sometimes experiencing several seizures within a day
  - Patients may also experience “drop attacks”, which is defined as a loss of muscle control causing the patient to fall abruptly to the floor
- **Infantile spasm**
  - Primarily consist of a sudden bending forward of the body with stiffening of the arms and legs
  - West Syndrome is characterized by infantile spasms, developmental regression, and a specific pattern on electroencephalography (EEG) testing called hypsarrhythmia (chaotic brain waves)
  - The onset is usually in the first year of life, typically between 4 and 8 months and usually stop by age 5, but may be replaced by other seizure types
- **Dravet syndrome**
  - A rare, catastrophic form of epilepsy that presents in the first year of life and is characterized by frequent, prolonged seizures
  - Patients may experience multiple seizures types during their lifetime
  - Infants with Dravet syndrome often experience multiple comorbidities over their lifetime related to the persistent seizure activity, including behavioral and developmental delay
  - Dravet syndrome is also associated with a 15% to 20% mortality rate due to Sudden Unexpected Death in Epilepsy (SUDEP)
- Goals of treating epilepsy are to reduce the frequency of seizure occurrence along with providing the best possible quality of life for the patient
  - Treatment will depend on the type of seizure
  - Many different classes of drugs are available to treat the different forms of seizures
  - Some patients will require more than 1 drug to control their seizures

National Institute of Neurological Disorders and Stroke, 2018
Dravet Foundation, 2019

Anticonvulsants

- **New Generic**
  - **topiramate- March 2023**
    - **FDA approved the first generic for the 200 mg ER oral capsule of Supernus' Trokendi XR from Zydus**
  - **methsuximide - May 2023**
    - **FDA approved the first generic for the 300 mg oral capsule of Parke Davis' Celontin from Novitium**

- **Manufacturer Communication**
  - **fenfluramine (Fintepla) – April 2023**
    - **The DEA published a final rule declaring the removal of fenfluramine and associated salts, isomers, and salts of isomers from the schedules of the Controlled Substances Act effective December 23, 2022**
    - **Fenfluramine was previously a schedule IV controlled substance since 1973**
    - **UCB Pharma has filed with the FDA for a labeling supplement to remove the schedule IV designation from the label**

- **New Dosing**
  - **lacosamide (Vimpat) - May 2023**
    - **PI updated to include loading dose and/or higher initial dosage during week 1 as an alternative option for initiation of lacosamide in patients ≥ 1 month to < 17 years of age with partial onset seizure (monotherapy or adjunctive treatment) & for patients ≥ 4 years of age to < 17 years of age with primary generalized tonic-clonic seizure (adjunctive treatment)**
    - **This new dosing can be applied for all formulations of the drug and can be utilized when reaching the maintenance dosage in a shorter timeframe is indicated**
    - **Labeling includes a table with recommended loading dosages according to patient age & weight**

Anticonvulsants

- **lacosamide (Motpoly XR)**
  - **May 2023: FDA has approved a new formulation of lacosamide ER capsules (Motpoly XR), for tx of partial-onset seizures (POS) in adults & in pediatric pts weighing ≥ 50 kg**
  - **Indication**
    - **Treatment of partial-onset seizures in adults and in pediatric patients weighing at least 50 kg**
  - **Warnings**
    - **Fetal Toxicity: use during pregnancy can cause cleft lip and/or palate and being small for gestational age**
    - **Suicidal behavior and ideation: antiepileptic drugs increase the risk of suicidal behavior or ideation**
    - **Cardiac Rhythm and Conduction Abnormalities: Obtaining ECG before beginning and after titration to steady-state maintenance is recommended in patients with underlying proarrhythmic conditions or on concomitant medications that affect cardiac conduction; closely monitor these patients**
  - **Dosage**
    - **Adults (17 years and older):**
      - **Initial dosage for monotherapy for the treatment of partial-onset seizures is 200 mg once daily**
      - **Initial dosage for adjunctive therapy for the treatment of partial-onset seizures is 100 mg once daily**
      - **Maximum recommended dosage for monotherapy and adjunctive therapy is 400 mg once daily**
    - **Pediatric patients weighing at least 50 kg:**
      - **Initial dosage for treatment of partial-onset seizures is 100 mg once daily**
  - **Availability**
    - **100 mg, 150 mg, 200 mg extended-release capsules**

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Alzheimer's Agents:

- ANTIDEMENTIA AGENTS :
- ANTIDEMENTIA AGENTS : ANTI-AMYLOID ANTIBODIES

Alzheimer’s Agents - Disease State Description

- **Dementia**
  - Characterized by irreversible loss of or decline in memory and other cognitive abilities
  - Approximately 6.5 million Americans aged 65 years and older suffer from Alzheimer's disease (AD)
  - AD is the most common type of dementia, accounting for 60% to 80% of dementia disorders in the elderly and is the fifth leading cause of death in the United States (US)
  - Other types of dementia include vascular dementia, dementia with Lewy bodies, mixed dementia, and frontotemporal dementia
  - Dementia may also be associated with human immunodeficiency virus (HIV), normal pressure hydrocephalus, Huntington’s disease, Korsakoff’s syndrome, multiple sclerosis (MS), Parkinson’s disease (PD), and Creutzfeldt-Jakob disease
  - Many other conditions can cause delirium symptoms, such as thyroid disorder and vitamin deficiencies, but are reversible once the underlying condition is addressed

- **Alzheimer’s Disease**
  - AD is characterized by progressive cognitive decline associated with impairment of activities of daily living (ADL) and behavioral disturbances
  - Patients with AD eventually lose all cognitive, analytical, and physical functioning
  - Ten warning signs of AD include memory loss that disrupts daily life, challenges in planning or solving problems, difficulty completing familiar tasks, confusion with time or place, trouble understanding visual images and spatial relationships, new difficulties with speaking or writing, misplacement of items or losing the ability to retrace steps, decreased or poor judgment, withdrawal from work or social activities, and mood or personality changes
  - In addition, there are 3 stages of AD over the course of the disease characterized by symptom severity, rate of disease progression, and level of necessary supportive care for activities of daily living

Alzheimer's Association, 2022

Alzheimer's Agents

- **lecanemab-irmb (Leqembi)**
  - **January 2023: FDA has granted Accelerated Approval to lecanemab-irmb (Leqembi), an amyloid beta-directed antibody indicated for the treatment of Alzheimer's disease. Labeling states treatment should be started in patients with mild cognitive impairment or mild dementia stage of disease, the population in which treatment was initiated in clinical trials as there is not safety or effectiveness data on starting treatment at earlier or later stages of the disease than were studied**
  - **Indication**
    - **Treatment of Alzheimer's disease. Treatment with LEQEMBI should be initiated in patients with mild cognitive impairment or mild dementia stage of disease, the population in which treatment was initiated in clinical trials**
  - **Limitation**
    - **Pregnancy: Based on animal data, may cause fetal harm**
    - **BBW: Monoclonal antibodies directed against aggregated forms of beta amyloid, including LEQEMBI, can cause amyloid related imaging abnormalities (ARIA), characterized as ARIA with edema (ARIA-E) and ARIA with hemosiderin deposition (ARIA-H). ARIA is usually asymptomatic, although rarely serious and life-threatening events can occur. Serious intracerebral hemorrhage greater than 1 cm have occurred in patients treated with this class of medications.**
  - **Dosage**
    - **The recommended dosage is 10 mg/kg that must be diluted then administered as an intravenous infusion over approximately one hour, once every two weeks**
  - **Availability**
    - **Injection:**
      - **500 mg/5 mL (100 mg/mL) solution in a single-dose vial**
      - **200 mg/2 mL (100 mg/mL) solution in a single-dose vial**

