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Diagnosis of Metastatic Cancer from the Iliac Crest Biopsy

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Cohen et al. [1], state that 'it is of no value to obtain a bone marrow biopsy for the detection of bone marrow metastases in asymptomatic cancer patients with negative skeletal radio-isotope scan and negative bone X-ray films'. This statement is based on their findings of positive iliac crest biopsies in 32 (16%) of 205 patients with solid tumours, all of whom had other indications of metastatic spread, i.e.

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positive bone scan, X-ray or bone pain; while none of 18 patients with negative parameters had a positive bone biopsy. The figures reported in the literature for positive iliac crest bone biopsies in patients with solid tumours range from 9 to 94% [2–5]. Cohen et al. [1] correctly cite the figure of 18% for micrometastases [4] but this value is taken out of context, as the overall rate of detection in our study of 838 patients with known or suspected solid tumours was 42% (359 cases) with the following distribution: 84% of 136 cases of occult primaries, 44% of 106 cases of breast cancer, 55% of 60 cases of prostatic carcinoma, 26% of 28 cases of bronchogenic cancer, and 17% of 158 cases of other primary tumours. The differences in rate of detection reported between various centres, and between the various primary tumours are due to the following factors: (1) the type of the primary; (2) the stage of the disease; (3) the quality of the histologic preparation, and (4) the size of the bone biopsy. As reported in a previous study [6] an increase in the section area available for microscopic examination from 20–30 mm² to 50–50 mm² increases the yield of positive biopsies by about 10%; Cohen et al. [1] provide no measurements of the biopsies they studied. In addition, their biopsies were decalcified and embedded in paraffin, procedures known to produce considerable shrinkage so that minute metastatic foci or small metastases of small-cellular type might be overlooked in such preparations, thus further decreasing the rate of detection.

Both radio-isotope scans and X-rays have the disadvantage of lack of specificity, and since there is a relatively high frequency of occult bone metastases (as also shown in the paper by Cohen et al. [1]: 35 patients diagnosed as having osseous metastases within a year of previously negative findings), we feel that an adequate bone biopsy, even in asymptomatic patients with known or suspected bronchogenic, prostatic or mammary tumours, is justified. And even a negative biopsy

will provide valuable information on the state of the haematopoietic tissue, blood vessels and bone.

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