# STEREOTACTIC BIOPSY INSTRUCTIONS

Review images to determine approach (CC, from below, Medial, lateral); considerations: depth from skin, breast thickness (?<3cm or deep lesions may need standoff pad), relationship to areola, visibility, configuration, multiple lesions (check correct lesion) and confirm modality, approach and needle type with breast interventional staff.

1. Select needle – regular 9G (2cm chamber), versus petit 9G (1cm chamber) for breasts under 3cm thick.
2. Check prebiopsy film w/ BB over area of interest (if obtained)
3. Consent and place green circle on breast (anticipating location of lesion and approach)
4. Tech will set room up. Has biopsy chamber been tested?
5. Tech will position patient w/ BB marker in field of view and they will obtain scout film (directly down FOV) and a stereotactic pair (30 degrees apart).
6. Compare scout film and stereo pair to pre-procedure films to ensure accuracy of target. This is especially critical if multiple lesions (e.g. groups of calcs) are present.
7. ***Ensure reference markers are correct, i.e. crosses are in holes at top of stereo pair images – if not, click incorrect and go through process (i.e.click in the holes, left then right) to confirm correct reference plate.***
8. Click on target in both pair windows to obtain coordinates; in general it is best to aim for the bottom (nipple side) of smaller lesions to maintain visability of needle to target on pre and post biopsy imaging pairs.
9. Double check stroke margin (compression - Z must equal > 7mm for the regular needle, and >2mm for the petit). If <7mm may need standoff pad or different approach

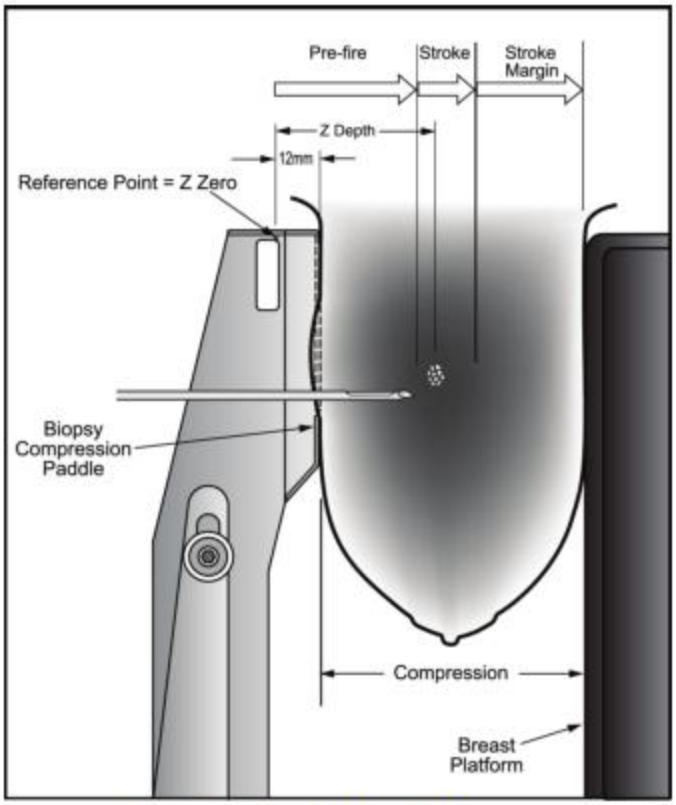

*Figure 27: Stroke Margin Diagram*

10. Send coordinates and have tech read off machine to confirm
11. **PERFORM TIME OUT**
12. Prep breast with chlorhexadine
13. Tech will place needle on needle holder
14. Set Z=0. Hold together motor enable and Z position until needle moves up to top and machine beeps. Dial needle forward until the tip just crosses plane of the reference plate (i.e. is immediately in front of the small vertical metal bar when viewed in profile through the gap in the compression paddle.
15. retract needle back approx 1cm to avoid scratching breast when moving to target.
16. Move needle to X & Y coordinates Hold together motor enable and go to target until need moves up to top and machine beeps
17. Advance needle close to skin surface
18. Intradermal bleb using **1% plain** lidocaine and deep anesthesia (with lido w/o and then w/ epi) to estimated Z depth(<3cc)
19. Skin incision with scapel deep enough get to the green plastic on scalpel
20. Blunt dissection w/ mosquito clamp (deeper tissues not skin)

21. Advance needle through insertion site to Z depth using rear dial (Z-differential=0);
22. If machine beeps as stroke margin is small, reassure patient (but must have stroke margin >0.5mm prior to firing)
23. Obtain stereo pair
24. Check needle tip position relative to target

