



LABORATORY OF RESEARCH ON DIABETES

مختبر بحث سكري  
« LAREDIAB »

# Treatment of osteoporosis with Teriparatide (FORTEO)

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**Presented by**

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## Healthy Bones

**Normal Vertebrae**  
(Compact Bone)

**Normal Bone Structure**  
(Compact Bone)

**Femoral Head**

**Femur**

## Osteoporotic Bones

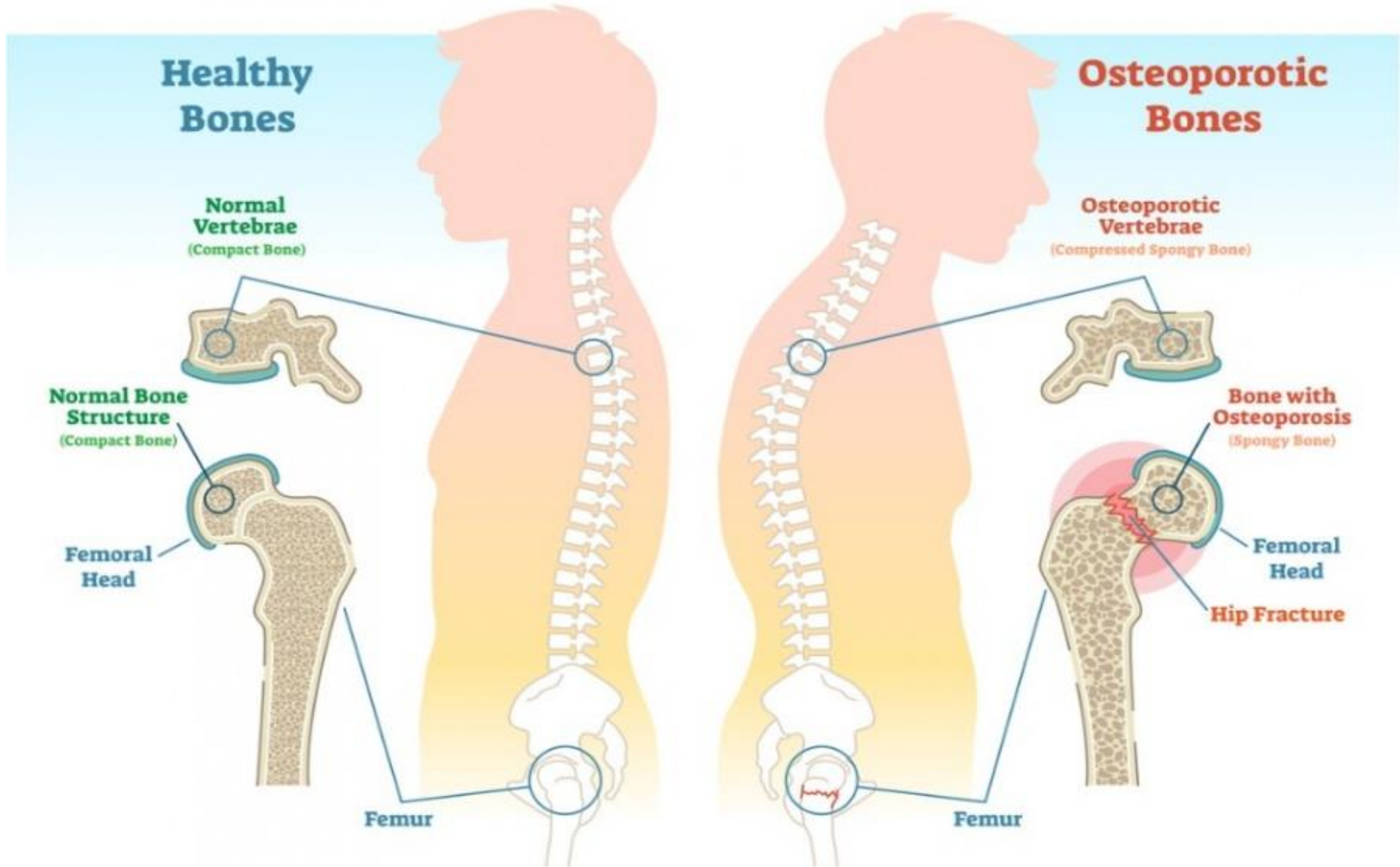
**Osteoporotic Vertebrae**  
(Compressed Spongy Bone)

