needle is usually preferred. The sample is expelled into a tube instead of a glass slide. Finally the sample is processed for histological rather than cytological interpretation.\textsuperscript{123,157,158}

More cellular material is aspirated with LNA, but the specimens are usually bloodier, which may interfere with the cytological interpretation.\textsuperscript{159} Moreover, it is more painful compared to FNA and more traumatic to cells and tissues. It may provide qualitatively superior smears compared to FNA, but it is not diagnostic in a greater number of cases.\textsuperscript{159} LNA is recommended by some authors as a repeat biopsy method for nodules that remain nondiagnostic after a repeat FNA. It can retrieve a diagnostic specimen in more than 80\% of the nodules reinvestigated compared to 50-60\% for repeat FNA.\textsuperscript{157}

\textbf{Core-Needle Biopsy (CNB)}

Thyroid core of tissue for histological interpretation may also be obtained by CNB, using TruCut or Vim-Silverman needles. Local lidocaine anesthesia is necessary.\textsuperscript{84,160} CNB provides a larger tissue sample that retains its cellular architecture and may enable a more precise histological diagnosis, but it is not used in the routine assessment of thyroid nodules. This is due to the perceived risk of complications (mainly postbiopsy haematomas and pain) as well as the earlier success of FNA. Another disadvantage of CNB is that only one or two cores (from one or two sites) are usually obtained and thus the risk of sampling error is higher than that of FNA.\textsuperscript{84,161,162}

There is much controversy over the distinct role and efficacy of CNB in the management of thyroid nodules. Some authors have reported that CNB shows no advantage over FNA and it is also less acceptable by patients.\textsuperscript{163} Others consider that the two methods may be complementary and suggest that combined FNA and CNB should more accurately diagnose thyroid carcinomas.\textsuperscript{129,161} Finally, some authors consider that US-guided CNB is of high diagnostic yield and accuracy and it frequently obviates surgery in patients whose findings after FNA are recurrently nondiagnostic.\textsuperscript{162}

\textbf{Step 5: Therapeutic approach (Figure 1)}

The therapeutic decision should be based upon the cytological result always in conjunction with the clinical and US findings.

\textbf{Benign cytolgy}

Even if the cytological interpretation indicates a benign nodule, all patients whose nodules are of clinically high suspicion for malignancy require surgical treatment.\textsuperscript{54}

\textbf{Figure 1.} From FNA cytology to treatment guidelines.