



Patient Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

PHYO  
CMC85950-001NS Rev. 9/2021

**Endocrinology  
Zoledronic Acid (ZOMETA)  
Infusion Therapy Plan**

**Baseline Patient Demographic**

To be completed by the ordering provider.

Diagnosis: \_\_\_\_\_ Height: \_\_\_\_\_ cm Weight: \_\_\_\_\_ kg Body Surface Area: \_\_\_\_\_ (m<sup>2</sup>)

NKDA - No Known Drug Allergies  Allergies: \_\_\_\_\_

**Therapy Plan orders extend over time (several visits) including recurring treatment.**

Please specify the following regarding the entire course of therapy:

Duration of treatment: \_\_\_\_\_ weeks \_\_\_\_\_ months \_\_\_\_\_ unknown

Treatment should begin:  as soon as possible (within a week)  within the month

**\*\*Plans must be reviewed / re-ordered at least annually. \*\***

**ORDERS TO BE COMPLETED FOR EACH THERAPY**

**ADMIT ORDERS**

Height and weight

Vital signs

**HYPOTENSION DEFINE ADMIT**

Nursing communication

Prior to starting infusion, please determine the patient's threshold for hypotension as defined by the following parameters. This information will be needed in the event of an infusion reaction.

Hypotension is defined as follows:

1 month to 1 year - systolic blood pressure (SBP) less than 70

1 year to 11 years - systolic blood pressure (SBP) less than 70+ (2 x age in years)

11 years to 17 years - systolic blood pressure (SBP) less than 90

OR any age - systolic blood pressure (SBP) drop of more than 30% from baseline.

Baseline systolic blood pressure (SBP) x 0.7 = value below defined as hypotension.

Nursing communication

Please notify ordering provider upon patient arrival for zoledronic acid infusion.

**NURSING ORDERS**

Please select all appropriate therapy

**IV START NURSING ORDERS**

Insert Peripheral IV

Place PIV if needed or access IVAD if available.

lidocaine 1% BUFFERED (J-TIP LIDOCAINE)

0.2 mL, INTRADERMAL, PRN

when immediate procedure needed  when procedure will take about 1 minute  patient / family preference for procedure

Administration Instructions: NOTE: Do not use this medication in patients with bleeding disorders, platelets  $\leq$  20,000, or in patients taking anticoagulants, when accessing implanted ports or using a vein that will be utilized for chemotherapy administration, nor for pre-term infants or neonates.

lidocaine - prilocaine (EMLA) cream

TOPICAL, PRN

when more than 60 minutes are available before procedure  when procedure will take more than 1 hour

patient / family preference for procedure

Administration Instructions: NOTE: In children < 3 months of age, or < 5 kg in weight, maximum application time is 1 hour.

lidocaine - tetracaine (SYNERA) patch

TOPICAL, PRN

when 20 - 30 minutes are available before procedure  when procedure will take more than 1 hour

when anticipated pain is less than 5 mm from skin surface  patient / family preference for procedure

lidocaine with transparent dressing 4% kit

TOPICAL, PRN

when 20 - 30 minutes are available before procedure  when procedure will take more than 1 hour

patient / family preference for procedure



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**ORDERS TO BE COMPLETED FOR EACH THERAPY**

**NURSING ORDERS, CONTINUED**

**Heparin flush**

**heparin flush**

10 - 50 units, INTRAVENOUS, PRN, IV line flush. Per protocol, heparin should not be used to flush peripheral IVs. This heparin flush should be used with all central lines including IVADs, with the exception of de-accessing the IVAD.

**heparin flush**

100 - 300 units, INTRAVENOUS, PRN, IV line flush. Per protocol, heparin should not be used to flush peripheral IVs. For use only when de-accessing IVADs.

**Sodium chloride flush**

**Sodium chloride flush 0.9% injection**

1 - 20 mL, INTRAVENOUS, PRN, IV line flush

**Sodium chloride - preservative free 0.9% injection**

1 - 30 mL, INTRAVENOUS, PRN, IV line flush

**PRE-PROCEDURE LABS**

<input checked="" type="checkbox"/> <b>Calcium, Total</b> Unit collect	<b>INTERVAL:</b> Every visit	<b>DURATION:</b> Until discontinued
<input checked="" type="checkbox"/> <b>Phosphorus</b> Unit collect	<b>INTERVAL:</b> Every visit	<b>DURATION:</b> Until discontinued
<input type="checkbox"/> <b>Magnesium</b> Unit collect	<b>INTERVAL:</b> Every visit	<b>DURATION:</b> Until discontinued
<input type="checkbox"/> <b>Creatinine</b> Unit collect	<b>INTERVAL:</b> Every visit	<b>DURATION:</b> Until discontinued
<input type="checkbox"/> <b>Urinalysis</b> Unit collect	<b>INTERVAL:</b> Every visit	<b>DURATION:</b> Until discontinued

**PRE-MEDICATIONS**

**Acetaminophen pre-medication 30 minutes prior (15 mg / kg, maximum 650 mg)**

**Nursing communication**

Administer only one of the acetaminophen orders, suspension or tablets, do not give both.

