



# Supra-Regional Assay and Advice Service (SAAS) for Calcium and Bone Metabolism

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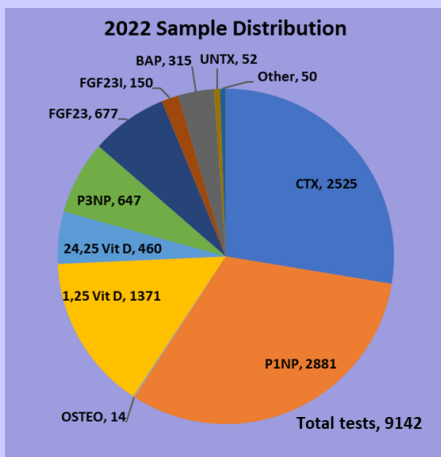
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## Overview of Our Service

- SAAS laboratories exist to provide specialist assays and clinical advice to users throughout the UK, and beyond, in order to benefit from expert knowledge
- Our SAAS offers a range of analyses for assessing the bone remodelling process
- We are an international service, regularly receiving samples from throughout Europe, and beyond
- Within the UK, we receive samples from around 260 UK hospital trusts/health boards
- Markers of bone remodelling can be measured in serum, plasma, or urine
- These "bone markers" have a variety of roles in the management of fracture risk, including targeting or modifying therapy
- Changes in bone remodelling, through targeted therapy, have been shown to lead to fracture risk reduction
- Understanding individual patient bone remodelling, prior to initiating therapy, allows the selection of the optimal treatment choice for them
- In addition, biochemical monitoring can aid patient understanding of their condition, and therapeutic adherence

- Key groups who benefit from our service include those with:

- Osteomalacia, including those with disorders of vitamin D metabolism
- Osteoporosis
- Paget's disease of bone
- Bone disease in malignancy, including tumour-induced osteomalacia (TIO)
- Renal bone disease, including recurrent stone formation
- Disorders of growth, including hypophosphatasia and disorders of collagen synthesis



## Tests

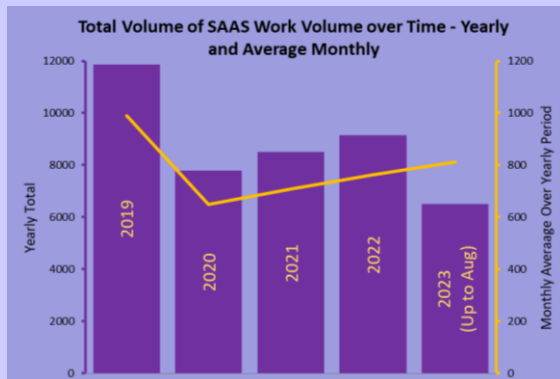
The full range of our SAAS tests are:

### ROUTINE

- 1,25-dihydroxyvitamin D
- 24,25-dihydroxyvitamin D
- 25-hydroxyvitamin D
- CTX (C-terminal telopeptides of type 1 collagen)
- P1NP (Procollagen Type 1 N-terminal propeptide)
- Osteocalcin
- Bone-specific alkaline phosphatase
- Fibroblast growth factor-23 (FGF23) (Both C-terminal and intact FGF23)
- P1IINP (Procollagen Type 3 N-terminal propeptide)
- Urine NTX (urine N-terminal telopeptides of type 1 collagen)
- Urine deoxypyridinoline (DPD) and pyridinoline (PYD)

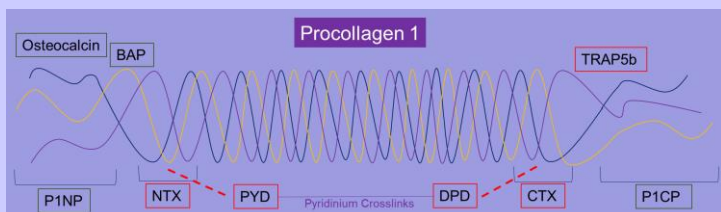
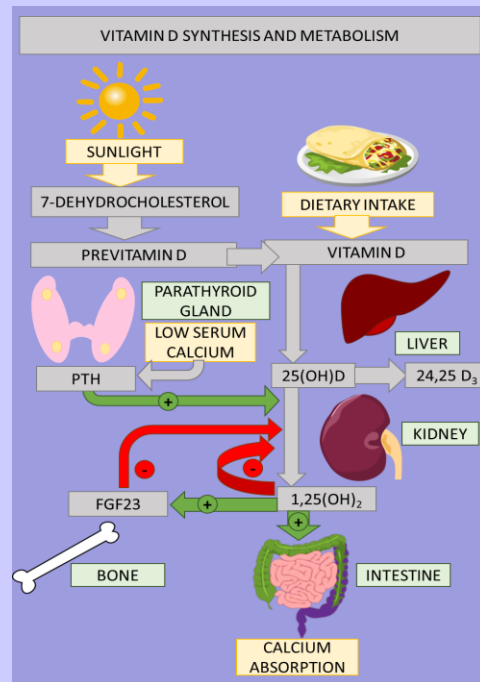
### AD-HOC/RESEARCH-BASED

- TRAP5b
- Osteoprotegerin, and associated antibodies
- PTH (1-34)
- Vitamin D-binding protein
- Sclerostin
- Cathepsin K
- Ellsworth-Howard test, utilising urine and plasma cAMP



## Clinical Advice Service

- Our users contact us for clinical advice in the interpretation of specialist bone marker results, and in diagnosing rare and unusual bone disease
- We are active members of a Norfolk-wide multidisciplinary team review of parathyroid patients referred for surgery
- We are key members of the East of England specialist rare bone disease network group (ERBoN)
- Our group is active in research into the pathophysiology of bone and bone-related disease, collaborating closely with research teams at University of East Anglia (UEA), and further afield
- We provide a sample-swap facility to other laboratories assaying specific bone markers, to ensure ongoing quality of analysis and clinical results



## Contact Us

- Details of the tests we provide can be found on our website: [www.easternpathologyalliance.nhs.uk](http://www.easternpathologyalliance.nhs.uk)
- Alternatively, we can be contacted via email at: [SAASBoneMetabolism@nuh.nhs.uk](mailto:SAASBoneMetabolism@nuh.nhs.uk)