Imperial College Healthcare NHS Trust

ICHT Fracture Liaison Service

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SESSION 1 : Objectives

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- **CLARIFY** The prevalence & impact of osteoporosis
- **INTERPRET** National clinical guidelines within FLS design
- **EXPLAIN** The ‘5iQ model’ (ROS)
- **FUNCTION** The 5iQ model : cross-boundary working practices to support & enhance care
- **ICHT FLIC** Service update

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The 'How & Why' of an effective Fracture Liaison Service

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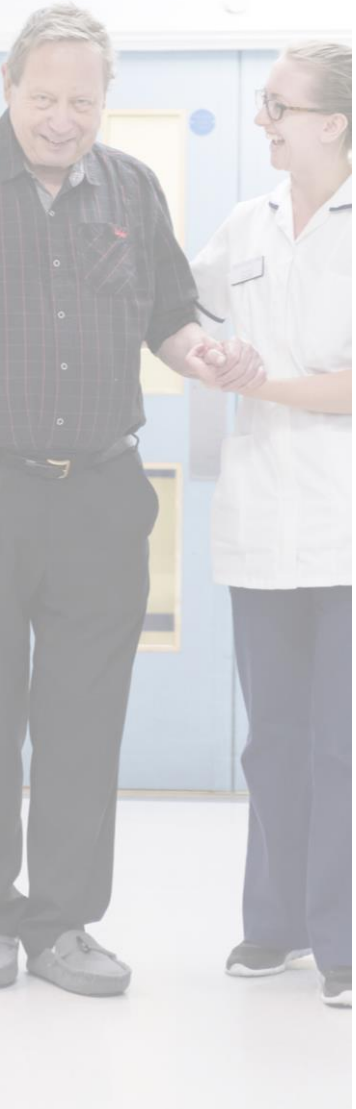
Osteoporosis : *the forgotten Long-Term Condition*



'… a "progressive systemic skeletal disease characterised by low bone mass & micro-architectural deterioration to bone tissue, with consequently increased bone fragility & susceptibility to fracture.."

(Kanis et al 1994)

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Osteoporosis :

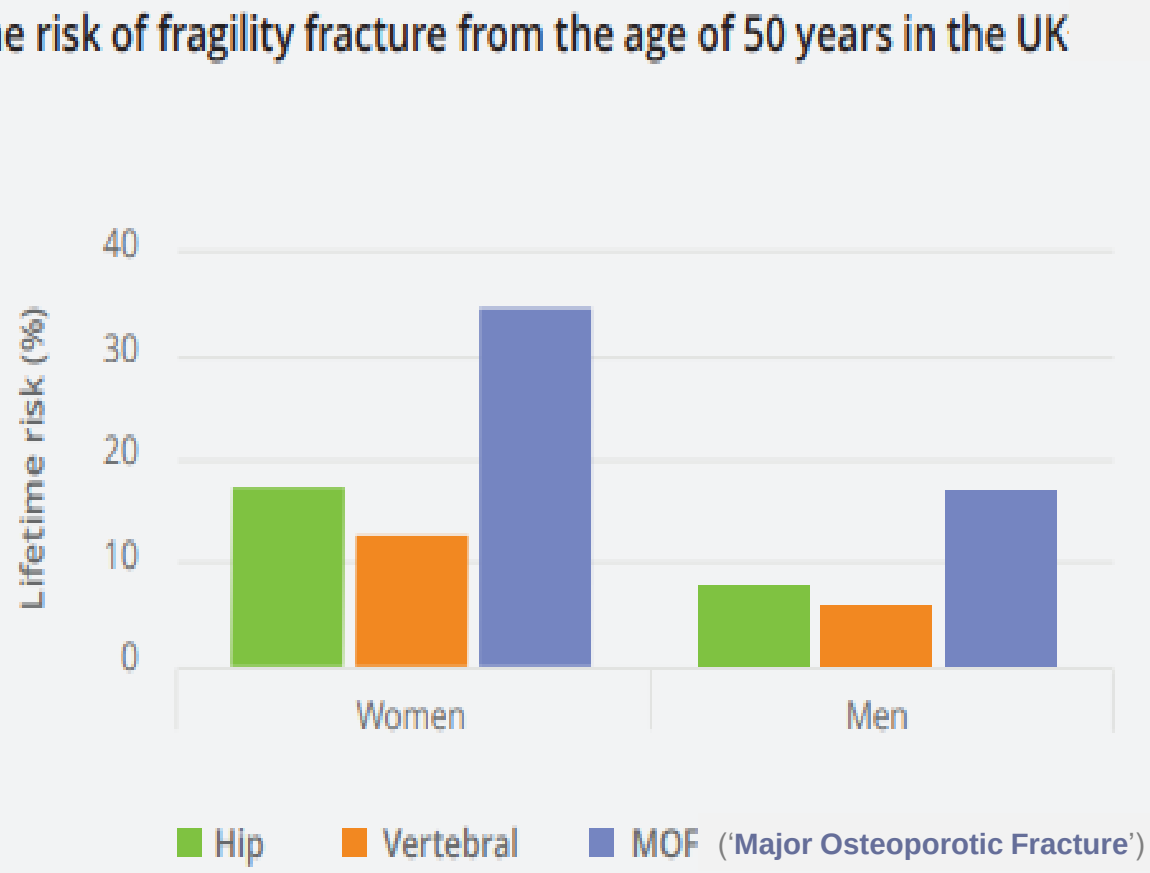
50% of **Females** and **20%** of **Males**

