1. **ALLERGIES/REACTIONS:**

2. **DIAGNOSIS:** Check the appropriate box under the chosen medication

3. **DIAGNOSIS/ICD-CM CODE(S):**

4. Height: ________cm  Weight ________kg  Baseline Serum Creatinine ________mg/dL

5. **BASELINE LABS:**
The following lab results should be drawn within 30 days of planned drug administration and placed on patient’s chart:
- Calcium
- Albumin
- Serum Creatinine OR 24-hour Creatinine Clearance (CrCl)

Other:
- Draw **STAT** serum creatinine, calcium and albumin on the day of the appointment if: (1) baseline labs have not been drawn; (2) calculated CrCl from baseline labs is 30-35 ml/minute; or (3) if the patient has been hospitalized within 30 days of planned treatment.

6. Pharmacy to review labs and calculate CrCl  
   CrCl: ________ ml/minute

7. **FOR NON-HYPERCALCEMIA INDICATIONS:** Instruct patient to take the current recommended daily dose of Vitamin D (800-1,000 International Units) **AND** Calcium 1,200 mg (1,500 mg when treating Paget’s disease.) Instruct patient on the symptoms of hypocalcemia.

8. Ensure the patient is free of exposed bone. If the patient has a planned dental surgery, such as a tooth extraction, treatment with any bisphosphonate should be scheduled one week after the dental surgery or when the patient is symptom free to reduce the risk of extremely rare occurrence of osteonecrosis of the jaw (ONJ).

9. Establish Venous Access

10. Vital signs pre- and post-infusion

11. **MEDICATIONS:**
- Nurse may Initiate IV Catheter Care, Outpatient Physician Order #858
- Initiate Drug Related Hypersensitivity Physician Order #774 for infusion reactions

**IBANDRONATE (Boniva):**
Patients with CrCl less than 30 ml/minute CANNOT receive ibandronate (Boniva)
LABS: Serum Creatinine within 7 days of subsequent doses
- Osteoporosis in Post Menopausal Women: Ibandronate (Boniva) 3 mg IV over 30 seconds every 3 months or ______

**PAMIDRONATE (Aredia):**
Hold treatment and contact physician if serum creatinine increased by more than 0.5 mg/dL from baseline  
(Treatment may be resumed when CrCl is within 10% of baseline)
LABS: Serum Creatinine within 7 days of subsequent doses
- Osteolytic bone lesions in breast cancer: Pamidronate (Aredia) 90 mg IV over 2 hours every ________ weeks  
  (3-4 weeks)
- Osteopenia/osteolytic bone lesions in multiple myeloma: Pamidronate (Aredia) 90 mg IV over 4 hours every month
- Hypercalcemia of malignancy:
  - cCa 12-13.5 mg/dL: Pamidronate (Aredia) ________ mg IV over 2 hours (usual dose 60-90 mg)
  - cCa greater than 13.5 mg/dL: Pamidronate (Aredia) 90 mg IV over 2 hours
- Paget’s disease: Pamidronate (Aredia) 30 mg IV over 4 hours daily times 3 doses

Physician Initial: ______________________________

**Franciscan Health System**
St. Joseph Medical Center, Tacoma, WA  
St. Francis Hospital, Federal Way, WA  
St. Clare Hospital, Lakewood, WA  
St. Elizabeth Hospital, Enumclaw, WA  
St. Anthony Hospital, Gig Harbor, WA

**PHYSICIAN ORDERS**
**BISPHOSPHONATE**
**INTRAVENOUS THERAPY**
12. MEDICATIONS: (Continued)

**ZOLEDRONIC ACID (Reclast):**

Patients with CrCl less than 35 ml/minute CANNOT receive zoledronic acid (Reclast)

- Verify patient was instructed to hold diuretics the morning of their appointment and is well-hydrated
- If CrCl less than 40 ml/minute infuse zoledronic acid (Reclast) over 1 hour otherwise infuse over 45 minutes
- Premedications: Give 30 minutes prior to infusion:
  - Acetaminophen (Tylenol) 650 mg PO
  - May instruct patient to take acetaminophen 650 mg every 6 hours for post-infusion flu-like symptoms 2-3 days following infusion as needed.
  - LIMIT THE TOTAL DOSE OF ALL ACETAMINOPHEN CONTAINING PRODUCTS TO 3,000 MG PER DAY

- Paget’s disease: Zoledronic acid (Reclast) 5 mg IV over 45 minutes times 1 dose
- Osteoporosis in Post Menopausal Women (Treatment): Zoledronic acid (Reclast) 5 mg IV over 45 minutes every 12 months
- Osteoporosis in Post Menopausal Women (Prevention): Zoledronic acid (Reclast) 5 mg IV over 45 minutes every 12 months
- Osteoporosis in Men: Zoledronic acid (Reclast) 5 mg IV over 45 minutes every 12 months
- Glucocorticoid-Induced Osteoporosis (Treatment and Prevention): Zoledronic acid (Reclast) 5 mg IV over 45 minutes every 12 months

**ZOLEDRONIC ACID (Zometa):**

Patients with CrCl less than 30 ml/minute CANNOT receive zoledronic acid (Zometa) for oncology diagnoses

LABS: Serum creatinine within 7 days of subsequent doses

- Hypercalcemia of malignancy: Zoledronic acid (Zometa) 4 mg or ______ mg IV over 30 minutes
- Multiple Myeloma: Zoledronic Acid (Zometa) 4 mg or ______ mg IV over 30 minutes every 3-4 weeks
- Osteolytic lesions / bone metastasis: Zoledronic acid (Zometa) 4 mg or ______ mg IV over 30 minutes every ______ weeks (3 to 4 weeks)
- Osteopenia: Zoledronic acid (Zometa) 4 mg or ______ IV over 30 minutes every 3 months
- Dose will be automatically adjusted by the pharmacist for renal impairment as follows:
  - CrCl  50 - 60 ml/minute = 3.5 mg
  - CrCl  40 - 49 ml/minute = 3.3 mg
  - CrCl  30 - 39 ml/minute = 3 mg
  - CrCl less than 30 ml/minute = Use not recommended

13. POST-INFUSION MONITORING FOR HIGH RISK PATIENTS:

If pre-infusion calculated CrCl is between 30-50 ml/minute, repeat the following labs (at the same laboratory) 2-4 weeks after administration of bisphosphonate. Results are to be faxed to the physician’s office.

a. Repeat serum creatinine
   OR
b. 24-hour CrCl (if a 24-hour CrCl was done initially)

NOTE: These orders should be reviewed by the attending physician, appropriately modified for the individual patient, dated, timed and signed below.

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>PHYSICIAN’S SIGNATURE</th>
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Another brand of drug, identical in form and content, may be dispensed unless checked. ☐