



IBEX Trueview[®]

DR Bone Health Classifier

The first major innovation in bone health since DXA

www.ibexmedical.co.uk

The “*fracture tsunami*” – a £50bn+ global problem

Financial Cost

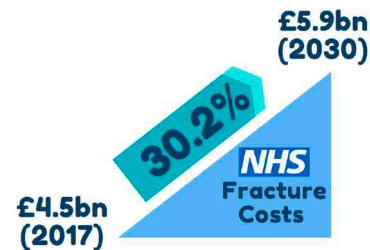
€37bn spent on fracture care in Europe in 2013



Only 5% was spent on pharmacological treatment with the remainder going on treatment and long-term care

\$25.3bn

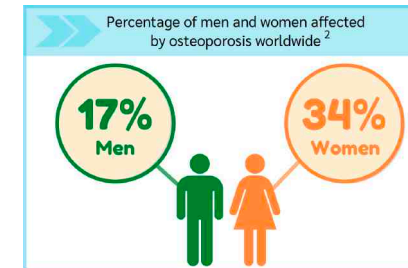
Predicted cost of 3 million US fragility fractures in 2025



Annual cost of fragility fractures for the UK NHS

Human Cost

3.5 million new fragility fractures accounted for 1,180,000 Quality-Adjusted Life Years lost in Europe during 2010



33%

1 year mortality rate for hip fractures in the UK

Following a hip fracture, quality of life is significantly impaired



40% of patients are unable to walk independently



60% have difficulty with one essential daily activity



80% are restricted in other activities e.g. driving or shopping



27% enter a nursing home for the first time

The IBEX vision to transform global bone health



A vision to reduce deaths and improve quality of life

Significantly reducing the £50bn cost of treating fragility fractures through early detection and treatment of osteoporosis in the over-50's.

Delivered by measuring bone health on every DR scan

Improving clinical referral accuracy, opportunistically identifying undiagnosed osteoporosis and creating a population-wide bone health screening program.



Significant benefits to Medical Imaging OEMs

Increased margins and market share from a valuable software add-on

Valuable retrofit opportunity for installed user base

Trueview: Unique bone health classification from DR

Robust physics modelling

Bone Health Assessment
from every DR scan

No change to clinical
protocol or X-ray hardware

Standard DR
system and
protocols



IBEXTrueview®

State-of-the-art physics
modelling and AI engine

Bone health assessment
Gridless scatter correction
Enhanced IQ

DR + Trueview: more information, better accuracy

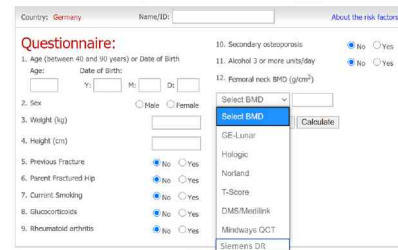
STAGE 1

INTEGRATE TO
OEM SYSTEM



STAGE 2

INCLUSION IN FRAX
TOOL

A screenshot of the FRAX tool questionnaire. It includes fields for Country (Germany), Name/ID, Age, Sex, Weight (kg), Height (cm), Previous Fracture, Parent Fractured Hip, Current Smoking, Glucocorticoids, Rheumatoid arthritis, Secondary osteoporosis, Alcohol, and Femoral neck BMD. There is a 'Calculate' button and a 'Select BMD' dropdown menu.

STAGE 3

COMBINE HIGH
RESOLUTION IMAGE

Add bone
trabecular score

More accurate
fracture risk
predictor

STAGE 4

3D FINITE ELEMENT
STRESS ANALYSIS

Utilise Trueview 3D
composition data

No high dose CT
required

STAGE 5

MASS SCREENING

Population-wide
screening

Supported by DXA



TODAY

Strong clinical buy-in for Trueview technology

“I am now convinced that this technology could make a major contribution to the identification of people with osteoporosis and at risk of fractures”



Dr Stephen Tuck
Consultant Rheumatologist
James Cook University Hospital

“The data I have seen from the study so far is fascinating and exciting, as I think it has the potential to change the way we screen individuals to assess their bone health”



Professor Amar Rangan
Professor of Orthopaedic Surgery
James Cook University Hospital



Health Care Economics

Route to market

The current landscape for bone health assessment

Dual Energy X-ray Absorptiometry (DXA)

The current gold standard for diagnosing bone health
Bone densitometry system market valued at \$1bn p.a.
Dedicated purpose, low resolution, low availability, low utility



\$170 per scan including \$115
outpatient costs

Only “at risk” patients are referred to DXA

Diagnosis limited to very small subset of the general population
No opportunistic or population-wide screening

