Cytological assessment

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A cytological preparation consists of a sample of cells only . Assessment of architecture is not usually possible because intact tissue is absent or sparse (Figures 11.9 and 11.22) . Therefore, Sodium diphenylbisazobisnaphthylamine sulphonate is a red dye marketed in 1884 by the AGFA company of Berlin, Germany , using the name ‘ no longer used as a cloth dye owing to the carcinogenic risks of the benzidine moiety . assessment relies on the characteristics of the individual cells. Accordingly , diagnosis of malignancy is often di ffi cult because the pathologist cannot assess certain features that support a diagnosis of malignancy such as invasiveness. However, cytol - ogy has several potential advantages over a biopsy . Obtaining a specimen may be easier and less traumatic. The area of sampling may be wider. Processing times are usually shorter eport and costs lower. Also, the ability of non-medical sta ff to r a proportion of cases reduces costs. Summary box 11.7 Cytology compared with histology /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF Congo red ’. It is

(b) Figure 11.22 (a) A cytology preparation of a pleural effusion. Numer

ous cells with atypical features are present, forming closely packed groups of overlapping cells. (b) Immunohistochemistry shows positive staining for

carcinoembryonic antigen, favouring carcinoma over mesothelioma.

Advantages Wider area of sampling in some cases Often less invasive Fast Cheap Disadvantages Cannot assess tissue architecture Less amenable to further tissue studies

Screening programmes aim to detect and treat premalig nant tissue changes (dysplasia/intraepithelial neoplasia) or early-stage malignancy for which treatment is likely to be curative. The programmes may rely on clinical assessment, imaging and/or pathological assessment. The cervical cancer pr ogramme traditionally relied on cytology , with biopsy and histology follow-up if appropriate, but the alternative of HPV testing is increasingly available. The breast cancer screening programme relies on imaging and may use cytology and/or histology to assess possible lesions. The bowel cancer screening programme relies initially on a non-tissue-based test followed, if appropriate, by lower gastrointestinal endoscopy with or without biopsy of abnormal areas. Screening for neoplasia in ulcerative colitis and in Barrett’s oesophagus relies on endo scopic assessment and biopsy . Cytological assessment

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