CAREPATHrx™
Specialty Pharmacy & Infusion Solutions

GUIDELINES FOR OUTPATIENT ABATACEPT (ORENCIA) THERAPY

Section: Nursing
Compliance: ACHC Infusion Pharmacy
ACHC Standards: N/A
URAC Standards: N/A
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Reviewed:
Revised:
Approved by: Kathleen Patrick, President 6/1/22

I. POLICY

Abatacept is a combination of the extracellular domain of human cytotoxic T-lymphocyte-associated antigen 4 (CTLA-4) linked to the modified heavy chain portion of human immunoglobulin G1 (IgG1). Abatacept binds to CD80 and CD86 receptors on the antigen-presenting cell and prevents them from binding to CD28 on the T cell for optimal T cell activation. Thus, it is a biological response modifier that demonstrates anti-inflammatory effects by downregulating T cell activation. The following defines specific guidelines that will ensure the safe and effective use and administration of Abatacept.

II. PATIENT ACCEPTANCE CRITERIA

A. All candidates for home care service must be evaluated by the clinician(s) and deemed appropriate to receive home care based upon CarepathRx admission criteria:
    1. Confirmation that a first dose has been tolerated in a controlled setting.
    2. The decision to administer a first dose in the home by a field nurse will be determined on a case-by-case basis and reviewed by nursing and pharmacy management. The following criteria will be evaluated:
        a. Prescriber preference
        b. Allergy profile
        c. Age ≥18 years
        d. Ability to secure contracted nursing for subsequent infusions
        e. Other relevant social and/or medical history
    3. CarepathRx treatment protocol for anaphylaxis will be instituted unless more comprehensive patient-specific orders are provided by physician (see policy NUR012 in Appendix A)
    4. Identification of a Home Health agency

B. Patients must be screened for tuberculosis and hepatitis prior to abatacept treatment initiation
    1. If being used for prophylaxis of acute graft-versus-host disease, the American Society

of Clinical Oncology additionally recommends HBV screening with hepatitis B surface antigen, hepatitis B core antibody, total Ig or IgG, and antibody to hepatitis B surface antigen prior to treatment initiation or at the beginning of treatment

III. PHARMACOLOGIC OVERVIEW

A. Indications
1. Adult patients with moderately to severely active rheumatoid arthritis (RA) or active psoriatic arthritis (PsA)
2. Patients 2 years of age and older with moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA)
3. 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

B. Dosing
1. Adults
a. Intravenous Use for Adult RA and Adult PsA
i. Administer at 0, 2, and 4 weeks, and every 4 weeks thereafter, as a 30-minute infusion per these weight-based recommendations:

Body Weight of Patient	Dose	Number of Vials
Less than 60 kg	500 mg	2
60 to 100 kg	750 mg	3
More than 100 kg	1000 mg	4

b. Intravenous Use for prophylaxis of aGVHD
i. 10 mg/kg dose (maximum dose 1,000 mg) as a 60-minute infusion on the day before transplantation, followed by a dose on Day 5, 14, and 28 after transplant
c. Subcutaneous Use for Adult PsA
i. Administer 125 mg by subcutaneous injection once weekly without an intravenous loading dose
1) Patients switching from intravenous use to subcutaneous use, administer first subcutaneous dose instead of next scheduled intravenous dose
d. Subcutaneous Use for Adult RA
i. Administer 125 mg by subcutaneous injection once weekly without an intravenous loading dose
1) Patients switching from intravenous use to subcutaneous use, administer first subcutaneous dose instead of next scheduled intravenous dose
ii. Prior to the first subcutaneous dose, may administer an optional loading dose as a single intravenous infusion per these weight-based recommendations. Administer subcutaneous dose within a day of the

intravenous infusion given

Body Weight of Patient	Dose	Number of Vials
Less than 60 kg	500 mg	2
60 to 100 kg	750 mg	3
More than 100 kg	1000 mg	4