will sustain one or more

Osteoporotic Fractures

during their lifetime

Fragility Fracture Risk (age 50+)



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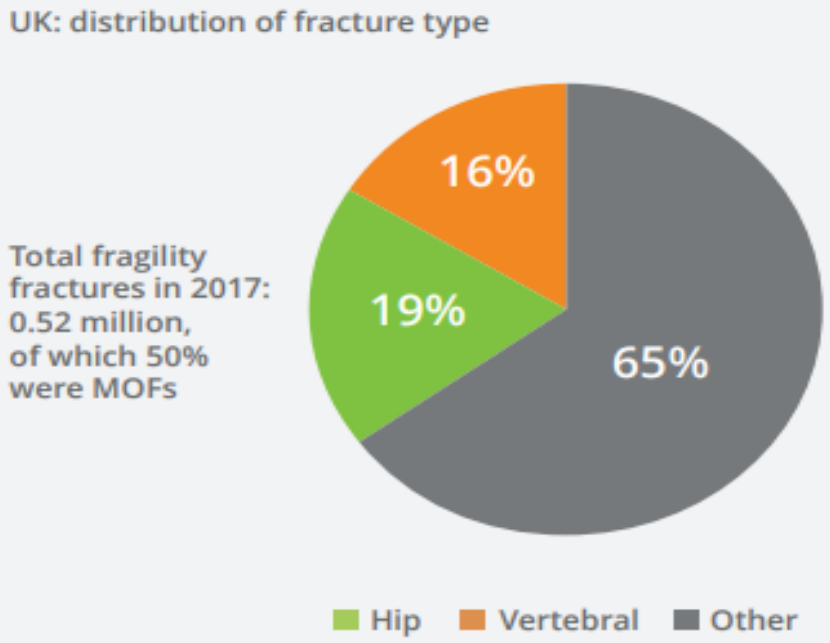
Hip Fractures in perspective:

Estimated number of fragility fractures in the UK in 2017 and the EU6, by fracture category



65% of **lost opportunity** to effectively **prevent Hip Fracture**

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Osteoporosis : Pain. Fear. Vulnerability. Reduced Outcomes. Increased Morbidity & Mortality.

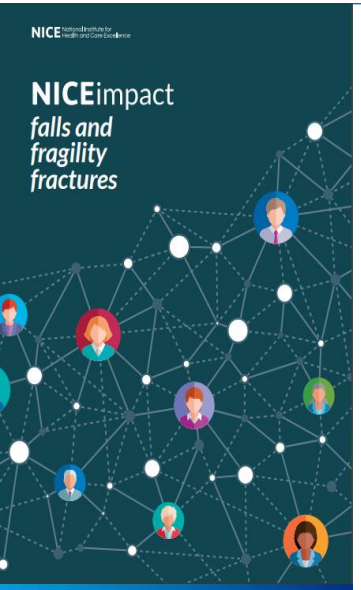
- ⇧ **Re-fracture risk** - **5-fold increased risk**
- ⇧ **Escalating problem** - ⇧ **30%** by **2030** : cost = **£5.89bn** (2030)

FACT 1: **Osteoporosis** disease burden **exceeds** that of **COPD** & **Ischaemic Stroke**

FACT 2: **Osteoporosis** - the **4th leading cause** of **Chronic Disease** morbidity

FACT 3: **Osteoporosis** = **560k fractures** per annum at a cost of **£4.52bn** (2017)

