

to surgery, is controversial^{4,5} and may merit reappraisal.

The disease has a dismal prognosis, with an average survival of 13.4 months after treatment, and a five year survival of 4.2%.¹ When metastases are present, survival averages only one to five months.

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Secondary tumour deposits in needle biopsy tracks: an underestimated risk?

We report a case of adenocarcinoma metastatic to a computed tomography guided needle biopsy tract. The actual incidence of such events is higher than is often claimed.¹⁻⁴

There has been a remarkable increase in various forms of needle biopsy in recent years. This has been partly due to the development of very accurate systems for guiding the procedure, and partly due to cost effectiveness. The result is that radiologists and pathologists frequently cooperate closely in the performance and interpretation of these procedures. The incidence of needle track metastases is fortunately rare, but rather more common than is sometimes stated.

The commonsense view is that although there is a real risk from large needle biopsies,

fine needle aspiration biopsy is much safer. Kline, writing about fine needle aspiration in the introduction to a text on aspiration cytology, states: "Seeding of tumour cells . . . is almost a myth."⁵ The commonest well established tumour that regularly seeds in needle tracks is malignant mesothelioma, but the reports on the seeding of other tumours is not inconsiderable.¹⁻⁵ We report here a further case of metastasis to a computed tomography guided needle biopsy track from an abdominal mass.

A 67 year old woman presented with vague abdominal symptoms; examination showed a large mass in the right iliac fossa. Computed tomography and ultrasound examinations were unhelpful in establishing the nature of the mass and computed tomography guided biopsy was therefore performed (figure). Two passes were made with a Tru-cut needle and at subsequent microscopy the cores of tissue contained poorly differentiated adenocarcinoma.

Six weeks later the patient returned with a skin lesion which was thought clinically to be a pyogenic granuloma. It was 7 mm in diameter and was located at the site of the biopsy. This was removed under local anaesthetic and subsequent histology showed poorly differentiated adenocarcinoma identical with that in the original Tru-cut biopsy specimen.

As the clinical and economic arguments for percutaneous biopsy, as opposed to open biopsy, seem to be irresistible, progressively more of these samples must be expected in the laboratory. Consequently the risks of such procedures must be constantly assessed. The assumption that there is less risk from fine needle aspiration than from larger needles has been challenged, at least in the case of prostatic cancer.⁵ Consequently one cannot automatically assume that there is no risk from fine needle aspiration or that such risks should be neglected. There are numerous examples, such as the one reported here of metastases to large needle tracks from renal² and prostatic carcinomas,⁵ and from fine needle aspiration of pancreatic,⁴ lung, and pleural primaries.³ Clearly the risk, though small, is real and continued recording of such cases is needed if we are to establish the true

incidence for an event which may have clinical and legal implications.

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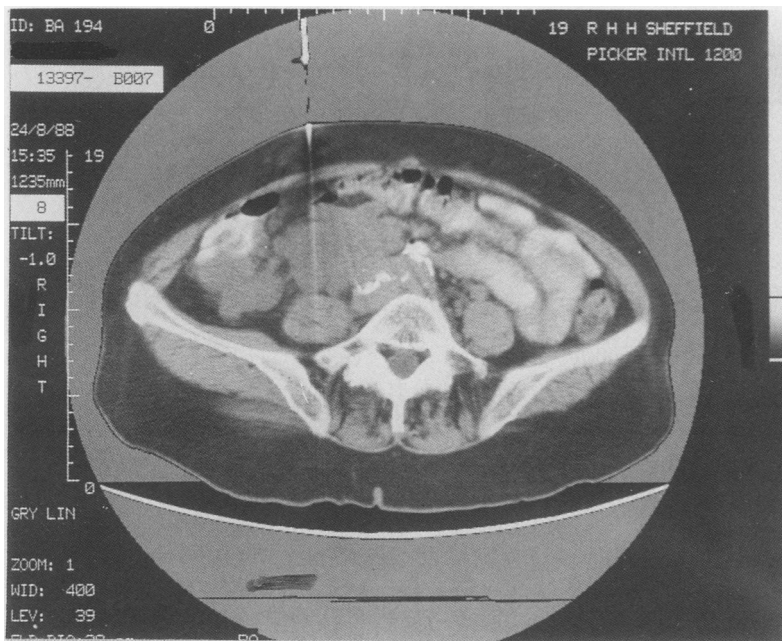
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Simplified method of preparing neutrophil slides to examine antibodies to cytoplasmic antigens

Several authors have described the specificity of indirect immunofluorescence tests for detecting antibodies to neutrophil cytoplasmic antigens (ANCA, ACPA) in diagnosing and managing patients with active Wegener's granulomatosis, microscopic polyarteritis, systemic vasculitis and necrotising glomerulonephritis.¹⁻³ We found the following method of slide preparation simple and less time-consuming than dextran or methylcellulose sedimentation with Ficoll-Hypaque neutrophil separation.³ We also did not observe neutrophil clumping, sometimes associated with exposure to density sedimentation with the Ficoll-Hypaque technique. This method is adapted from that used to affix neutrophils to glass slides for the nitro-blue tetrazolium (NBT) reduction assay.⁴

One to two drops of fresh whole human blood without anticoagulant are allowed to clot for 30 minutes on warm glass slides coated with 4% bovine serum albumin in a 37°C humidified chamber. The clot is gently removed and the area briefly rinsed indirectly with phosphate buffered saline. The wet slide is immediately cytocentrifuged at 500 rpm for five minutes, air dried, and fixed with 99% ethanol for five minutes at 4°C (or acetone/formalin), as previously described.^{1,3} The prepared slides are stable at -20°C for at least one month. We have found the cellular morphology to be excellent in addition to which there is low background fluorescence and reproducibility. This method can be adapted for phorbol myristate acetate neutrophil activation and subsequent immunofluorescence staining.

In view of rapidly increasing interest in ANCA/ACPA testing, and the necessity for preservation of neutrophil morphology, we feel that this technique may prove more time saving and cost effective than previously described methods.^{5,6} Other methods which do not use indirect immunofluorescence are currently under evaluation^{7,8} and seem to



Computed tomography guided Tru-Cut needle biopsy specimen of intra-abdominal mass in the right iliac fossa.