**Clinical Use**
- Differential diagnosis of hypercalcemia
- Manage patients with solid tumors and hypercalcemia

**Reference Range**
≤4.7 pmol/L

**Interpretive Information**
- Tumor-associated hypercalcemia
- Fetus
- Newborn

**Clinical Background**
Parathyroid hormone-related protein (PTH-RP) has an amino-terminal structure similar to parathyroid hormone (PTH). PTH-RP can bind to and stimulate PTH receptors and is produced mainly by solid tumors. It is also found in the normal lactating mammary gland, keratinocytes, placenta, and parathyroid gland. PTH-RP levels are high in approximately 70% of the patients with tumor-associated hypercalcemia. It may be useful in the differential diagnosis of hypercalcemia, specifically differentiating primary hyperparathyroidism from hypercalcemia related to cancer. It is not elevated in primary or chronic renal failure.

**Method**
- Immunoradiometric assay (IRMA)
- Analytical sensitivity: 2.5 pmol/mL
- Analytical specificity: intact PTH-RP; no detectable cross-reactivity with PTH (C-terminal, mid-molecule, amino acids 39-84, or intact)

**Specimen Requirements**
1.5 mL frozen plasma
1.0 mL minimum
Collect blood in syringe or red-top tube and immediately transfer to a cold, special Nichols Institute PTH-RP collection tube; mix thoroughly. Centrifuge in refrigerated centrifuge. Transfer plasma to a plastic tube and freeze.