

**FELICIA COSMAN, M.D.**

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1. **Date of Preparation:** November 20, 2020
  
2. **Personal Data:**  
Felicia Cosman, M.D.  
Date of Birth: June 12, 1958  
Birthplace: New York, New York  
Citizenship: Citizen of the United States
  
3. **Academic Training:**  
Cornell University 1975-1979  
Ithaca, New York B.A. with distinction  
  
Stony Brook Medical School 1979-1983  
Stony Brook, New York M.D.  
Alpha Omega Alpha Award Awarded 2003
  
4. **Traineeship:**  
Internship: Department of Medicine 1983-1984  
Columbia Presbyterian Medical Center (NYPH)  
New York, New York  
  
Residency: Department of Medicine 1984-1986  
Columbia Presbyterian Medical Center (NYPH)  
New York, New York  
  
Fellowship: Division of Endocrinology 1986-1988  
Columbia College of Physicians  
and Surgeons, New York, New York
  
5. **Board Qualification:**  
Diplomate, National Board of Medical Examiners 1983  
Diplomate, American Board of Internal Medicine 1987  
Diplomate, Endocrinology and Metabolism 1989
  
6. **Military Service:** None
  
7. **Professional Organizations and Societies:**  
Associate, American College of Physicians 1986  
  
Member, American Society for Bone and Mineral Research 1988-present  
  
Member, NCCLS Subcommittee on Applications of Biochemical  
Markers of Bone Turnover in Evaluation of Bone Disease 2000-2004  
  
Ad Hoc Grant Reviewer for Canadian Institute for Health Research 2003-2004  
2010-2011  
  
Clinical Director, National Osteoporosis Foundation 1996-2011  
  
Data Safety Monitoring Board, PEARL Study, Pfizer 2002-2008

Senior Clinical Director, National Osteoporosis Foundation	2011-2015
Board of Trustees, National Osteoporosis Foundation	2011-present
Program Committee Abstract Reviewer for ASBMR	1998-2019 Multiple Years
Program Committee Abstract Reviewer for ECTS	2009-2019 Most Years
Ad Hoc Grant Reviewer for NIAMS and NIA	2002-2018 Multiple Years
HORIZON Trial Steering Committee	2005-2015
ASBMR Task Force on Atypical Femur Fractures	2009-2013
Chairman, NOF Clinician's Guide Committee	2013-2015
ASBMR Working Group on Goal Directed Therapy for Osteoporosis	2012-2017
NHANES Vertebral Fracture Working Group	2014-2017
NAMS Hormone/Estrogen Treatment Position Statement	2009, 2015-2017 2019-2020
NIH Pathways to Prevention Workshop	2018-2019
American Orthopedic Association Own the Bone Multidisciplinary Advisory Committee	2012-present
Multiple Advisory Boards for Industry (Pfizer, Novartis, Merck, GSK, Eli Lilly, Amgen, Radius)	2000-present
Fellow of the ASBMR	2019- present
<b>8. <u>Academic Appointments:</u></b>	
Instructor in Clinical Medicine	1988-1990
Assistant Professor of Clinical Medicine	1990-1996
Associate Professor of Clinical Medicine	1996-2005
Professor of Medicine	July 2005-present
Department of Medicine	
Columbia University College of Physicians and Surgeons	
<b>9. <u>Hospital Appointments:</u></b>	
Endocrinologist/Osteoporosis Specialist	1988-2018
Helen Hayes Hospital, West Haverstraw, NY	
Assistant Physician, Columbia Presbyterian Hospital, New York, NY	1988-1990
Assistant Attending Physician, Columbia Presbyterian Hospital, New York, NY	1990-1996
Associate Attending Physician, Columbia Presbyterian Hospital, New York, NY	1997-2005
Attending Physician, New York Presbyterian Hospital	2005-2012

New York, NY  
 Medical Director, Clinical Research Center,  
 Helen Hayes Hospital, West Haverstraw, NY 1996-2018

