HOLOGIC®

Dual-Energy X-ray Absorptometry Studies

Updated: November 2019

	Date	Body Composition	BMD/ Osteoporosis/Fracture Risk	Trabecular Bone Score	Atypical Femoral Fracture (AFF)	Sarcopenia	Human Performance/Athletics	Obesity	Metabolic disease/Visceral Fat	Abdominal aortic calcification	Reimbursement/Cost Effectiveness	Pediatric	Hip Structure Analysis	Breast Cancer & Osteoporosis	Precision
Precision of the Hologic DXA in the Assessment of Visceral Adipose Tissue Elijah K. Goldberg, Ellen B. Fung, Journal of Clinical Densitometry: Assessment & Management of Musculoskeletal Health, 1_9, 2019 DOI: https://doi.org/10.1016/j.jocd.2019.03.005 ***Key Point:** The precision of VAT measurement by Hologic DXA is further improved when measuring overweight or obese subjects.	Nov-19								X						
Association of Body Fat and Risk of Breast Cancer in PostmenopausalWomen With Normal Body Mass Index A Secondary Analysis of a Randomized Clinical Trial and Observational Study Neil M. Iyengar, MD; Rhonda Arthur, PhD; JoAnn E. Manson, MD, DrPH; Rowan T. Chlebowski, MD, PhD; Candyce H. Kroenke, ScD; Lindsay Peterson, MD; et al., JAMA Oncology February 2019 Volume 5, Number 2 (Reprinted) DOI 10.1001/jamaoncol.2018.5327 ***Key Point:** The results of this study indicate that postmenopausal women with increased levels of body fat are at elevated risk of breast cancer despite having a normal BMI.	Feb-19													X	
Body composition by DXA John A. Shepherd, Bennett K. Ng, Markus J. Sommer, Steven B. Heymsfield, Bone. 2017 DOI: https://doi.org/10.1016/j.bone.2017.06.010 ***Key Points:** This study identified that One full body DXA scan has the equivalent amount of radiation as received over one day at sea level. **Summary Card**	Nov-17	X													X
Fat-Free Mass Index in NCAA Division I and II Collegiate American Football Players Eric T. Trexler; Abbie E. Smith-Ryan; Malia N.M. Blue; Richard M. Schumacher; Jerry L. Mayhew; J. Bryan Mann; Pat A. Ivey; Katie R. Hirsch; Meredith G. Mock Journal of Strength and Conditioning Research. 31(10):2719–2727, OCT 2017. DOI: 10.1519/JSC.0000000000001737, PMID: 27930454 ***Key Points**: Outlines the differences in FFMI differences between different playing positions and Highlights the importance & accuracy of DXA assessments in professional athletic setting. **Summary Card**	Oct-17	X					X								

Short term in vivo precision of whole body composition measurements on the Horizon A densitometer. Michael Nowitz, and Paula Monahan Journal Med Imaging Radiation Oncology. 2017 Jul 29. doi: 10.1111/1754-9485.12646 *Key Points: This study identified Horizon A precision exceeds the minimum acceptable precision value by a factor of four. Summary Card	Jul-17	X	X				X								X
Management of Aromatase Inhibitor-Associated Bone Loss (AIBL) in postmenopausal women with hormone sensitive breast cancer: Joint position statement of the IOF, CABS, ECTS, IEG, ESCEO, IMS, and SIOG Peyman Hadjia, Matti S. Aaprob, Jean-Jacques Body, Michael Gnantd, Maria Luisa Brandie, Jean Yves Reginsterf, M. Carola Zillikensg, Claus-C. Glüerh, et al., Journal of Bone Oncology 7 (2017) 1–12 DOI 10.1016/j.jbo.2017.03.001 *Key Point: In all patients initiating AI treatment, fracture risk should be assessed and recommendation with regard to exercise and calcium/vitamin D supplementation given.	Jun-17													X	
Spine fracture prevalence in a nationally representative sample of US women and men aged ≥40 years: results from the National Health and Nutrition Examination Survey (NHANES) 2013-2014 F. Cosman, J. H. Krege, C. Looker, T. Schousboe, Fan N. Sarafrazi Isfahani, J. A. Shepherd, D. Krohn, Steiger, E. Wilson, et al., International Osteoporosis Foundation and National Osteoporosis Foundation 2017, DOI 10.1007/s00198-017-3948-9 *Key Point: Spine fracture prevalence is similar in women and men and increases with age and lower BMD, although most subjects with spine fracture do not meetBMD criteria for osteoporosis. Summary Card	Jan-17		X												
Seasonal Effects on Body Composition, Muscle Characteristics, and Performance of Collegiate Swimmers and Divers. Roelofs EJ, Smith-Ryan AE, Trexler ET, Hirsch KR. J Athl Train. 2016 Dec 1. PMID: 27905858 *Key Point: Body composition and muscle characteristics improved through 1 training season, which may have implications for performance. Quantifying body composition and muscle characteristics may be beneficial for professionals who work with athletes in order to improve performance and prevent injury.	Dec-16	X					X								
Menopause Transition and Body Composition in Healthy South Indian Women Deepa Meeta D, Sameena Agarwal S, Akanshi Tanvir A - Journal of Clinical Densitometry, Vol. 19, Issue 4, p536 Published in issue: October 2016 *Key Point: This study was to assess the total body composition of healthy Indian women and to investigate its relationship with age and menopause as independent factors.	Oct-16	X													

