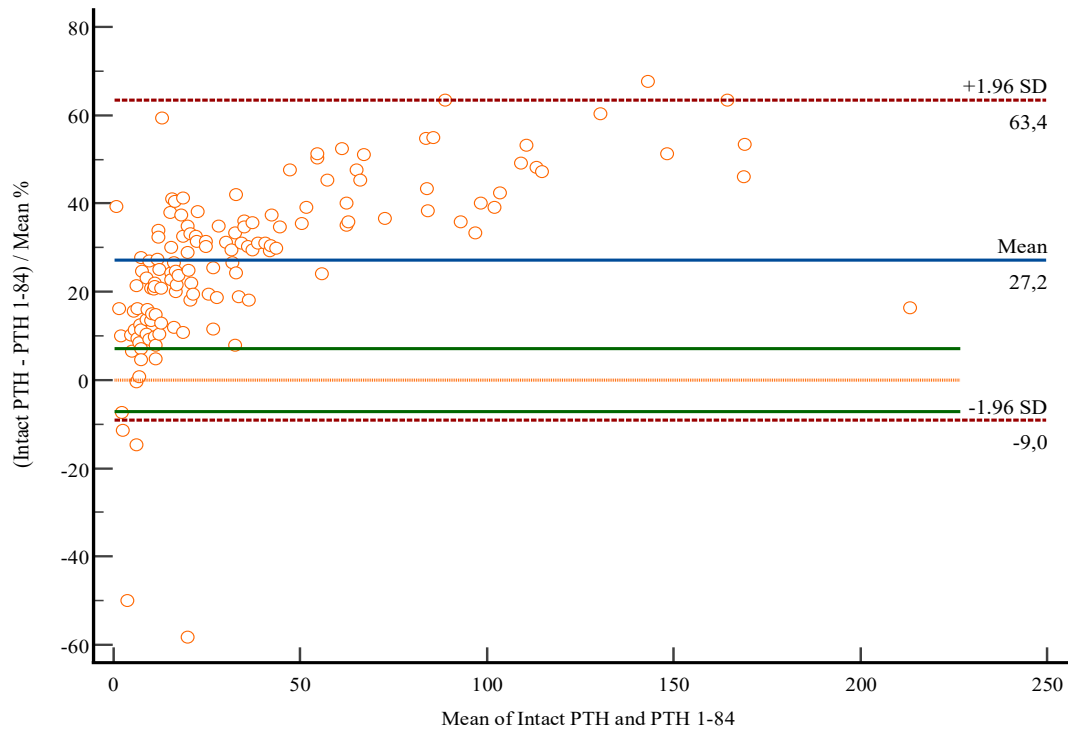


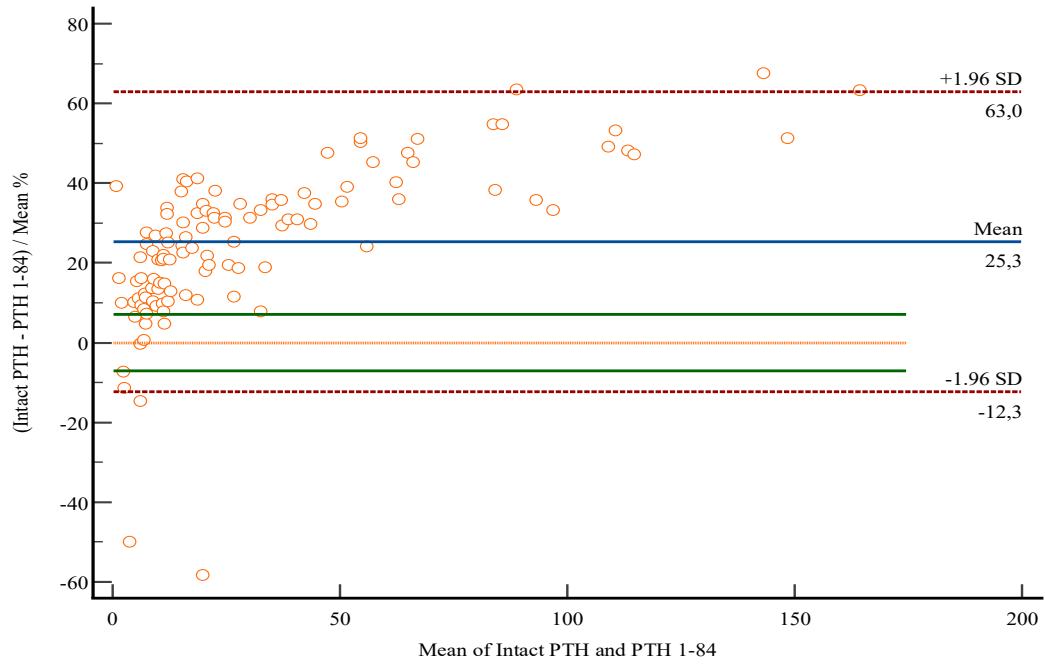
Note: This is Online Supplementary Document 1 of Nhlapo N, Jacob D, Khoza S, Maphayi MR. Comparison of second and third-generation parathyroid hormone assays at a tertiary hospital in South Africa. *Afr J Lab Med.* 2025;14(1), a2700. <https://doi.org/10.4102/ajlm.v14i1.2700>.

