Percutaneous Stereo Core Biopsies: When, How & Often

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Percutaneous Core Breast Biopsies

- Abbreviations used
  - FWLB = Fine Wire Localized breast Biopsy
  - MIBB = Minimally Invasive Breast Biopsy
  - Core = Automated, large core
  - Vac = Directional, Vacuum-Assisted
Percutaneous Core Breast Biopsies

- Technique easy to learn
- Tissue collection for histology
- Less invasive and as accurate as FWLB
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- Used to establish a tissue diagnosis
- Benign – observation and no surgery
- Malignant – surgery reduced to a “one step” from “two step”
## Percutaneous Core Breast Biopsies: Cancer Misses by Stereo & FWLB

<table>
<thead>
<tr>
<th>Biopsy Type</th>
<th>Cancer Misses</th>
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<tbody>
<tr>
<td>14-G Core (^1)</td>
<td>4%</td>
</tr>
<tr>
<td>11-G Vac (^2)</td>
<td>1%</td>
</tr>
<tr>
<td>FWLB (^3)</td>
<td>2%</td>
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1 = Jackman, *Radiology* 1999; 210:799  
2 = 6 studies  
3 = Jackman, *Radiology* 1997; 204:677
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- Image guidance:
  - Stereo taxis
  - Ultrasound
  - MRI
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- **Tissue sampling**
  - 12 or 14 g automated core biopsy needles
  - 9 or 11 g directional vacuum assisted probes
  - 9 or 11 g titanium vacuum assisted probes

- **COST Difference $$**
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- Stereotactic Bx by vacuum preferred over core
  - Significant decreased cancer misses, DCIS underestimates, ADH underestimates, calcification misses and rebiopsies

- Increased cost and complications

- Availability
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- Lesions which are only seen on mammogram
- Majority are calcifications with no mass
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- Asymmetric densities
- Architectural distortion
- Masses not seen at U/S
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- Dedicated prone tables
- Add-on units
  - Patients who can’t lie prone
  - Cost saving $$
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- Two images 15 degrees off midline
- Depth (z axis) calculated by computer
- Small field digital imaging
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- Lesion targeted using shortest pathway
- Skin cleansed
- Local anaesthetic prior to and during biopsy
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- Small skin incision
- Probe is “fired” into the lesion
- Pre and post fire stereo images
- 6 – 12 or > specimens with post collection specimen images
Case # 1

- 44 yr. old woman
- 1\textsuperscript{st} mammogram
- No family history of breast cancer