

## **Zoledronic Acid Added to the Inpatient Formulary for Indication of Hip Fracture with Osteoporosis**

**What:** Legacy Health P&T added zoledronic acid infusion to the hospital formulary for its additional indications, including hip fracture with osteoporosis in adult patients.

### **Why:**

- Evidence shows that administration of zoledronic acid after hip fracture is associated with a lower incidence of future fractures vs placebo.
- Data are conflicting, but in one clinical trial zoledronic acid was associated with a reduction in mortality, compared to placebo.
- Zoledronic acid is not associated with delayed fracture healing when given following hip fracture.
- Administration of zoledronic acid infusion during admission significantly increases rates of osteoporosis treatment.

**When:** Zoledronic acid 5 mg IVPB is available at Legacy Hospitals. Zoledronic acid 4 mg IVPB is available for treating hypercalcemia and bone metastases.

### **Key Practice Points:**

- A low trauma hip fracture is a fragility fracture and diagnostic of osteoporosis. DEXA is not needed.
- A PARQ is necessary with every patient (or family) in consideration for use of a bisphosphonate, regarding rare but serious side effects such as osteonecrosis of the jaw and renal failure. Patients should be educated that arthralgias are commonly reported after receiving zoledronic acid.
- An oral bisphosphonate, such as alendronate, may be initiated in the outpatient setting, as an alternative to zoledronic acid, for treating osteoporosis.
- Contraindications to zoledronic acid 5 mg are: CrCl <35 mL/minute, severe dental disease or plans for any dental procedures upcoming including extractions or implants, PTA osteoporosis treatment, hypocalcemia, or vitamin D 25-OH < 15 ng/mL.
- Concomitant calcium and vitamin D supplementation needs to be ordered. If vitamin D 25-OH is < 15 ng/mL, replete with cholecalciferol 50,000 units once per week for 8 weeks. For maintenance, administer calcium carbonate 500 mg elemental BID and cholecalciferol 1,000—2,000 units daily.

### **References:**

Turner NM et al. *J Bone Joint Surg Am*. Published online Feb 14, 2025.

Colón-Emeric C, et al. *Osteoporos Int*. 2011;22(8):2329-2336.

Lyles KW, et al. *N Engl J Med*. 2007;357(18):1799-1809.