**acetaminophen suspension**

15 mg / kg, ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion

**Dose:** \_\_\_\_\_

**acetaminophen tablet**

15 mg / kg ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion

**Dose:** \_\_\_\_\_

**Ibuprofen pre-medication 30 minutes prior (10 mg / kg, maximum 600 mg)**

**Nursing communication**

Administer only one of the ibuprofen orders, suspension or tablets, do not give both.

**ibuprofen suspension**

10 mg / kg, ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion

**Dose:** \_\_\_\_\_

**ibuprofen tablet**

10 mg / kg ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion

**Dose:** \_\_\_\_\_



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**ORDERS TO BE COMPLETED FOR EACH THERAPY****PRE-MEDICATIONS, CONTINUED**
 **Diphenhydramine pre-medication 30 minutes prior (1 mg / kg, maximum 50 mg)**
**Nursing communication**

Administer only one of the diphenhydrAMINE pre-medication orders, liquid, capsule or injection, do not give more than one of the orders as a pre-medication.

**diphenhydrAMINE liquid**

1 mg / kg, ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion

**Dose:** \_\_\_\_\_**diphenhydrAMINE capsule**

1 mg / kg ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion

**Dose:** \_\_\_\_\_**diphenhydrAMINE injection**

1 mg / kg, INTRAVENOUS, 1 dose pre-medication, give 30 minutes prior to infusion

**Dose:** \_\_\_\_\_**INTRA-PROCEDURE**
 **Vital signs**

Check blood pressure, pulse, respirations, temperature and pain prior to the start of the infusion. Observe vitals every 30 minutes upon the initiation of the infusion for signs and symptoms and / or complaints of infusion related reactions.

 **Nursing communication**

Monitor fluid intake and urine output during the infusion and as needed.

 **Physician communication order**

Please enter the dose of zoledronic acid in 'mg' to facilitate prior authorization requirements:

First dose: 0.0125 mg / kg (maximum 4 mg) over 60 minutes.

Second and subsequent doses: start at 0.025 mg / kg (maximum 4 mg) over 60 minutes and titrate for efficacy.

(For doses of 0.05 mg / kg, medication should be prepared in 100 mL)

Default of 100 mL NS is selected, 50 mL can be selected based on provider discretion

(low dose and children less than 3 years old).

When a NS bolus is ordered, give over 30 minutes immediately before and after zoledronic acid infusion.

 **sodium chloride 0.9% for fluid bolus infusion 5 mL / kg (dosing weight) Dose: \_\_\_\_\_ mL**

5 mL / kg, INTRAVENOUS, ONCE, administer over 30 minutes. Give 30 minutes prior to zoledronic acid infusion.

 **Zoledronic acid 0.0125 mg / kg** INTERVAL: Once DEFER UNTIL: \_\_\_\_\_ DURATION: Until discontinued  
**in sodium chloride 0.9% 100 mL infusion**

INTRAVENOUS, ONCE, starting 0.5 hours after treatment start time, Administer over 60 minutes zoledronic acid must not be mixed with calcium or other divalent cation-containing infusion solutions, such as Lactated Ringer's solution, and should be administered as a single intravenous solution in a line separate from all other drugs.

**Dose:** \_\_\_\_\_**Volume of Sodium Chloride:**  50 mL  100 mL
 **Zoledronic acid 0.025 mg / kg** INTERVAL: Day 1 of every 6 months DEFER UNTIL: \_\_\_\_\_ DURATION: Until discontinued  
**in sodium chloride 0.9% 100 mL infusion**

INTRAVENOUS, ONCE, starting 0.5 hours after treatment start time, Administer over 60 minutes. Zoledronic acid must not be mixed with calcium or other divalent cation-containing infusion solutions, such as Lactated Ringer's solution, and should be administered as a single intravenous solution in a line separate from all other drugs.

**Dose:** \_\_\_\_\_**Volume of Sodium Chloride:**  50 mL  100 mL
 **sodium chloride 0.9% for fluid bolus infusion 5 mL / kg (dosing weight) Dose: \_\_\_\_\_ mL**

5 mL / kg, INTRAVENOUS, ONCE starting 2.5 hours after treatment start time for 1 dose, Administer over 30 minutes give after completion of zoledronic acid infusion.