Alzheimer's Agents

- **CMS Communication**
  - **CMS announced that Medicare Part B will cover drugs that slow the progression of Alzheimer's disease if:**
    - **(1) The drug is granted traditional FDA-approval (rather than Accelerated Approval)**
    - **(2) Patient is diagnosed with mild cognitive impairment or early dementia due to Alzheimer's disease**
    - **(3) The patient is followed by a qualified physician participating in a registry and has appropriate follow up care**

Alzheimer's Agents

- **Drug Discontinuation**
  - **Aduhelm (aducanumab-avwa)- February 2024**
    - Biogen has announced a realignment of resources in their Alzheimer's disease portfolio resulting in discontinuation of the development and commercialization of aducanumab-avwa (Aduhelm)
    - Biogen has stated the decision to withdraw resources was not the result of any safety or efficacy concerns but allows for a reprioritization to focus on lecanemab-irmb (Leqembi) as well as potential pipeline products
    - Rights to aducanumab-avwa will revert to Neurimmune, and the phase 4 post-marketing confirmatory ENVISION study will be terminated
    - Aduhelm received Accelerated Approval in 2021

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Cytokine & CAM Antagonists:

- CYTOKINE AND CAM ANTAGONISTS :
- ATOPIC DERMATITIS AGENTS : JANUS KINASE (JAK) INHIBITORS - ORAL

Cytokine & CAM Antagonists - Disease State Description

- Cytokines and cell-adhesion molecules (CAMs) are chemical mediators involved in inflammatory processes throughout the body

Cytokines

- Small proteins secreted in response to an immune stimulus for the purpose of mediating and regulating immunity, inflammation, and hematopoiesis
- Derived from monocytes and macrophages and induce gene expression of a number of proteins that contribute to the inflammatory response
- The actions of the individual cytokines are widely varied and they contribute to fibrosis and tissue degeneration associated with chronic inflammation, primarily by inducing the proliferation of fibroblasts and collagenase
- The pro-inflammatory cytokines, tumor necrosis factor (TNF), and interleukin (IL)-1, are involved in tissue destruction in many chronic inflammatory diseases affecting various organs
  - TNFα also has a role in Crohn's disease in stimulation of inflammation

European Respiratory Journal, 2003

Cytokine & CAM Antagonists - Disease State Description

Cell Adhesion Molecules (CAM)

- Cell surface proteins involved in the binding of cells, usually leukocytes, to each other, endothelial cells, or the extracellular matrix
- Specific signals produced in response to wounds and infection control the expression and activation of these molecules
- Most of the CAMs characterized fall into 3 general families of proteins:
  - The immunoglobulin (Ig) superfamily
    - The adhesion molecules that bind to integrins on leukocytes and mediate their flattening onto the blood vessel wall
  - The integrin family
    - Consists of an α chain and a ß chain that mediate cell-to-cell interactions, such as leukocyte adherence to the vascular endothelium
  - The selectin family
    - Involved in the adhesion of leukocytes to activated endothelium followed by extravasation through the blood vessel walls into lymphoid tissues and sites of inflammation
  - Other proteins that are functionally classified as CAMs are involved in strengthening the association of T cells with antigen-presenting cells or target cells, in T cell activation, and in recirculating lymphocytes back to the circulation via the lymphatic system
- Different CAMs have been implicated in inflammatory, fibrotic, and autoimmune diseases

European Respiratory Journal, 2003

Hidradenitis Suppurativa - Background and Guidelines

Hidradenitis Suppurativa (HS)

- HS is a chronic condition that affects the terminal follicular epithelium in apocrine gland-bearing skin, such as the armpits or perianal area
- It typically occurs in adolescents (generally after puberty) and adults, is generally diagnosed clinically, and affects approximately 1% to 2% of the U.S. population
- Select signs and symptoms include erythema, raised bumps or lesions, painful lesions, and local arthritis or arthralgia
- In addition to nonpharmacologic treatments, pharmacologic treatment includes anti-inflammatories, antibiotics, antiandrogens, and biologics, such as infliximab (Remicade)
    - Surgery may also be considered in some patients

- **European Dermatology Forum, 2015**
    - Guidelines for treatment are limited, but guidelines from the European Dermatology Forum recommend either adalimumab or infliximab in severe or refractory disease, stating adalimumab appears to be better tolerated; however, only adalimumab is approved by the FDA for this use

Uveitis – Background

Uveitis

- Non-infectious intermediate and posterior uveitis is inflammation of the intermediate and posterior uvea, while panuveitis is inflammation of the anterior chamber, vitreous humor, and choroid or retina simultaneously
- Together, these represent the most severe and highly recurrent forms of uveitis
- The incidence of all cases of uveitis is approximately 25 to 52 cases per 100,000 patients per year, and anterior uveitis is the most common form of uveitis
- Initial treatment is typically with topical corticosteroids
- Adalimumab is generally reserved for patients with disease non-responsive to initial treatment
- Other treatments include systemic glucocorticoids, immunosuppressives, and intraocular implants

Uveitis – Guidelines

Uveitis (Treatment)

- ACR and Arthritis Foundation, 2019
  - Published guidelines on the treatment of uveitis associated with JIA, one of the most common extraarticular manifestation of JIA
  - The group recommends select topical glucocorticoids in patients with JIA and active chronic anterior uveitis for short-term control, but for those who are unable to control symptoms with short-term therapy, they recommend adding systemic therapy in order to taper topical glucocorticoids
    - Changing or escalating systemic therapy is recommended after ≥ 3 months if control is not achieved
  - For JIA patients who develop new chronic anterior uveitis despite stable systemic therapy, they recommend topical glucocorticoids prior to changing or escalating systemic therapy right away
  - Regarding specific agents, they group recommends SC methotrexate conditionally over oral methotrexate; however, use of a TNF antagonist with methotrexate in severe active disease and sight-threatening complications is conditionally recommended over methotrexate monotherapy
  - If starting a TNF antagonist, they conditionally recommend a monoclonal antibody over etanercept
    - Dose or frequency of the TNF antagonist should be escalated for an inadequate response prior to trying another biologic agent
    - Likewise, if a patient has failed a TNF antagonist following an escalated dose/frequency, changing to a different TNF antagonist is conditionally recommended over another biologic
  - Abatacept or tocilizumab as biologics and mycophenolate, leflunomide, or cyclosporine as nonbiologic options are conditionally recommended in patients who have failed methotrexate and 2 monoclonal antibody TNF antagonists
  - The disease should be well-controlled for 2 years on a DMARD and/or biologic therapy prior to tapering
  - For pediatric patients with spondyloarthritis who develop acute anterior uveitis, the group conditionally recommends topical glucocorticoids prior to a change in systemic therapy
  - Notably, the only agent approved for uveitis in this class is adalimumab

Ankylosing Spondylitis – Background and Guidelines

Background:

- Axial spondyloarthritis (axSpA) is an inflammatory condition generally affecting the spine and can be furthered subdivided into ankylosing spondylitis (AS; radiographic axSpA) and nonradiographic axSpA (nr-axSpA

American College of Rheumatology/Spondylitis Association of America/Spondyloarthritis Research and Treatment Network

