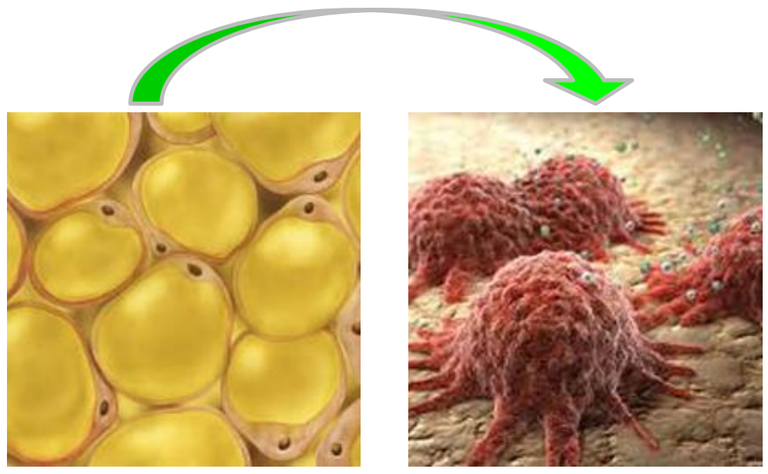
Osteocalcin - More than a bone marker

P750

The Odense Androgen Study

Torben Leo Nielsen, Kim Brixen, Anne Pernille Hermann, Marianne Andersen
Dept. of Endocrinology, Odense University Hospital, University of Southern Denmark

Background



Adipocytes affect bone (leptin, neuronal pathways)
Karsenty et al. Cell Metab. 2006

Thus (by principle of feed back loops)

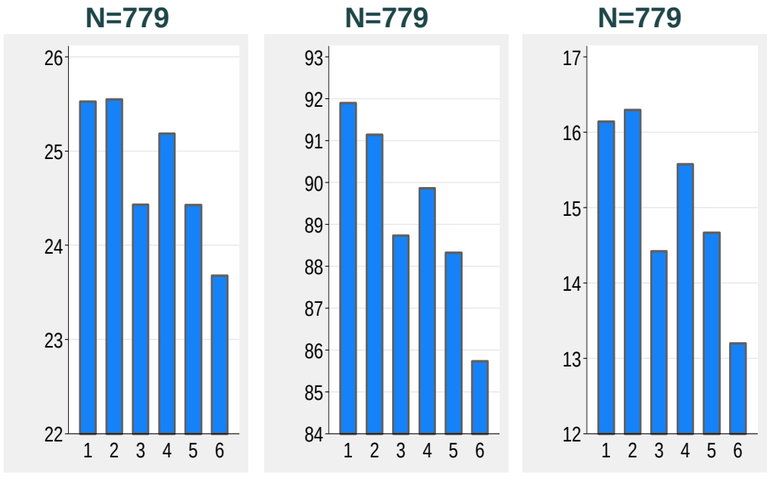
Bone must affect adipocytes
Lee et al, Cell. 2007 & Kindblom et al, JBMR. 2009

Objectives

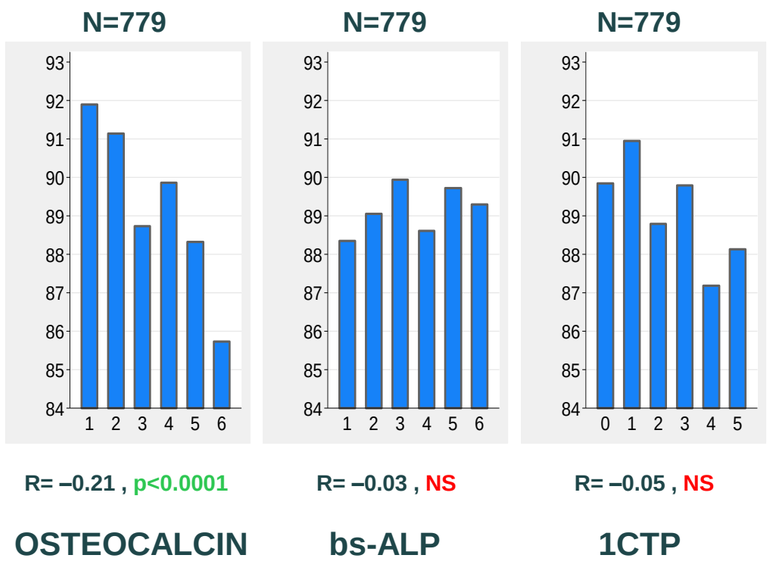
To examine the relationship between osteocalcin and regional fat depots