SUPPLEMENTARY TABLE 1: Analytical Characteristics of the Roche second and third generation PTH Assays used.

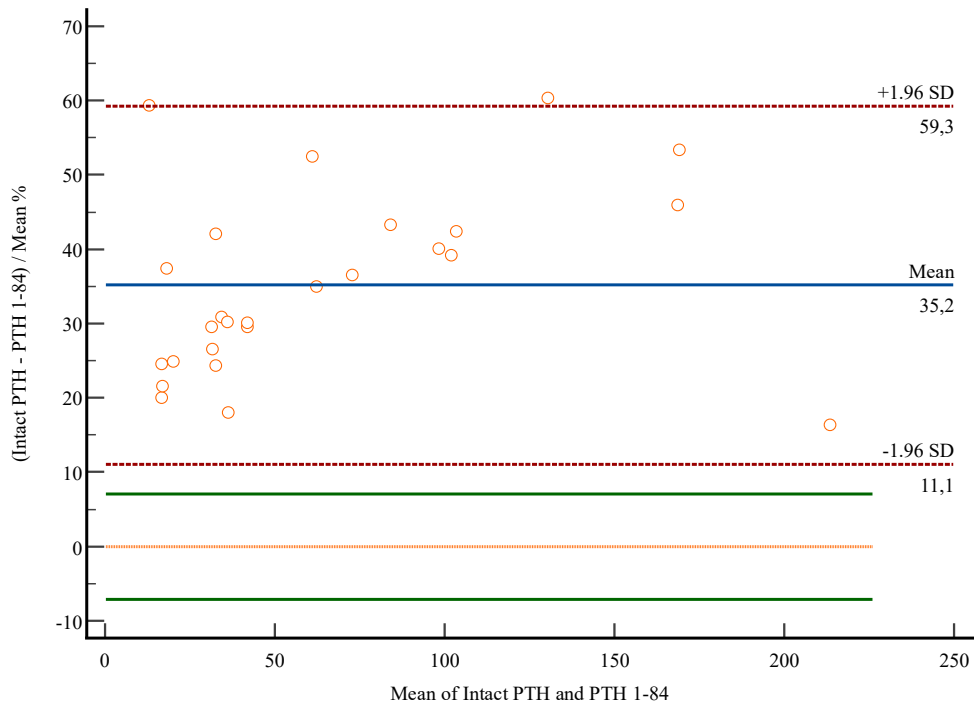
| Parameter | Elecsys Intact PTH (Second generation) | Elecsys PTH 1-84 (Third generation) |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Methodology | ECLIA C terminal epitope: ruthenium labelled monoclonal mouse antibodies reactive with epitopes in the amino acid region 38 - 84. N terminal epitope: biotinylated monoclonal mouse antibodies reactive with epitopes in the amino acid regions 26 - 32 and 37 - 42. | ECLIA Monoclonal mouse antibodies Epitopes not explicitly stated. |
| Limit of Detection (pmol/L) | 0.127 | 0.583 |
| Measuring Range (pmol/L) | 0.127 – 530 | 0.583 – 244 |
| Calibration Standard | Traceable to a commercial PTH (RIA) assay. | Traceable to the WHO international standard 95/646. |
| Reference Interval (pmol/L) | 1.6 – 6.9 | 1.58 – 6.03 |
| Analytical coefficient of variation (CV) (%) | | |