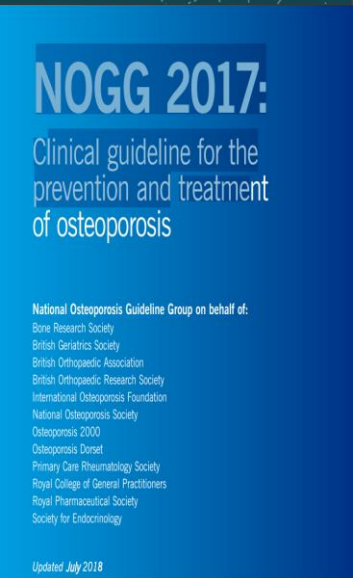
DOH / NICE:

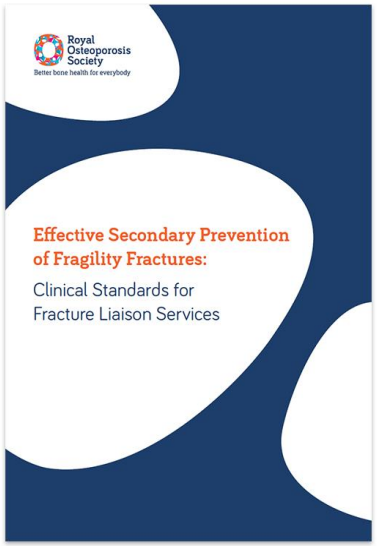


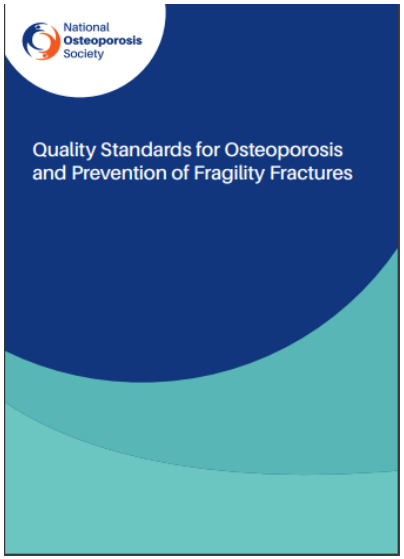
‘.. a ***major health priority*** **…** ***serious*** *clinical* ***consequences*** *&* ***escalating*** *health care* ***costs..***

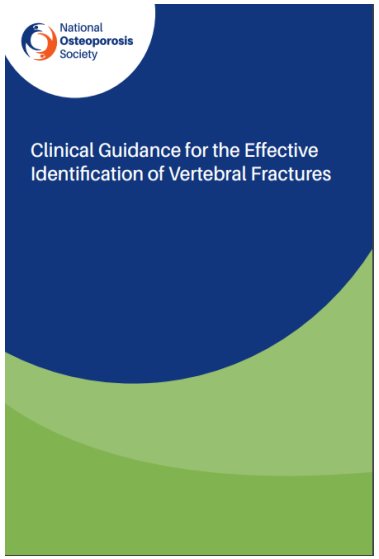
Patients at high ***risk*****,** *including those with prior fragility fracture history, may not be sufficiently* ***well-managed*** *to* ***prevent*** *further fracture.’*

(NICE 2018)









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FLS: the rationale

Clinical Guidance & Standards

Prevention & Treatment

Secondary Prevention

Vertebral fracture identification & management

Reducing Risk & Incidence of Fractures

Systematic case finding / optimised management reduces clinical fracture risk

by

50%

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Guidelines & Quality Standards

- **NICE: CG149**

  Osteoporosis: Assessing the risk of Fragility Fracture (2017)

- **NICE: QS149**

  Osteoporosis Quality Standard (2017)

- **NOGG**

  Clinical Guidelines for the Prevention & Treatment of Osteoporosis (2017)

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NICE: CG149

Fragility fractures result from mechanical forces which would not ordinarily result in fracture – a **'low-level'** or **'low energy' trauma***

*quantified as force equivalent to a fall from a standing height or less (WHO)

Fragility fractures most commonly occur in the **vertebrae**, **hip** and **wrist** but **may** also **occur** at the **humerus**, **pelvis** & other bones.

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NICE: QS149

Quality statements

- Statement 1 Adults who have had a fragility fracture, or use systemic glucocorticoids or a history of falls, have a fracture risk assessment.
- Statement 2 Adults at high risk of fragility fracture are offered drug treatment to reduce risk.
- Statement 3 Adults prescribed such treatment are asked about adverse effects & adherence at each medication review.
- Statement 4 Adults having long-term bisphosphonate therapy have a review of the need for continuing treatment* (*at 5 years – ROS 2019).