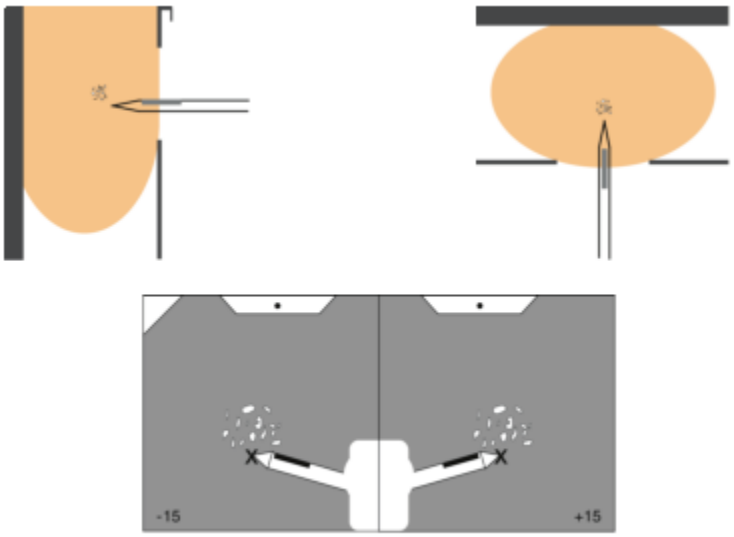


*Figure 25: Pre-Fire Needle Placement*

25. Adjust as necessary using x,y,z dials; reimage if necessary.
26. Additional deep anesthesia w/ **lido + epi** (approx 5cc) running needle along hub at 4 quadrants
27. Dial needle back to -5mm z depth for regular needle and -1mm for petite needle.
28. Lock needle travel and push needle guide to skin
29. Warn patient about upcoming popping noise
30. Deploy needle with plunger
31. Obtain stereo pair

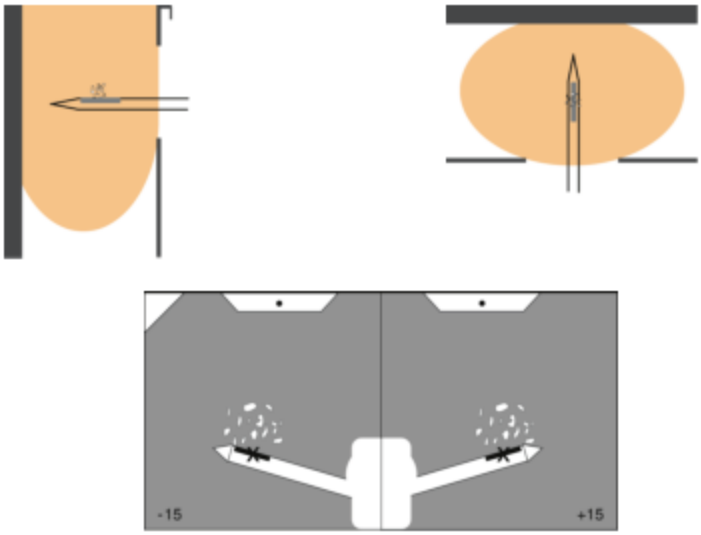

*Figure 26: Post-Fire Needle Placement*

32. Check target relative to chamber; adjust as necessary (ideal position is target immediately above chamber). Be aware of foreshortening effect
33. Deep anesthetic w/ **lido + epi** through back of chamber using adapter. Inject 2cc to fill dead space then inject another 4-6cc while needle turns 360 degrees
34. Warn patient of biopsy noise then put foot on pedal. Each time the machine beeps turn needle (12,2,4,6,8,10 O'clock postions)
35. Obtain 6 core biopsies
36. Select lavage on the Atec machine (or ask tech to). Rotate needle until clear fluid and all biopsies in chamber.
37. Select biopsy on Atec macine
38. Remove specimen container and lay out specimens on wet filter paper.
39. X-ray specimen to document presence/absence of calcs.
40. If biopsies in adequate, retract needle several mm but keep in skin
41. Redo stereo pair and retarget
42. Dial to X and Y targets manually then reinsert to new Z-5mm and rebiopsy.
43. If biopsy satisfactory then remove needle (clips off at back), leave sheath in.
44. Insert clip and deploy, image to confirm
45. Remove sheath by dialing back on Z. Hold compression and remove patient from hole
46. Clean skin with peroxide, apply 3 x stereo strips after benzoin.
47. Give patient instructions – no showers for 24 hrs. No tub baths, hot tubs or swimming for 5 days. No lifting > 10 lbs, exercise that involves jumping up and down or contracting pectorals for 3 days. Remove steristrips after a week.

48. Patient will then go to mammo for a check clip film.
49. Review clip position with original prebiopsy films.
50. Confirm if biopsy needs to be reviewed with in path conference. Time constraints limit how many biopsies that can be reviewed during this conference, so these are identified on the biopsy record sheet, or occasionally after the results become available.

Typically studies that are NOT reviewed are:

- Classic cancers (e.g. obvious spiculated masses)
- Fibroadenomas unless atypical
- Calcifications where sampling is good
- Cysts

Any study where there is a question of rad-path correlation MUST be reviewed, at this point we are also reviewing all MRI guided biopsies

51. Complete the back side of the biopsy sheet and get staff to review and sign.