Results

Osteocalcin vs. BMI, waist, and fat mass

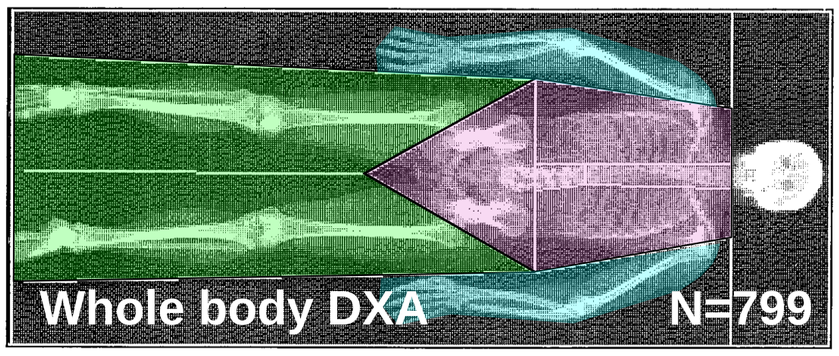


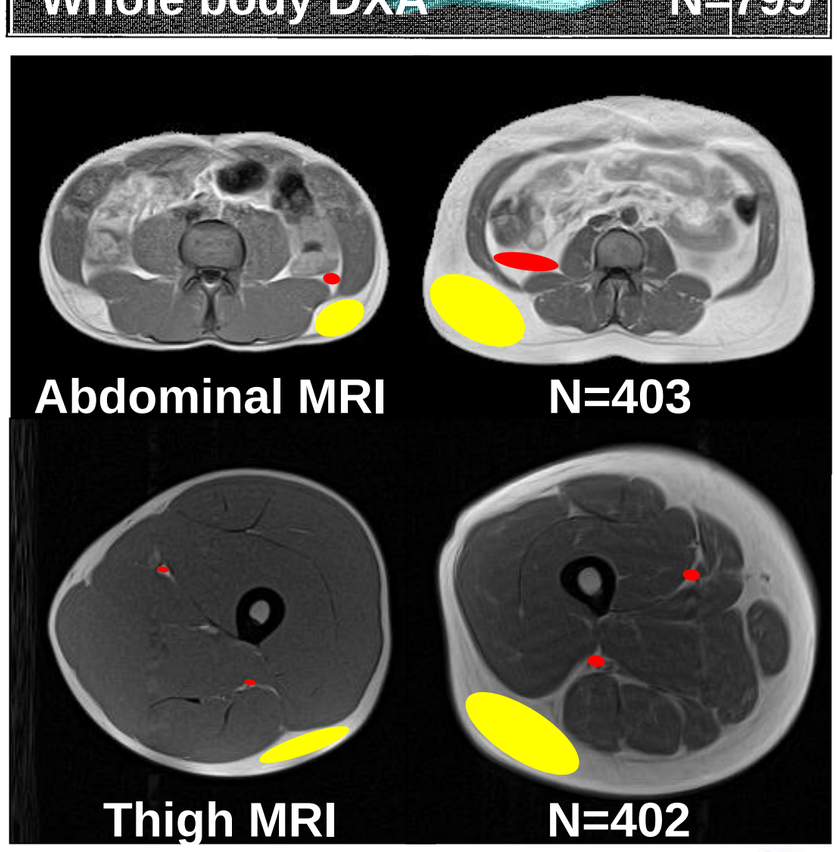
All bone markers vs. waist

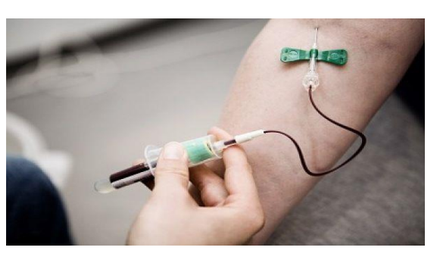


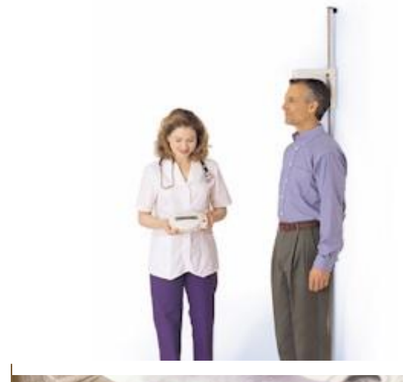
Methods

The Odense Androgen Study: population-based, cross-sectional study. 779 men aged 20-29 years
Nielsen et al, JCEM. 2007



