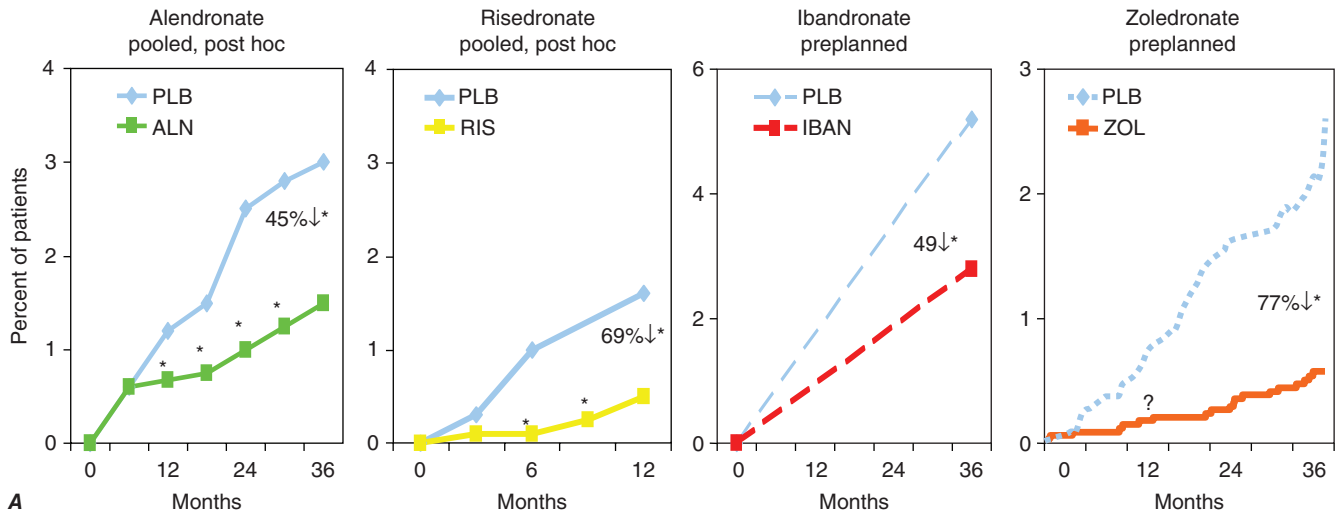
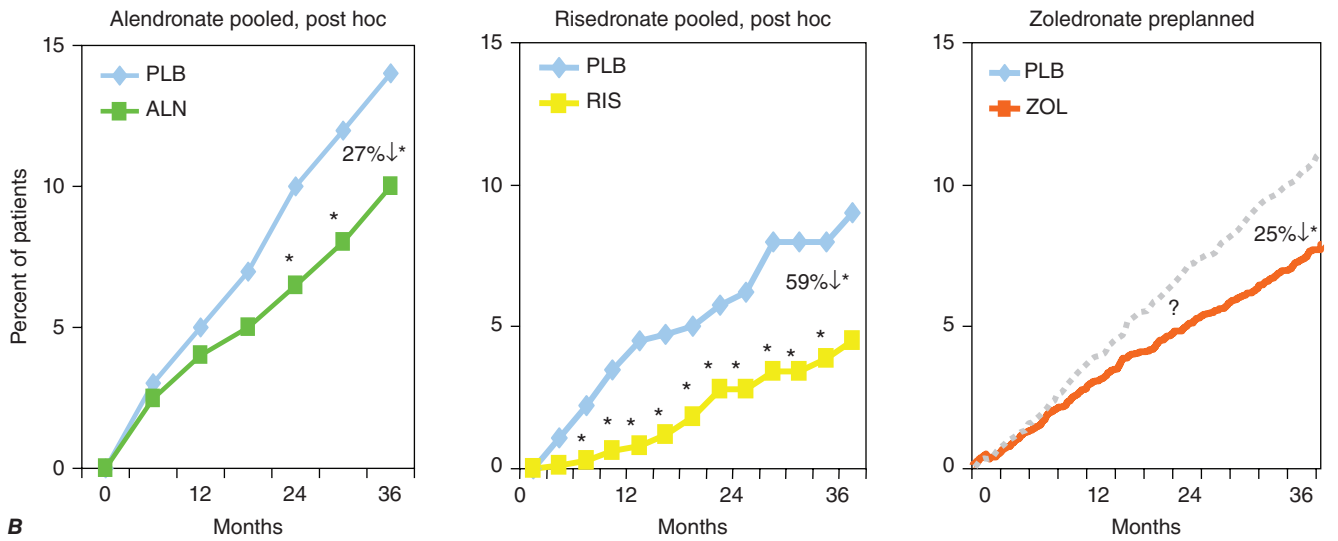


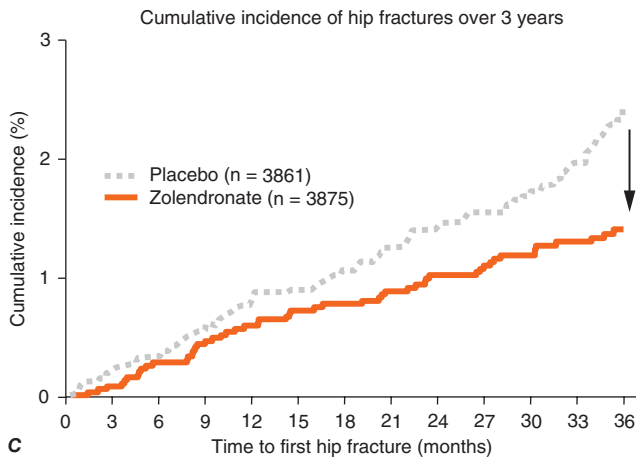
Vertebral fractures



Nonvertebral fractures



Hip fractures



**FIGURE 425-9** Effects of various bisphosphonates on clinical vertebral fractures (A), nonvertebral fractures (B), and hip fractures (C). PLB, placebo; RRR, relative risk reduction. (After DM Black et al: *J Clin Endocrinol Metab* 85:4118, 2000; C Roux et al: *Curr Med Res Opin* 4:433, 2004; CH Chesnut et al: *J Bone Miner Res* 19:1241, 2004; DM Black et al: *N Engl J Med* 356:1809, 2007; JT Harrington et al: *Calcif Tissue Int* 74:129, 2003.)

not permanent reduction in renal function was seen in comparison to placebo. Detailed evaluation of all bisphosphonates failed to confirm that these agents increased the risk of atrial fibrillation. Zoledronic acid is the only osteoporosis agent that has been studied in the elderly with a prior hip fracture. The risk of all clinical

fractures was reduced significantly by about 35%, and there was a trend toward reduced risk of a second hip fracture (effect size similar to that seen above). There was also a reduction in mortality of about 30% that was not completely accounted for the reduced hip fracture risk.