**10. Awards:**

Castle-Connolly List of Best Doctors – New York Metro Area	2000-2018
Hudson Valley List of Best Doctors	2000-2018
America’s Registry of Outstanding Professionals	2001-2018
New York Magazine – The Best Doctors in New York	2002
Alpha Omega Alpha Medical Honor Society, Stony Brook University Medical School	2003
Superstars of Medicine, MORE Magazine	2003
ASBMR Most Outstanding Abstract	2009
National Osteoporosis Foundation Generations Award	2013
ASBMR Most Outstanding Clinical Abstract	2016
<b>ACE Distinction in Endocrinology Award</b>	<b>2019</b>
<b>ASBMR Frederic C. Bartter Award</b>	<b>2020</b>

**11. Fellowship and Grant Support:**

**Principal Investigator or Co-Investigator** on over 50 Industry-sponsored Phase 2 or Phase 3 Clinical Trials not listed here.

**Listed Here are only Awards from NIH, DOD, Foundations and Investigator Initiated Trials Sponsored by Industry:**

**Co-Investigator SCOR**, National Institutes of Health 1990-1995  
 #DK4289-Treatment Strategies for Osteoporosis

**Co-Investigator SCOR**, Project 4, National Institutes of Health 1992-1997  
 #AR39191-06-Parathyroid Hormone Treatment in Estrogenized Osteoporotic Women

**Principal Investigator SCOR Core D**, National Institutes of Health 1992-1997  
 #AR39191-06-Bone Mass Measurement

**Principal Investigator R01**, National Institutes of Health 1993-1998  
 #DK46381-01-Skeletal Effects of Estrogens and Antiestrogens

**Principal Investigator**, National Institutes of Health 1997-2001  
 (subcontract from Columbia University)  
 Therapy of Osteoporosis in Men with PTH

**Co-Investigator R01**, NIH-National Institute of Aging Vitamin D 1997-2002  
 Supplementation in Postmenopausal Black Women

**Principal Investigator**, Multiple Sclerosis Society, Vitamin D 1998-2003  
 Supplementation in MS

**IIT Principal Investigator**, Wyeth-Ayerst Inc., 1998-2003  
 Multisystemic Effects of Estrogen and SERMS

**Co-Principal Investigator SCOR**, Project 4, Mechanisms of PTH 1998-2003  
 Action in vivo, National Institutes of Health AR 39191

<b>Investigator SCOR</b> , Core D, National Institutes of Health AR 39191	1998-2003
<b>Investigator SCOR</b> , Core B, National Institutes of Health AR 39191	1998-2003
<b>Principal Investigator</b> , Department of Defense #CBD970-0000-0008, Determinants of Stress Fracture and Bone Mass in Elite Military Cadets	1998-2003
<b>IIT Co-Principal Investigator</b> , BioNebraska, Inc. Effects of GRF and PTH on the Skeleton	1999-2001
<b>Principal Investigator</b> , Christopher Reeve Paralysis Foundation, Acute Spinal Cord Injury: A Randomized Controlled Trial to Prevent Bone Loss	2004
<b>Co-Investigator</b> , NIH Subcontract from Columbia University Primary Hyperparathyroidism: Cognitive Function	2003
<b>IIT Principal Investigator</b> , Eli Lilly Foundation, PTH Effects on Bone Size as Determined by QCT in Women Previously Treated with Alendronate or Raloxifene	2008-2010
<b>Co-Principal Investigator SCOR</b> , National Institutes of Health A mechanistic study of skeletal action of 1-34hPTH	2005-2011
<b>IIT Principal Investigator</b> , Novartis Hip Fracture: Health outcomes and outcome research	2009-2012
<b>Principal Investigator R01</b> , National Institutes of Health Early effects of PTH on the proximal femur	2010-2015
<b>Co-Principal Investigator R01</b> , National Institutes of Health Cyclic versus daily teriparatide on bone mass, microstructure and strength: a two-year extension	2010-2018
<b>IIT Principal Investigator</b> , Amgen Investigator Initiated Trial: Optimizing denosumab and teriparatide sequences for treatment of osteoporosis	2012-2018
<b>IIT Principal Investigator</b> , Amgen Bone histomorphometry of the proximal femur in denosumab- treated subjects undergoing total hip replacement	2015-2019
<b>Co-Investigator</b> , National Institutes of Health PTH1-34 and Pelvic Fracture Healing: A Randomized Controlled Trial	<b>2017-Active</b>
<b>IIT Principal Investigator</b> , Radius Health Abaloparatide added to ongoing denosumab versus continued denosumab alone	<b>2020-Active</b>

