The authors rightly stress the importance of staging prostate cancer and the evidence that, in TURP specimens, the area fraction of tumour or the proportion of chips which contain tumour provides valuable prognostic information. Later, however, they give the advice, carried over from the days before the importance of tumour volume was recognised, that "... any white or yellow fragments (which may prove to be red blood cells) are included in the cassettes". This contravenes the basic requirement for a quantitative technique such as assessing tumour volume—that is, that sampling must be at random. Furthermore, the extent to which tumour is degraded will be unknown, as the pathologist cannot know how accurately malignant chips have been identified. This problem may be reduced by the large volumes of tissue which the authors recommend should be processed, but this advice is unlikely to be followed to the letter in most hard-pressed district general hospital laboratories.

We should be clear about what we are trying to achieve. The problem is not how to analyse a large sample, taken at random. We will then detect small tumours, and we will know what proportion of the sample they occupy. We will, however, expend a lot of time and money. An alternative, which would cost considerably less, is to have ready access to data where finances are constrained and workloads are high, is to take a smaller sample but attempt to include any "suspicious" fragments. This risks missing low volume tumours which are macroscopically obvious, and it should be recognised that it completely invalidates any assessment of tumour bulk.

My own preference is to get the best of both worlds. First, take a random sample which is as large as I think reasonable given the patient's age, clinical suspicion, etc. If there remain any fragments which look suspicious, I then put these into a cassette which is identified separately, and which I know cannot be used for assessment of tumour volume. Do the authors think this an acceptable variation?

P FURNESS
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Drs Harmed and Parkinson comment:
We thank Dr Furness for his thoughtful criticism of the recent Broadcast and do not dispute his assertions concerning the mathematical theory of volume measurement. We are forward to seeing the details of the random sampling method that is widely used in prostate cancer histology, although we should perhaps have stressed this in our discussions.

The mathematical model to apply to the sampling of prostate cancer chips is not clear, because we are dealing with a specimen which itself is a sample already influenced by the variability of the clinical situation and the constraints of the operative procedure. We are aware that to randomise the presence of malignant chips in the laboratory, we would need to introduce a validated mathematical technique, such as a grid labelled with random specimens.
numbers. The consistent application of such a method would be of course time-consuming. Furthermore, the published work that we have quoted either makes no attempt to randomise, or mentions it in passing with no detail given as to the methodology. In particular, the papers that specifically address the question of tumour extent in TURP specimens in relation to survival are based on archival material with no mention of the sampling technique other than the number of blocks available. Therefore, we have no way of knowing whether macroscopically "abnormal" chips were specifically included or not, and our advice to include such fragments was an attempt to be thorough. Whilst none of our patients seem perfect in terms of design (as is often the case when dealing with clinical material in an imperfect and cost confined world), they do provide methods for obtaining useful information. In other words, they "work".

The details of sampling prostatic fragments for carcinomas are always a discussion point—not least in an attempt to reduce cost and tedious. However, one must not lose sight of the fact that the major decision that we take is not with respect to sampling techniques but as to whether and when to sample. Thus, whilst giving definite advice on processing the entire specimen from men aged 60 years or less, we advocate some form of sampling for TURP specimens from men over 60 years of age. We hope that this Broadsheet will increase awareness of protocols with respect to prostatic pathology, particularly as regards the false negative rate in the diagnosis of carcinoma, and facilitate discussions with clinicians in order to adopt the protocol that is best suited to local circumstances. The greater public concern with cancer diagnosis and treatment will inevitably lead to more questions being asked and decisions challenged, and we therefore feel that it is imperative that pathologists and clinicians have clearly defined, defensible and mutually acceptable protocols. Our reasons for discarding numerous grams of prostatic tissue from TURP specimens whilst meticulously examining levels of fine biopsy cores from the same organ may at some time have to be made clear to "the man on the Clapham omnibus" who is usually blissfully unaware that histopathology departments are under increasing pressure with increasing workload requiring more and more complex levels of interpretation in the face of resources which are at best static but more often are decreasing.

