Diagnostic imaging work up in multi-nodular goiter.

Ultrasound, scintigraphy and sonographically guided fine-needle biopsy are the cornerstones in the diagnostic work-up multinodular goitre. Subsequent decisions for adequate treatments should be based on accurate tests to avoid unnecessary intervention. Especially in areas with endemic goitre a preselection of patients for the most effective procedure e.g. surgical or medical treatment is mandatory. Autoimmune hyperthyroidism (Graves' disease), solitary hyperfunctioning thyroid nodules and toxic multinodular goitre (Plummer's disease) constitute a clear indication for radioiodine treatment in many cases. Recently, there is an emerging role for I-131 in the treatment for so called subclinical hyperthyroidism caused by either of three first entities and for patients with non-toxic goitre, in whom surgery is not an option. These patients with large non toxic goitre encompass a group of patients who are euthyroid but may benefit from diminishment of thyroid volume. We review the spectrum of diagnostic tests and provide some recommendations regarding (nuclear medicine) therapy.