12. **Departmental and University Committees:**
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|--|-----------|
| Strategic Planning Committee, HHH              | 1989-1990 |
| Laboratory Committee, HHH                      | 1988-1994 |
| Surgical Surveillance Committee, Co-Chair, HHH | 1990-1997 |

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|-----|---|----------------------|
|     | Institutional Animal Care and Use Committee, HHH  | 1996-2007            |
|     | Internal Medicine Committee, HHH  | 1988-2005            |
|     | Research Committee, HHH   | 1993-2005            |
|     | Ambulatory Care Committee, HHH (Chairperson 2015-2018)  | 2009-2018            |
|     | Columbia University Executive Committee   | 2006- present        |
| 13. | <b><u>Teaching Experience and Responsibilities:</u></b>   |                      |
|     | Metabolic Bone Disease Clerkship at Columbia Presbyterian Medical Center for 4th year medical students  | 1990-1991            |
|     | Preceptor, Metabolic Bone Disease Program for Orthopedic residents  | 1989-1993            |
|     | Director/Preceptor for medical student Physical Diagnosis Course  | 1994-2006            |
|     | Ph. D. Thesis Committee and Sponsorship, Jamie Ruffing  |                      |
|     | Department Epidemiology, Columbia University  | 2002-2011            |
|     | Preceptor, Endocrinology Specialty Fellowship in Metabolic Bone Disease   | 2000-2019            |
| 14. | <b><u>Editorial Positions:</u></b>  |                      |
|     | Associate Editor, Osteoporosis: Index & Reviews   | 1995-1996            |
|     | Cummings, Cosman and Jamal: Osteoporosis: An Evidence Based Approach To The Prevention of Fractures. American College of Physicians, Philadelphia.  | 2002-2003            |
|     | Editorial Board, Clinical Cases in Mineral and Bone Metabolism  | 2003-2011            |
|     | Ad Hoc Reviewer for: Journal of Bone Metabolism Research, Bone Mineral Research, Journal of Clinical Endocrinology and Metabolism, Osteoporosis International, Endocrinology, Bone, Calcified Tissue International, Endocrine Practice, NEJM  | 1989-present         |
|     | Associate Editor, Bone  | 2009-2014            |
|     | Editorial Board, Osteoporosis International   | 1999-present         |
|     | Review Editor, Osteoporosis International   | 2000-2015            |
|     | Co-Editor, Current Osteoporosis Reports, Pathophysiology and Epidemiology   | 2017- 2019           |
|     | <b>Co-Editor-in-Chief, Osteoporosis International</b>   | <b>2016-present</b>  |
|     | <b>Editor, Osteoporosis, Fifth Edition</b><br>(Editors: Dempster, Bouxsein, Cauley, Cosman)   | <b>2017- present</b> |
| 15. | <b><u>CHAPTERS (Partial List)</u></b>   |                      |
|     | 1. Cosman F, Shen V, Herrington BS, Seibel M, Ratcliffe A, Lindsay R. (1990) Mechanism of estrogen action in osteoporosis treatment as assessed by human (1-34)PTH infusion. Osteoporosis III, ed. C. Christiansen and K. Overgaard, Osteopres, Copenhagen, Denmark, pp. 976-978.   |                      |
|     | 2. Cosman F, Seibel M, Shen V, Herrington BS, Schnering D, Dempster D, Ratcliffe A, Lindsay R. (1990) A comparison of hydroxy-pyridinium collagen cross-links with other biochemical markers in different clinical situations. Osteoporosis III, ed. C. Christiansen and K. Overgaard, Osteopres, Copenhagen, Denmark, pp. 697-698. |                      |

