his in 1981 (8, 9). Dr. Ablin appears to be preoccupied with his previous work and fails to state clearly these differences in his Letter, resulting in misidentification of his antigen with that of ours.

Dr. Ablin’s putative non-secretory, normal-prostate-tissue-specific antigen could be an interesting molecule, because it occurs exclusively in normal prostate and obviously is lost during the process of tumorigenesis. Some mechanism(s) of tumorigenesis may be uncovered by studying its possible role in malignant transformation of the prostate, should the initial observations be confirmed and the antigen be isolated.

References

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Thiocyanate vs Cotinine As a Marker to Identify Smokers

To the Editor:
The debate continues as to what is the most effective assay to use in distinguishing smokers from nonsmokers (1). Assay of cotinine, the metabolite of nicotine, has been suggested (2). Alternatively, assay of thiocyanate, the metabolite of cyanide, is recommended for this purpose (3–5).

Cotinine assay, in the present state of the art, suffers two deficiencies: current procedures are complicated and costly (2); and cotinine has a biological half-life of only 19 h (6), whereas that of thiocyanate is 14 days (7). Although less specific, procedures for thiocyanate appear quite adequate (3).

Recently, insurance companies and health organizations have begun testing for evidence of smoking among their applicants. Short-term abstinence might result in a positive thiocyanate test but a negative cotinine test. To consider the value of thiocyanate as a differentiating parameter in a “spot test” for smokers, I undertook a study of 100 randomly selected volunteers whom I tested by using “Smoke-Screen” (David Diagnostics, Inc., Astoria, NY 11103), a commercially available test for thiocyanate in saliva. The test is performed by placing about 0.5 mL of saliva in a plastic cup and adding five drops of reagent solution. Positive results (a golden-brown color) are obtained when the salivary thiocyanate is ≥500 μmol/L and a negative (dull green) when below this threshold concentration.

In our test group, 58 were cigarette smokers and 42 nonsmokers, by history. Of the smokers, results for 54 were positive. The four for whom results were negative all smoked infrequently, or smoked low-tar brands. For a positive response, the smoker must have been exposed to at least 60 mg of tar daily (8). Of the nonsmokers, results for 41 were negative and, on retesting at a later date, the one false positive was recorded as negative.

In summary, this thiocyanate test appears to provide reliable screening results easily in a non-laboratory setting.

References


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Temperature Coefficient for Erythrocyte Sedimentation Rate As Measured in Plastic Tubes

To the Editor:
Measurement of the erythrocyte sedimentation rate (ESR) is a simple laboratory test, but it is affected by ambient temperature (1).

Earlier workers (2, 3) found the temperature coefficient to be constant in the range from 23 to 37 °C, but dependent on the ESR (2). In these studies glass pipettes were used, whereas disposable plastic tubes are widely used now. Therefore we re-examined the temperature coefficient, using plastic tubes (Ole Riise, Tøstrup, Denmark), which comply with the tentative NCCS standard (4).

Blood samples from 23 patients were collected in 0.11 mmol/L citrate solution, and the ESR was measured in duplicate at 23, 28, 32, and 37 °C. The standard deviation was 1.5 mm/h. The results at 23 °C are summarized below, and our mean values are compared with those from refs. 2 and 3.

<table>
<thead>
<tr>
<th>ESR, mm/h</th>
<th>Temp. coeff., mm/h per °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤50</td>
<td>0.62</td>
</tr>
<tr>
<td>50–100</td>
<td>0.19</td>
</tr>
<tr>
<td>≥100</td>
<td>0.61</td>
</tr>
</tbody>
</table>

Manley (2) (Westergren method)
Wartman (3) (Wintrobe method)

This study: 1.72 2.20 1.08
(no. patients) (12) (11) (4)

As can be seen, our results show a much larger temperature coefficient than reported elsewhere, both with respect to the size of the temperature gradients and to the dependence on the ESR value.

Evidently one cannot use the previous temperature gradients, found with use of glass pipettes, uncritically, but must establish new ones for each type of plastic tubes used.