

Thyroid autoantibodies

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Serum levels of antibodies against thyroid peroxidase (TPO) and thyroglobulin are useful in determining the cause of thyroid dysfunction and swellings. Autoimmune thyroiditis may be associated with thyroid toxicity, failure or euthyroid goitre. Levels above 25 units/mL for TPO antibody and titres of greater than 1:100 for antithyroglobulin are considered significant,

(10–30 nmol/L) Free T (3.5–7.5 pmol/L) Free T₄ 3 Normal Normal High
High Low Low High High (often normal) Normal High

of lymphocytic (autoimmune) thyroiditis are seronegative. The presence of antithyroglobulin antibody interferes with assays of serum thyroglobulin, with implications for follow-up of thyroid cancers. TSH receptor antibodies (TSH-RAb or TRAb) are often present in Graves' disease. They are largely produced within the thyroid itself. Summary box 55.1 Thyroid investigations

Essential Serum: TSH (T and T₄ if abnormal); thyroid autoantibodies 3 4 Fine-needle aspiration cytology (FNAC) of palpable discrete swellings Optional Corrected serum calcium Serum calcitonin (carcinoembryonic antigen may be used as an alternative screening test for medullary cancer) Imaging: chest radiograph and thoracic inlet if tracheal deviation/retrosternal goitre; ultrasonography, computed tomography (CT) and magnetic resonance imaging (MRI) scan for known cancer, some reoperations and some retrosternal goitres; isotope scan if discrete swelling and toxicity coexist

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