3. Lindsay R, Cosman F, Herrington BS, Himmelstein S, Cosman F. (1990) Radiographic absorptiometry: a simple technique for determination of low bone mass for the primary care physician. *Osteoporosis III*, ed. C. Christiansen and K. Overgaard, Osteopres, Copenhagen, Denmark, pp. 667-669.
4. Lindsay R, Cosman F, Nieves J. (1993) Estrogen: effects and actions in osteoporosis. *Osteoporosis International* 3:Suppl 1:S150-152.
5. Dempster DW, Cosman F, Nieves J, Shen V, Lindsay R. (1993) Parathyroid hormone in the treatment of osteoporosis. *Proceedings on the Fourth International Symposium on Osteoporosis and Consensus Development Conference, Hong Kong*, pp.144-145.
6. Roundtable Discussion: Health issues in the peri- and postmenopausal woman: a multinational perspective of women and their doctors. *Journal of Women's Health* 1996;5(4);373-382.
7. Cosman F. (1998) Conversation with the experts. Toward optimal health: The experts respond to osteoporosis. *Journal of Women's Health* 7:25-29.
8. Birge SJ, Cosman F, Ettinger B. (2001) Raloxifene FAQs: perspectives on the first approved SERM - where are we now? Part 1. *Menopause Management*. Pgs. 18-25.
9. Lindsay R, Cosman F. (1990) Estrogen therapy: benefits and risks in osteoporosis therapy. In: Peck WA (ed): Prevention of Postmenopausal Osteoporosis: Dream or Reality? pp. 29-42.
10. Lindsay R, Cosman F. (1990) Estrogen in prevention and treatment of osteoporosis. In: Flint M, Kronenberg F, Utian W (eds): Annals of the New York Academy of Sciences 592:326-333.
11. Lindsay R, Mellish R, Cosman F, Dempster DW. (1990) Biochemical markers of bone remodeling. In: Nordin BEC (ed): Osteoporosis: Contributions to Modern Management, pp. 47-56.
12. Lindsay R, Cosman F. (1990) Epidemiology of osteoporosis In: Drife JO, Studd JWW (eds): HRT and Osteoporosis, Springer Verlag, London, pp. 75-86.
13. Lindsay R, Cosman, F. (1991) Estrogen, calcium metabolism and the skeleton. Annals of the New York Academy of Sciences, 622:307-314.
14. Lindsay R, Cosman F. (1991) The risk of osteoporosis in aging women. In: Sitruk-Ware R, Utian WH (eds): The Menopause and Hormonal Replacement Therapy: Facts and Controversy, Marcel Dekker, New York, pp. 47-72.
15. Lindsay R, Cosman F. (1992) Primary osteoporosis. In: Coe FL, Favus MJ (eds): Disorders of Bone and Mineral Metabolism, Raven Press, New York, pp 831-888.
16. Lindsay R, Cosman F. (1992) Osteoporosis: the estrogen relationship. In: Swartz DP (ed): Hormone Replacement Therapy in the Ovarian Deficient Woman, Williams and Wilkins, Baltimore, pp. 17-64.
17. Cosman F, Lindsay R. (1993) Thoracolumbar fractures in Osteoporosis. In: Floman Y, Farcy JP, Argenson C (eds): Thoracolumbar Spine Fractures, Raven Press, New York, pp. 339-358.