- Published a 2019 update on the treatment of ankylosing spondylitis (AS) and nonradiographic axial spondyloarthritis (SpA)
- In general, recommendations for AS and nonradiographic axial SpA are similar
- TNF antagonists (but not a specific one) are recommended as first biologic (over Cosentyx or Tremfya, which are then recommended over a second TNF antagonist if first does not produce a response)
- All the prior mentioned agents are recommended over Xeljanz
- Concurrent low-dose methotrexate with TNF antagonist is not recommended
- Recommend against a strict treat-to-target strategy
- If a patient's disease is stable, guidelines recommend against discontinuing or tapering of biologics
- Sulfasalazine provides a viable option for select patients who cannot take a TNF antagonist

Recurrent Pericarditis - Background and Guidelines

Background:

- Acute pericarditis is inflammation of the pericardium and symptoms can include chest pain, electrocardiogram (ECG) changes, pericardial effusion, and pericardial friction rub
  - It typically lasts up to 6 weeks, although symptoms may recur, and recurrence may be as high as 15% to 30% in select patients with idiopathic pericarditis
- In recurrent pericarditis, these symptoms return after a symptom-free period of at least 4 to 6 weeks
- Symptoms of recurrent pericarditis include pleuritic chest pain with fever, pericardial rub, ECG changes, new or worsening pericardial effusion, and/or elevation of markers of inflammation; patients may feel well in between attacks and others may have a more persistent disease course
- Studies have suggested that many cases of recurrent pericarditis are caused by an autoimmune disorder, although other causes are possible (e.g., infection)
  - There are no well-established predictors of recurrence

Treatment:

- The pharmacologic treatment of recurrent pericarditis is similar to treatment of acute pericarditis, and includes NSAIDs or aspirin, plus colchicine as typical first-line agents
  - Steroids or combination therapy may also be considered
  - Other agents that may be used for treatment in late-line therapy include rilonacept and the off-label use of anakinra, azathioprine, or immune globulins
- Pericardiectomy may also be considered in select patients

Polymyalgia Rheumatica - Background and Guidelines

Polymyalgia rheumatica (PMR):

- Polymyalgia rheumatica (PMR) is an inflammatory disorder characterized by pain and stiffness in the shoulders, upper arms, hips, and neck which is worse upon waking or after rest
- Flu-like symptoms, fatigue, and weight loss may also present
- Onset of PMR is typically seen after the age of 50 years. PMR most often occurs in Caucasians and in women
- The condition is associated with the development of GCA in approximately 10% to 15% of patients with PMR
- Treatment guidelines for PMR are lacking
- The 2015 collaborative initiative by EULAR/ACR strongly recommends treatment with glucocorticoids to treat PMR episodes
- The addition of methotrexate may be considered, particularly in patients at high risk for relapse and/or prolonged therapy or with comorbidities prone to steroid-related adverse events
- The panel also strongly recommends against the use of TNFα inhibitors for PMR
- It is estimated that up to 29% to 45% of patients do not adequately respond to glucocorticoid therapy within 3 to 4 weeks and relapses and long-term glucocorticoid dependency are common
- In 2023, the FDA approved sarilumab (Kevzara) as the first biologic for the treatment of adults with PMR who have had an inadequate response to corticosteroids or who cannot tolerate corticosteroid taper.

Atopic Dermatitis - Background and Guidelines

Atopic Dermatitis:

- Atopic dermatitis (AD) is a chronic, pruritic inflammatory disease of the skin resulting from a combination of genetic and environmental factors
- Often referred to as “eczema,” AD affects up to 15% of children and about 7.3% of adults in the US.
- AD commonly occurs in patients affected by asthma and other allergic conditions and is associated with elevated serum immunoglobulin E (IgE) levels
- AD is characterized by extremely dry, itchy skin on the insides of the elbows, behind the knees, and on the face, hands, and feet

- The American Academy of Dermatology (AAD) guidelines from 2023, which only address topical therapies for management of AD, state that moisturizers, topical corticosteroids, topical calcineurin inhibitors, topical phosphodiesterase-4 (PDE-4) inhibitors, and topical Janus kinase (JAK) inhibitors are options with strong evidence for the treatment of AD
    - Systemic immunomodulating agents are indicated for patients whose AD is not adequately controlled by topical regimens and/or phototherapy
    - Like the AAD guidelines, the American Academy of Allergy, Asthma, and Immunology (AAAAI) 2012 guidelines state first-line options include hydration (emollients), moisturizers, and topical corticosteroids
    - AAAAI also recommends careful consideration of risks and benefits of systemic agents in patients who do not respond to topical agents or phototherapy; abrocitinib and upadacitinib are also not addressed in these guidelines

Disease State Description - Ulcerative Colitis

- Ulcerative colitis (UC) is a chronic inflammatory disease primarily affecting the colon and rectum
- UC affects approximately 1,000,000 people in the United States (US) and the incidence continues to increase worldwide. The Center for Disease Control and Prevention (CDC) estimates the current prevalence of UC at 249 per 100,000 adults
  - UC may present at any age, but onset typically peaks between 15 and 30 years of age
- The disease is characterized by superficial infiltration of the bowel wall by inflammatory white cells, resulting in multiple mucosal ulcerations and crypt abscesses
- The predominant symptom of UC is diarrhea, which is usually associated with blood in the stool
  - Additional symptoms may include pain in the lower quadrant or rectum along with systemic features, including fever, malaise, and weight loss (which are more common if a greater portion of the colon is affected)
  - The initial attack of UC may be fulminant with bloody diarrhea, but the disease more commonly begins indolently, with non-bloody diarrhea progressing to bloody diarrhea
  - UC can present initially with any extent of anatomic involvement ranging from disease confined to the rectum to the entire large intestine (pancolitis)
  - Most commonly, UC follows a chronic intermittent course with long periods of quiescence interspersed with acute attacks lasting weeks to months. However, a significant percentage of patients suffer a chronic continuous course

Centers for Disease Control and Prevention, 2015

Disease State Description – Crohn's Disease

- In 2021, the American Gastroenterological Association (AGA) issued a guideline on the medical management of moderate to severe luminal and perianal fistulizing Crohn's disease (CD) and notable recommendations regarding agents within this class are described below
- In adult outpatients with moderate to severe CD, the AGA recommends the use of a TNF antagonist (moderate evidence) or ustekinumab (moderate evidence) over no treatment for induction and maintenance of remission, and the AGA suggests the use of vedolizumab over no treatment for induction and maintenance of remission (low/moderate evidence)
- In biologic treatment-naïve adult outpatients with moderate to severe CD, the AGA recommends the use of infliximab, adalimumab, or ustekinumab (moderate evidence) over certolizumab pegol (low evidence) and suggests the use of vedolizumab over certolizumab pegol for the induction of remission
- In adult outpatients with moderate to severe CD who never responded to TNF antagonists, the AGA recommends ustekinumab (moderate evidence) and suggests vedolizumab (low evidence) over no treatment of the induction of remission
- If patients had previously responded to infliximab, the AGA recommends adalimumab or ustekinumab (moderate evidence for both) and suggests vedolizumab (low evidence) over no treatment for the induction of remission
- The group also recommends the use of biologic drug monotherapy over thiopurine monotherapy for the induction of remission (moderate evidence)