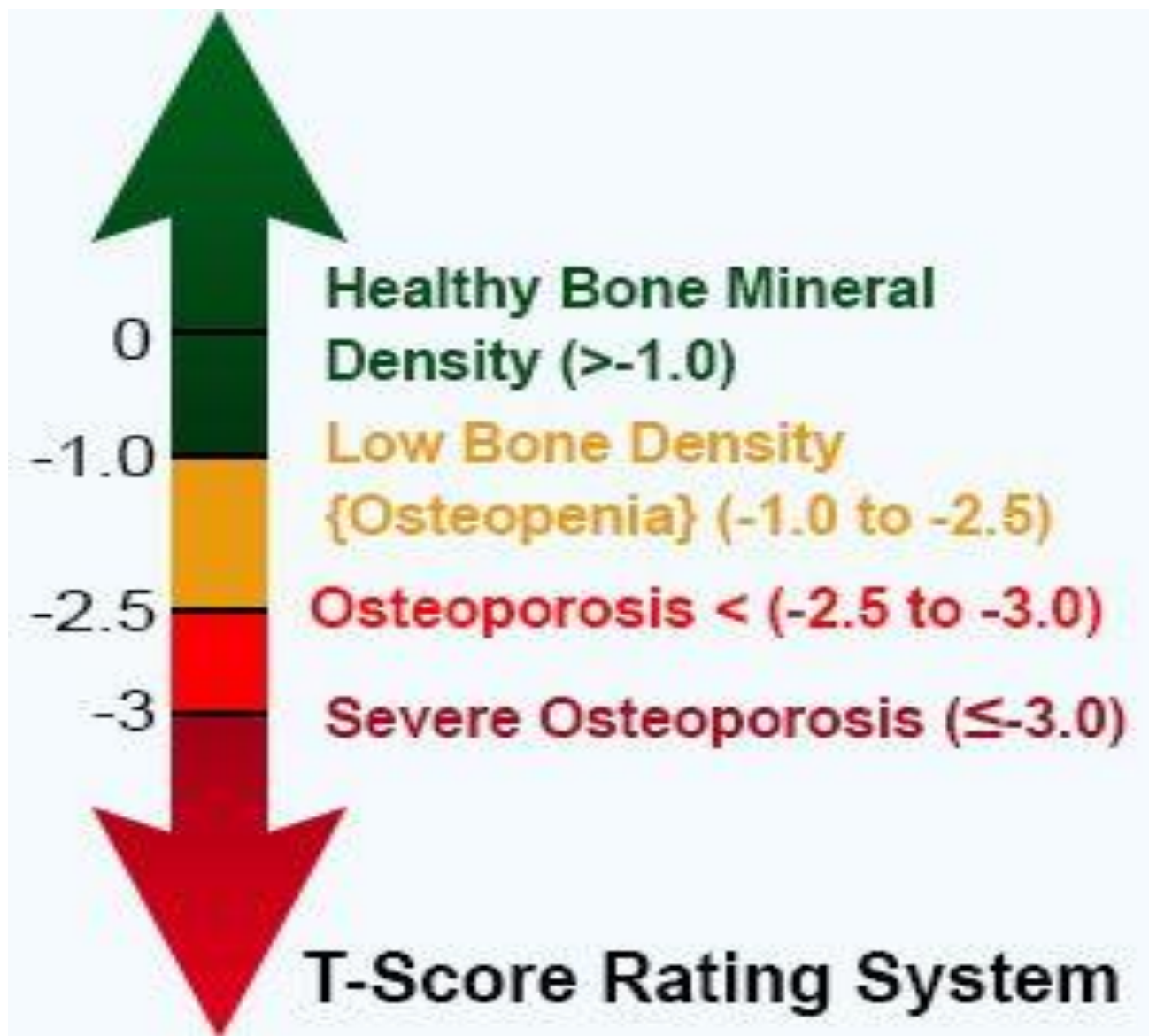
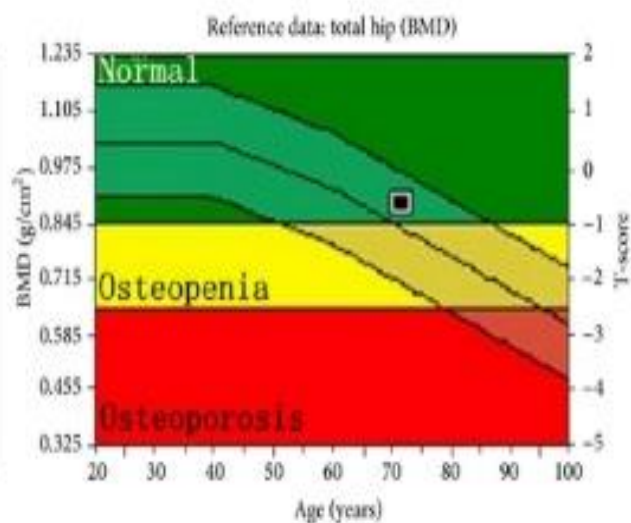
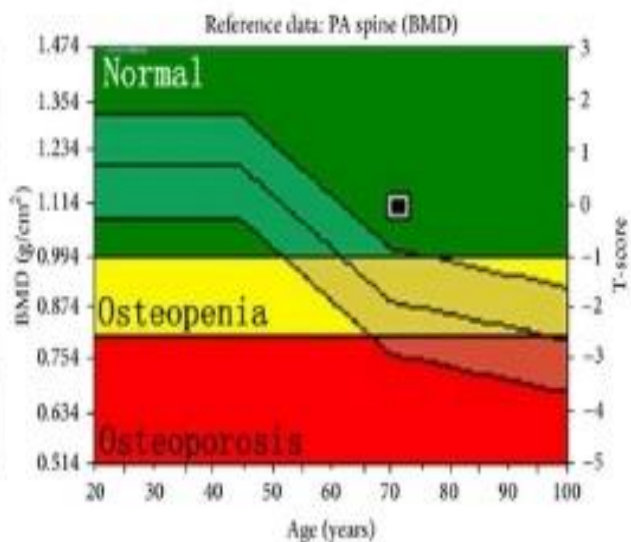
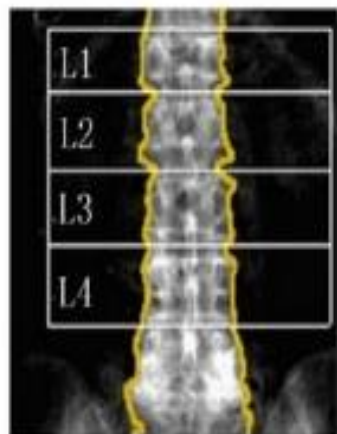
**Bone with Osteoporosis**  
(Spongy Bone)

