

# CT For Bone Densitometry QCT

**CPT: 77078**

NOTE: This is an alternative method to DXA. The decreased radiation dose and cost make DXA preferable 1 Prior exams performed using QCT 2 Child under age of 18 3 Severe spinal degeneration 4 Vertebral compression fractures 5 Spinal deformities 6 Scoliosis 7 Previous spinal surgeries 8 Chronic steroid therapy (prednisone, corticosteroids) 9 Large body habitus (>35 BMI)

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## 10.1 Hyperparathyroidism

10.2 Osteoporosis

10.3 Steroid therapy

11 Evaluating bone quality

- Vicente Gilsanz, Francisco J. Perez, Patricia P. Campbell, Frederick J. Dorey, David C. Lee, and Tishya A. L. Wren Quantitative CT Reference Values for Vertebral Trabecular Bone Density in Children and Young Adults Radiology January 2009 250:222-227
- H. K. Genant, K. Engelke, and S. Prevrhal Advanced CT bone imaging in osteoporosis Rheumatology (2008) 47(suppl 4): iv9-iv16 doi:10.1093/rheumatology/ken180
- Huda, W, Morin, R L Patient doses in bone mineral densitometry Br J Radiol 1996 69: 422-42 'BMD patient doses are at the lower end of the exposure range encountered in diagnostic radiology. As a result, radiation dose is not a primary factor in choosing the method for BMD determination
- Li N et al. "Comparison of QCT and DXA: Osteoporosis Detection Rates in Postmenopausal Women". International Journal of Endocrinology. Vol 2013; p 1-5.  
<https://onlinelibrary.wiley.com/doi/10.1155/2013/895474>
- Finkelstein JS, Yu EW. "Patient Education: Bone Density Testing". Up To Date. Sep 29, 2023.  
<https://www.uptodate.com/contents/bone-density-testing-beyond-the-basics/print#:~:text=Osteoporosis%20is%20much%20more%20common,types%20of%20bone%20density%20tests>

## References

1. Vicente Gilsanz, Francisco J. Perez, Patricia P. Campbell, Frederick J. Dorey, David C. Lee, and Tishya A. L. Wren Quantitative CT Reference Values for Vertebral Trabecular Bone Density in Children and Young Adults Radiology January 2009 250:222-227
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