NOGG: Patient Identification

- **A case-finding strategy** where patients are identified due to a fragility fracture or by the presence of clinical risk factors
- **Fracture risk** should be assessed in postmenopausal women and men aged >50ys with risk factors***,** where assessment would influence management

***Primary**:	age, sex, BMI, # hx, parental hip #, steroids, smoking, alcohol intake
***Secondary**:	RA, T1DM, Hyperthyroidism, hypogonadism, early menopause, chronic: malabsorption, liver disease, malnutrition

NOGG : patient assessment

History and Physical Examination

- **Bloods**: FBC, Bone Profile, Renal Profile, TFTs, LFTs, Vitamin D, Coeliac / Myeloma MGUS Screens, P1NP, PTH, [PSA]
- **Family History** Fracture History, Medical History, lifestyle (inc. Alcohol / smoking / BMI etc), Falls history
- **Bone densitometry**
- [finish up with link to the next page – FRAX & TREATMENT]

FRAX & NOGG (National Osteoporosis Guideline Group)

FRAX & NOGG

Please remember:

FRAX’®

Is a widely-used predictive tool, but does not model all scenarios or clinical risk factors

“..The probability of fracture…. may be underestimated. Fracture probability is also underestimated with multiple fractures.” (University of Sheffield)

https://www.sheffield.ac.uk/FRAX/tool.aspx

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FRAX & NOGG continued…..

NOGG

- **Treatment reviews** :
  - at Year 3 - Zoledronate infusion patients*
  - at Year 5 - Oral treatment patients

*Patients receiving injected / infused therapies (Denosumab / Teriparatide) remain under consultant care

- **Continuation** >3-5 years generally recommended for:
  - those >75y
  - those with hip or vertebral fracture history
  - those who fracture whilst on treatment
  - those taking regular oral glucocorticoids*

*Inc. those receiving 3 or more courses of oral steroids within a 12 month period - i.e. COPD exacerbations

- **If treatment discontinued** re-assess risk:
  - after further fracture (including vertebral fracture)
  - After 18m-3y if no new fracture occurs.

FLS : the ‘5iQ Model’

Royal Osteoporosis Society: 5iQ (Clinical Standards 2019)

Identify	**Age 50+** with potential fragility fracture(s)
Investigate	**Holistic** assessment, including Risk Factors
Inform	**Individualised** patient care & education
Intervene	**Cross-boundary** working (internal & external)
Integrate	**Primary & Secondary care. MDT. Third Sector.**

ICHT Service aligns to the National Clinical Standards (ROS, 2019)

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Aligning to the 5iQ Model : ICHT Service Design

2 x Clinical Nurse Specialists / Coordinators

Standard 5.1: **Identification** of fragility **fractures** & those at ⇧ risk of **re-fracture**

Standard 5.2: **Assessment, Review & Advise** to avoid the '**Fracture Cascade**'

Standard 5.3: **Optimise** treatment / management / education / patient ownership

Standard 5.4: **Systematic** follow up to monitor concordance / advice & support

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Standard 5.5: **Treatment / Management Recommendations / Third Sector : sign-posting & AHP /HCP education & engagement**

FLS - Systematic coordination / communication with primary/secondary care & associated services

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Standard 1: Identification

E-Trauma admissions portal(A&E admission)

Fracture Clinic management portal (A&E / Urgent Care Centre – all sites)

Spines referral portal (vertebral fractures)

Internal Referrals to service (FLIC team email / telephone)

Standard 2: Investigate

Mechanism of Injury / injury sustained

Medical / Medications / Fracture History & Family History

Falls history

Lifestyle Choices

Risk Factors

Blood tests / imaging (DEXA / X-Ray)

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Standard 3 : Inform

Information & Support for those identified by FLS &, where appropriate, their carers

Provide information literature in patient's spoken language

Written communication from FLS is triangulated to patients and their GPs

Third Sector Patient Support Groups / information sessions / clinic presence

Standard 4: Intervene

Interventions to Reduce the Risk of further Fragility Fractures offered as required

Medication / Falls Team review / Community Exercise Programmes

Supplementation / Dietary advice

Systematic FLS follow-up to monitor concordance & address any issues

Standard 5 : Integrate

Wider healthcare system integration to facilitate a cohesive pathway

Effective Case Finding

Onward Referrals as required

Long-term Management of Osteoporosis

FLIC: what's happened so far?

