Multipotential Cell

VSMC (a mesenchymal cell)
Inflammatory cell
Pericyte

Cbfa-1
Core binding factor alpha - 1

Cbfa-1 is currently thought To be the “switch” that turns This mesenchymal Cell Into an osteoblast - like Cell

Osteoblast – like Cell
Type I collagen: Osteopontin, bone sialoprotein, alk-phos, and osteocalcin

VSMC Multipotential Cell

ARTERIAL OSSIFICATION
Modified atherosclerosis in ESRD (highest risk for mortality)
Calciphylaxis an emerging epidemic? (poor prognosis)
Abnormal bone mineral metabolism (renal osteodystrophy)

UREMIA
Elevated Pi, PTH
II Hyperparathyroidism
Aging, AGE, and Diabetes
[ GLUCOSE ] T2DM
Ox Lipoprotein elevation
HDL-C low
•ROS *
•Inflammatory Cytokines
•IL-1, IL-6, TNFalpha
•Growth Factors: TGF beta
•Ca++, Vitamin D

Sensitizers