Differences in DXA-Derived Lean Tissue Mass and Muscle Quality Between Healthy Young (25-35y) and Older (55-65y) Adults Francis P, Stein S, Butterworth M, Hind K - Journal of Clinical Densitometry, Vol. 19, Issue 4, p531 Pub in issue: October 2016 ***Key Point:** The aim of this study was to assess age-related differences in upper leg lean tissue mass (LTM), maximal voluntary upper leg strength and muscle quality in healthy young and older adults.	Oct-16	**X**					**X**								
A DXA-Based Analysis of Aberrant Body Composition of Patients with Crohn's Disease L. Dowling, M. Skelly, H. Yousuf, D. O'Sullivan, C. Dunne, P. Jakeman - Journal of Clinical Densitometry, Vol. 19, Issue 4, p522 Published in issue: October 2016 ***Key Point:** The aim of this study was to conduct a discriminate analysis of the body composition of patients with Crohn's Disease (CD) that overcomes the recognised limitations in the use of BMI.	Oct-16	**X**													
Body Composition by Dual-X-Ray Absorptiometry in Women of Reproductive Age Journal of Clinical Densitometry, Vol. 19, Issue 4, p526–527 - Published in issue: October 2016 ***Key Point:** The assessment of the components of body composition (BC) using dual-x-ray absorptiometry (DXA) represents an important step in evaluating clinical and nutritional disorders.	Oct-16	**X**													
DXA: Technical aspects and application Bazzocchi A, Ponti F, Albisinni U, Battista G, Guglielmi G - European Journal of Radiology, Volume 85, Issue 8, August 2016, Pages 1481-92 ***Key Point:** The purposes of this review are: (1) to appreciate the role of DXA in the study of body composition; (2) to understand potential limitations and pitfalls of DXA in the analysis of body composition; (3) to learn about technical elements and methods, and to become familiar with biomarkers in DXA.	Aug-16	**X**	**X**	**X**									**X**		
Muscle analysis using pQCT, DXA and MRI Erlandson MC, Lorbergs AL, Mathur S, Cheung AM - European Journal of Radiology, Vol 85, Issue 8, August 2016, Pg 1505-11 ***Key Point**: A review of peripheral quantitative computed tomography (pQCT), dual X-ray energy absorptiometry (DXA) and magnetic resonance imaging (MRI) techniques used to assess skeletal muscle size and quality in-vivo.	Aug-16	**X**							**X**						
Body composition in clinical practice Andreoli A, Garaci F, Cafarelli FP, Guglielmi G - European Journal of Radiology, Vol 85, Issue 8, August 2016, Pg 1461-1468 ***Key Point:** A review of the increasing interest in the study of body composition to monitor conditions and delay in development of obesity-related diseases.	Aug-16	**X**						**X**							