2. Pediatrics
    a. Intravenous Use for pJIA in Pediatric Patients ≥6 Years Old
        i. Pediatric patients weighing <75 kg administer 10 mg/kg intravenously and those weighing ≥75 kg administer the adult intravenous dosing regimen (not to exceed a maximum dose of 1,000 mg), as a 30-minute infusion
            1) Subsequently administer infusions at 2 and 4 weeks and every 4 weeks thereafter
    b. Intravenous Use for prophylaxis of aGVHD
        i. For patients 6 years and older, administer at a 10 mg/kg dose (maximum dose 1,000 mg) as a 60-minute infusion on the day before transplantation, followed by a dose on Day 5, 14, and 28 after transplant
        ii. For patients 2 to less than 6 years old, administer a 15 mg/kg dose as a 60-minute infusion on the day before transplantation, followed by a 12 mg/kg dose as a 60-minute infusion on Day 5, 14, and 28 after transplant
    c. Subcutaneous Use for pJIA in Pediatric Patients ≥2 Years Old
        i. Administer subcutaneously without an intravenous loading dose per these weight-based recommendations:

Body Weight of Pediatric Patient	Dose (Once Weekly)
10 kg to 24.9kg	50 mg
25 kg to 49.9 kg	87.5 mg
50 kg or more	125 mg

C. Contraindications
None

D. Warnings and Precautions
1. Hypersensitivity and anaphylaxis have occurred. In clinical trials with adult RA patients, other hypersensitivity reactions included hypotension, urticaria, and dyspnea. In post-marketing experience, there have been incidences of anaphylaxis and severe angioedema. Angioedema has occurred with the first and subsequent doses, and also has occurred within hours to days of administration.
2. Increased risk of infection
    a. Concomitant use with a TNF antagonist can increase the risk of infections
    b. Screen for latent TB and viral hepatitis prior to initiating Abatacept

c. Cytomegalovirus (CMV) and Epstein-Barr Virus (EBV) reactivation has occurred in patients treated for aGVHD prophylaxis
3. Live vaccines should not be given concurrently or within 3 months of discontinuation
4. COPD patients may develop more frequent respiratory adverse events

E. Pharmacokinetics
1. Bioavailability
a. SubQ: 78.6%
2. Elimination half-life:
a. IV: 13 days
b. SubQ: 14.3 days

F. Adverse Reactions
1. Most common adverse events (≥10%) in RA
a. Headache
b. Upper respiratory tract infection
c. Nasopharyngitis
d. Nausea
2. Most common adverse reactions (≥10%) in prophylaxis of aGVHD
a. Anemia
b. Hypertension
c. CMV reactivation/CMV infection
d. Pyrexia
e. Pneumonia
f. Epistaxis
g. CD4 lymphocytes decreased
h. Hypermagnesemia
i. Acute kidney injury

G. Drug Interactions
1. Avoid concurrent use of Abatacept with these medications due to increased risk for infection(s):
a. Biologics
b. Anifrolumab-fnia
c. Janus Kinase Inhibitors (JKI's)
d. Live vaccines

H. Monitoring
1. Perform periodic skin examinations
2. Monitor for signs/symptoms of infection
3. Monitor for hypersensitivity reactions
4. In patients receiving abatacept for prophylaxis of acute graft-versus-host disease following hematopoietic stem cell transplant monitor for:
a. Cytomegalovirus infection/reactivation
b. Epstein-Barr virus reactivation
c. Post-transplant Lymphoproliferative Disorder

5. Abatacept may result in a falsely elevated blood glucose measurement due to assay interference with the glucose dehydrogenase pyrroloquinoline quinone (GDH-PQQ) method

IV. ADMINISTRATIVE GUIDELINES

A. Intravenous Administration
   1. Preparation
      a. Use only a silicone-free disposable syringe and an 18- to 21-gauge needle to reconstitute the 250 mg vial of lyophilized powder with 10 mL of sterile water for injection to a concentration of 25 mg/mL
         i. A silicone-free disposable syringe is provided with the vial of lyophilized powder. If dropped or contaminated, information on obtaining additional silicone-free disposable syringes may be obtained at 1-800-ORENCIA
         ii. If vial of lyophilized powder is inadvertently reconstituted using a siliconized syringe, discard solution
      b. From a 100 mL infusion bag or bottle of NS, withdraw a volume equal to the volume of reconstituted solution required for the patient's dose. Slowly add the reconstituted abatacept solution from the vial into the infusion bag or bottle using the same silicone-free disposable syringe used during reconstitution. Gently mix; do not shake the bag or bottle
      c. Final concentration should be no more than 10 mg/mL and discard remaining solution in vial
   2. Administration
      a. Infuse over 30 minutes for psoriatic arthritis and rheumatoid arthritis indications or 60 minutes for acute graft-versus-host disease prophylaxis
      b. Administer through **a 0.2- to 1.2-micron filter per Bristol Myers Squibb prescribing information**
      c. Administer the solution within 1 hour after preparation.
      d. Do not infuse other medications through the same IV line with abatacept