18. Lindsay R, Cosman F. (1993) Estrogens and osteoporosis. In: Hajj S (ed): Post Reproductive Gynecology, Appleton & Lange, pp. 43-58.
19. Cosman F, Lindsay R. (1994) Skeletal Physiology and Osteoporosis. In: Downey JA, Myers SJ, Gonzalez EG, Lieberman JS, (eds): The Physiological Basis of Rehabilitation Medicine, Second Edition, Butterworth-Heinemann, Boston, pp. 659-687.
20. Tohme JF, Cosman F, Lindsay R. (1995) Osteoporosis. In: Becker KL (ed): Principles and Practice of Endocrinology and Metabolism 2<sup>nd</sup> Edition, J.B. Lippincott Company, Philadelphia, Pp. 567-585.
21. Cosman F, Lindsay R. (1995) Anabolic Effect of parathyroid hormone. In: Lindsay R, Stevenson J (eds): Osteoporosis, Chapman & Hall, UK pp. 293-301.
22. Cosman F, Dempster DW, Lindsay R. (1997) Clinical effects of estrogens and antiestrogens on the skeleton and skeletal metabolism. In: Dempster DW, Lindsay R, Jordan CV (eds): Estrogens and Antiestrogens: Basic and Clinical Aspects, Lippincott-Raven Publishers, Philadelphia, pp.151-164.
23. Cosman F, Lindsay R. (1999) Anti-estrogens and SERMs. In: Rogerio Lobo (ed): Treatment of the Postmenopausal Woman, 2<sup>nd</sup> Edition, Lippincott-Raven Publishers, Philadelphia, pp 305-314.
24. Lindsay R, Cosman F. (1999) Therapeutics: Estrogen. In: Clifford Rosen, Julie Glowack, John Bilezikian (eds): The Aging Skeleton, Academic Press, San Diego, CA, pp 495-505.
25. Cosman F, Lindsay R. (1999) Selective Estrogen Receptor Modulators. In: David Goltzman and Janet E. Henderson (eds): The Osteoporosis Primer, Cambridge University Press, Cambridge, UK.
26. Lindsay R, Cosman F: (2001) Osteoporosis. In: Becker KL (ed): Principles and practice of Endocrinology and Metabolism 3<sup>rd</sup> Edition, JB Lippincott Co., Philadelphia, pp 623-641.
27. Lindsay R, Cosman F. (2001) Osteoporosis: Pathophysiology, Diagnosis and Treatment. In: Braunwald E, Faui AS, Kasper DL, Hauser SL, Longo DL, Jameson JL. (eds) Harrison's Textbook of Internal Medicine 15<sup>th</sup> Edition, McGraw-Hill, New York, pp 2226-2236 .
28. Lindsay R, Cosman F. Estrogens. (2001) In Marcus R (ed) Estrogen & Osteoporosis 2<sup>nd</sup> Edition. Academic Press, pp 577-601.
29. Nieves JW, Zion M, Ruffing J, Lindsay R, Cosman F. (2001) "Exercise and milk intake are detriments of bone mass in elite military cadets". Nutritional Aspects of Osteoporosis. Academic Press, pp 125-129.
30. Nieves J, Lindsay R, Cosman F. (2002) Primary Osteoporosis. In: Coe FL, Favus MJ (eds) Disorders of Bone and Mineral Metabolism, Raven Press, New York, pp 805-830.
31. Nieves J, Cosman F, Lindsay R. (2002) Skeletal Physiology and Osteoporosis. In: Downey JA, Myers SJ, Gonzalez EG, Lieberman JS, (eds): The Physiological Basis of Rehabilitation Medicine, Second Edition, Butterworth-Heinemann, Boston, pp 101-131.
32. Marcus R, Jamal S, Cosman F. (2002) Physical activity as a strategy to conserve and improve bone mass. In: Cummings S, Cosman F, Jamal S. (Eds). Osteoporosis: An Evidence

Based Approach To The Prevention of Fractures. American College of Physicians, Philadelphia, pp 109-126.

33. Lindsay R, Cosman F. (2002) The Pharmacology of Estrogens in Osteoporosis. In: Bilezikian JPB, Raisz, Rolan G :Principles of Bone Biology, Second Edition, Volume 2. Academic Press, pgs. 1401–1406.

34. Cosman F. Selective Estrogen Receptor Modulators (SERMS). (2002) In: Cummings S, Cosman F, Jamal S. (Eds). Osteoporosis: An Evidence Based Approach To The Prevention of Fractures. American College of Physicians, Philadelphia pp 151-168.