Provider Distribution Changes in Dual-Energy X-Ray Absorptiometry in the Medicare Population Over the Past Decade Charles M. Intenzo,* Laurence Parker, David C. Levin, Sung M. Kim, and Vijay M. Rao, Journal of Clinical Densitometry: Assessment & Management of Musculoskeletal Health, 1–4, July 2016, DOI 10.1016/j.jocd.2015.10.001 ***Key Point:** The total number of DXA scans performed on Medicare patients peaked at 2,691,295 scans in 2006, then began to steadily decrease to 2,253,345 scans in 2013.	Jul-16										X				
Reliability of 2 Different Positioning Protocols for Dual-Energy X-ray Absorptiometry Measurement of Body Composition in Healthy Adults Kerr A, G Slater GL, Byrne N, Nana A - Journal of Clinical Densitometry, Volume 19, Issue 3, July 2016, Pages 282-289 ***Key Point:** Compare the reliability of a new positioning protocol (Nana et al) with the current reference (National Health and Nutrition Examination Survey [NHANES]) protocol and investigate their within-protocol precision.	Jul-16	X													
Quantitative Comparison of 2 Dual-Energy X-ray Absorptiometry Systems in Assessing Body Composition and Bone Mineral Measurements Xu W, Chafi H, Guo B, Heymsfield SB, Murray KB, Zheng J, Jia G - Journal of Clinical Densitometry, Volume 19, Issue 3, July 2016, Pages 298-304 ***Key Point:** The high correlation between the 2 DXA systems with systematic differences enabled development of calibration equations for extending the multisystem measurements to advanced quantitative analyses.	Jul-16	X	X												
Body Composition Analysis Applied to Different Sports Practices: Focus in Perspectives for Research and Clinical Outcomes in Regular, Elite, and Professional High-Performance Athletes Tamayo-Orozco J, Tlatoa-Ramírez H, Velázquez-Verduzco A, Montes-Felisart V - Journal of Clinical Densitometry, online 12 July 2016	Jul-16	X					X								
Novel unilateral analysis of AP lumbar spine bone density in elite cricket fast bowlers Hind K, K Bansil K, Barlow M, Rutherford Z, Lees M - Bone and Body Composition Research Group June 2016 ***Key Point:** Evaluate lumbar spine bone mass in elite male fast bowlers compared to cricketers of other positions using central dual- energy X-ray absorptiometry (DXA) with novel custom analysis of bilateral regions.	Jun-16		X				X								
Body Composition and Muscle Characteristics of Division I Track and Field Athletes. Hirsch KR, Smith-Ryan AE, Trexler ET, Roelofs EJ - J Strength Cond Res. 2016 May;30(5):1231-8. doi: 10.1519/JSC.0000000000001203. ***Key Point:** The purpose of this study was to evaluate event-specific body composition and muscle characteristics of track and field athletes and to assess body composition changes after 1 year.	May-16	X					X								

Three-Compartment Body Composition Changes in Professional Rugby Union Players Over One Competitive Season: A Team and Individualized Approach Lees MJ, Oldroyd B, Jones B, Brightmore A, O'Hara JP, Barlow MJ, Till K, Hind K. - J Clin Densitom. 2016 May 5. pii: S1094-6950(16)30048-8. doi: 10.1016/j.jocd.2016.04.010 ***Key Point:** This study highlights the advantages of an individualized approach to dual-energy X-ray absorptiometry body composition monitoring and this can be achieved through application of derived LSC.	May-16	X			X										
Assessment of Fat distribution and Bone quality with Trabecular Bone Score (TBS) in Healthy Chinese Men Shan Lv, Aisen Zhang, Wenjuan Di, Yunlu Sheng, Peng Cheng, Hanmei Qi, Juan Liu, Jing Yu, Guoxian Ding, Jinmei Cai, and Bin Lai, Sci Rep. 2016; 6: 24935. doi: 10.1038/srep24935	Apr-16	X		X					X						
Seasonal Changes in Whole Body and Regional Body Composition Profiles of Elite Collegiate Ice-Hockey Players. Prokop NW, Reid RE, Andersen RE - J Strength Cond Res. 2016 Mar;30(3):684-92. doi: 10.1519/JSC.0000000000001133. PMID: 26907839 ***Key Point:** The purpose of the study was to investigate changes in whole-body and regional-body composition of fat and lean tissue. The body composition profiles of 19 elite Canadian collegiate hockey players were assessed using dual energy X-ray absorptiometry.	Mar-16	X			X		X								
Detecting meaningful body composition changes in athletes using dual-energy x-ray absorptiometry. Colyer SL, Roberts SP, Robinson JB, Thompson D, Stokes KA, Bilzon JL, Salo AI - Physiol Meas. 2016 Apr;37(4):596-609. doi: 10.1088/0967-3334/37/4/596. Epub 2016 Mar 30. ***Key Point:** DXA was able to detect real body composition changes without the use of stringent scanning controls. Associations between changes in body composition and performance demonstrated the potential influence of these changes on strength and power indices.	Mar-16	X					X								
Comparison of Adipose Distribution Indices with Gold Standard Body Composition Assessments in the EMPAREG H2H SU Trial: A Body Composition SubStudy Ian J. Neeland, Darren K. McGuire, Björn Eliasson, Martin Ridderstråle, Cordula Zeller, Hans J. Woerle, Uli C. Broedl, and Odd Erik Johansen Diabetes Ther. 2015 Dec; 6(4): 635–642. doi: 10.1007/s1330001501467	Nov-15	X							X						
Body composition analysis of inter-county Gaelic athletic associations players measured by dural energy X-ray absorptiometry. Davies RW, Toomey C, McCormack W, Hughes K, Cremona A, Jakeman P - J Sports Sci. 2016;34(11):1015-20.doi: 10.1080/02640414.2015.1085076. ***Key Point:** Stature and body mass was measured, estimates of three components of body composition, i.e., lean mass, fat mass and bone mineral content was obtained by dual energy X-ray absorptiometry (DXA), and normative data for Gaelic athletic association athletes.	Sep-15	X													

