Cytology sectuion
Abstract from:

# Guidelines for the management of thyroid cancer in adults

British Thyroid Association

Royal College of Physicians

March 2002

# 3. Fine needle aspiration cytology (FNAC)

## 3.1 Aspiration cytology of thyroid

- i Thyroid cytology should be reported by a cytopathologist with a special interest in thyroid disease, or by one who participates in a multidisciplinary network with the possibility of cytology review. There should be correlation with any subsequent histology.
- ii Aspiration may be performed by any physician or surgeon with expertise and interest in thyroid disease. However, he/she should be trained in good practice and should perform sufficient aspirates to maintain expertise.
- iii All requests should include full clinical details, and details of the aspiration procedure, including the site of the abnormality.
- iv Where cysts are aspirated, the pathologist should be informed whether or not there was complete resolution of the mass after aspiration. Any residual mass should be immediately re-aspirated and the specimens identified separately. Cysts can be reported along the lines outlined below, but the stipulation regarding six or more groups of follicular cells for adequacy can be relaxed where a cyst aspirate has resulted in resolution of the mass.
- v Reports should be based on descriptive text, but should include a numerical coding, as defined below, which guides towards specific further investigation or therapeutic course of action.
- vi Where appropriate, the results of additional investigations should be included in the text, eg immunopositivity for calcitonin in medullary carcinoma; immunocytochemistry, FACS analysis or molecular analysis of light chain (  or  ) restriction in lymphoma.
- vii FNAC can also be used in the diagnosis of suspicious lymph nodes.

## 3.2 Diagnostic categories

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| **Thy1** | Non-diagnostic (inadequate or where technical artefact precludes interpretation; smears must contain six or more groups of at least ten thyroid follicular cells to be considered adequate). |
| *Action* | FNAC should be repeated. Ultrasound guidance may permit more targeted sampling. |
| **Thy2** | Non-neoplastic (features consistent with a nodular goitre or thyroiditis). |
| *Action* | Two diagnostic benign results 3–6 months apart are required to exclude neoplasia ( **C**). In patients in a high clinical risk group (eg male gender, extremes of age, with other features suggestive of tumour, with a family history, or with a history of irradiation) the decision to proceed to lobectomy may be made even with a benign FNAC diagnosis. This decision might also be made if there are pressure symptoms or rapid growth. In addition, the patient should have the choice to have the lesion removed if he/she so wishes. |
| **Thy3** | (i) All follicular lesions. |
| *Action* | Lobectomy. Completion thyroidectomy will be necessary if the histology proves malignant<br>(ii) There may be a very small number of other cases where the cytological findings warrant inclusion in this category rather than in Thy2 or Thy4. The text of the report will indicate the suspicious findings. |
| *Action* | These cases should be discussed by the surgeon/endocrinologist and cytologist to decide on the appropriate course of action. |

*continued*

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| **Thy4** | Abnormal, suspicious of malignancy (suspicious, but not diagnostic, of papillary, medullary or anaplastic carcinoma or of lymphoma). |
| *Action* | Surgical intervention indicated for differentiated tumour. Further treatment will depend on the pathology report.<br>Indication for further investigation for anaplastic thyroid carcinoma, lymphoma, or metastatic tumour. |
| **Thy5** | Diagnostic of malignancy (unequivocal features of papillary, medullary or anaplastic carcinoma, or of lymphoma or metastatic tumour). |
| *Action* | Surgical intervention indicated for differentiated thyroid cancer, depending on tumour size, clinical stage and other risk factors such as gender and extremes of age.<br>Indication for appropriate further investigation, radiotherapy or chemotherapy for anaplastic thyroid carcinoma, lymphoma, or metastatic tumour. |