 **Therapy Appointment Request**
**Please select department for the therapy appointment request:**

Expires in 365 days

 Dallas Special Procedures  Plano Infusion Center  Dallas Allergy  Dallas Transplant  Dallas Neurology

## CHILDREN'S HEALTH

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## ORDERS TO BE COMPLETED FOR EACH THERAPY

## EMERGENCY MEDICATIONS

 Nursing communication1. Hives or cutaneous reaction only – no other system involvement **PATIENT IS HAVING A DRUG REACTION:**

- Stop the infusion
- Give diphenhydramine as ordered
- Check vitals including blood pressure every 5 minutes until further orders from provider.
- Connect patient up to monitor (cardiac / apnea, blood pressure and oxygen saturation), if not already on one
- Notify provider for further orders

2. Hives or cutaneous reaction plus one other system, i.e. abdominal cramping, vomiting, hypotension, altered mental status, respiratory distress, mouth / tongue swelling **PATIENT IS HAVING ANAPHYLAXIS:**

- Stop the infusion
- Call code – do not wait to give epinephrine
- Give epinephrine as ordered
- Notify provider
- Check vitals including blood pressure every 5 minutes until the code team arrives.
- Connect patient up to monitor (cardiac / apnea, blood pressure and oxygen saturation), if not already on one.
- Give diphenhydramine once as needed for hives
- May repeat epinephrine every 5 minutes x 2 doses for persistent hypotension and respiratory distress with desaturation until code team arrives.
- May give albuterol as ordered for wheezing with oxygen saturations stable while waiting for code team, continue to monitor oxygen saturation.

**Hypotension is defined as follows:**

- 1 month to 1 year – systolic blood pressure (SBP) less than 70  
 1 year to 11 years – systolic blood pressure (SBP) less than  $70 + (2 \times \text{age in years})$   
 11 years to 17 years – systolic blood pressure (SBP) less than 90  
 OR any age – systolic blood pressure (SBP) drop more than 30% from baseline.  
 Baseline systolic blood pressure (SBP) x 0.7 = value below defined as hypotension.

 **EPINEPHRINE Injection Orderable For Therapy Plan**  
(AMPULE / EPI - PEN JR. / EPI - PEN) 0.01 mg / kg

0.01 mg / kg, INTRAMUSCULAR, EVERY 5 MINUTES PRN, for anaphylaxis and may be repeated for persistent hypotension and respiratory distress with desaturation until the code team arrives, for 3 doses

Use caution with PIV administration. This solution has a pH < 5, or a pH > 9, or an osmolality > 600 mOsm / L.

**Dose:** \_\_\_\_\_

 **Cardio / Respiratory Monitoring**  
**Rationale for Monitoring: High risk patient (please specify risk)**

- Clinically significant cardiac anomalies or dysrhythmias  
 Recent acute life-threatening event  
 Unexplained or acutely abnormal vital signs  
 Artificial airway (stent, tracheostomy, oral airway)  
 Acute, fluctuating or consistent oxygen requirements

Monitor Parameters (select all that apply):  Heart rate  Oxygen saturation  Respiratory rate

Telemetry Required:  Yes  No

 **diphenhydrAMINE injection**

1 mg / kg, INTRAVENOUS, ONCE PRN, for hives or cutaneous reaction, for 1 dose. Maximum dose = 50 mg per dose, 300 mg per day.

**Dose:** \_\_\_\_\_

 **Albuterol for aerosol**

0.25 mg / kg., INHALATION ONCE PRN, for wheezing, but oxygen saturations stable while waiting for code team, continue to monitor oxygen saturation for 1 dose

**Dose:** \_\_\_\_\_

## POST-PROCEDURE

 Nursing communication

Flush PIV or IVAD with 20 mL 0.9% sodium chloride (250 mL bag) at the completion of the infusion.

Flush IVAD with saline and heparin flush per protocol prior to de-accessing IVAD.

Discontinue PIV prior to discharge.



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**POST-PROCEDURE. CONTINUED**

Sodium chloride 0.9% infusion

INTRAVENOUS, at 0 - 25 mL / hour ONCE

Dose: \_\_\_\_\_ mL

Nursing communication

Patient needs calcium and phosphorus labs to be drawn 24, 48 and 72 hours after zoledronic acid infusion. Please check with caregiver about preferred lab and select the appropriate lab orders and release from the therapy plan. This will ensure orders are available.

**POST-PROCEDURE OUTPATIENT LAB DRAW**

Children's     LabCorp     Quest     Other External Lab

**Calcium and Phosphorus**

Calcium, Total

Expected: Day 1, Draw calcium 24 hours after zoledronic acid infusion.

Calcium, Total

Expected: Day 2, Draw calcium 48 hours after zoledronic acid infusion.

Calcium, Total

Expected: Day 3, Draw calcium 72 hours after zoledronic acid infusion.

Phosphorus

Expected: Day 1, Draw phosphorus 24 hours after zoledronic acid infusion.

Phosphorus

Expected: Day 2, Draw phosphorus 48 hours after zoledronic acid infusion.

Phosphorus

Expected: Day 3, Draw phosphorus 72 hours after zoledronic acid infusion.

\_\_\_\_\_  
Signature of Provider

(circle one):  
MD DO  
\_\_\_\_\_  
Credentials

\_\_\_\_\_  
Date

\_\_\_\_\_  
Time

\_\_\_\_\_  
Printed Name of Provider