Changes in body composition in Divison I Football Players over a competitive season and recovery in off-season Binkley T, Daughters SW, Weidauer LA, Vukovich MD - J Strength Cond Res. 2015 Sep;29(9):2503-12. doi: 10.1519/JSC.0000000000000886. ***Key Point:** In this study, body composition in the younger linemen had unfavorable changes at postseason, although these younger linemen had no significant change in weight. Results from this study could be used to support the implementation of a "training table" program for the athletic department lead by a dietician so that nutritional education programs could be initiated.	Sep-15	**X**					**X**								
Do Canadian collegiate hockey players accurately perceive body composition changes after unmonitored training and diet? Prokop NW, Duncan LR, Andersen RE,. Appl Physiol Nutr Metab. 2015 Oct;40(10):1056-60. doi: 10.1139/apnm-2015-0114. Epub 2015 Jul 6. ***Key Point:** Collegiate athletes often use nutritional programs and supplements to elicit body composition changes in muscle or fat. It is unknown if athletes can accurately perceive their fluctuations in body composition, yet their understanding may help them make more accurate interpretations regarding the success of potential nutrition or exercise regimens.	Jul-15	**X**					**X**								
Multi-Component Molecular-Level Body Composition Reference Methods: Evolving Concepts and Future Directions Steven B. Heymsfield, Cara B. Ebbeling, Jolene Zheng, Angelo Pietrobelli, Boyd J. Strauss, Analiza M. Silva, and David S. Ludwig Obes Rev. 2015 April ; 16(4): 282–294. doi:10.1111/obr.12261	Apr-15	**X**						**X**							
Methodology review: using dual-energy X-ray absorptiometry (DXA) for the assessment of body composition in athletes and active people. Nana A, Slater GJ, Stewart AD, Burke LM - Int J Sport Nutr Exerc Metab. 2015 Apr;25(2):198-215. doi: 10.1123/ijsnem.2013-0228. Epub 2014 Jul 14 ***Key Point:** This review presents a summary of the sources of error and variability in the measurement of body composition by DXA, and develops a theoretical model of best practice to standardize the conduct and analysis of a DXA scan.	Apr-15	**X**													
Concordance between muscle mass assessed by bioelectrical impedance analysis and by dual energy X-ray absorptiometry: a cross-sectional study Fanny Buckinx, Jean-Yves Reginster, Nadia Dardenne, Jean-Louis Croisiser, Jean-François Kaux, Charlotte Beaudart, Justine Slomian and Olivier Bruyère Buckinx et al. BMC Musculoskeletal Disorders (2015) 16:60 DOI 10.1186/s12891-015-0510-9	Mar-15	**X**													**X**
Seasonal DXA-measured body composition changes in professional male soccer players Chiara Milanese, Valentina Cavedon, Giuliano Corradini, Francesco De Vita & Carlo Zancanaro Journal of Sports Science, 33:12, 1219-1228, 16 March 2015 DOI: 10.1080/02640414.2015.1022573 ***Key points:** This study used DXA scans to show the in season changes in body composition in professional soccer players. **Summary Card**	Mar-15	**X**					**X**								