American Gastroenterological Association, 2021

Disease State Description – Crohn's Disease

- In adult outpatients with moderate to severe CD who are treatment-naïve to biologics and immunomodulators, the AGA suggests infliximab plus thiopurines over infliximab monotherapy (moderate evidence) and adalimumab plus thiopurines over adalimumab monotherapy (very low evidence) for induction and maintenance of remission
- The AGA does not make recommendations regarding the use of ustekinumab or vedolizumab as monotherapy or in combination with another agent
- The AGA does suggest the early introduction of a biologic over waiting until failure of 5-aminosalicylates and/or corticosteroids (low evidence)
- For those with an active perianal fistula, the AGA recommends infliximab over no treatment for the induction and maintenance of fistula remission (moderate evidence) and suggests adalimumab, ustekinumab, or vedolizumab over no treatment for the induction or maintenance of fistula remission (low evidence)
- Risankizumab-rzaa and upadacitinib were not approved for CD at the time these guidelines were developed
- The role of natalizumab (Tysabri) and other agents not in this therapeutic class are also addressed in the guidance

American Gastroenterological Association, 2021

Cytokine & CAM Antagonists

- **sarilumab (Kevzara)**
  - **March 2023: FDA approved for the treatment of adults with polymyalgia rheumatica (PMR) who have had an inadequate response to corticosteroids or who cannot tolerate a steroid taper. Previously approved for treatment of RA**
  - **Indications**
    - Adult patients with moderately to severely active rheumatoid arthritis (RA) who have had an inadequate response or intolerance to one or more disease modifying antirheumatic drugs (DMARDs)
    - **Adult patients with polymyalgia rheumatica (PMR) who have had an inadequate response to corticosteroids or who cannot tolerate corticosteroid taper**
  - **Precautions/Contraindications**
    - BBW: Increased risk of serious bacterial, fungal, viral, and opportunistic infections leading to hospitalization or death
    - BBW: Tuberculosis
  - **Dosing**
    - **PMR:**
      - **The recommended dosage is 200 mg subcutaneously, once every two weeks in combination with a tapering course of corticosteroids**
      - **For PMR, can be used as monotherapy following discontinuation of corticosteroids**
  - **Formulations**
    - Injection: 150 mg/1.14 mL or 200 mg/1.14 mL solution in a single-dose pre-filled syringe
    - Injection: 150 mg/1.14 mL or 200 mg/1.14 mL solution in a single-dose prefilled pen

Cytokine & CAM Antagonists

- **adalimumab-adbm (Cyltezo)**
  - **March 2023: FDA approved Cyltezo (interchangeable Humira biosimilar) for the tx of moderate to severe hidradenitis suppurativa (HS) in adults. Previously approved indications include RA, JIA, PsA, AS, CD, UC, & PsO**
  - **May 2023: FDA approved new 40 mg/0.8 mL single-dose prefilled autoinjector pen presentation**
  - **July 2023: FDA approved for treatment of non-infectious intermediate, posterior, & panuveitis in adults**

  - **Indications**
    - **Rheumatoid Arthritis (RA), Juvenile Idiopathic Arthritis (JIA), Psoriatic Arthritis (PsA), Ankylosing Spondylitis (AS), Crohn's Disease (CD), Ulcerative Colitis (UC), Plaque Psoriasis (Ps), Hiradenitis Suppurativa (HS), Uveitis (UV)**
  - **Precautions/Contraindications**
    - **BBW: Increased risk of serious bacterial, fungal, viral, and opportunistic infections leading to hospitalization or death**
    - **BBW: Malignancies**
  - **Dosing**
    - **Dosing stratified by indication, age, and weight (Found in TCR or PI)**
  - **Formulations**
    - **Single-dose prefilled pen (Cyltezo Pen): 40 mg/0.8 mL**
    - **Single-dose prefilled glass syringe: 40 mg/0.8 mL, 20 mg/0.4 mL, 10 mg/0.2 mL**

Cytokine & CAM Antagonists

- **adalimumab-atto (Amjevita)**
  - **March 2023: FDA approved Amjevita (Humira Biosimilar) for the treatment of moderate to severe Hidradenitis Suppurativa (HS) in adults**
  - **August 2023: FDA approved the following new high-concentration presentations: 20 mg/0.2 mL, 40 mg/0.4 mL, and 80 mg/0.8 mL prefilled syringe; and 40 mg/0.4 mL and 80 mg/0.8 mL prefilled autoinjector**
  - **Indications**
    - Rheumatoid Arthritis (RA), juvenile idiopathic arthritis (JIA), psoriatic arthritis (PsA), ankylosing spondylitis (AS), Crohn's Disease (CD), Ulcerative Colitis (UC), plaque psoriasis (Ps), **Hidradenitis Suppurativa (HS)**, and Uveitis (UV)
  - **Precautions/Contraindications**
    - BBW: Serious infections
    - BBW: Malignancy
  - **Dosing**
    - **Hidradenitis Suppurativa:**
      - **Adults: Day 1: 160 mg (given in one day or split over two consecutive days); Day 15: 80 mg; Day 29 and subsequent doses: 40 mg every week or 80 mg every other week**
  - **Formulations**
    - Single-dose prefilled SureClick autoinjector: 80 mg/0.8 mL, 40 mg/0.8 mL, 40 mg/0.4 mL
    - **Single-dose prefilled glass syringe: 80 mg/0.8 mL, 40 mg/0.8 mL, 40 mg/0.4 mL, 20 mg/0.4 mL, 20 mg/0.2 mL, 10 mg/0.2 mL**

Cytokine & CAM Antagonists

- **adalimumab-aqvh (Yusimry)**
  - **March 2023: FDA approved Yusimry (Humira biosimilar) as a single-dose 40 mg/0.8 mL prefilled autoinjector pen; Yusimry previously approved as a prefilled syringe**
  - **April 2023: FDA approved for treatment of moderate to severe hidradenitis suppurativa in adults**
  - **September 2023: FDA approved for treatment of non-infectious intermediate, posterior and panuveitis in adults**
  - **Indications**
    - Rheumatoid Arthritis (RA), Juvenile Idiopathic Arthritis (JIA), Psoriatic Arthritis (PsA), Ankylosing Spondylitis (AS), Crohn's Disease (CD), Ulcerative Colitis (UC), Plaque Psoriasis (Ps), **Hidradenitis Suppurativa (HS)**, and **Uveitis (UV)**
  - **Precautions/Contraindications**
    - BBW: Serious infections
    - BBW: Malignancy
  - **Dosing**
    - **Hidradenitis Suppurativa:**
      - **Adults: Day 1: 160 mg (given in one day or split over two consecutive days); Day 15: 80 mg; Day 29 and subsequent doses: 40 mg every week or 80 mg every other week**
    - **Uveitis**
      - **Adults: 80 mg initial dose (followed by 40 mg every week or 80 mg every other week starting one week after initial dose)**
  - **Formulations**
    - Injection: 40 mg/0.8 mL in a single-dose prefilled glass syringe