Osteoporosis is treatable when diagnosed

Changes to lifestyle and diet
Low cost bisphosphonates treatment



\$47 p.a. per patient

Adding value throughout the care pathway

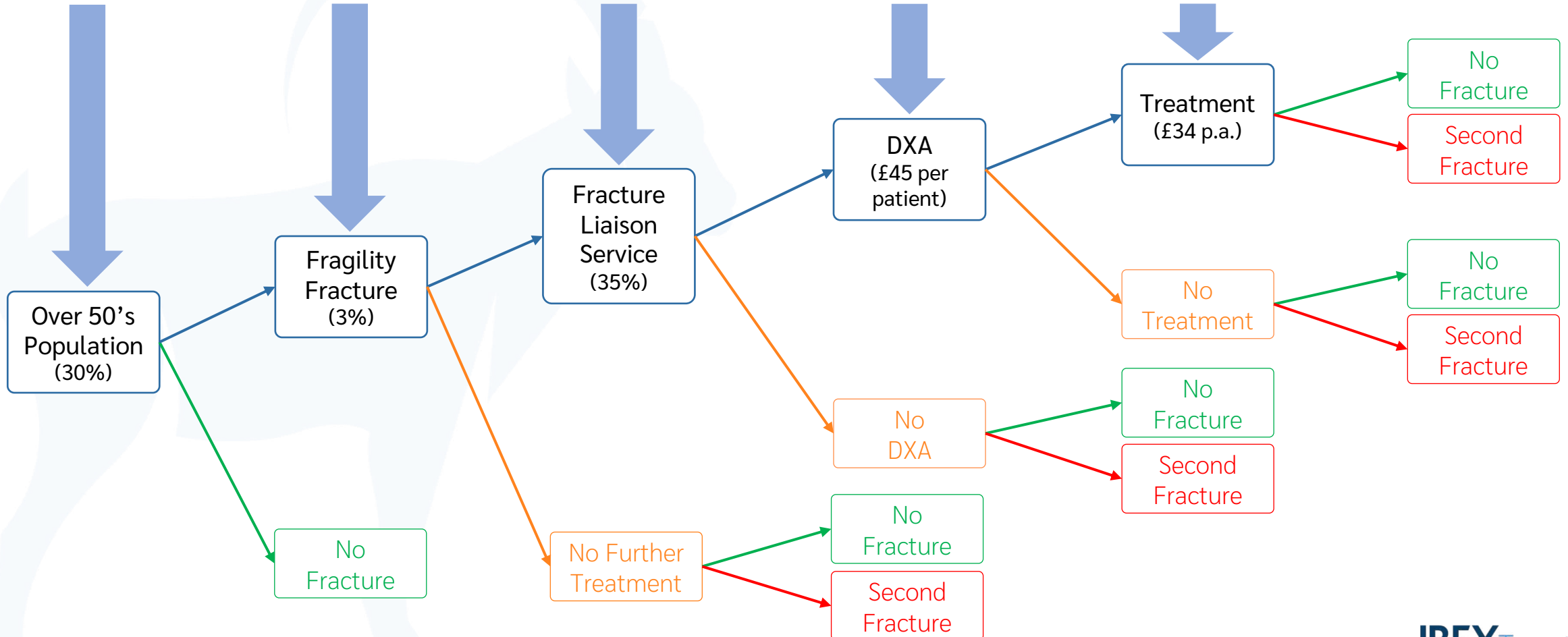
IBEX Trueview®
Primary Prevention:
Reduce first fractures with mass screening