**Femoral Head**

**Hip Fracture**

**Femur**





**Teriparatide (Forteo )** an osteoanabolic is recombinant human parathyroid hormone analog (1-34), [rhPTH(1-34)]

- Stimulate osteoplasts function
  - Increased gastrointestinal calcium absorption
  - Increases renal tubular reabsorption of Ca<sup>+</sup>
  - enhances bone turnover by initiating greater bone formation
- it's an injection subcutaneous of 20 ug /day during 18 -24 months



# Teriparatide (Forteo )

## Indications for treatment are:

- postmenopausal osteoporosis (PMO)
- corticoid-induced osteoporosis (CIO)
- severe osteoporosis.
- Presence of a risk fracture 's factor
- Increase of bone mass in men with primary or hypogonadal osteoporosis.

# Teriparatide (Forteo )

## Therapeutic Efficacy Criteria:

- no fracture Under treatment
- BDM control absence of bone loss  $0,03\text{g}/\text{cm}^2$  or more , and T scors more than 2,5

## **Objective:**

this work is to study the clinical profile of patients with osteoporosis treated with forteo.

## Methods:

4-year prospective study, we collected 18 patients 17 women and 01 men with osteoporosis and treated with forteo, the average age is 56 years

## Inclusion criteria are:

- Bone densitometry for diagnosis osteoporosis( **T-score**)
- Lateral x-rays of thoracic and lumbar spine based vertebral fracture assessment (In our practice for osteoporosis evaluation we used the Genant semiquantitative approach)
- Pre Therapeutic biological assessment liver function test , kidney function test, phosphate , calcium, vit D level



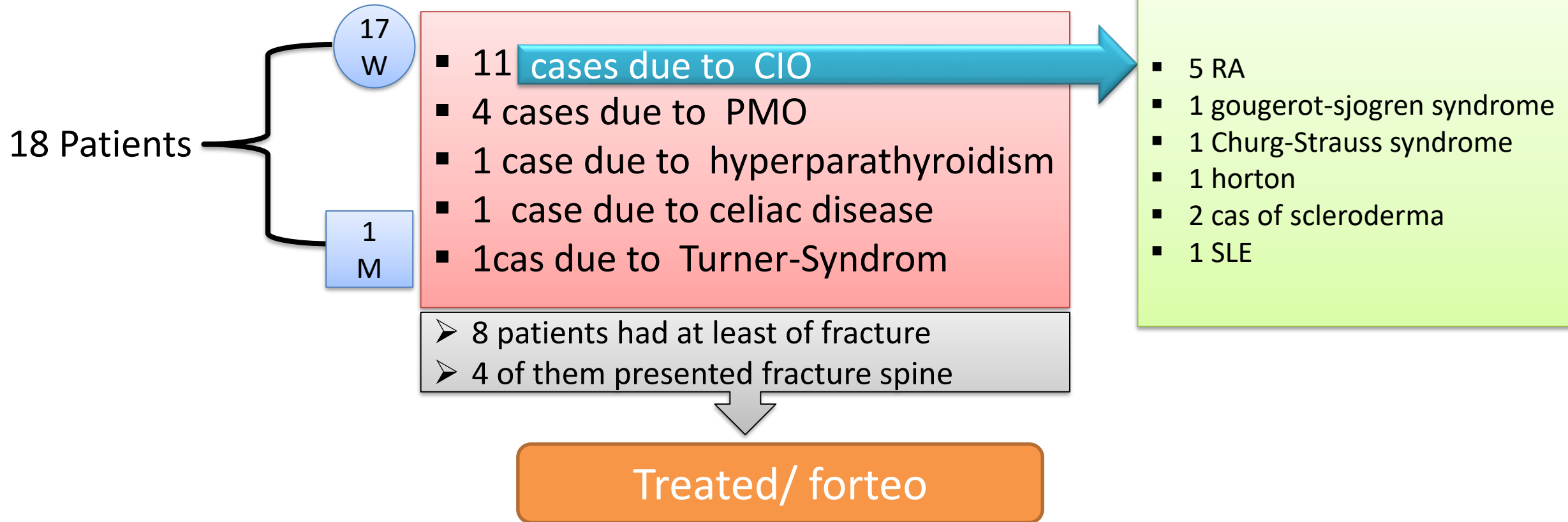
## Exclusion criteria are

- glomerular filtration rate 30 ml / min
- pregnancy
- hyperparathyroidism
- paget disease
- malignant bone tumors
- history of skeletal radiation therapy
- child under 18

lateral x-ray showing previously unrecognized thoracic spine fractures of a 79 year old patient with postmenopausal osteoporosis

