The presence of *SDHB* mutations was significantly and independently associated with survival, and five-year probability of survival following the diagnosis of malignancy was 0.36 in patients with *SDHB* mutations and 0.67 in those without. Median survival after the diagnosis of malignancy was 42 months for the *SDHB* mutation carriers and 244 months for patients with no *SDHB* mutation.

The authors conclude that the presence of *SDHB* mutations is associated with a poor outcome in patients with malignant pheochromocytomas or paragangliomas and they suggest that all patients with these disorders should be offered genetic testing, as a sporadic presentation does not exclude the presence of *SDHB* mutations.

Original article Amar L *et al.* (2007) Succinate dehydrogenase B gene mutations predict survival in patients with malignant phaeochromocytomas or paragangliomas. *J Clin Endocrinol Metab* **92:** 3822–3828

Criteria for malignancy of lymph nodes on neck ultrasonography

Neck ultrasonography is widely used for follow-up of patients with differentiated thyroid carcinoma (DTC). However, fine-needle aspiration biopsy is frequently required to clarify uncertain findings. To evaluate the sensitivity and specificity of ultrasound criteria for malignancy, Leboulleux *et al.* compared the results of ultrasound scans with the pathological findings from dissected lymph nodes of 19 patients who underwent neck surgery for DTC recurrence.

Of 578 lymph nodes resected, 56 could be definitively matched by location, shape and size to lymph nodes detected by ultrasonography. Of these, 28 were classed as benign and 28 as malignant by pathological examination. Ultrasound criteria found to be indicative of malignant lymph nodes were hyperechoic punctuations and a cystic appearance; all lymph nodes with either of these characteristics were found to be malignant. In addition, 96% of lymph nodes with a short axis >5 mm were malignant, but only 61% of malignant lymph nodes have a short axis >5 mm. The presence of a hyperechoic hilum was 100% indicative of nonmalignancy. The specificities of node shape, loss of hilum, and hypoechogenicity were not sufficient to assess malignancy. Both the sensitivity and specificity of peripheral vascularization were >80%; therefore, the authors recommend use of Doppler imaging to examine the vascularization pattern of suspicious lymph nodes.

The authors conclude that lymph nodes with a visible hilum should be considered benign, whereas those with a cystic appearance or hyperechoic spots should be considered malignant, and the presence of peripheral vascularization is an indication for biopsy.

Original article Leboulleux S *et al.* (2007) Ultrasound criteria of malignancy for cervical lymph nodes in patients followed up for differentiated thyroid cancer. *J Clin Endocrinol Metab* **92:** 3590–3594

Screening for *MEN1* mutations in patients with endocrine tumors

Menin, a nuclear tumor-suppressor protein, is encoded by the *MEN1* gene. Mutations in this gene result in multiple endocrine neoplasia, which causes parathyroid, pituitary and enteropancreatic tumors. Tham *et al.* conducted a study to determine the spectrum of *MEN1* mutations and the detection rate among patients with endocrine tumors in Sweden.

Of 200 probands referred for *MEN1* testing, mutations were found in 48. Forty different *MEN1* mutations were found, 18 of which were novel. When relatives of the probands were included, 106 of 371 patients tested had *MEN1* mutations. Of 115 patients with clinical MEN1 (defined as having tumors in at least two major locations), 54 had a *MEN1* gene mutation. No correlation was found between mutation type and disease severity. *MEN1* mutations were found in 94% of patients from *MEN1* families and in 6% of sporadic cases. As only the coding region of the gene was tested, it is possible that the remaining familial cases had mutations in the regulatory portion of *MEN1*.

The authors recommend that patients with endocrine tumors aged <30 years and/or those with multiple tumors should be tested for *MEN1* mutations. The authors' screening program routinely includes multiplex ligation-dependent probe amplification, to detect large deletions; two such mutations were uncovered in the present study.

Original article Tham E *et al.* (2007) Clinical testing for mutations in the *MEN1* gene in Sweden: a report on 200 unrelated cases. *J Clin Endocrinol Metab* **92:** 3389–3395