Body composition and bone mineral density of national football league players. Donald R. Dengel, Tyler A. Bosch, T. Pepper Burruss, Kurt A. Fielding, Bryan E. Engel, Nate L. Weir, and Todd D. Weston. Journal of Strength Conditioning Research. 2014 Jan;28(1):1-6. doi: 10.1519/JSC.0000000000000299	Jan-14	X	X				X								
The accuracy and precision of DXA for assessing body composition in team sport athletes. Bilsborough JC, Greenway K, Opar D, Livingstone S, Cordy J, Coutts AJ. J Sports Sci. 2014;32(19):1821-8. doi: 10.1080/02640414.2014.926380. Epub 2014 Jun 10. ***Key Points**: Compares precison of pencil and fan beam DXA devices for assessing body composition in professional Australian Football players	Jun-14	X					X								X
The FNIH Sarcopenia Project: Rationale, Study Description, Conference Recommendations, and Final Estimates Stephanie A. Studenski, Katherine W. Peters, Dawn E. Alley, Peggy M. Cawthon, Robert R. McLean, Tamara B. Harris, Luigi Ferrucci, Jack M. Guralnik, et al., A Biol Sci Med Sci 2014 May;69(5):547–558 DOI:10.1093/gerona/glu010 ***Key Point:** These evidence-based cutpoints, based on a large and diverse population, may help identify participants for clinical trials and should be evaluated among populations with high rates of functional limitations.	May-14					X									
Correlations of skin fold thickness and validation of prediction equations using DEXA as the gold standard for estimation of body fat composition in Pakistani children Zainab Hussain, Tazeen Jafar, Maseeh uz Zaman, Riffat Parveen, Farzan Saeed BMJ Open 2014;4: e004194. doi:10.1136/bmjopen-2013-004194	Mar-14	X													X
The International Olympic Committee consensus statement: beyond the Female Athelete Traid-Relative Energy Deficiency in Sport (RED-S) Margo Mountjoy, Jorunn Sundgot-Borgen, Louise Burke, Susan Carter, Naama Constantini, Constance Lebrun, Nanna Meyer, Roberta Sherman, Kathrin Steffen, Richard Budgett, Arne Ljungqvist Journal of Strength and Conditioning Research. 31(10):2719–2727, OCT 2017. DOI: 10.1519/JSC.0000000000001737, PMID: 27930454 ***Key Points:** RED-S points to a syndrome that affects many aspects male and female athelets physiological function, health and atheletic performance. Body fat percentage and FFM was measured using DXA.	Mar-14	X					X		X						
Dual-Energy X-Ray Absorptiometry Measured Regional Body Composition Least Significant Change: Effect of Region of Interest and Gender in Athletes Buehring B, Krueger D, Libber J, Heiderscheit B, Sanfilippo J, Johnson B, Haller I, Binkley N - Journal of Clinical Densitometry, Volume 17, Issue 1, January 2014, Pages 121-128 ***Key Point:** Knowledge of measurement precision is essential for monitoring body composition changes over time.	Jan-14	X													

Breast cancer and osteoporosis Angela M. Cheunga,b,c, Ruth Heiseyd, and Jeevitha Srighanthana,b, www.co-endocrinology.com Volume 20 _ Number 6 _ December 2013, DOI: 10.1097/01.med.0000436195.10599.dd ***Key Point:** Breast cancer treatments increase osteoporosis and fractures. All women on aromatase inhibitors should have bone density measurements every 1–2 years. In postmenopausal women, bisphosphonate therapy may improve disease-free survival and decrease risk of death.	Dec-13													X	
Comparison of Bod Pod® and DXA in Female Collegiate Athletes TASHA P. BALLARD, LAURA FAFARA, and MATTHEW D. VUKOVICH American College of Sports Medicine DOI: 10.1249/01.MSS.0000121943.02489.2B	Dec-13	X					X								X
The Official Positions of the International Society for Clinical Densitometry: Indications of Use and Reporting of DXA for Body Composition Kendler D, Borges J, Fielding R, Itabashi A, Krueger D, Mulligan K, Camargos B, Sabowitz B, Wu CH, Yu E, Shepherd J - Journal of Clinical Densitometry, Volume 16, Issue 4, October–December 2013, Pages 496-507 ***Key Point:** Reviews the most common, specific scenarios (HIV therapy, sarcopenia, bariatric surgery, obesity) and proposed indications for body composition assessment. We have also discussed contraindications to body composition testing.	Oct-13	X													
The Official Positions of the International Society for Clinical Densitometry: Body Composition Analysis Reporting Petak S, Barbu CG, Yu EW, Fielding R, Mulligan K, Sabowitz B, Wu CH, Shepherd JA - Journal of Clinical Densitometry, Volume 16, Issue 4, October–December 2013, Pages 508-519 ***Key Point:** These guidelines provide evidence-based standards for the reporting and clinical application of DXA-based measures of body composition.	Oct-13	X													
The usefulness of densitometry as a method of assessing the nutritional status of athletes. Comparison with body mass index. Infante JR, Reyes C, Ramos M, Rayo JI, Lorente R, Serrano J, Domínguez ML, García L, Durán C, Sánchez R - Revista Española de Medicina Nuclear e Imagen Molecular (English Edition), Volume 32, Issue 5, September–October 2013, Pages 281-285 ***Key Point:** Although BMI is an appropriate parameter in general population for the assessment of nutritional status, in athletes should be taken into account fat and muscle body percentage and their corresponding indexes. The whole body densitometry appears to be a simple and reliable technique for this purpose.	Sep-13	X	X												