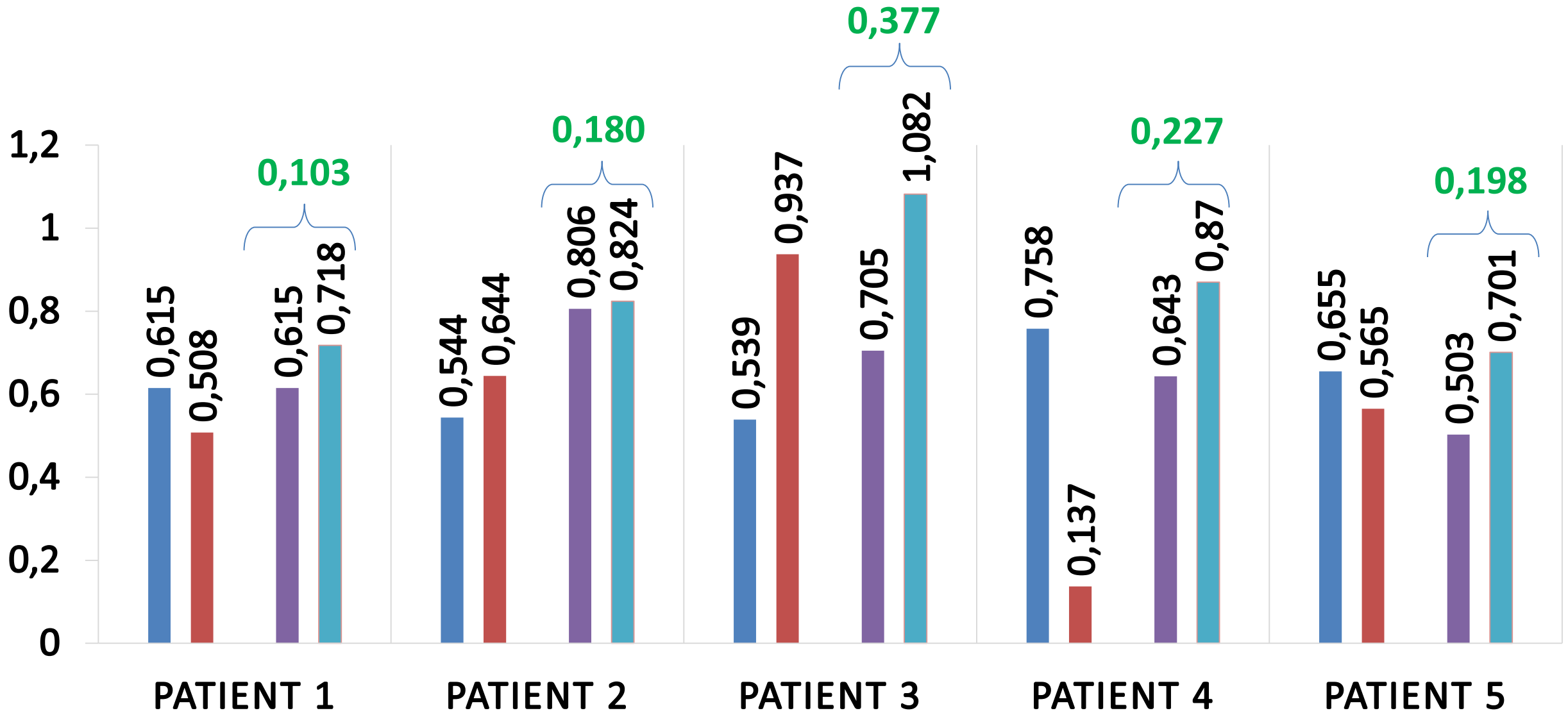


# Results



■ BDM initiale femoral neck g/cm2  
■ BDM initiale spine g/cm2

■ BDM contrôle femoral neck g/cm2  
■ BDM contrôle Spine g/cm2



patients who finish treatment for 24 month and put on bisphosphonate relay

## Conclusion

The majority of our patients treated by forteo have a severe osteoporosis complicated with fractures; the Treatment of osteoporosis with forteo to reduce the risk of vertebral and peripheral fractures, but not of the hip.



Thank you for your  
attentions