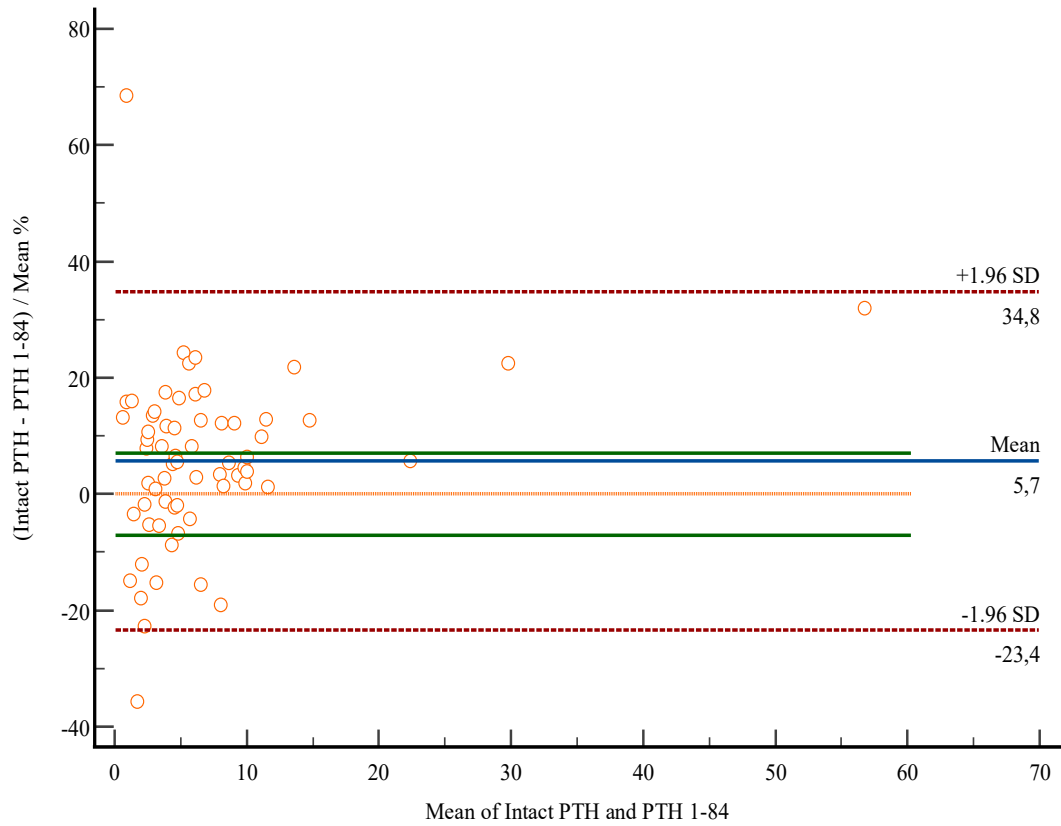
SUPPLEMENTARY FIGURE 1: The percentage difference across concentration range as measured by Intact PTH and PTH 1-84 assays in the entire CKD group, Johannesburg, South Africa, 06 April 2022 to 21 September 2022.



