Success rate and diagnostic performance of ultrasound guided Tru-Cut biopsies in cases with suspected sarcoma

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Introduction
No imaging modalities can sufficiently differentiate sarcomas and atypical myomas. In selected cases ultrasound guided biopsies are indicated in the planning of treatment.

Objective
To determine the rate of success and diagnostic performance of ultrasound guided Tru-Cut biopsies, where sarcoma was suspected.

Material & Methods

Results
In 66.7% (14 cases) the Tru-Cut was sufficient for diagnosis. In seven the material was insufficient for diagnosis (necrosis, lack of material or the origin of material not identifiable). In 2/7 cases with insufficient Tru-Cut a sarcoma was diagnosed at final pathology. In 12/14 patients with sufficient biopsy a gold standard was available, obtained by surgery.

<table>
<thead>
<tr>
<th>Biopsy/Surgery</th>
<th>Op benign</th>
<th>Op sarcoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benign biopsy</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Sarcoma biopsy</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Diagnostic performance:
- Negative predictive value 83.3 %
- Positive predictive value 100 %
- Sensitivity 85.7%
- Specificity 100%.

Conclusion
Ultrasound guided Tru-Cut biopsies were successful and sufficient for diagnosis in 66.7%. Tru-Cut biopsy are useful for confirmation of sarcoma (i.e. PPV= 100%). However, both a negative predictive value of 83.3% and 33.3% insufficient biopsies should lead to extra caution in selecting patients for biopsy.