# SUMMARY & CONCLUSION

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The present study was performed on 90 individuals categorized as follows:

- Twenty apparently health non-symptomatizing postmenopausal women as a control group with their age ranging from 48-59 years.
- Forty women suffering from generalized axial bone ache and at risk of being osteoporotic with their age ranging from 50-74 years.
- Thirty women with pathological fracture with there age ranging from 70-85 years.
- Urine samples were obtained from subjects as following:
  a. First morning sample for detection of urinary deoxypridinoline cross links by solid phase chemiluminescent enzyme immunoassay.
  b. 24 hours urine collection for detection of calcium in urine.
- Blood samples were obtained from fasting subjects and serum was separated.
- In addition to full history and clinical examination, all the studied individuals were subjected to the following investigations: FBS, prothrombine time, total protein, albumin, ALP, creatinine, urine calcium, ostescalcin and urine pyrilink (Dpd).
- In the control group the mean value $\pm$ SD of urinary deoxypyridinolin level was $5.67 \pm 1.12$ nM DPD mM creatinine and the range was (4-7.3 nM DPD/ mM creatinine).
- Significantly elevated urinary DPD values were found in patients with postmenopausal osteoporosis.
- Significant elevated serum osteocalcin level was found in patients with postmenopausal osteoporosis.

- No significant increase in other markers of bone turn over as ALP, and urine calcium in post menopausal osteoporotic and pathological fracture groups.
- From the present data we conclude that the bone turn over is increased in post menopausal osteoporosis and that urinary deoxypyridinoline appears to be useful marker of bone resorption and serum osteocalcin appears to be a useful marker of bone formation in this disease, and further studies are needed to determine the value of pyrilink estimation in relation to bone density to evaluate the degree of bone loss in association with progression of osteoporosis.