During endoscopic ultrasound (EUS)-
guided fine-needle aspiration (FNA), the
standard size of needle used is a 22-gauge
needle. Larger needles have been used to
obtain actual core tissue samples [1/C1773],
but their has failed to significantly im-
prove diagnostic accuracy for malignancy
[2/C1774], except perhaps in the case of un-
usual histology [5]. On the contrary, a
new, smaller-caliber (25-gauge) needle
has been introduced to the market by
Wilson-Cook Medical Inc. (Winston-
Salem, North Carolina, USA). The purpose
of this study was to compare the 22− and
25−gauge needles for adequacy of tissue
acquisition and diagnostic yield.

The study was a retrospective review of
all EUS-FNA procedures performed using
22- and 25-gauge needles alternately in
the same patient. Of a total of 132 pa-
tients undergoing EUS, only 16 met the
inclusion criteria. The mean age was 65.1
years. The cytotechnician was present
during 75% of the procedures. The needle
pass was considered by the endoscopist
to be difficult in 37.5% vs. 25.0% of cases
using the 22- and 25-gauge needles,
respectively (P = 0.7). The specimen ade-
quacy rates were: cytologic 68.6 vs. 56.3
(P = 0.7), and histologic 87.5% vs. 75.0%
(P = 0.6) with 22- and 25-gauge needles,
respectively. Two patients were lost to
follow-up. Out of the remaining 14 pa-
tients, a definitive diagnosis was obtained
in 85.7% (22-gauge needle) and 50.0%
(25-gauge needle) (P = 0.1). When 22−
and 25-gauge needles were combined,
the cytologic and histologic yields, as
well as the definitive diagnosis, were
higher (81.3%, 93.8%, and 92.9%, respect-
vatively). Hence, in conclusion we found no
statistically significant difference be-
tween needle size despite a relatively eas-
ier pass with the 25-gauge needle and
higher specimen adequacy and definitive
diagnosis with the 22-gauge needle. Al-
though we found the two needles to com-
plement each other when used alternate-
ly in the same patient, the differences did
not reach statistical significance due to
the small number of cases. We recom-
end large prospective trials.

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**Table 1** Comparison of 22- and 25-gauge needles with combined technique.

<table>
<thead>
<tr>
<th></th>
<th>22-gauge needle</th>
<th>25-gauge needle</th>
<th>Combined</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tissue yield</td>
<td>16/16 (100%)</td>
<td>15/16 (93.6%)</td>
<td>16/16</td>
<td>100%</td>
</tr>
<tr>
<td>Difficult needle pass</td>
<td>6/16 (37.5%)</td>
<td>4/16 (25.0%)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Cytologic adequacy</td>
<td>11/16 (68.6%)</td>
<td>9/16 (56.3%)</td>
<td>13/16</td>
<td>81.3%</td>
</tr>
<tr>
<td>Histologic adequacy</td>
<td>14/16 (87.5%)</td>
<td>12/16 (75.0%)</td>
<td>15/16</td>
<td>93.8%</td>
</tr>
<tr>
<td>Definitive diagnosis</td>
<td>12/14 (85.7%)</td>
<td>7/14 (50.0%)</td>
<td>13/14</td>
<td>92.9%</td>
</tr>
</tbody>
</table>

N/A, not applicable; NS, not significant.