35. Cosman F. Selection of Medications and Guidelines for Fracture Prevention. (2002) In: Cummings S, Cosman F, Jamal S. (Eds). Osteoporosis: An Evidence Based Approach To The Prevention of Fractures. American College of Physicians, Philadelphia pp 273-281.

36. Cosman F: (2003) Osteoporosis: Selective estrogen-receptor modulators. In: Ethel S. Siris (ed): Clinics in Geriatric Medicine W.B. Saunders Co., Philadelphia, pp 372-379.

37. Lindsay R, Cosman F (2003). Estrogen Dependent Bone Loss and Osteoporosis. In: Orwoll E (ed.): Atlas of Osteoporosis, Current Medicine Inc., Philadelphia.

38. Nieves JW, Ambrose B, Vasquez E, Zion M, Cosman F, Nieves R. (2004) Vitamin D supplementation in postmenopausal women improves calcium homeostasis and bone turnover in three months. In: Burckhardt P, Dawson-Hughes B, Heaney RP (eds) Nutritional Aspects of Osteoporosis, Second Edition, Elsevier Science, pp. 245-252.

39. Lindsay R, Cosman F. (2005) Osteoporosis: In: Harrison's Textbook of Internal Medicine 16<sup>th</sup> Edition, Kasper DL, Braunwald E, Fauci AS, Hauser SL, Longo DL, Jameson JL, (eds) McGraw-Hill, New York pp 2268-2278.

40. Cosman F, Lindsay R. (2007) Selective estrogen-receptor modulators. In: Rogerio Lobo (ed): Treatment of the Postmenopausal Woman, 3rd Edition, Lippincott-Raven Publishers, Philadelphia.

41. Cosman F, Dempster D (2011) Pathogenesis of osteoporosis. In: Hochberg M, Silman A, Smolen J, Weinblatt, Weisman M (eds). Rheumatology Editions 3 -5. Elsevier, London.

42. Lindsay R, Cosman F. (2015) Osteoporosis: In: Harrison's Principles of Internal Medicine 17<sup>th</sup> Edition, Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson LJ, Loscalzo J, (eds) McGraw-Hill, New York pp 2297-2408.

43. Lindsay R, Cosman F (2018) Osteoporosis In: Harrison's Principles of Internal Medicine 18<sup>th</sup> Edition, Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson LJ, Loscalzo J, (eds) McGraw-Hill, New York

44. Nieves JW and Cosman F. Impact of Nutrition on Medications for Osteoporosis. In Holick M and Nieves JW (eds) Nutrition and Bone Health, 2nd edition. Humana Press, Springer Science and Business Media, January 2015

45. Cosman F. (2019) Management of Patients with Increased Fracture Risk. In: Ferrari S., Roux C. (eds) Pocket Reference to Osteoporosis. Springer, Cham, pp 59-70|

46. Cosman F. Abaloparatide in the treatment of osteoporosis. In: Encyclopedia of Bone (Zaidi M, ed). 2019



47. Moreira C, Cosman F and Dempster DW. PTH as an Anabolic Agent. In: Encyclopedia of Bone (Zaidi M, ed). 2019
48. Cosman F. Teriparatide and Abaloparatide for Treatment of Osteoporosis. In Marcus and Feldman Osteoporosis, Fifth Edition. Eds: Dempster DW, Bouxsein M, Cauley J and Cosman F. 2020.
49. Cosman F and Saag K. Romosozumab in the Treatment of Osteoporosis. In Marcus and Feldman Osteoporosis, Fifth Edition. Eds: Dempster DW, Bouxsein M, Cauley J and Cosman F. 2020.
50. Ferrari S and Cosman F. Longterm Treatment Strategies and Goal Directed Therapy. In Marcus and Feldman Osteoporosis, Fifth Edition. Eds: Dempster DW, Bouxsein M, Cauley J and Cosman F. Academic Press, Elsevier 2020.

