Care Pathway for identification and Management of Osteoporosis

NHS
Middlesbrough
Redcar and Cleveland

Target Groups for Assessment

The more risk factors that are present, the greater the risk. Increasing age (esp ≥ 70 yrs) and being a postmenopausal woman also increases risk but alone are not sufficient to begin therapy/ DXA scanning.

Major Risk Factors	Other Significant Risk Factors
Previous fragility fracture Parental history of hip fracture Regular glucocorticoid use Untreated Premature menopause Male hypogonadism **Malabsorptive or nutritional**: inflammatory bowel disease, coeliac disease, anorexia nervosa Transplantation and Chronic Renal Failure Long-term immobilisation BMI < 18kg/m^2 (<22kg/m^2 for postmenopausal women)	Rheumatoid Arthritis Ankylosing spondylitis **Some antiepileptics**: carbamazepine, phenytoin, phenobarbital, primidone **Other Endocrine disorders**: poorly controlled hyperthyroidism, , primary hyperparathyroidism Osteomalacia Loss of height > 3cm **Lifestyle**: inadequate sun exposure, poor calcium Intake, smoking, alcohol excess (≥4 units/day)

The list above is not exhaustive. Further information can be found at: www.**nice**.org.uk www.**nos**.org.uk www.**rcp**london.ac.uk www.**sign**.ac.uk

Men
See notes overleaf

Pre-menopausal women
See notes overleaf

Postmenopausal women
Refer to treatment pathway **Fracture Prevention in Postmenopausal Women**

Glucocorticoid Therapy for ≥ 3 months
Refer to treatment pathway **Prevention and Treatment of steroid induced Osteoporosis**

Assess Fracture Risk
Use FRAX tool (www.shef.cc.uk/FRAX) to estimate 10 year probability of fracture and NOGG.

Lifestyle advice
Provide advice on diet, smoking, alcohol, exercise. Consider falls risk assessment/advice (≥ 65 years)

Refer for DEXA
Many patients over 75 may be unable to attend for DEXA because of pain or poor health. DEXA is not essential for assessing fracture risk in these individuals, but is useful for monitoring response to therapy, determining the extent of bone loss and selection of appropriate therapy.

Diagnosis of osteoporosis from DEXA
Follow advice from secondary care. Also see overleaf – may require referral to secondary care for further input.

Primary Care Follow-up
Assess patient compliance with treatment after 3 months.
If a baseline DXA is performed and treatment initiated, then a repeat DXA should be requested usually after 3-5 years, but advice will be given on the DXA report to assess the response to therapy. It will also allow better decisions on alternative therapies if bisphosphonates are contra-indicated or the patient is unable to tolerate them.

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Supporting Notes

1. Referrals

The bone clinics are held on Friday morning in the Department of Rheumatology at James Cook University Hospital. They are run by Dr. Tuck, Dr. Fordham and Dr Drury. Dr. Tuck has a particular interest in male osteoporosis. The department is happy to see any patient with osteoporosis or other metabolic bone conditions. It is reccommended that the following patients are referred to secondary care:

- all men with osteoporosis
- premenopausal women with osteoporosis
- anyone who fails to respond to initial therapy
- anyone with exceptionally low BMD (eg. T-score<-3 in the under 75 year old group and <-4 in the over 75 year olds)
- patients with Paget's disease, hyperparathyroidism, osteogenesis imperfecta, children with osteoporosis etc.
- anyone with a z-score score<-2 (very low BMD for age).

2. Initial therapy

Oral alendronate (generic 70mg weekly) is the first line of therapy. If this is not tolerated or it is contra-indicated then next line would be risedronate and then strontium. Referral to secondary care may be considered if patient fails to respond to initial therapy with a view to alternatives inlcuding densosumab, zoledronate etc. Intravenous zolendronate (secondary care only) may be used following a hip fracture if patient unable or unwilling to take oral bisphosphonates (only treatment demonstrated to reduce mortality in this patient group).

3. Monitoring of treatment

Best means of monitoring response is a repeat DXA scan generally after 3-5 years to allow an adequate change in bone mineral density to have occurred. It is currently not recommended to rely upon bone turnover markers alone to assess response.

4. Failure of response

Treatment failure is said to have taken place when the BMD falls significantly from baseline or if further fractures take place despite an adequate trial of drug treatment. However, it is important to realise that even the best treaments will only decrease the fracture rate (generally between 30% and 60% for oral bisphosphonates).

5. A note on calcium and vitamin D

Calcium and vitamin D supplementation should be routinely provided alongside osteoporosis treatment unless clinicians are confident that individuals have adequate calcium intake and are vitamin D replete. Products which will provide 1000mg of calcium (elemental) and 800IU of vitamin D per day should be chosen. Calcium and vitamin D supplementation also appears to be beneficial in reducing fracture rates in high-risk individuals such as frail and institutionalised elderly.

6. A note on men

Men who sustain a low trauma fracture or have DXA defined osteoporosis with a T-score< -2.5 have a 50% risk of having a secondary cause, e.g. hypogonadism. The WHO definition of osteoporosis (T-score< -2.5) has not been substantiated in men although it is widely accepted. Men with a T-score in the osteopaenic range may still need treatment if they have had a low trauma fracture. Low trauma fractures in men includes distal forearm (Colles' fracture), as well as hip and vertebral.