B. Subcutaneous administration
   1. Prefilled auto injector and syringes for subcutaneous use:125 mg/1 mL, 87.5 mg/0.7 mL, and 50 mg/0.4 mL
   2. Allow prefilled syringe and auto injector to warm to room temperature (for 30 to 60 minutes and 30 minutes, respectively) prior to administration
   3. Inject full amount into the front of the thigh (preferred), abdomen (except for 2-inch area around the navel), or the outer area of the upper arms (if administered by a caregiver)
   4. Rotate injection sites (≥1 inch apart)
   5. Do not administer into tender, bruised, red, or hard skin

C. Do not administer if solution is discolored or contains particulate matter

D. Duration: Duration of therapy should be dependent on patient response and adverse reaction. No specific duration is noted in package insert.

E. Dose Adjustment: No dosage adjustment is recommended in patient with renal or hepatic impairment

V. NURSING PROCEDURE

A. Supplies for Infusion
   1. Alcohol Swabs
   2. Gloves
   3. Vials of Abatacept with silicone free syringes
   4. Sterile Water Vials
   5. Bag of sodium chloride 0.9% for dilution (100 mL)
   6. Dressing change kit
   7. IV Pole
   8. IV Start Kit
   9. Peripheral IV catheter (ex. 22 Gauge x1" and 24 Gauge x ¾" for patients needing peripheral access)
   10. Port access needle (ex. 22 Gauge x ¾ to 1" safe step for patients with a port)
   11. Tape
   12. Extension set 8"
   13. IV injection cap
   14. IV administration set (dial-a-flow or gravity) with in-line or add-on 0.22-micron filter
   15. Syringes (10mL) with needles (20 G x 1")
   16. Sharps container

B. How Supplied:
   1. Abatacept for infusion is supplied as a white lyophilized powder for intravenous infusion after reconstitution and dilution. It is supplied as 250mg vials with each vial set also containing a silicone free syringe.
   2. Abatacept pre-filled syringe for subcutaneous administration comes as 50 mg/0.4 mL, 87.5 mg/0.7 mL, and 125 mg/mL, is supplied as single-dose disposable prefilled glass syringes with BD UltraSafe Passive™ needle guard and flange extenders.
   3. Abatacept ClickJect, 125 mg/mL, is supplied as a single-dose disposable prefilled autoinjector. The Type I glass syringe contained in the autoinjector has a coated stopper and fixed stainless-steel needle (5 bevel, 27-gauge special thin wall, ½-inch needle) covered with a rigid needle shield. The autoinjector provides 125 mg of abatacept in 1 mL and is provided is provided as a pack of 4 autoinjectors

C. Storage and Handling
   1. Store prefilled syringes, auto-injector, and lyophilized powder in vials in the refrigerator at 36 °F to 46 °F (2 °C to 8 °C) until you are ready to use. Be sure to keep in the original package and out of the light. DO NOT freeze

D. Compatibility: Stable in 0.9% Sodium Chloride
E. Procedures for Infusion
    1. Explain the reasoning for visit and use of abatacept
    2. Establish venous access prior to preparation of drug.
    3. Counsel patient on warnings, precautions, and potential side effects including but not limited to: Hypersensitivity reactions, angioedema, infections, nausea, and headache
    4. Preparation
        a. Use only a silicone-free disposable syringe and an 18- to 21-gauge needle to reconstitute the 250 mg vial of lyophilized powder with 10 mL of sterile water for injection to a concentration of 25 mg/mL
            i. A silicone-free disposable syringe is provided with the vial of lyophilized powder. If dropped or contaminated, information on obtaining additional silicone-free disposable syringes may be obtained at 1-800-ORENCIA
            ii. If vial of lyophilized powder is inadvertently reconstituted using a siliconized syringe, discard solution
        b. From a 100 mL infusion bag or bottle of NS, withdraw a volume equal to the volume of reconstituted solution required for the patient's dose. Slowly add the reconstituted abatacept solution from the vial into the infusion bag or bottle using the same silicone-free disposable syringe used during reconstitution. Gently mix; do not shake the bag or bottle
        c. Final concentration should be no more than 10 mg/mL and discard remaining solution in vial
    5. Administration
        a. Infuse over 30 minutes for psoriatic arthritis and rheumatoid arthritis indications or 60 minutes for acute graft-versus-host disease prophylaxis
        b. Administer through **a 0.2- to 1.2-micron filter per Bristol Myers Squibb prescribing information**
        c. Administer the solution within 1 hour after preparation.
    6. Monitor vital signs periodically throughout the infusion. Follow Protocol for Management of Adult Infusion Reactions (Appendix A)
    7. Monitor the patient and vital signs 15 minutes after infusion has completed.

