n-oxPTH: test design

Parathyroid Hormone (PTH)

is subject to oxidation

oxidized PTH is biologically inactive

Plasma Probe

Step 1: Affinity chromatography

Patient sample:

Step 2: Immunoassay for bioactive PTH

PTH native (bioactive)

PTH oxidized (bioinactive)

antibody-coated chromatography beads binding oxPTH

TMB

H2O2 colored substrate product

PTH native (bioactive)
The impact of noxPTH versus iPTH on mortality differs substantially: “biological function” vs. “oxidative stress (+ biological function)”.

Hocher et al., PLoS One 2012: first description and clinical data
Hocher et al., Kidney Blood Press Res 2013: reference values
Tepel et al., JCEM 2013: different meaning of n-oxPTH versus iPTH
Hocher et al., Nephron 2017: n-oxPTH, but not iPTH predicts cardiovascular outcome in EVOLVE