## 16. **BOOKS**

Cummings S, Cosman F, Jamal S. (Editors). 2002 Osteoporosis: An Evidence Based Approach To The Prevention of Fractures. American College of Physicians, Philadelphia.

Cosman, F (2003) What Your Doctor May Not Tell You About Osteoporosis. Warner Books, New York.

**Marcus and Feldman's Osteoporosis Fifth Edition** Editors: David Dempster, Mary Bouxsein, Jane Cauley, Felicia Cosman. Academic Press, Elsevier.

## 17. **PEER REVIEWED PUBLICATIONS**

1. Cosman F, Morrow B, Kopal M, Bilezikian JP. Stimulation of inositol phosphate formation in ROS 17/2.8 cell membranes by guanine nucleotide, calcium and parathyroid hormone. *J Bone Min Res* 1989; 4:413-420.

2. Cosman F, Post K, Holub D, Wardlaw S. Lymphocytic hypophysitis: report of three new cases and review of the literature. *Medicine* 1989; 68:240-256.

3. Seliger G, Cosman F, Abrams G, Lindsay R. Hypercalcemia causing declining cognitive function in a head injured patient. *Brain Injury* 1989; 3:315-318.

4. Lindsay R, Himmelstein S, Herrington BS, Cosman F. (1990) Body composition studies in premenopausal healthy women. In: Advances in In Vivo Body Composition Studies, eds. 1990 Yasumura S, Harrison JE, McNeil KG, et al., pp. 95-100.

5. Cosman F, Shen V, Herrington B, Lindsay R. Response of the parathyroid gland to infusion of (1-34)hPTH: demonstration of suppression of endogenous secretion using IRMA intact (1-84)PTH assay. *J Clin Endo Metab* 1991; 73:1345-1351.

6. Cosman F, Herrington B, Himmelstein S, Lindsay R. Radiographic absorptiometry: a simple method for determination of bone mass. *Osteopor Int* 1991; 2:34-38.

7. Lindsay R, Cosman F, Herrington BS, Himmelstein S. Bone mass and body composition in normal women. *J Bone Miner Res* 1992; 7:55-63.

8. Cosman F, Schnitzer MB, McCann PD, Herrington BS, Parisien MV, Dempster DW, Lindsay R. Relationships between quantitative histological measurements and non-invasive assessments of bone mass. *Bone* 1992; 13:237-242.
9. Nieves JW, Cosman F, Mars C, Lindsay R. Comparative assessment of bone mineral density of the forearm using single photon and dual x-ray absorptiometry. *Calcified Tissue Int* 1992; 51:352-355.
10. Cosman F, Shen V, Xie F, Seibel M, Ratcliffe A, Lindsay R. Estrogen protection against bone resorbing effects of parathyroid hormone infusion. *Annals Int Med* 1993; 118:337-343.
11. Seibel MJ, Cosman F, Shen V, Gordon S, Dempster DW, Ratcliffe A, Lindsay R. Urinary hydroxypyridinium crosslinks of collagen as markers of bone resorption and estrogen efficacy in postmenopausal osteoporosis. *J Bone Miner Res* 1993; 8:881-889.
12. Komar L, Nieves J, Cosman F, Rubin A, Shen V, Lindsay R. (1993) Calcium homeostasis of an elderly population upon admission to a nursing home. *J Amer Geriatric Society* 1993; 41:1057-1064.
13. Dempster DW, Cosman F, Parisien M, Shen V, Lindsay R. Anabolic actions of parathyroid hormone on bone. *Endocrine Reviews* 1993; 14:690-709.
14. Lindsay R, Nieves J, Henneman E, Shen V, Cosman F. Subcutaneous administration of the amino terminal fragment of human parathyroid hormone (1-34hPTH): kinetics and biochemical response in estrogenized osteoporotic patients. *J Clin Endo Metab* 1993; 77:1535-1539.
15. Cosman F, Nieves J, Horton J, Shen V, Lindsay R. Effects of estrogen on response to EDTA infusion in postmenopausal osteoporotic women. *J Clin Endo Metab* 1994; 78:939-943.
16. Cosman F, Nieves J, Herbert J, Shen V, Lindsay R. High dose glucocorticoids in multiple sclerosis patients exert direct effects on the kidney and skeleton. *J Bone Miner Res* 1994; 9:1097-1105.
17. Nieves J, Cosman F, Herbert J, Shen V, Lindsay R. High prevalence of vitamin D deficiency and reduced bone mass in multiple sclerosis. *Neurology* 1995; 44:1687-1692.
18. Cosman F, Nieves J, Shen V, Lindsay R. Oral 1,25-dihydroxyvitamin D administration in osteoporotic women: effects of estrogen therapy. *J Bone Miner Res* 1995; 10:594-600.
19. Parisien M, Cosman F, Mellish R, Schnitzer M, Nieves J, Silverberg S, Shane E, Kimmel D, Recker R, Bilezikian J, Lindsay R, Dempster D. Bone structure in postmenopausal hyperparathyroid, osteoporotic and normal women. *J Bone Miner Res* 1995; 10:1393-1399.
20. Cosman F, Nieves J, Walliser J, Lindsay R. Postmenopausal osteoporosis: patient choices and outcomes. *Maturitas* 1995; 22:137-143.
21. Cosman F, Nieves J, Wilkinson C, Schnering D, Shen V, Lindsay R. Bone density change and biochemical indices of skeletal turnover. *Calcified Tissue Int* 1996; 58:236-243.
22. Lindsay R, Cosman F. Skeletal effects of estrogen analogues. *Osteoporosis Int* 1997 (Supp 1);40-43.