Cytokine & CAM Antagonists

- **adalimumab-adaz (Hyrimoz)**
  - **March 2023: FDA approved Hyrimoz (citrate-free Humira biosimilar) as a high-concentration formulation (HCF) in the following presentations: 10 mg/0.1 mL & 20 mg/0.2 mL prefilled syringe; 40 mg/0.4 mL & 80 mg/0.4 mL prefilled syringe and autoinjector**
  - **April 2023: FDA approved for the treatment of moderate to severe hidradenitis suppurativa in adults**
  - **September 2023: FDA approved for treatment of non-infectious intermediate, posterior, & panuveitis in adults**
  - **Indications**
    - Rheumatoid Arthritis (RA), Juvenile Idiopathic Arthritis (JIA), Psoriatic Arthritis (PsA), Ankylosing Spondylitis (AS), Crohn's Disease (CD), Ulcerative Colitis (UC), Plaque Psoriasis (Ps), **Hidradenitis Suppurativa (HS)**, and **Uveitis (UV)**
  - **Precautions/Contraindications**
    - BBW: Increased risk of serious bacterial fungal, viral and opportunistic infections
    - BBW: Malignancies
  - **Dosing**
    - **Hidradenitis Suppurativa:**
      - **Adults: Day 1: 160 mg (given in one day or split over two consecutive days); Day 15: 80 mg; Day 29 and subsequent doses: 40 mg every week or 80 mg every other week**
    - **Uveitis**
      - **Adults: 80 mg initial dose (followed by 40 mg every week or 80 mg every other week starting one week after initial dose)**
  - **Formulations**
    - Single-dose prefilled pen (Sensoready Pen): 40 mg/0.8 mL, 40 mg/0.4 mL and 80 mg/0.8 mL
    - **Single-dose prefilled glass syringe : 20 mg/0.4 mL, 40 mg/0.8 mL, 40 mg/0.4 mL and 80 mg/0.8 mL**
    - **Single-dose prefilled glass syringe: 10 mg/0.2 mL, 10 mg/0.1 mL and 20 mg/0.2 mL**

Cytokine & CAM Antagonists

- **adalimumab-aaty (Yuflyma)**
  - **May 2023: FDA has approved Yuflyma (adalimumab-aaty), a biosimilar to Humira (adalimumab)**
  - **Indications**
    - **Rheumatoid Arthritis (RA), Juvenile Idiopathic Arthritis (JIA), Psoriatic Arthritis (PsA), Ankylosing Spondylitis (AS), Crohn's Disease (CD), Ulcerative Colitis (UC), Plaque Psoriasis (Ps), Hidradenitis Suppurativa (HS)**
  - **Precautions/Contraindications**
    - **BBW: Serious infections**
    - **BBW: Malignancy**
  - **Dosing**
    - **Dosing stratified by indication (found in TCR and/or PI)**
  - **Formulations**
    - **Injection: Single-dose prefilled auto-injector (YUFLYMA AI): 40 mg/0.4 mL**
    - **Single-dose prefilled syringe with safety guard : 40 mg/0.4 mL**
    - **Single-dose prefilled syringe: 40 mg/0.4 mL**

Cytokine & CAM Antagonists

- **upadacitinib (Rinvoq)**
  - **May 2023: FDA approved for adults with moderately to severely active CD who have had an inadequate response or intolerance to ≥ 1 tumor necrosis factor blocker(s)**
  - **Indications**
    - Rheumatoid Arthritis (RA), Atopic Dermatitis, Psoriatic Arthritis (PsA), **Crohn's Disease (CD),** Ulcerative Colitis (UC), Ankylosing Spondilitis (AS), Non-radiographic Axial Spondyloarthritis
  - **Precautions/Contraindications**
    - BBW: Increased risk of serious bacterial, fungal, viral, and opportunistic infections leading to hospitalization or death, including tuberculosis (TB)
    - BBW: Higher rate of all-cause mortality, including sudden cardiovascular death with another Janus kinase (JAK) inhibitor vs. tumor necrosis factor (TNF) blockers in rheumatoid arthritis (RA) patients
    - BBW: Malignancies have occurred in patients treated with RINVOQ. Higher rate of lymphomas and lung cancers with another JAK inhibitor vs. TNF blockers in RA patients
    - BBW: Higher rate of MACE (defined as cardiovascular death, myocardial infarction, and stroke) with another JAK inhibitor vs. TNF blockers in RA patients
    - BBW: Thrombosis has occurred in patients treated with Rinvoq. Increased incidence of pulmonary embolism, venous and arterial thrombosis with another JAK inhibitor vs. TNF blockers
  - **Dosing**
    - **Chron's Disease: The recommended induction dosage is 45 mg once daily for 12 weeks. The recommended maintenance dosage is 15 mg once daily. A maintenance dosage of 30 mg once daily may be considered for patients with refractory, severe, or extensive disease**
  - **Formulations**
    - Extended-release tablets: 15 mg, 30 mg, and 45 mg

Cytokine & CAM Antagonists

- **adalimumab-bwwd (Hadlima)**
  - **June 2023: FDA approved for the treatment of moderate to severe hidradenitis suppurativa in adults**
  - **July 2023: FDA approved for the treatment for non-infectious intermediate, posterior, and panuveitis in adults**
  - **Indications**
    - Rheumatoid Arthritis (RA), juvenile idiopathic arthritis (JIA), psoriatic arthritis (PsA), ankylosing spondylitis (AS), Crohn's Disease (CD), Ulcerative Colitis (UC), plaque psoriasis (Ps), **Hiradenitis Suppurativa (HS)**, and **Uveitis (UV)**
  - **Precautions/Contraindications**
    - BBW: Serious infections
    - BBW: Malignancy
  - **Dosing**
    - **Hidradenitis Suppurativa:**
      - **Adults: Day 1: 160 mg (given in one day or split over two consecutive days); Day 15: 80 mg; Day 29 and subsequent doses: 40 mg every week or 80 mg every other week**
    - **Adult Uveitis:**
      - **Adults: 80 mg initial dose, followed by 40 mg every other week starting one week after initial dose**
  - **Formulations**
    - Single-dose prefilled autoinjector (Hadlima PushTouch): 40 mg/ 0.8 mL
    - Single-dose prefilled glass syringe: 40 mg/0.8 mL
    - Single-dose glass vial for institutional use only: 40 mg/0.8 mL
    - Single-dose prefilled autoinjector (Hadlima PushTouch): 40 mg/ 0.4 mL
    - Single-dose prefilled glass syringe: 40 mg/0.4 mL

Cytokine & CAM Antagonists

- **New Biosimilars**
  - **July 2023:**
    - **Several adalimumab (Humira) biosimilars have launched per manufacturer press releases**
    - **These commercially available Humira biosimilars on the market include:**
      - **adalimumab-adbm (Cyltezo) from Boehringer Ingelheim**
      - **adalimumab-bwwd (Hadlima) from Organon**
      - **adalimumab-fkjp (Hulio) from Biocon**
      - **adalimumab-adaz (Hyrimoz) high-concentration from Sandoz**
      - **adalimumab-aacf (Idacio) from Fresenius Kabi**
      - **adalimumab-aaty (Yuflyma) from Celltrion**
      - **adalimumab-aqvh (Yusimry) from Coherus**
      - **All products are available as a low-concentration formulation except Hyrimoz & Yuflyma. Hadlima, Hyrimoz, & Yuflyma are available as a high-concentration formulation**
      - **Citrate-free formulations include Cyltezo, Hadlima (high concentration), Hulio, Hyrimoz (high concentration), Idacio, Yuflyma, & Yusimry. Cyltezo is interchangeable with Humira**

Cytokine & CAM Antagonists

- **canakinumab (Ilaris)**
  - **September 2023: FDA approved for gout flares in adults in whom NSAIDs and colchicine are contraindicated, are not tolerated, or do not provide an adequate response, and in whom repeated courses of corticosteroids are not appropriate**
  - **Indications**
    - Periodic Fever Syndrome, Active Still's Disease, and **Gout flares**
  - **Precautions/Contraindications**
    - Serious infections: Has been associated with an increased incidence of serious infections. Exercise caution when administering Ilaris to patients with infections, a history of recurring infections or underlying conditions which may predispose them to infections. Discontinue if a patient develops a serious infection. Avoid administering Ilaris to patients during an active infection requiring medical intervention
    - Immunizations: Avoid administration of live vaccines concurrently with Ilaris. Update all recommended vaccinations prior to initiation of therapy with Ilaris
  - **Dosing**
    - **Gout Flares: Recommended dosage is 150 mg subcutaneously. In patients who require re-treatment, there should be an interval of at least 12 weeks before a new dose of Ilaris may be administered**
  - **Formulations**
    - **Injection: 150 mg/mL solution in single-dose vials.**