References:

Orencia [package insert]. Princeton, NJ. Bristol-Myers Squibb Company. 2017.

APPENDIX A: ANAPHYLAXIS KIT INTRUCTIONS

Emergency Medication After Your Infusion

Please call your pharmacy if you have any questions or concerns. In the event of an emergency, always call 911.

Your nurse will tell you when you need to use Emergency Medications.
The epinephrine dose will be noted on the Anaphylaxis Protocol included with your kit.

Start with a clean work surface and clean hands.

Open the supply bag labeled Anaphylaxis Kit Contents.

You will need:

1. **Bag containing Pills** (2 Acetaminophen and 2 Diphenhydramine)
2. **Bag containing Alcohol Prep Pads**
3. **Bag labeled IM Epinephrine**

All other contents will not be needed.

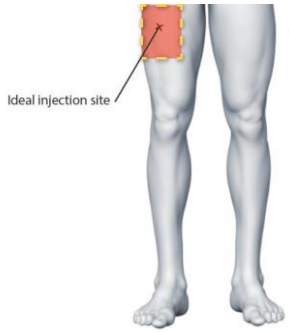
Open the IM Epinephrine Bag

1. **Remove 1 of each item**
    a. 1 – syringe
    b. 1 – brown labeled filter needle (BD Filter Needle) – **for ampule use only**
    c. 1 – black labeled safety needle (Magellan Hypodermic Safety Needle 22G x 1")
    d. 1 – ampule of epinephrine

Prepare IM (intramuscular) injection of Epinephrine:

1. **Attach the brown filtered needle to syringe**
    a. Be careful to not touch the tip of the syringe or the needle.
2. Using an **alcohol swab, wipe the neck of the epinephrine ampule.**
3. Holding the ampule upright, **swirl and flick the ampule until all fluid flows to the bottom chamber** (the top chamber should be empty).
4. Using a new alcohol wipe, grasp the neck of the ampule and with your other hand grasp the bottom chamber of the ampule. **Quickly snap the top of the ampule off, directing the snap way from you.**
5. **Place the tip of the brown filter needle inside the ampule**. Tilting the ampule, **withdraw dose of medication into the syringe** by gently pulling back on the plunger. Be careful to not pull the plunger out of the syringe.
6. Remove the needle from the ampule and h**old the syringe upright** with the needle pointing upward. **Gently tap the side of the syringe to bring any air to the top of the syringe.**
7. **Push the air out of the syringe by gently pushing on the plunger**.
8. Replace the cap on the brown filter needle. Discard remainder in ampule.
9. **Remove the brown filter needle and place the black safety needle onto the syringe.**

Give your IM Epinephrine injection



1. **Grasp your leg muscle at the outer mid-thigh** and **cleanse the area** with a new alcohol wipe.
2. **Push the needle into your leg muscle straight** in at a 90-degree angle.
3. **Inject the medication** by depressing the plunger in a slow and steady motion.
4. **Remove the needle** and wipe the site with the alcohol wipe.
5. May repeat dose every 5 minutes (**maximum 3 doses**) if ordered per protocol.

Take the pills by mouth.

a. 2 – Acetaminophen
b. 2 – Diphenhydramine

Place all trash in the bag the pills came in and take with you when you seek medical care. **Give the bag to the nurse or EMT**, so your doctor will know what medication you already took. They will properly dispose of the syringe and needles.
Call 911 or have someone drive you to the emergency department.