Measurement techniques for melanoma: a statistical comparison

The paper by Calder, Campbell, and Plaistow is misleading when it says that the depth of invasion of the dermis is the single most important prognostic factor in determining the outcome of any melanoma.1 This factor is of importance in stage 1 melanoma, as quoted in their first reference, but in any melanoma the most important prognostic factor is the stage of the disease.2 It should also be emphasised that in measuring the thickness of a melanoma the examination of multiple levels from multiple blocks to find the thickest part of the tumour is more important than the accurate measurement of tumour thickness on a single section.

H GOULDING
E GRADWELL
Department of Histopathology, Whiston Hospital, Prescot, Merseyside L35 5DR

2 Ackerman's Surgical Pathology, vol 1. 7th ed. 135.

Dry Calder, Campbell and Plaistow comment: The letter from Goulding and Gradwell is correct in pointing out that the most important factor in the prognosis of a melanoma is the stage of the disease, and also that multiple blocks must be cut to find the thickest part of the tumour. Having found the thickest part of the melanoma, however, it is then important to be able to measure it accurately: this is the problem that our paper was addressing.

Cost effectiveness of dipssticks

MacGowan and colleagues express their doubts about the cost effectiveness of dipssticks for screening urines in a routine diagnostic laboratory.1 We have reservations about their accuracy in detecting pyuria after performing a blind comparison of 1000 urine samples by BM stix and microscopy.

BM stix (Neubauer + Leuco; Boehringer Mannheim, Germany) were graded as follows: 0 = negative; + = 10-25 pus cells/μl; ++ = about 75 pus cells/μl or +++; about 500 pus cells/μl, according to the manufacturer's instructions. Microscopy was graded as 0 = less than 20 pus cells/μl; + = 20-50 pus cells/μl; ++ = 60-200 pus cells/μl; +++; = 200-500 pus cells/μl and +++++ = > 500 pus cells/μl. The results are summarised in table 1.

<table>
<thead>
<tr>
<th>Leucocyte esterase stix</th>
<th>Microscopy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>49</td>
</tr>
<tr>
<td>+</td>
<td>91</td>
</tr>
<tr>
<td>++</td>
<td>52</td>
</tr>
<tr>
<td>++++</td>
<td>9</td>
</tr>
<tr>
<td>Total 1000</td>
<td></td>
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</tbody>
</table>

In a subgroup of 460 consecutive samples of urine we correlated the findings on microscopy and BM stix with the culture result (table 2). Though numbers in some of the groups are small, it is apparent that, compared with microscopy, BM stix become increasingly insensitive at detecting pyuria in lesser degrees of bacteriuria. The criterion of 10³ organisms/ml has been taken as the “gold standard” for defining significant bacteriuria. In a symptomatic patient with pyuria, however, the presence of as little as 10² organisms/ml is felt to be significant by many workers.3

If BM stix are used instead of microscopy to detect pyuria many genuine urinary tract infections, especially those with lower bacterial counts may be misdiagnosed.

Before 1989 all our urine samples (about 100 000 a year) were tested by BM stix and culture on CLED agar by the method of Leigh and Williams. Microscopy was not performed routinely. In 1989 we abandoned dipsstick testing in favour of microscopy. Each sample of urine is placed in a well of a microtitre tray and examined on an inverted microscope connected to a TV camera and monitor; the results are simultaneously typed into the laboratory management computer. This system is both rapid and easy to use and the resultant savings from not using dipssticks (over £12 000 each year) have permitted the funding of an additional MLSO to perform the microscopical examination of the samples.

H GOULDING
IM GOULD
The Regional Laboratory, City Hospital, Aberdeen AB9 8AJ


<table>
<thead>
<tr>
<th>Culture result</th>
<th>Number</th>
<th>Pyuria on microscopy</th>
<th>Sensitivity of BM stix</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;10³ organisms/ml</td>
<td>107</td>
<td>89</td>
<td>90%</td>
</tr>
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</table>
| 10⁻¹⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻⁻ître  on group.bmj.com on October 13, 2017 - Published by http://jcp.bmj.com/Downloaded from 791

BOOK REVIEWS


This 400 page book covers the wide field of lung tumours. It is well written with an excellent introductory chapter on the normal structure of the lung. All illustrations, both at the light microscopic and electron microscope level, are of excellent quality and add considerably to the book's appeal. The chapter on staging is up to date and well informed. The authors emphasise that cytolgy needs close liaison with clinical work to avoid false positive diagnoses which can be seen in a wide range of non-neoplastic conditions.
Cost effectiveness of dipsticks.

G Harvey and I M Gould

doi: 10.1136/jcp.44.9.791-b

Updated information and services can be found at:
http://jcp.bmj.com/content/44/9/791.2.citation

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