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OSTEOPOROSIS TREATMENT PRESCRIPTION IN VERY HIGH-RISK FRACTURE POPULATION: A SINGLE-CENTRE EXPERIENCE

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INTRODUCTION
Osteoporosis is associated with increased fracture risk, leading to significant morbidity and mortality. Despite established clinical guidelines, a substantial gap remains between recommended and actual prescribing practices. Patients at very high fracture risk have poorer outcomes and are recommended to receive anabolic or parenteral antiresorptive therapies. However, access to these treatments is limited in Malaysian government hospitals due to cost constraints.

METHODOLOGY
This retrospective clinical audit evaluated osteoporosis treatment prescriptions among very high-risk patients attending the Osteoporosis Endocrine Clinic at Hospital Queen Elizabeth II from 2020 to 2025. Very high fracture risk was defined according to the American Association of Clinical Endocrinologists criteria, including recent fractures, fractures on therapy, multiple fractures, high fall risk, glucocorticoid use, very high FRAX probability (>30% major osteoporotic fracture or >4.5% hip fracture), or very low bone mineral density (T-score <–3.0).

RESULTS
A total of 120 patients were included, with a median age of 68 years (interquartile range [IQR] 62–73). Most were of Chinese ethnicity (60%, n = 72), with a median body mass index of 22.6 kg/m² (IQR 19.6–26). Secondary osteoporosis was present in 70% of patients, commonly due to aromatase inhibitor use (45%), glucocorticoid-induced osteoporosis (13.3%), thyroid disorders (10.8%), and vitamin D insufficiency (9.2%). Only 12% of patients (n = 14) received anabolic or parenteral antiresorptive therapy, while 88% (n = 106) were treated with oral alendronate. Among those on alendronate, 19.8% (n = 21) developed adverse outcomes, including treatment failure (n = 13), gastrointestinal side effects (n = 6), and atypical femoral fractures (n = 2).

CONCLUSION
The uptake of guideline-recommended therapy in very high-risk osteoporosis patients remains low. A notable proportion of patients treated with oral alendronate experienced adverse outcomes or suboptimal responses. Addressing financial and systemic barriers is crucial to improving access to advanced therapies and optimizing patient outcomes.

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REDEFINING DEFINITIVE THERAPY: PERCUTANEOUS ETHANOL ABLATION FOR PRIMARY HYPERPARATHYROIDISM IN A NONSURGICAL CANDIDATE

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INTRODUCTION
Parathyroidectomy is the definitive treatment for primary hyperparathyroidism (PHPT) due to parathyroid adenoma. However, surgery may be contraindicated in patients with significant comorbidities. Ultrasound-guided percutaneous ethanol ablation (PEA) is a minimally invasive alternative that induces biochemical remission through targeted destruction of hyperfunctioning tissue. We report a case of PHPT successfully managed with PEA in a patient unfit for surgery due to cardiac dysfunction.

CASE
In 2023, a 53-year-old female with stage IB breast carcinoma was found to have persistent hypercalcemia (2.68–3.59 mmol/L) during chemotherapy and post-mastectomy follow-up. Evaluation excluded bone metastases. Biochemical assessment demonstrated elevated intact parathyroid hormone (iPTH) levels 38.6 pmol/L (Reference: 1.6–6.0 pmol/L), hypophosphatemia (0.42–0.80 mmol/L), and elevated alkaline phosphatase (ALP) 215–309 U/L (30–120 U/L)—consistent with PHPT. Tc-99 m sestamibi scintigraphy localized a 1.1 × 1.5 × 1.2 cm hyperfunctioning parathyroid adenoma.

Initial management prioritized oncological therapy, including trastuzumab for 1 year. Hypercalcemia was intermittently controlled with intravenous hydration and zoledronic acid when calcium exceeded 3 mmol/L.

Her disease was complicated with severe osteoporosis (DEXA T-score −3.3) with vertebral fractures, renal impairment requiring cessation of alendronate, and medullary nephrocalcinosis on computed tomography surveillance.