IBEX Trueview®
Reduce secondary fractures with opportunistic screening

IBEX Trueview®
Improve coverage of FLS to 100% by assessing every patient

IBEX Trueview®
Direct more patients to DXA, more accurately

IBEX Trueview®
Combine DXA and Trueview to give better treatment decisions



Health economics confirms >£4bn opportunity

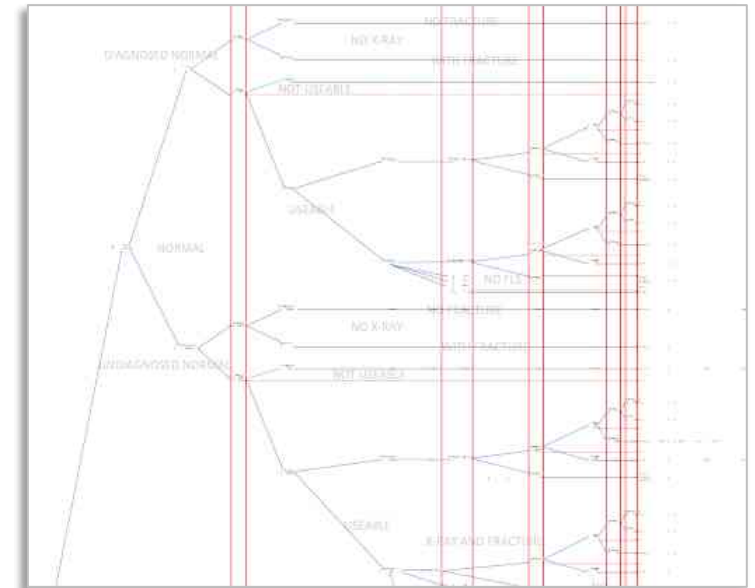
Detailed model of UK fracture clinical pathway

In collaboration with York Healthcare Economics Consortium
Models long-term financial and human impact of Trueview


Scaled to include EU & USA

Based on EU = 8x and USA = 5x


Projected over initial 10 years



£1.4bn p.a. value from improving the status quo

 **Improved CRC**
Improving referral accuracy

 **Opportunistic screening**
Access up to 48% of X-rays of the over-50's population

 **Mass screening**
Assuming 2.1% uptake per annum by over-50's population)

£234m

Initial 10-year annualised HCP cost saving

£1.13bn

Initial 10-year annualised QALY value


320,000

Reduction in fractures per year

* For combined UK, USA and EU markets

£2.5bn p.a. value from opportunistic screening

 Improved CRC
Improving referral accuracy

 Opportunistic screening
Access up to 48% of X-rays of the over-50's population

 Mass screening
Assuming 2.1% uptake per annum by over-50's population)

£136m

Initial 10-year annualised HCP cost saving

£2.39bn

Initial 10-year annualised QALY value

680,660

Reduction in fractures per year

* For combined UK, USA and EU markets

Fast HCP ROI for Opportunistic Screening

Pay-per-Use model



Cost of pay-per-use bone health classification



Time for HCP to recover the annual cost including QALY benefit



Annual UK, EU and USA revenue opportunity*

*Estimated 38m compatible opportunistic scans

Licence Model



Sales price of bone health classifier add-on



Time for HCP to recover the cost of investment including QALY benefit



Annual global OEM revenue opportunity from 15k units p.a.* and 50:50 OEM revenue split

*c. 25% of annual DR market, excluding upgrade opportunity to installed base

£4bn p.a. value from mass screening

Improved CRC
Improving referral accuracy

Opportunistic screening
Access up to 48% of X-rays of the over-50's population

Mass screening
Assuming 2.1% uptake per annum by over-50's population

£2,692m

Initial 10-year annualised HCP cost saving

£1.37bn

Initial 10-year annualised QALY value

389,600

Reduction in fractures per year

* For combined UK, USA and EU markets

£500m revenue opportunity from mass screening

The case for mass bone health screening

Osteoporosis is as deadly as breast cancer

- The lifetime risk of sustaining a hip fracture is 50% higher than of developing breast cancer
- The 2.8% lifetime risk of death from a hip fracture is equivalent to that for breast cancer
- Osteoporosis leads to more days spent in hospital than breast cancer for women over 45 years
- Despite this, breast cancer screening is the norm but no screening takes place for osteoporosis

Mass bone health screening does not require huge initial investment in new equipment

- Breast screening was adopted despite the need for development and mass deployment of new specialist equipment
- The large global DR install base could be harnessed to rapidly implement a mass bone health screening program with minimum investment

Mass screening delivered at net zero dose impact

- Trueview demonstrates the required sensitivity at just 15% of standard clinical dose
- Screening would be targeted at low radiation risk age groups and could be performed on low radiosensitivity body parts such as the forearm
- Early identification would significantly reduce multiple high dose pelvis and CT scans

IBEXTrueview® Imaging
OEM



Potential financial benefit p.a. to HCPs in UK, EU and USA



Annual OEM revenues from £50k feature on 3,000 DR systems and 50:50 revenue share with IBEX



OEM revenue opportunity from upgrading 20k installed units

Trueview - a revolution in bone health screening

£50bn global problem that can be addressed by a mass bone health screening product

Performance validated clinically

83% performance far exceeds 60% threshold for clinical adoption

Seeking strategic partnership to bring capability to market within two years





IBEXTrueview®

See more clearly

www.ibexmedical.co.uk

IBEX Innovations Limited, Explorer 2, Netpark, Sedgfield TS21 3FF, UK