Cytokine & CAM Antagonists

- **adalimumab-fkjp (Hulio)**
  - **September 2023: FDA approved for treatment of non-infectious intermediate, posterior and panuveitis in adults.**
  - **Indications**
    - Rheumatoid Arthritis (RA), Juvenile Idiopathic Arthritis (JIA), Psoriatic Arthritis (PsA), Ankylosing Spondylitis (AS), Crohn's Disease (CD), Ulcerative Colitis (UC), Plaque Psoriasis (Ps), Hidradenitis Suppurativa (HS), and **Uveitis (UV)**
  - **Precautions/Contraindications**
    - BBW: Increased risk of serious bacterial fungal, viral and opportunistic infections
    - BBW: Malignancies
  - **Dosing**
    - **Hidradenitis Suppurativa:**
      - **Adults: Day 1: 160 mg (given in one day or split over two consecutive days); Day 15: 80 mg; Day 29 and subsequent doses: 40 mg every week or 80 mg every other week**
  - **Formulations**
    - Injection: 40 mg/0.8 mL in a single-dose prefilled pen (Hulio Pen)
    - Injection: 40 mg/0.8 mL in a single-dose prefilled plastic syringe
    - Injection: 20 mg/0.4 mL in a single-dose prefilled plastic syringe

Cytokine & CAM Antagonists

- **vedolizumab (Entyvio)**
  - **September 2023: FDA has approved a single-dose prefilled syringe and single-dose prefilled pen in the strength of 108 mg/0.68 mL for SC self-injection for ulcerative colitis (UC). Previously, vedolizumab was only available for IV injection. The IV route of administration is indicated for UC & CD. After the first two IV doses at week 0 and week 2, vedolizumab may be switched to SC injection at week 6; beginning at week 6 and thereafter the dose is 108 mg SC once every 2 weeks; therapy should be discontinued in pts who do not show evidence of therapeutic benefit by week 14. For pts in clinical response or remission beyond week 6, vedolizumab can be switched from IV infusion to SC injection by administering the 1st SC dose in place of the next scheduled IV infusion and every 2 weeks thereafter**
  - **Indications**
    - Moderately to severely active ulcerative colitis (UC)
    - Moderately to severely active Crohn's disease (CD)
  - **Precautions/Contraindications**
    - Progressive Multifocal Leukoencephalopathy (PML): Although unlikely, a risk of PML cannot be ruled out. Monitor patients for any new or worsening neurological signs or symptoms
  - **Dosing**
    - **Stratified by indication and formulation (See TCR or PI)**
  - **Formulations**
    - Intravenous infusion
      - For injection: 300 mg vedolizumab in a single-dose vial
    - **Subcutaneous injection**
      - **Injection: 108 mg/0.68 mL solution in a single-dose prefilled syringe with needle safety device**
      - **Injection: 108 mg/0.68 mL solution in a single-dose prefilled pen (ENTYVIO PEN)**

Cytokine & CAM Antagonists

- **adalimumab-afzb (Abrilada)**
  - **June 2023: FDA approved for treatment of moderate to severe hidradenitis suppurativa (HS) in adults**
  - **August 2023: FDA approved for treatment of non-infectious intermediate, posterior, and panuveitis in adults**
  - **October 2023: Adalimumab-afzb (Abrilada) has been designated by the FDA as an interchangeable biosimilar to the corresponding presentations of adalimumab (Humira): 10 mg/0.2 mL & 20 mg/0.4 mL prefilled syringe for SC use; 40 mg/0.8 mL prefilled glass syringe, prefilled pen, & glass vial for SC use. This interchangeable designation applies to all indications: RA, JIA, PsA, AS, CD, UC, PsO, HS, & UV**
  - **Indications**
    - Rheumatoid Arthritis (RA), Juvenile Idiopathic Arthritis (JIA), Psoriatic Arthritis (PsA), Ankylosing Spondylitis (AS), Crohn's Disease (CD), Ulcerative Colitis (UC), Plaque Psoriasis (Ps), **Hidradenitis Suppurativa (HS)**, and **Uveitis (UV)**
  - **Dosing**
    - **Hidradenitis Suppurativa:**
      - **Adults: Day 1: 160 mg (given in one day or split over two consecutive days); Day 15: 80 mg; Day 29 and subsequent doses: 40 mg every week or 80 mg every other week**
    - **Uveitis**
      - **Adults: 80 mg initial dose (followed by 40 mg every week or 80 mg every other week starting one week after initial dose)**
  - **Formulations**
    - Injection:
      - Single-dose prefilled pen (ABRILADA Pen): 40 mg/0.8 mL (3)
      - Single-dose prefilled glass syringe: 40 mg/0.8 mL, 20 mg/0.4 mL, 10 mg/0.2 mL
      - Single-dose glass vial for institutional use only: 40 mg/0.8 mL

Cytokine & CAM Antagonists

- **tocilizumab-bavi (Tofidence)**
  - **October 2023: FDA approved tocilizumab-bavi (Tofidence) as 1st biosimilar to tocilizumab (Acetmra). It is an IL-6 receptor antagonist indicated for certain adults with RA and patients ≥ 2 yo with polyarticular JIA (PJIA) or systemic JIA (SJIA)**
  - **Indications**
    - **Rheumatoid Arthritis (RA), Polyarticular Juvenile Arthritis (PJIA), and Systemic Juvenile Idiopathic Arthritis (SJIA)**
  - **Precautions/Contraindications**
    - BBW: Increased risk of serious bacterial fungal, viral and opportunistic infections
  - **Dosing**
    - **Rheumatoid Arthritis:**
      - **When used in combination with DMARDs or as monotherapy, the recommended starting dose is 4 mg per kg every 4 weeks followed by an increase to 8 mg per kg every 4 weeks based on a clinical response**
    - **Polyarticular Juvenile Arthritis:**
      - **Patients < 30 kg: 10 mg per kg (every 4 weeks)**
      - **Patients ≥ 30 kg: 8 mg per kg (every 4 weeks)**
    - **Systemic Juvenile Idiopathic Arthritis:**
      - **Patients < 30 kg: 12 mg per kg (every 2 weeks)**
      - **Patients ≥ 30 kg: 8 mg per kg (every 2 weeks)**
  - **Formulations**
    - **Intravenous Infusion Injection: 80 mg/4 mL (20 mg/mL), 200 mg/10 mL (20 mg/mL), 400 mg/20 mL (20 mg/mL) in single-dose vials for further dilution prior to intravenous infusion**

Cytokine & CAM Antagonists

- **etanercept (Enbrel)**
  - **October 2023: FDA has approved ustekinumab-auub (Wezlana) as an interchangeable biosimilar to ustekinumab (Stelara)**
  - **Indications**
    - Adult patients: Rheumatoid Arthritis (RA), Psoriatic Arthritis (PsA), Ankylosing Spondylitis (AS), Plaque Psoriasis (PsO)
    - Pediatric patients: Polyarticular Juvenile Idiopathic Arthritis (pJIA) 2 years of age or older**, Juvenile Psoriatic Arthritis (jPsA) 2 years of age or older**, and Plaque Psoriasis in patients 4 years of age or older
  - **Precautions/Contraindications**
    - BBW: Increased risk of serious bacterial fungal, viral and opportunistic infections
    - BBW: Malignancies
  - **Dosing**
    - **jPsA: 0.8 mg/kg weekly, with a maximum of 50 mg per week**
  - **Formulations**
    - Injection: 25 mg/0.5 mL and 50 mg/mL solution in a single-dose prefilled syringe
    - Injection: 50 mg/mL solution in single-dose prefilled SureClick Autoinjector
    - Injection: 25 mg/0.5 mL solution in a single-dose vial
    - For Injection: 25 mg lyophilized powder in a multiple-dose vial for reconstitution
    - Injection: 50 mg/mL solution in Enbrel Mini® single-dose prefilled cartridge for use with the AutoTouch® reusable autoinjector only