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'Live' - 13th January 2020

'Fracture routes' - reviewed daily: E-Trauma, Fracture Clinic patients & Spinal portal

Fragility Fracture patients - accepted & uploaded FLSDB = **85**

Hip # Patients - followed-up on discharge (irrespective of destination)

Liaison - between all specialties to optimise assessment, treatment / management

GP / AHP Liaison – a seamless continuum of care

Referral pathway - third sector (including exercise/strength & stability) established

Sharing of good practice with all NWL FLS Teams

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CALCIUM & VITAMIN D

Please prescribe Calcium / Vitamin D Supplementation for all patients on Bone Health medication* (*unless contraindicated)

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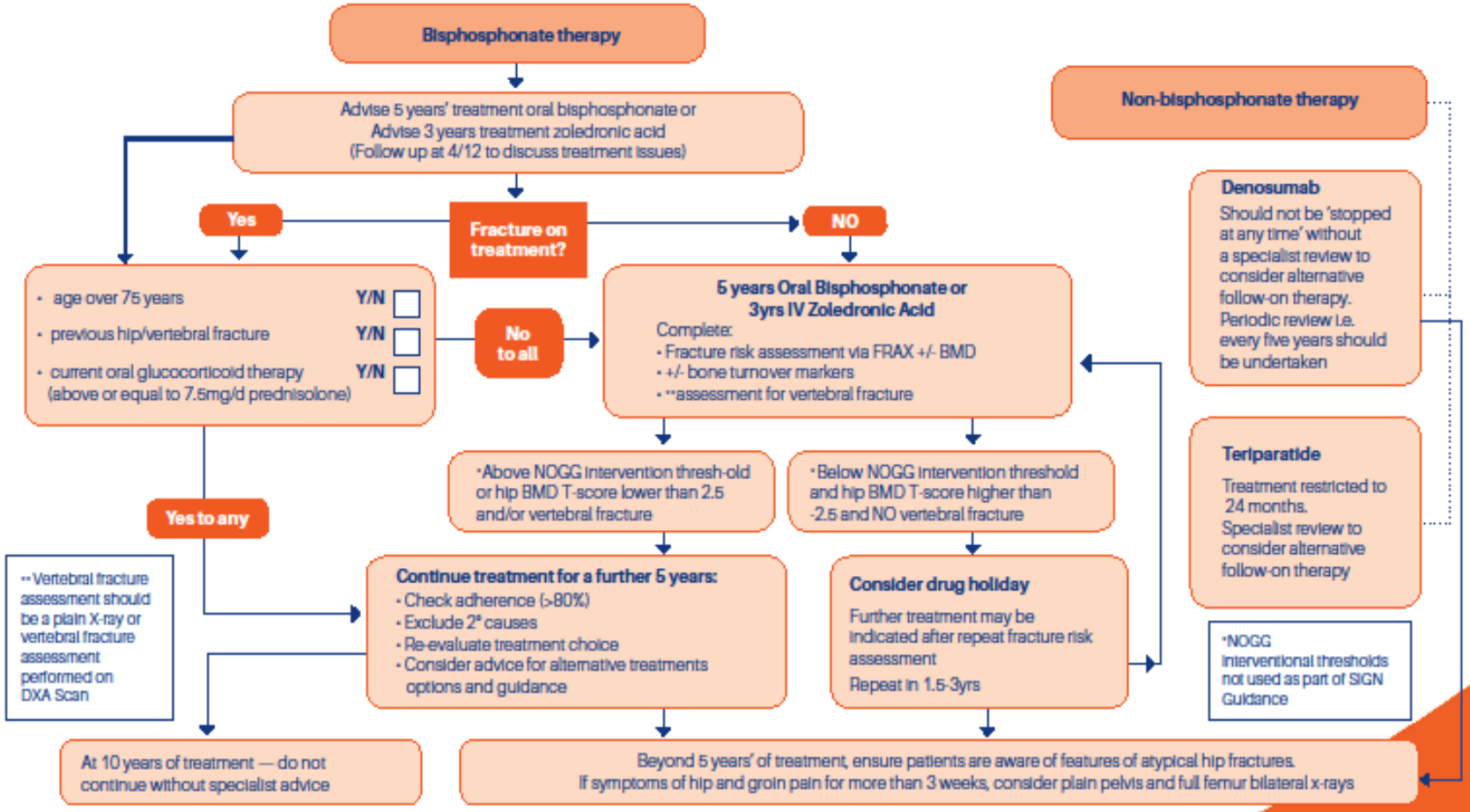
Duration of Osteoporosis Treatment

(adapted from NOGG : www.sheffield.ac.uk/NOGG/NOGG%20Guideline%202017.pdf and SIGN : www.sign.ac.uk/assets/sign142.pdf) www.sheffield.ac.uk/FRAX

Royal Osteoporosis Society

Better bone health for everybody



Not all patients will fit these scenarios, and we recommend the use of Advice and Guidance to discuss with local specialists for further advice. May be adapted locally.

June 2018

theros.org.uk

Any questions, please?