Osteoporosis clinic referral guidance for GPs

GPs should consider referring patients to the local osteoporosis clinic for the following reasons:-

1. Intolerance of oral bisphosphonates

In patients found to be intolerant of oral bisphosphonates to treat osteoporosis, it may be appropriate to refer the patient to consider alternatives such as sc denosumab or IV zoledronate; due to their route of administration, the latter agents lack gastrointestinal side effects which commonly lead to discontinuation of oral bisphosphonates. However, the following should be considered before referring the patient:-

- Patients are not necessarily intolerant of all bisphosphonates; it's worth trying alendronate, risedronate and ibandronate, and only referring if the patient is found to be intolerant of all three agents.
- sc denosumab and IV zoledronate overcome oral tolerability problems, but not others. For example, the risk of osteonecrosis of the jaw is if anything greater than for all oral bisphosphonates, and oral bisphosphonates are at least as safe in the context of chronic kidney disease
- The justification for treatment is different in the case of sc denosumab and IV zoledronate compared to oral bisphosphonates. For example, it may be reasonable to commence a postmenopausal woman with a low trauma fracture on an oral bisphosphonate without having had a DXA scan. However, if a patient is being considered for sc denosumab and IV zoledronate to treat osteoporosis, an up to date DXA needs to have been performed first, with the result clearly demonstrating the need for treatment.
- Even when results demonstrate osteoporosis or high risk, conservative treatment may be an option in borderline cases. This is particularly the case in a patient who is yet to sustain a fracture. It may be easier to discuss individual cases via advice and guidance.

2. Treatment failure

- Oral bisphosphonates reduce the risk of non-vertebral fractures by around 30%. A substantial proportion of patients taking oral bisphosphonates are expected to have a further non vertebral fracture, but this doesn't necessarily indicate treatment failure.
- Patients receiving treatment for osteoporosis should be referred to consider alternatives if they have evidence of treatment failure as suggested by (i) a vertebral fracture; (ii) a hip fracture; (iii) two or more non vertebral fractures; (iv) a significant decline in BMD

3. Completing 5 years of denosumab treatment

- We would recommend following advice given in the algorithm to assess denosumab drug holiday. If your patient falls outside the criteria described then it would be sensible to seek further advice from your local osteoporosis service.

4. Severe osteoporosis

As well as being helpful in managing patients unable to tolerate oral bisphosphonates, sc denosumab and IV zoledronate are more effective at treating osteoporosis compared to oral bisphosphonates, especially in reducing the risk of further vertebral fractures. Other forms of treatment may also be used in severe osteoporosis, namely daily teriparatide injections, combination treatment (eg denosumab + teriparatide), and romosozumab Therefore, it is important to identify patients with relatively severe osteoporosis, in whom 'second line' therapies need to be

considered, even in those able to tolerate oral bisphosphonates. The following are indicators of relatively severe osteoporosis requiring referral:-

- Two or more vertebral fractures in the absence of an obvious trauma
- Very low BMD (T score below -3.5)

5. Other reasons for referral
    - Unusual forms of osteoporosis eg onset less than 50 years of age in the absence of a known underlying cause, atraumatic vertebral fractures despite normal BMD
    - Other bone disorders
        - Osteogenesis imperfecta
        - Paget's disease
        - Osteomalacia
        - Fibrous dysplasia
        - Metabolic bone diseases