

## DID YOU KNOW?



Bone spicules are found in vessel walls and viscera of ESRD patients.



Vitamin D and PTH are essential for healthy bone matrix mineralization and bone remodeling.



Alkaline phosphatase is measured every month, but we usually tend to ignore it. The higher the alkaline phosphatase, the higher is the mortality



Elevations of normalized alkaline phosphatase is significantly associated with several comorbid conditions, increased fractures, parathyroidectomy, risk of hospitalization due to major adverse cardiac events, higher all-cause cardiovascular, and infection-related mortality risk.



Elevated serum normalized alkaline phosphatase is associated with higher risks of hospitalization and death in hemodialysis patients, independent of calcium, phosphorus, and parathyroid hormone levels.



Independent of liver function tests and serum calcium and phosphorus, higher levels of serum alkaline phosphatase are associated with increased mortality in the CKD population. Further studies are warranted to identify the potential mechanisms for this association.

*(Kidney International 58: 396-399, 2000).*

*(Seminars in Dialysis 17: 209-216, 2004).*

*(Kidney Int. 2009 May;75(10):1114; author reply 1114).*

*(Clin J Am Soc Nephrol. 2009 Nov;4(11):1805-10).*