Cytokine & CAM Antagonists

- **bimekizumab-bkzx (Bimzelx)**
  - **October 2023: FDA approved bimekizumab-bkzx (Bimzelx), a humanized interleukin-17A and F antagonist, indicated for the treatment of moderate to severe PsO in adults who are candidates for systemic therapy or phototherapy**
  - **Indications**
    - **A humanized interleukin-17A and F antagonist indicated for the treatment of moderate to severe plaque psoriasis in adults who are candidates for systemic therapy or phototherapy**
  - **Precautions/Contraindications**
    - **Infections: May increase risk of infection. Instruct patients to seek medical advice if signs or symptoms of clinically important infection occur. If such an infection develops, do not administer Bimzelx until the infection resolves**
    - **Tuberculosis (TB): Avoid use in patients with active TB. Initiate treatment of latent TB prior to Bimzelx treatment**
  - **Dosing**
    - **Administer 320 mg (two 160 mg injections) by subcutaneous injection at Weeks 0, 4, 8, 12, and 16, then every 8 weeks thereafter**
    - **For patients weighing ≥ 120 kg, consider a dose of 320 mg every 4 weeks after Week 16**
  - **Formulations**
    - **Injection: 160 mg/mL in a single-dose prefilled syringe or single-dose prefilled autoinjector**

Cytokine & CAM Antagonists

- **infliximab-dyyb (Zymfentra)**
  - **October 2023: FDA approved a SC formulation of infliximab-dyyb, under brand name Zymfentra, for the maintenance treatment of adults with moderately to severely active UC or CD, following treatment with an IV-administered infliximab product. Maintenance treatment with Zymfentra 120 mg SC once every 2 weeks may begin at or after week 10 of therapy. Zymfentra is the only infliximab product that is given via SC injection and can be administered by the patient or caregiver**
  - **Indications**
    - **Moderately to severely active ulcerative colitis following treatment with an infliximab product administered intravenously**
    - **Moderately to severely active Crohn's disease following treatment with an infliximab product administered intravenously**
  - **Precautions/Contraindications**
    - **BBW: Serious infection**
    - **BBW: Malignancy**
  - **Dosing**
    - **Indicated as maintenance treatment only, starting at Week 10 and thereafter**
    - **All patients must complete an intravenous induction regimen with an infliximab product before starting Zymfentra**
    - **Recommended Maintenance Dosage in Ulcerative Colitis and Crohn's Disease**
      - **Week 10 and thereafter: Inject 120 mg subcutaneously once every two weeks**
      - **To switch patients who are responding to maintenance therapy with an infliximab product administered intravenously, administer the first subcutaneous dose of Zymfentra in place of the next scheduled intravenous infusion and every two weeks thereafter**
  - **Formulations**
    - **120 mg/mL in a single-dose prefilled syringe**
    - **120 mg/mL in a single-dose prefilled syringe with needle shield**
    - **120 mg/mL in a single-dose prefilled pen.**

Cytokine & CAM Antagonists

- **ustekinumab-auub (Wezlana)**
  - **November 2023: FDA has approved ustekinumab-auub (Wezlana) as an interchangeable biosimilar to ustekinumab (Stelara)**
  - **Indications**
    - **Adult patients: Moderate to severe Plaque Psoriasis (Ps) who are candidates for phototherapy or systemic therapy; active Psoriatic Arthritis (PsA), moderately to severely acting Crohn's disease; moderately to severely active ulcerative colitis**
    - **Pediatric patients (6 years of age or older): moderate to sever plaque psoriasis who are candidates for phototherapy or systemic therapy; active Psoriatic Arthritis**
  - **Precautions/Contraindications**
    - **Infections: Serious infections have occurred. Do not start Wezlana during any clinically important active infection. If a serious infection or clinically significant infection develops, consider discontinuing treatment until the infection resolves**
  - **Dosing**
    - **Dosing stratified by indication, age and weight based. (See PI or TCR)**
  - **Formulations**
    - **Subcutaneous Injection:**
      - **Injection: 45 mg/0.5 mL or 90 mg/mL solution in a single-dose prefilled syringe**
      - **Injection: 45 mg/0.5 mL solution in a single-dose vial**
    - **Intravenous Infusion:**
      - **Injection: 130 mg/26 mL (5 mg/mL) solution in a single-dose vial**

Cytokine & CAM Antagonists

- **adalimumab-aacf (Idacio)**
  - **October 2023: FDA approved for treatment of moderate to severe hidradenitis suppurativa in adults**
  - **November 2023: FDA approved for treatment of non-infectious intermediate, posterior and panuveitis in adults**
  - **January 2024: FDA approved a 40mg/0.8mL SDV kit for institutional use only**
  - **Indications**
    - Rheumatoid Arthritis (RA), Juvenile Idiopathic Arthritis (JIA), Psoriatic Arthritis (PsA), Ankylosing Spondylitis (AS), Crohn's Disease (CD), Ulcerative Colitis (UC), Plaque Psoriasis (Ps), **Hidradenitis Suppurativa (HS)**, and **Uveitis (UV)**
  - **Precautions/Contraindications**
    - BBW: Serious infections
    - BBW: Malignancy
  - **Dosing**
    - **Hidradenitis Suppurativa:**
      - **Adults: Day 1: 160 mg (given in one day or split over two consecutive days); Day 15: 80 mg; Day 29 and subsequent doses: 40 mg every week or 80 mg every other week**
    - **Uveitis**
      - **Adults: 80 mg initial dose (followed by 40 mg every week or 80 mg every other week starting one week after initial dose)**
  - **Formulations**
    - Single-dose prefilled pen (IDACIO Pen): 40 mg/0.8 mL
    - Single-dose prefilled glass syringe: 40 mg/0.8 mL
    - **Single dose glass vial kit for institutional use only: 40mg/0.8 mL**

Cytokine & CAM Antagonists

- **secukinumab (Cosentyx)**
  - **October 2023: FDA approved as first IV formulation IL-17A antagonist for treatment of adults with active PsA, active AS, & active non-radiographic axial spondylarthritis (nr-axSpA) with objective signs of inflammation**
  - **November 2023: FDA approved for treatment of moderate to severe hidradenitis suppurativa in adults**
  - **Indications**
    - Plaque Psotiasis (PsO), Psoriatic Arthritis (PsA), Active Ankylosing Spondylitis (AS), Non-radiographic Axial Spondyloarthritis, Enthesitis-related Arthritis, and **Hidradenitis Suppurativa (HS)**
  - **Precautions/Contraindications**
    - Infections: Serious infections have occurred. Exercise caution when considering the use of Cosentyx in patients with a chronic infection or a history of recurrent infection. If a serious infection develops, discontinue Cosentyx until the infection resolves
  - **Dosing**
    - **Hidradenitis Suppurativa:**
      - **Adults: Day 1: 160 mg (given in one day or split over two consecutive days); Day 15: 80 mg; Day 29 and subsequent doses: 40 mg every week or 80 mg every other week**
  - **Formulations**
    - Subcutaneous Injection
      - Injection: 300 mg/2 mL solution in a single-dose UnoReady pen and in a single-dose prefilled syringe
      - Injection: 150 mg/mL solution in a single-dose Sensoready pen and in a single-dose prefilled syringe
      - Injection: 75 mg/0.5 mL solution in a single-dose prefilled syringe (for pediatric patients)
    - **Intravenous Infusion: Injection: 125 mg/5 mL solution in a single-dose vial**