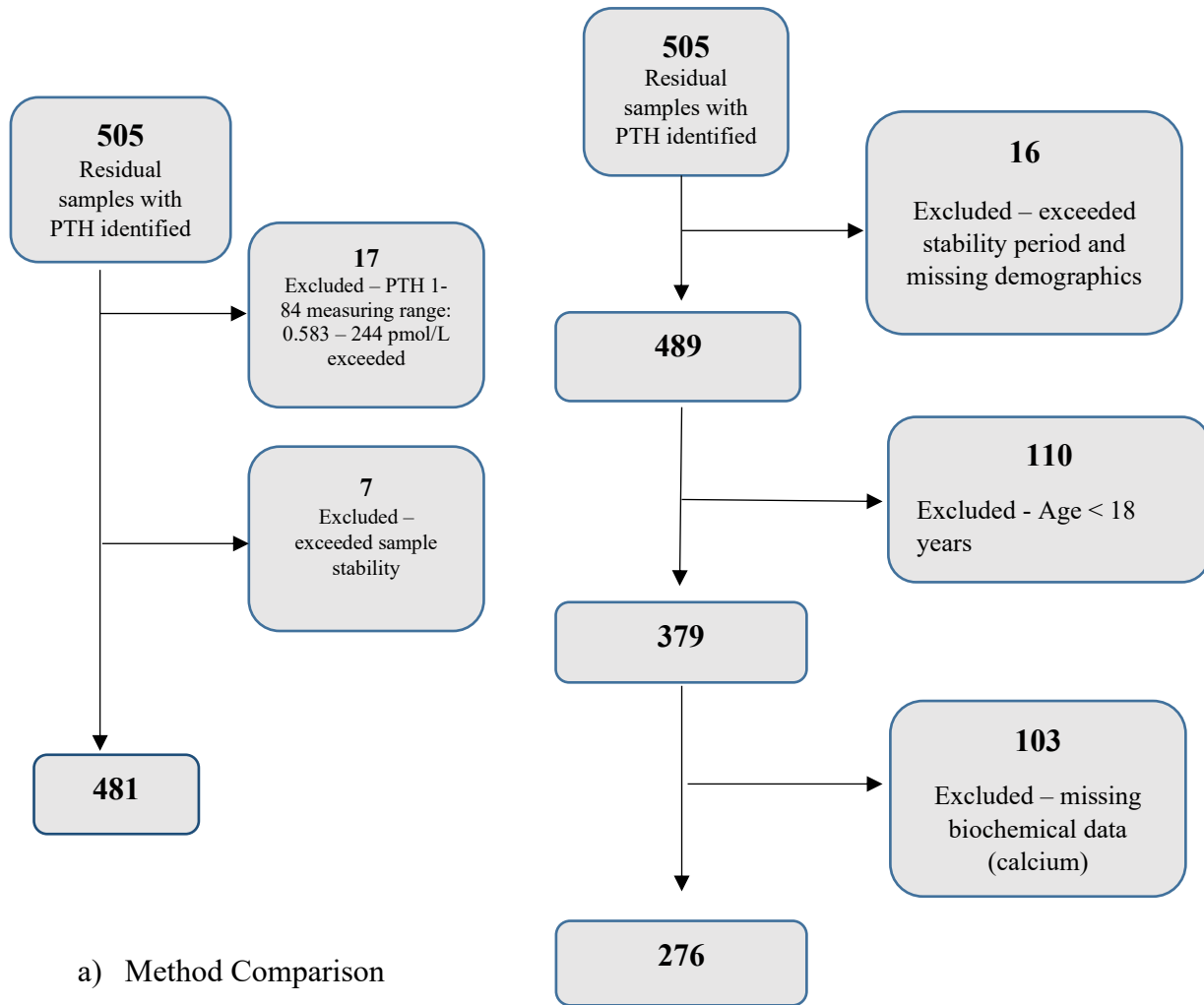
SUPPLEMENTARY FIGURE 2: The percentage difference across concentration ranges measured by Intact PTH and PTH 1-84 assays in pre-dialysis CKD group, Johannesburg, South Africa, 06 April 2022 to 21 September 2022.



SUPPLEMENTARY FIGURE 3: The percentage difference across concentration range measured by-Intact PTH and PTH 1-84 assays in the dialysis group, Johannesburg, South Africa, 06 April 2022 to 21 September 2022.



SUPPLEMENTARY FIGURE 4: The percentage difference in PTH results between-Intact PTH and PTH 1-84 assays in the non-CKD group with eGFR >60 ml/min/1.73 m², Johannesburg, South Africa, 06 April 2022 to 21 September 2022.



SUPPLEMENTARY FIGURE 5: Selection of PTH samples used for clinical interpretation: (a) method comparison and (b) clinical interpretation; Johannesburg, South Africa, 06 April 2022 to 21 September 2022.