South Central Priorities Committees
(Berkshire PCTs)

Policy Statement 123: **Serum P1NP measurement in the management of osteoporosis**
RefTV111

Date of Issue: **February 2008**

The South Central Priorities Committees have reviewed the evidence for serum P1NP measurement in the management of osteoporosis and consider its use to be a LOW PRIORITY due to lack of evidence of clinical and cost effectiveness.

Osteoporosis is an asymptomatic skeletal disease in which low bone mass leads to significantly increased risk of fracture. 2% of women aged 50 and over have osteoporosis and prevalence rises to 25% in women over 80. Diagnosis of osteoporosis is made by DXA scan. Drug treatment has been shown to increase bone density and reduce fracture risk. Long term compliance with drug treatment is poor. Interventions to increase compliance could reduce the risk of fracture. DXA scan is not a suitable technique for monitoring response to treatment.

Serum P1NP is one of a number of biochemical markers of bone turnover that could be measured to monitor compliance and response to drug therapy. There are no trials looking at the role of serum P1NP measurement in the management of any group or sub-group of patients on long term drug treatment for osteoporosis.

A randomized controlled trial comparing urinary marker measurement with no measurement in post-menopausal women on drug treatment showed that women who had positive marker results were more likely to persist with treatment than women who did not have marker measurement. However, women who had negative marker results were more likely to give up treatment than those who had no marker measurement.

A small randomized trial on post-menopausal women on drug treatment compared 'nurse monitoring' with 'urinary marker measurement and nurse monitoring' and 'no monitoring'. Patients in the 'nurse monitoring' and 'marker and nurse monitoring' groups were more likely to persist with treatment than those with 'no monitoring'. However, both monitored groups were equally likely to persist – marker measurement made no difference to compliance.

There are no trials looking at the role of monitoring by any marker test in specific groups such as patients considering 'drug holidays' from long term treatment or patients on teriparatide treatment.

There is no trial evidence showing any impact of treatment monitoring (by any method) on fracture rates.

In conclusion, it is possible that monitoring response to treatment of osteoporosis could help improve compliance with treatment and, ultimately, reduce fracture risk. However, the evidence does not currently show that this is the case or that the cost of such testing would be a cost effective use of resources. The use of monitoring by any means cannot therefore currently be supported as part of routine clinical services. The South Central Priorities Committees recommend that the role of monitoring in improving compliance and reducing fracture risk should be investigated through appropriately designed and funded research trials.

NOTES:
1. *Exceptional circumstances may be considered where there is evidence of significant health impairment and there is also evidence of the intervention improving health status.*
2. *This policy will be reviewed in the light of new evidence or guidance from NICE.*
3. *Berkshire Priorities Committee policy statements and minutes can be viewed at www.berkshire.nhs.uk/priorities*