Vacuum-Assisted Breast Biopsy Devices

The Advantages That May Be Provided by Sharp Needle Tips

The design and sharpness of the needle tip of a breast biopsy probe can impact several aspects of a breast biopsy. Particularly when passing through dense tissue, a reduction in the force necessary to guide the probe through the breast can help increase control, thus reducing the risk of complications, improving targeting, and potentially decreasing patient discomfort. Patient comfort may be improved by a reduction in a “drag” effect.

Physician Perspectives on the EnCor Enspire® Breast Biopsy System TriConCave™ Cutting Tip

Bard Biopsy Systems interviewed three leaders in breast care to determine how the EnCor Enspire® Breast Biopsy System patented TriConCave™ Cutting Tip impacted:

- Risk of complications
- Procedural performance
- Patient comfort

All three physicians have extensive experience with the EnCor Enspire® Breast Biopsy System, having completed hundreds of biopsies with the system.

Sharp Tip Can Impact Risk of Complications

Without a sharp tip, passing through dense tissue in the breast can require increased force, heightening the risk of complications such as piercing the chest wall, hitting the pectoralis muscle, cutting vessels near the intramammary artery, or passing through the skin on the contralateral side of the breast.

General Surgeon Jason Hechtman, M.D. correlates tip sharpness with control as the probe passes through tissue of varying densities. In explaining his preference for the TriConCave™ needle, he observes, “With a dull instrument, when you hit that interface of hard/soft tissue you have a much higher chance of flying forward and damaging structures on the other side. You control the tip more when it is sharp.”

“I must say that we do about 900 core biopsies a year with EnCor Enspire® Breast Biopsy System, and there have been no cases that we can’t biopsy because the breast is too dense or the lesion is too firm or sclerotic for us to be able to get our needle through.”

Linda B. Griska, M.D.
“The EnCor Enspire® Breast Biopsy System cuts like a knife.”

Jason Hechtman, M.D., F.A.C.S.

Sharpness and Reduced Penetration Pressure May Improve Targeting

Surgical Oncologist S. Chace Lottich, M.D. also finds that sharpness—particularly when penetrating fibrotic tissue or malignant lesions—can also contribute to better targeting of the lesion. “With EnCor Enspire® Breast Biopsy System I feel it just sort of glides and it’s not as if I’m working against an immobile object.”

Radiologist Linda B. Griska, M.D. agrees and also sees improved targeting as reducing both time within the breast and patient discomfort. “I think that the sharp needle allows us to go in and get to where we want to get without a lot of probing around unnecessarily... We’re able to get out of there as quickly as possible.”

Sharpness and Reduced Drag May Contribute to Patient Comfort

A number of other factors related to the sharpness of the needle tip may influence a patient’s comfort during the biopsy. For example, while a dull tip can create a dragging sensation as the tip passes through tissue, the EnCor Enspire® Breast Biopsy System probe was engineered to have a sharp tip that reduces that drag sensation.

Dr. Lottich reports that due to the sharpness of the EnCor Enspire® Breast Biopsy System needle it “seems to penetrate the breast tissue easily, with low discomfort and minimal snowplowing in the patient’s tissue.”

Conclusion

Interviewed separately, all three physicians found that since the EnCor Enspire® Breast Biopsy System’s tip was sharp it contributed to a low risk of complications, excellent performance, as well as to increased patient comfort.