

Clinical Updates on
Bone-Sparing Therapies
for Cancer-Related Bone Disease and Osteoporosis



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Estimated time to complete activity: 2.0 hours

Sponsored by Curatio CME Institute and Postgraduate Healthcare Education

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This CME-certified Web-based activity is based on information presented at a satellite symposium held on December 7, 2010 in Anaheim, California at the 45th American Society of Health-System Pharmacists (ASHP) Midyear Clinical Meeting and Exhibition.

Hardware/Software Requirements

- Javascript-enabled browser
- Active Internet connection
- Adobe Acrobat Reader
- Adobe Flash Player plugin v.8.0+

Activity Overview

Loss of bone mass, which leads to fracture and other complications, is increasingly recognized as a major health care dilemma. Currently, over 10 million Americans have been diagnosed with osteoporosis and an additional 34 million have low bone mass. The increased risk of bone loss and fracture that is seen throughout the course of disease in people with cancer is equally concerning. Bone loss in cancer patients is generally more rapid and severe than bone loss associated with aging and menopause. Bone metastasis also increases bone loss, further increasing risk. Skeletal-related events, especially pathologic fracture, lead to severe pain, a dramatic decrease in quality of life, and substantially increased rates of morbidity and mortality. To ensure optimal management of patients at risk for skeletal complications due to bone loss, pharmacists must have a thorough understanding of bone pathophysiology and the treatment strategies for bone loss. This activity features discussions on the current and emerging therapies used to manage patients with osteoporotic and cancer-related bone loss.

Target Audience

This activity has been designed to meet the educational needs of health-system pharmacists, retail pharmacists, and other pharmacy professionals involved in the management of patients with bone disease.

Podcast available at curatiocme.com

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the impact of untreated bone loss on fracture risk, overall health, and quality of life
- Recognize individuals at risk of bone loss and implement appropriate preventive therapy early in the course of treatment
- Discuss mechanisms of bone loss and new therapeutic approaches to managing bone loss
- Recommend appropriate screening methods and schedules to monitor for bone loss
- Apply current guidelines in the prevention and management of bone disease

Faculty

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Accreditation Statement



Postgraduate Healthcare Education is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education.

UAN: 0430-0000-11-002-H01-P

Podcast available at curatiocme.com

Credits: 2.0 hour (0.20 ceu)

Type of activity: Knowledge

Fee Information: There is no fee for this activity.

Pharmacists should not claim credit for this activity if credit was previously claimed for the symposium on which this Internet activity is based.

Method of Participation

There are no fees for participating in this CE activity. To receive credit during the period February 2011 to February 28, 2013, participants must (1) read the learning objectives and disclosure statements, (2) study the educational activity, and (3) complete the posttest and activity evaluation form, including the certificate information section.

To obtain a certificate, participants must receive a score of 70% or better on the posttest. The posttest can be accessed at the end of the activity. Please e-mail any questions to cecustomerservice@jobson.com.

Medium

This activity is offered as an Internet activity on the *US Pharmacist* Web site. Offering this CE activity online allows participants to learn on their own time and at their own pace. The interactive nature of the activity allows participants to become engaged and offers visual, written, and spoken education to suit many learning styles.

Disclosure

In accordance with the Accreditation Council for Continuing Medical Education and ACPE Standards for Commercial Support, all CME/CPE providers are required to disclose to the activity audience the relevant financial relationships of everyone in a position to control content of an educational activity. A relevant financial relationship is a relationship in any amount occurring in the last 12 months with a commercial interest whose products or services are discussed in the CE activity content over which the individual has control. Relationship information appears below:

Jill S. Burkiewicz, PharmD, BCPS, FCCP, has disclosed no relevant financial relationships.

Laura Boehnke Michaud, PharmD, BCOP, FASHP, has disclosed no relevant financial relationships.
Dr. Michaud discusses the unlabeled or investigational use of a commercial product.

Jane M. Pruemmer, PharmD, BCOP, FASHP, has disclosed no relevant financial relationships.
Dr. Pruemmer discusses the unlabeled or investigational use of a commercial product.