Cytokine & CAM Antagonists

- **abatacept (Orencia)**
  - **November 2023: FDA has expanded SC use of Orencia for treatment of active PsA to include patients ≥ 2 years of age**
  - **Indications**
    - A selective T cell costimulation modulator indicated for:
      - The treatment of adult patients with moderately to severely active rheumatoid arthritis (RA)
      - The treatment of patients 2 years of age and older with moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA)
      - **The treatment of patients 2 years of age and older with active psoriatic arthritis (PsA)**
      - The prophylaxis of acute graft versus host disease (aGVHD), in combination with a calcineurin inhibitor and methotrexate, in adults and pediatric patients 2 years of age and older undergoing hematopoietic stem cell transplantation (HSCT) from a matched or 1 allele-mismatched unrelated donor.
  - **Precautions/Contraindications**
    - Concomitant use with a TNF antagonist can increase the risk of infections and serious infections
  - **Dosing**
    - PsA:
      - 10 kg to < 25 kg: 50 mg once weekly
      - 25 kg to < 50 kg: 87.5 mg once weekly
      - ≥ 50 kg: 125 mg
  - **Formulations**
    - Intravenous Infusion: For injection: 250 mg lyophilized powder in a single-dose vial
    - Subcutaneous Use:
      - Injection: 50 mg/0.4 mL, 87.5 mg/0.7 mL, 125 mg/mL solution in single dose prefilled syringe
      - Injection: 125 mg/mL solution in a single-dose prefilled ClickJect autoinjectors

Cytokine & CAM Antagonists

- **adalimumab-ryvk (Simlandi)**
  - **March 2024: FDA has approved adalimumab-ryvk (Simlandi), a high-concentration, interchangeable biosimilar to Humira (adalimumab)**
  - **Indications**
    - **Rheumatoid Arthritis (RA), Juvenile Idiopathic Arthritis (JIA), Psoriatic Arthritis (PsA), Ankylosing Spondylitis (AS), Crohn's Disease (CD), Ulcerative Colitis (UC), Plaque Psoriasis (Ps), Hidradenitis Suppurativa (HS), and Uveitis (UV)**
  - **Precautions/Contraindications**
    - **BBW: Serious infection**
    - **BBW: Malignancy**
  - **Dosing**
    - **Stratified by indication, weight, and age (See TCR/PI)**
  - **Formulations**
    - **Injection: 40 mg/0.4 mL single-dose autoinjector**

Cytokine & CAM Antagonists

- **tocilizumab-aazg (Tyenne)**
  - **March 2024: FDA has approved tocilizumab-aazg (Tyenne) as biosimilar to tocilizumab (Actemra). Tyenne is approved for the following indications: (1) adults with mod-severely active RA who have had an inadequate response to ≥ 1 DMARDs, (2) adults with giant cell arteritis, (3) polyarticular JIA in patients ≥ 2 years of age, & (4) systemic JIA in patients ≥ 2 years of age**
  - **Indications**
    - **Rheumatoid Arthritis (RA), Giant Cell Arteritis (GCA), Polyarticular Juvenile Idiopathic Arthritis (PJIA), and Systemic Juvenile Idiopathic Arthritis (SJIA)**
  - **Precautions/Contraindications**
    - **BBW: Serious infection**
    - **Hepatotoxicity: Monitor patients for signs and symptoms of hepatic injury. Modify or discontinue Tyenne if abnormal liver tests persist or worsen or if clinical signs and symptoms of liver disease develop**
  - **Dosing**
    - **Stratified by indication, weight, and age (See TCR/PI)**
  - **Formulations**
    - **Intravenous Infusion Injection: 80 mg/4 mL (20 mg/mL), 200 mg/10 mL (20 mg/mL), 400 mg/20 mL (20 mg/mL) in single-dose vials for further dilution prior to intravenous infusion**
    - **Subcutaneous Injection Injection: 162 mg/0.9 mL in a single-dose prefilled syringe or single-dose prefilled autoinjector**

Cytokine & CAM Antagonists

- **risankizumab-rzaa (Skyrizi)**
  - **March 2024: Approved as 90 mg/mL single-dose PFS to allow for SC self-administration of maintenance dosage for treatment of mod-severely active CD in adults. Patients must be trained on SC technique before self-injecting**
  - **Indications**
    - Moderate-to-severe plaque psoriasis in adults who are candidates for systemic therapy or phototherapy
    - Active psoriatic arthritis in adults
    - Moderately to severely active Crohn's disease in adults
  - **Precautions/Contraindications**
    - Hepatotoxicity: Monitor patients for signs and symptoms of hepatic injury. Modify or discontinue Tyenne if abnormal liver tests persist or worsen or if clinical signs and symptoms of liver disease develop
  - **Dosing**
    - Plaque Psoriasis & Psoriatic Arthritis: 150 mg SC at week 0, week 4, and every 12 weeks thereafter
    - **Crohn's Disease: 600 mg IV over at least one hour at week 0, week 4, and week 8. The recommended maintenance dose is 180 mg or 360 mg SC at week 12 and every 8 weeks thereafter.**
  - **Formulations**
    - Subcutaneous injection:
      - 150 mg/mL in each single-dose prefilled pen
      - **90 mg/mL in each single-dose prefilled syringe**
      - 150 mg/mL in each single-dose prefilled syringe
      - 180 mg/1.2 mL (150 mg/mL) in each single-dose prefilled cartridge
      - 360 mg/2.4 mL (150 mg/mL) in each single-dose prefilled cartridge
    - Intravenous infusion: Injection: 600 mg/10 mL (60 mg/mL) in each single-dose vial

Magellan Rx MANAGEMENT℠

Magellan Medicaid Administration

Oncology, Injectables:
- ONCOLOGY AGENTS : AUTOLOGOUS CELLULAR IMMUNOTHERAPY (CAR-T)
- ONCOLOGY AGENTS : MITOTIC INHIBITORS – ORAL
- ONCOLOGY AGENTS : GENE THERAPIES

Oncology, Other (Oral):
- ONCOLOGY AGENTS : NITROSOUREAS – ORAL
- ONCOLOGY AGENTS : IMIDAZOTETRAZINES - ORAL

Antineoplastic Agents, Topical:
- ONCOLOGY AGENTS : SELECTIVE RETINOID X RECEPTOR AGONISTS - ORAL

Oncology, Breast & Oncology, Hematological:
- ONCOLOGY AGENTS : ANTIMETABOLITES – ORAL
- ONCOLOGY AGENTS : PHOSPHATIDYLINOSITOL 3-KINASE (PI3K) INHIBITORS – ORAL

Sickle Cell Agents
- HEMATOPOIETIC AGENTS : SICKLE CELL ANEMIA
- HEMATOPOIETIC AGENTS : SICKLE CELL ANEMIA - SELECTIN BLOCKERS

Gaucher Disease
- HEMATOPOIETIC AGENTS : GAUCHER DISEASE