What is already known on this topic

Multiple myeloma is an important differential diagnosis in patients with suspected osteoporosis as it affects patients of the same age and often causes bone fragility

Monoclonal gammopathy of undetermined significance is a benign disorder, but patients should be monitored for progression to malignancy

What this study adds

One in 20 patients presenting with osteoporosis have an M component in serum

Multiple myeloma is 75 times more common in patients with osteoporosis

Measurement of M component in serum may be particularly important in patients with fragility fractures

common in patients with osteoporosis compared with people with normal bone mineral density or osteopenia, stratifying for bone mineral density within the group with osteoporosis did not provide additional information. The three patients with multiple myeloma, however, all had evidence of established osteoporosis, suggesting that measurement of M component may be informative in this group.

Referral patterns vary between osteoporosis clinics, depending on guidelines and the availability of bone densitometry. In our clinic, 46% of referred patients fulfilled the World Health Organization definition of osteoporosis. This agrees closely with the 41% to 53%[9 10] reported by clinics in the United Kingdom and United States.[11] The most important limitation of our study was that we could not calculate the false negative rate. To do this we would have had to rule out non-secretory myeloma and light chain disease by carrying out skeletal x rays and marrow biopsies in all patients with osteoporosis referred to our clinic. It is possible, however, to estimate the number of false negative tests by extrapolating from Mayo clinic data on the distribution of multiple myeloma subtypes at diagnosis.

The number of patients with multiple myeloma in our study is a conservative estimate, because we did not assess urine Bence-Jones protein. Light chain disease, however, is less common and the expense would be greater. Thus, about 600 urine analyses would be needed to diagnose a single case of light chain multiple myeloma in patients with osteoporosis if 20%[12] of cases of secretory multiple myeloma are of the light chain variant.

We know from other studies that normal bone mineral density does not rule out multiple myeloma,[13 14] but owing to the low prevalence of the disease in referred patients without osteoporosis, we cannot make a strong case for vigilance for M component in the absence of osteoporosis.

Contributors: See bmj.com

Funding: BA is the recipient of a clinical research grant from the Novo Nordisk Foundation.

Competing interests: None declared.

Ethical approval: Not required.

1 Nordic Myeloma Study Group. Vårdprogram for myelomatose. www.nordic-myeloma.org (accessed 1 December 2004).
2 *Cancer incidence in Denmark 1999*. Copenhagen: National Board of Health, 2003.
3 Attal M, Harousseau JL, Stoppa AM, Sotto JJ, Fuzibet JG, Rossi JF, et al. A prospective, randomized trial of autologous bone marrow transplantation and chemotherapy in multiple myeloma. Intergroupe Francais du Myelome. *N Engl J Med* 1996;335:91-7.
4 Blade J, Munoz M, Fontanillas M, San Miguel J, Alcala A, Maldonado J, et al. Treatment of multiple myeloma in elderly people: long-term results in 178 patients. *Age Ageing* 1996;25:357-61.
5 Oken MM, Harrington DP, Abramson N, Kyle RA, Knospe W, Glick JH. Comparison of melphalan and prednisone with vincristine, carmustine, melphalan, cyclophosphamide, and prednisone in the treatment of multiple myeloma: results of Eastern Cooperative Oncology Group Study E2479. *Cancer* 1997;79:1561-7.
6 Genvresse I, Lange C, Schanz J, Schweigert M, Harder H, Possinger K, et al. Tolerability of the cytoprotective agent amifostine in elderly patients receiving chemotherapy: a comparative study. *Anticancer Drugs* 2001; 12:345-9.
7 Genvresse I, Wedding U, Bokemeyer C, Spath-Schwalbe E. [Treatment of multiple myeloma in elderly patients: consensus of the Geriatric Oncology Working Group of the German Society of Hematologic Oncology and the German Society of Geriatrics]. *Onkologie* 2001;24:386-90.
8 Gregersen H, Mellemkjaer L, Ibsen JS, Dahlerup JF, Thomassen L, Sorensen HT. The impact of M-component type and immunoglobulin concentration on the risk of malignant transformation in patients with monoclonal gammopathy of undetermined significance. *Haematologica* 2001;86:1172-9.
9 Sim MF, Stone M, Johansen A, Ho P, Pettit RJ, Evans WD. An analysis of an open access general practitioner bone densitometry service. *Int J Clin Pract* 2004;58:300-5.
10 Nelson DA, Molloy R, Kleerekoper M. Prevalence of osteoporosis in women referred for bone density testing: utility of multiple skeletal sites. *J Clin Densitom* 1998;1:5-12.
11 Ben Sedrine W, Broers P, Devogelaer JP, Depresseux G, Kaufman JM, Goemaere S, et al. Interest of a prescreening questionnaire to reduce the cost of bone densitometry. *Osteoporos Int* 2002;13:434-42.
12 Kyle RA, Gertz MA, Witzig TE, Lust JA, Lacy MQ, Dispenzieri A, et al. Review of 1027 patients with newly diagnosed multiple myeloma. *Mayo Clin Proc* 2003;78:21-33.
13 Roux S, Bergot C, Fermand JP, Frija J, Brouet JC, Mariette X. Evaluation of bone mineral density and fat-lean distribution in patients with multiple myeloma in sustained remission. *J Bone Miner Res* 2003;18:231-6.
14 Abildgaard N, Brixen K, Kristensen JE, Vejlgaard T, Charles P, Nielsen JL. Assessment of bone involvement in patients with multiple myeloma using bone densitometry. *Eur J Haematol* 1996;57:370-6.

(Accepted 14 January 2005)

doi 10.1136/bmj.38376.401701.8F

Corrections and clarifications

Short cuts: What's new in the other general journals
We lost a decade somehow when, in the 12 March issue, we cited the reference to the last item ("Review supports more optimistic view of phase I trials in adults with cancer") in this section (*BMJ* 2005;330:561-2). The article about risks and benefits of phase 1 oncology trials was of course published this year, not in 1995. The correct reference is therefore *New England Journal of Medicine* 2005;352:895-904.

Cognitive behaviour therapy for adolescents with chronic fatigue syndrome: randomised controlled trial
In the paper by Maja Stulemeijer and colleagues the drop-out rate from treatment in the group allocated to immediate cognitive behaviour therapy was given as 19% (*BMJ* 2005;330:14-7, 1 Jan). This should have been 17% (6/35). Also, in the footnote to table 4 (full version only) the cut-off score on the fatigue was given as ≥35.7. As the paper indicates that patients were considered to be improved if the score was <35.7, reflecting less fatigue, the cut off in the footnote would be better presented as <35.7 to match the presentation in the text.