



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

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

PHYO  
CMC85551-001NS Rev. 5/2021**Natalizumab (TYSABRI)  
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** **Physician Communication Order**

Patient should be enrolled in M.S. Touch Program. Prior to infusion, complete M.S. Touch questionnaire.

 **Nursing Communication**

Hold infusion if the patient has any of the following: Any signs or symptoms of infection, cold, or influenza. Hold infusion, notify provider and draw / collect the following labs CBC, BMP, Urine for UA and Culture and Sensitivity.

 **Complete Blood Count with Differential****INTERVAL: PRN****DURATION: Until Discontinued**

Unit collect, hold infusions if the patient has any of the following: Any signs or symptoms of infection, cold or influenza. Hold infusion, notify provider and draw / collect the following labs CBC, BMP, Urine for UA and Culture and Sensitivity.

 **Basic Metabolic Panel****INTERVAL: PRN****DURATION: Until Discontinued**

Unit collect, hold infusions if the patient has any of the following: Any signs or symptoms of infection, cold or influenza. Hold infusion, notify provider and draw / collect the following labs CBC, BMP, Urine for UA and Culture and Sensitivity.

 **Urine Culture and Urinalysis****INTERVAL: PRN****DURATION: Until Discontinued**

Unit collect, clean catch, urine. hold infusions if the patient has any of the following: Any signs or symptoms of infection, cold or influenza. Hold infusion, notify provider and draw / collect the following labs CBC, BMP, Urine for UA and Culture and Sensitivity.

 **Height and weight** **Vital signs****Hypotension Defined 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 occurring.

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 ORDERS**

Please select all appropriate therapy

**IV START NURSING ORDERS** **Insert peripheral IV / Access IVAD**

Place PIV if needed or access IVAD if available



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**NURSING ORDERS, CONTINUED**

Please select all appropriate therapy

**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

**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**

**Physician Communication Order**

Initial labs: CBC with Differential, CMP, Urine Culture and Urinalysis. If not performed in the last 60 days, they must be completed prior to enrollment in the Biogen program and prior to the first infusion of natalizumab. The following baseline labs must be completed and cleared by the ordering provider prior to the first administration of natalizumab: (CBC with Differential and CMP)."



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**ORDERS TO BE COMPLETED FOR EACH THERAPY**

**PRE-PROCEDURE LABS, CONTINUED**

- Physician Communication Order**  
CBC with differential and Platelets. BMP, LFT's (initial dose, 2nd dose, 3rd dose, then every 6 months (24 weeks))
- Complete Blood Count With Differential**      **INTERVAL: Every 4 Weeks**      **DURATION: Until Discontinued**  
Unit Collect, 1st, 2nd, and 3rd doses.
- Complete Blood Count With Differential**      **INTERVAL: Every 24 Weeks**      **DURATION: Until Discontinued**  
Unit Collect, Every 6 months (24 weeks)
- Comprehensive Metabolic Panel**      **INTERVAL: Every 4 Weeks**      **DURATION: Until Discontinued**  
Unit Collect, 1st, 2nd, and 3rd doses.
- Comprehensive Metabolic Panel**      **INTERVAL: Every 24 Weeks**      **DURATION: Until Discontinued**  
Unit Collect, every 6 months (24 weeks)
- Miscellaneous Send Out Test**      **INTERVAL: Every 24 Weeks**      **DURATION: Until Discontinued**  
Unit Collect, Anti-JC Virus Ab with Reflex Titer at baseline and every 6 months (24 weeks) Note: Do NOT send PCR, send JCV Ab

**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:** \_\_\_\_\_
- 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:** \_\_\_\_\_  
**cetirizine tablet 10 mg**  
10 mg, ORAL. ONCE, for 1 dose pre-medication, give 30 minutes prior to infusion  
**Dose:** \_\_\_\_\_

**INTRA-PROCEDURE**

- Vital Signs**  
Vitals: pre-infusion, post infusion and 1 hour following infusion. Monitor for any signs or symptoms of hypersensitivity / allergic reactions or side effects, including, but not limited to: urticaria, pruritus, chest pain, fever, nausea, vomiting, hypotension, rash, flushing, shortness of breath, rigors, dizziness. If signs or symptoms of hypersensitivity develop, stop infusion, contact the provider and start 0.9% NaCl at 100 mL / hour and supportive measures as necessary.

Key: BMP = basic metabolic profile; CBC = complete blood count; cm = centimeter; CMP = comprehensive metabolic panel; IV = intravenous; IVAD = implantable venous access device; kg = kilogram; LFT = liver function test; m<sup>2</sup> = square meters; mg = milligram; mL = milliliter; mL / hr = milliliters per hour; mOsm / L = milliosmole per liter; MS = multiple sclerosis; NaCl = sodium chloride; NKDA = no known drug allergies; PCR = polymerase chain reaction; pH = hydrogen ion concentration; PIV = peripheral intravenous; PRN = as needed; RTA = ready to administer; SBP = systolic blood pressure; TOUCH = Outreach Unified Commitment to Health; UA = urinalysis



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**INTRA-PROCEDURE, CONTINUED**

**methyIPREDNISolone RTA infusion 250 mg**

INTERVAL: Every 4 Weeks

DURATION: For 3 treatments

NTRAVENOUS, ONCE, give with first 3 doses of natalizumab. For doses  $\geq$  10 mg / kg, see Policy 7.10.16, assess and document heart rate and blood pressure (BP) every 15 minutes during infusion and for 1 hour after the infusion is complete. Doses > 15 mg / kg should be given over a minimum of 1 hour.

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

**natalizumab 300 mg in sodium chloride 0.9% 100 mL infusion**

INTERVAL: Every 4 Weeks

DURATION: Until Discontinued

300 mg, INTRAVENOUS, at 115 mL / hour, ONCE, starting 0.5 hours after treatment start time. Infuse over a minimum of 1 hour and flush with normal saline after infusion is complete. Monitor for signs of hypersensitivity for 1 hour after infusion is complete. PROTECT FROM LIGHT.

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

**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

**EMERGENCY MEDICATIONS**

**Nursing communication**

1. Hives or cutaneous reaction only – no other system involvement

**PATIENT IS HAVING A DRUG REACTION:**

- Stop the infusion
- Give diphenhydramine as ordered
- Check heart rate, respiratory rate and blood pressure every 5 minutes until further orders from provider.
- Connect patient 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 heart rate, respiratory rate and blood pressure every 5 minutes until the code team arrives.
- Connect patient 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 saturation 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 x age in years)  
 11 years to 17 years – systolic blood pressure (SPB) less than 90  
 OR any age – systolic blood pressure (SPB) drop more than 30% from baseline.  
 Baseline systolic blood pressure 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.

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**EMERGENCY MEDICATIONS**

**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**

**Sodium chloride 0.9% infusion**

INTRAVENOUS, for 1 dose Give 50 mL post-infusion hydration to run at 100 mL / hour x 30 minutes.

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

**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.

**Sodium chloride 0.9% infusion**

INTRAVENOUS, at 0 - 25 mL / hour ONCE, for 1 dose

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

Signature of Provider	(circle one): MD    DO	Date	Time
Printed Name of Provider	Credentials		

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