Body composition changes by DXA, BIA and skinfolds during exercise training in women. Sillanpää E, Häkkinen A, Häkkinen K. - Eur J Appl Physiol. 2013 Sep;113(9):2331-41. doi: 10.1007/s00421-013-2669-9. Epub 2013 Jun 8. ***Key Point:** Accuracy of bioimpedance (BIA) and skinfold thickness in estimating body composition among 39-64 year-old women was investigated using dual-energy X-ray absorptiometry (DXA) as a criterion method both cross-sectionally and during a training intervention.	Sep-13	**X**													
Total and Regional Body Volumes Derived From Dual-Energy X-Ray Absorptiometry Output Joseph P. Wilson, Bo Fan, and John A. Shepherd Journal of Clinical Densitometry: Assessment & Management of Musculoskeletal Health, vol. 16, no. 3, 368e373, 2013 http://dx.doi.org/10.1016/j.jocd.2012.11.001	Jul-13	**X**													**X**
Clinical Observations in Total Body DXA: Technical Aspects of Positioning and Analysis Libber J, Binkley N, Krueger D - Journal of Clinical Densitometry, Volume 15, Issue 3, July–September 2012, Pages 282-289 ***Key Point:** This report describes technical challenges experienced in performing TB DXA, explores the frequency with which autoanalysis inaccuracies occur, assesses their effect on regional body composition results, and describes a uniform clinical approach for TB DXA positioning and analysis.	Jul-12	**X**													
DXA Use in Athletes: Exploration of Regional Lean Mass Distribution and Correlation with Performance: Recipent of Young Investigator Award Donnenwerth J, Heiderschiet B, Libber J, Fidler E, Krueger D, Binkley N - Journal of Clinical Densitometry, Volume 14, Issue 2, April 2011, Page 154 ***Key Point:** The purpose of this report is to characterize DXA-measured lean mass regional distribution in Division 1 college student-athletes and to evaluate the correlation of lean mass with athletic performance as measured by jumping mechanography.	Apr-11	**X**					**X**								
Cancer treatment-induced bone loss in premenopausal women: A need for therapeutic intervention? P. Hadji a,⇑, M. Gnant b,j, J.J. Body c,k, N.J. Bundred d,l, A. Brufsky e,m, R.E. Coleman f,n, T.A. Guise g, Lipton h, M.S. Aapro i,o, Cancer Treat Rev (2012), DOI:10.1016/j.ctrv.2012.02.008 ***Key Point:** Women with a Z-score <_2.0 or Z-score 6_1.0 and/or a 5–10% annual decrease in bone mineral density should be considered for bisphosphonate therapy in addition to calcium and vitamin D supplements	Apr-10													**X**	
Sarcopenia: European consensus on definition and diagnosis: Report of the European Working Group on Sarcopenia in Older People Alfonso J. Cruz-Jentoft, Jean Pierre Baeyens, Jürgen M. Bauer, Yves Boirie, Tommy Cederholm, Francesco Landi, Finbarr C. Martin, Jean-Pierre Michel,Yves Rolland, Stéphane M. Schneider, Eva Topinková, Maurits Vandewoude, Mauro Zamboni Age Ageing. 2010 Jul;39(4):412-23. doi: 10.1093/ageing/afq034. Epub 2010 Apr 13.	Apr-10	**X**				**X**									
PSA and body composition by dual X-ray absorptiometry (DXA) in NHANES. Jay H. Fowke and Charles E. Matthews. Prostate. 2010 Feb 1;70(2):120-5. doi: 10.1002/pros.21039	Feb-10	**X**						**X**							