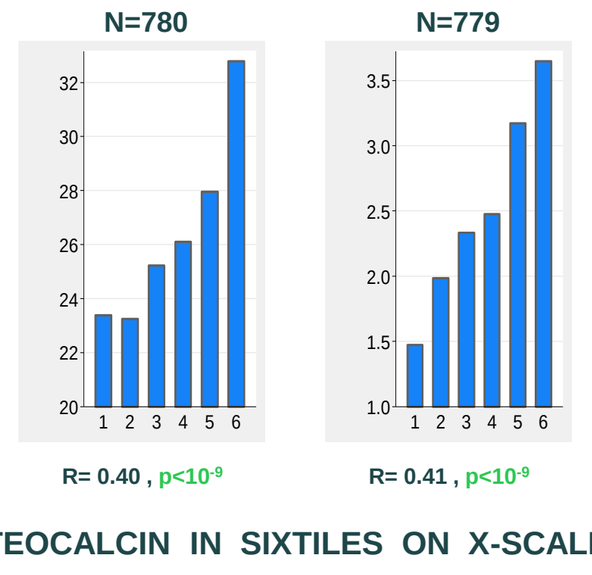






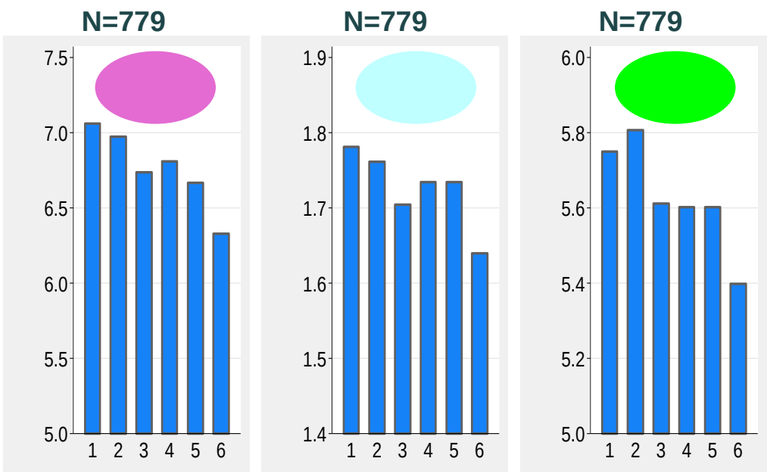
Results

Osteocalcin vs. bs-ALP and 1CTP

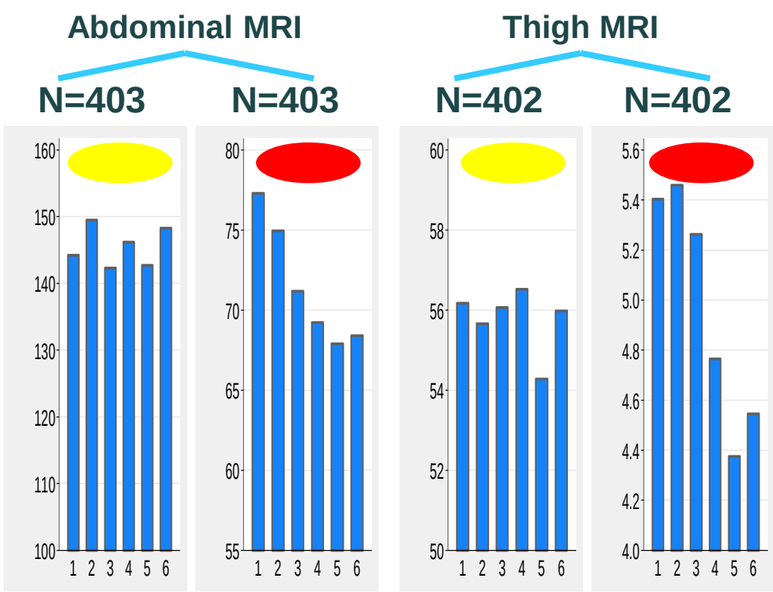


Results

DXA fat parameters - adjusted



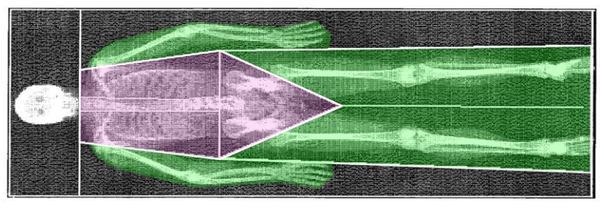
MRI fat parameters - adjusted



Conclusions

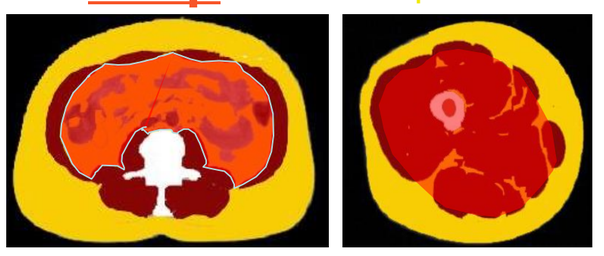
Associations: central fat vs. peripheral fat

DXA:



Associations: deep vs. sc. adipose tissue

MRI:



References

1. Karsenty et al, Cell Metab. 2006
2. Lee et al, Cell. 2007
3. Kindblom et al, JBMR. 2009
4. Nielsen et al, JCEM. 2007