Book reviews

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For departments in which central nervous system (CNS) cytology forms only a small part of the workload, the subject is full of potential pitfalls, and an authoritative book that addresses the diagnostic problems likely to be encountered is long overdue. When it is written by authors with the experience of Bigner and Johnston, it is especially welcome.

After a brief opening chapter, the authors cover neuroanatomy, normal cells and contaminants, infective and non-neoplastic conditions in successive chapters. The sections on haematological malignancies and metastatic carcinoma are detailed and useful. The chapter on primary neoplasms is most helpful for tumours such as medulloblastomas, germ cell tumours and choroid plexus papillomas, where examination of the cerebrospinal fluid often yields a diagnosis.

The illustrations on the whole are of an extremely high standard, both cytological preparations and the excellent gross specimens. The low power histology sections would possibly have been more informative with some arrows, as the anatomical structures referred to in captions may not always be familiar. The variable quality of the staining of the Romanowsky preparations accompanying the leukaemia section means that the distinction between different types of blast is not always clear.

My only real criticisms relate to the last three chapters. The chapter on stereotactic biopsies, while containing useful tables for differential diagnosis of CNS tumours, is not likely to be of real use to either cyologists or neuropathologists. The chapter on immunocytochemistry gives considerably more theoretical detail than necessary for readers of this book (although the latter part is of practical use), and the same criticism could be levelled at the last chapter on molecular genetics. Finally, there is no attempt to cover intraoperative and diagnosis of CNS tumours. Apart from those minor reservations, this is an excellent, well thought out and informative book, providing both essential background information and practical diagnostic help for those at whom it is directed.

J GEDDES


This small, rather poorly bound book will provide a useful reference source for researchers in microbiology and histopathology who are interested in developing rapid tests for the detection of organisms which cannot be readily cultivated. The principles behind the methods for the detection and amplification of nucleic acid and techniques for recognising the end products—for example, chemiluminescence—are described in detail. A particular strength of many of the chapters is the emphasis which has been placed on identifying problems that can arise when introducing and performing the tests and discussion of relative advantages and disadvantages. There is also the welcome inclusion of an entire chapter related to the topical issue of quality assurance. Each chapter includes detailed protocols, often illustrated by line drawings, but many diagnostic laboratories would probably prefer more specific examples. This issue is also addressed by providing extensive bibliographies, some of which are surprisingly up to date, 1994. The majority of the authors work in the private sector and, therefore, it is not surprising that some of the chapters direct the users to commercial assays and the products read like an advertisement rather than a scientific paper. Anyone who is interested in the principle behind many of the commercial assays which are currently being introduced or developed—for example, multiple PCR and chemiluminescence—will find it a valuable source of information.

The clearly presented protocols should enable many research and development departments to develop in house assays.


This is another contribution to the successful Biopsy Interpretation Series which covers the subject in a well structured way. Most pathologists are exposed to pulmonary pathology through transbronchial rather than open lung biopsy specimens. This book will certainly help both the general and specialists, and histopathologist obtain as much information as possible from the tissue sent.

The subject of lung pathology divides conveniently into non-neoplastic and neoplastic disease, and this book uses this as the approach to cover the subject. In view of the nature of problems encountered in biopsy specimens, particularly those of transbronchial type, non-neoplastic disease is covered under the heading "Infiltrative" disease.

The book has a very pragmatic approach to the subject. There is a short chapter on the diseases of small airways, particularly bronchiolitis. A description of how this process relates to chronic bronchitis and chronic obstructive airways disease would have been useful. It is not clear, however, how the subject of bronchiolitis relates to—for example, organising pneumonia. I like the classification of acute infiltrative diseases into those involving immunocompromised and immunocompetent hosts. This is a very useful and problem orientated way of dealing with the subject. Chronic infiltrative disease is covered using the American classification, but the transition is easily made between the two systems.

The section on tumour pathology includes a chapter on cytology, which is unusual in view of the increased use of this technique.

This book is a compact and up to date account of lung pathology which will be of great use to surgical pathologists, and I particularly liked its size as a repeating room bench book.

E A SHEFFIELD
Macroscopic examination of prostatic specimens.

P Furness

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