Sarah L. Scarpace, PharmD, BCOP, has disclosed the following relevant financial relationships:
Speaker Merck, Millennium, Pfizer

Dr. Scarpace discusses the unlabeled or investigational use of a commercial product.

Curatio CME Institute

Matthew Horn, MD, Medical Director, has disclosed no relevant financial relationships.

Jonathan S. Simmons, ELS, Managing Editor, has disclosed no relevant financial relationships.

Postgraduate Healthcare Education

Susanne Batesko, RN, BSN, President, has disclosed no relevant financial relationships.

Disclaimer

The information presented at this activity is for continuing pharmacy education purposes only and is not meant to substitute for the independent medical judgment of pharmacists regarding diagnosis and treatment of a specific patient’s medical condition.

Unapproved Product Use

This educational activity may contain discussion of published and/or investigational uses of agents that are not indicated by the US Food and Drug Administration. Curatio CME Institute, Postgraduate Healthcare Education, and Amgen do not recommend the use of any agent outside the labeled indications.

The opinions expressed in this educational activity are those of the faculty and do not necessarily represent the views of Curatio CME Institute, Postgraduate Healthcare Education, or Amgen. Please refer to the official prescribing information for each product for discussion of approved indications, contraindications, and warnings.

Generic Name	Trade Name	Approved Use (if any)	Unapproved/ Investigational Use
Anti-DKK1	N/A	Investigational agent: novel DKK1 inhibitor/Wnt pathway stimulant	Treatment and prevention of bone metastasis; treatment and prevention of cancer therapy–induced bone loss
Atrasentan	Xinlay	Investigational agent: novel endothelin-A antagonist	Treatment and prevention of bone metastasis; treatment and prevention of cancer therapy–induced bone loss
AZD0530	N/A	Investigational agent: novel Src/Abl kinase inhibitor	Treatment and prevention of bone metastasis
Balicatib (AAE-581)	N/A	Investigational agent: novel cathepsin K inhibitor	Treatment and prevention of bone metastasis
Bortezomib	Velcade	Treatment of multiple myeloma in patients who have not responded to at least one other agent	Treatment and prevention of bone metastasis; treatment and prevention of cancer therapy–induced bone loss
Clodronate	Bonefos	Treatment of	Treatment and prevention of

		hypercalcemia of malignancy (outside the United States; not approved by the US FDA)	bone metastasis
Denosumab	Prolia Xgeva	Treatment of osteoporosis in postmenopausal women; treatment of bone metastasis from solid tumors; not approved for multiple myeloma	Prevention of bone loss; prevention of bone metastasis; treatment and prevention of cancer therapy–induced bone loss
Ibandronate	Boniva	Treatment and prevention of osteoporosis in postmenopausal women	Treatment and prevention of bone metastasis
Ki26894	N/A	Investigational agent: novel transforming growth factor- β kinase inhibitor	Treatment and prevention of bone metastasis
L-000845704	N/A	Investigational agent: novel integrin inhibitor	Treatment and prevention of bone metastasis
Odanacatib (MK-0822)	N/A	Investigational agent: novel cathepsin K inhibitor	Treatment and prevention of bone metastasis; treatment and prevention of cancer therapy–induced bone loss
Pamidronate	Aredia	Treatment of Paget’s disease, hypercalcemia of malignancy, and the osteolytic bone metastases of multiple myeloma and breast cancer	Prevention of bone metastasis; treatment of bone metastasis in prostate cancer; prevention and treatment of cancer therapy–induced bone loss
Relacatib (SB-462795)	N/A	Investigational agent: novel cathepsin K inhibitor	Treatment and prevention of bone metastasis
Zoledronic acid	Reclast Zometa	Treatment and prevention of osteoporosis in postmenopausal women; treatment to increase bone mass in men with osteoporosis; treatment and prevention of glucocorticoid-induced osteoporosis in patients expected to be on glucocorticoids for at least 12 months, treatment of Paget’s disease; treatment of hypercalcemia of malignancy; multiple	Prevention of bone metastases; treatment and prevention of cancer therapy–induced bone loss

		myeloma; solid tumors with documented metastasis to bone (in conjunction with standard antineoplastic therapy); prostate cancer that has progressed after hormonal therapy	
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