Sarcopenia: An Undiagnosed Condition in Older Adults. Current Consensus Definition: Prevalence, Etiology, and Consequences International Sarcopenia Consensus Conference Working Group Meeting*, Rome, Italy, November 18, 2009, Am Med Dir Assoc. 2011 May ; 12(4): 249–256. DOI:10.1016/j.jamda.2011.01.003 ***Key Point:** This manuscript proposes a consensus definition of sarcopenia. This definition defines a population of patients that should be considered for evaluation of sarcopenia, a set of guidelines to target patients who may be sarcopenic for further evaluation, and an objective definition of sarcopenia.	Nov-09					X									
Zoledronic Acid Prevents Bone Loss in Premenopausal Women Undergoing Adjuvant Chemotherapy for Early-Stage Breast Cancer Dawn L. Hershman, Donald J. McMahon, Katherine D. Crew, Serge Cremers, Dinaz Irani, Gina Cucchiara, Lois Brafman, and Elizabeth Shane, Journal of Clinical Oncology Vol. 26 no. 29 October 2008, DOI: 10.1200/JCO.2008.16.4707 ***Key Point:** Premenopausal women receiving chemotherapy for BC sustained significant bone loss at the LS and hip, whereas BMD remained stable in women who received ZA. Administration of ZA during the first year of chemotherapy is an effective and well-tolerated strategy for preventing bone loss.	Oct-08													X	
Body Composition in Athletes: Assessment and Estimated Fatness Malina RA - Clinics in Sports Medicine, Volume 26, Issue 1, January 2007, Pages 37-68 ***Key Point:** Provides an overview of models and methods used for studying body composition, changes in body composition during adolescence and the transition into adulthood, and applications to adolescent and young adult athletes.	Jan-07	X	X												
Guidance for the management of breast cancer treatment-induced bone loss: A consensus position statement from a UK Expert Group David M. Reid a,*, Julie Doughty b, Richard Eastell c, Steven D. Heys d, Anthony Howell e, Eugene V. McCloskey c, Trevor Powles f, Peter Selby g, Robert E. Coleman h, Cancer Treatment Reviews (2008) 34, S3–S18, DOI: 10.1016/j.ctrv.2008.03.007 ***Key Point**: Due to the rate of bone loss associated with breast cancer treatments, and uncertainties about the interaction between aromatase inhibitor use and BMD for fracture risk, the threshold for intervention has been set at a higher level than that generally recommended for postmenopausal osteoporosis.	Jan-08													X	

Weight and Body Composition Changes during and after Adjuvant Chemotherapy in Women with Breast Cancer R. J. Freedman, N. Aziz, D. Albanes, T. Hartman, D. Danforth, S. Hill, N. Sebring, J. C. Reynolds, and J. A. Yanovski, The Journal of Clinical Endocrinology & Metabolism 89(5):2248–2253 May 2004 DOI: 10.1210/jc.2003-031874 ***Key Point:** Women who received 4 months of modern adjuvant chemotherapy regimens demonstrated weight changes over a 10.5-month period that were not overtly different from the changes that occurred in a control group of women. However, body composition changed in the women with breast cancer, with increased body fat and decreased percentage of lean soft tissue and skeletal mass.	May-04													X	
Modeling elite male athletes' peripheral bone mass, assessed using regional dual x-ray absorptiometry Nevill AM, R.L. Holder, A.D. Stewart - Bone, Volume 32, Issue 1, January 2003, Pages 62-68 ***Key Point:** The results from this study suggest that the bone mass acquisition of elite athletes' arms and legs increases in proportion to the projected bone area, having simultaneously controlled/removed the effect of the confounding variables of body mass and body fat.	Jan-03	X	X												
Epidemiology of Sarcopenia among the Elderly in New Mexico Richard N. Baumgartner, Kathleen M. Koehler, Dympna Gallagher, Linda Romero, Steven B. Heymstleld, Robert R. Ross, Philip J. Garry, and Robert D. Lindeman, American Journal of Epidemiology, Vol. 147, No. 8, 1998 DOI: 10.1093/oxfordjournals.aje.a009520 ***Key Point:** This study confirms that relative muscle mass is significantly lower in elderly persons than in younger adults and that it decreases with age among persons older than 65 years.	Apr-98					X									