23. Parisien M, Cosman F, Morgan D, Schnitzer M, Liang X, Nieves J, Forese L, Luckey M, Meier D, Shen V, Lindsay R, Dempster DW. Histomorphometric assessment of bone mass, structure and remodeling: A comparison between healthy black and white premenopausal women. *J Bone Miner Res* 1997; 12:948-957.
24. Cosman F, Morgan DC, Nieves JW, Shen V, Luckey MM, Dempster DW, Lindsay R, Parisien M. Resistance to bone resorbing effects of PTH in black women. *J Bone Miner Res* 1997; 12:958-966.
25. Formica C, Cosman F, Nieves J, Herbert J, Lindsay R. Reduced bone mass and fat-free mass in patients with multiple sclerosis: Effects of ambulatory status and glucocorticoid use. *Calcified Tissue Int* 1997; 61:129-133.
26. Lindsay R, Nieves JW, Formica C, Henneman E, Woelfert L, Shen V, Dempster DW, Cosman F. Randomised controlled study of effect of parathyroid hormone on vertebral bone mass and fracture incidence among postmenopausal women on estrogen with osteoporosis. *Lancet* 1997; 350:550-555.
27. Kurland ES, Rosen CJ, Cosman F, McMahon D, Chan F, Shane E, Lindsay R, Dempster D, Bilezikian JP. Insulin-like growth factor-I in men with idiopathic osteoporosis. *J Clin Endo Metab* 1997; 82:2799-2805.
28. Cosman F, Nieves J, Woelfert L, Gordon S, Shen V, Lindsay R. Parathyroid responsiveness in postmenopausal women with osteoporosis during treatment with parathyroid hormone. *J Clin Endo Metab* 1998; 83:788-790.
29. Nieves JW, Komar L, Cosman F, Lindsay R. Calcium potentiates the effect of estrogen and calcitonin on bone: review and analysis. *Amer J Clin Nutrit* 1998; 67:18-24.
30. Cosman F, Lindsay R. Is parathyroid hormone a therapeutic option for osteoporosis? *Calcified Tissue Int* 1998; 62:475-480.
31. Cosman F, Nieves J, Woelfert L, Shen V, Lindsay R. Alendronate does not block the anabolic effect of PTH in postmenopausal osteoporotic women. *J Bone Miner Res* 1998; 13:1051-1055.
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