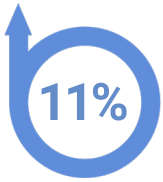
The Science of VAB

Clinical Highlights

Mammotome VAB devices have been used and studied by clinicians across the world, including the Mammotome® Elite Tetherless Vacuum-Assisted Biopsy System. Three clinical studies assessing performance compared to 14G spring-fired core needle devices are highlighted below, originating from the Seoul National University Bundang Hospital (13G Mammotome® Elite device), the Fudan University Shanghai Cancer Center and Department of Oncology (10G Mammotome® Elite device), and the Lower Silesian Oncology Centre – Regional Comprehensive Cancer Centre (11G Mammotome® Breast Biopsy System). These clinical studies find that Mammotome VAB devices accurately sample tissue, improve patient outcomes, and had equivalent or less pain ratings as compared to 14G core needle devices.

Author	# of Patients Included	# of Lesions Biopsied
Seo and Kim, et al, 2017	125	145
Zhang, et al, 2023	1,462	1,462
Szynglarewicz et al, 2011	723	723

Key results of Mammotome VAB devices as compared to a 14G core needle device



Improved Sampling Accuracy

- 11% improvement in sampling accuracy[1]
- Secured samples from desired location with and without calcifications

Reduction in Underestimation Rate

- 83% reduction in underestimation rate[1]
- Ensured radiologic-pathologic concordance at all times[1]

Reduction in False Negative Rate

- 37% reduction in false negative rate[2]

Reduced or Equivalent Patient Pain

- Using single insertion VAB devices results in less or equivalent pain during and equivalent pain after procedures, as compared to core needles despite larger gauge sizes (10G to 13G).[1,2,3]

View the full papers:

- Seo and Kim, et al, 2017 >
- Zhang, et al, 2023 >
- Szynglarewicz et al, 2011 >

References

1. Seo, J, et al. Ultrasound-Guided Cable-Free 13-Gauge Vacuum-Assisted Biopsy of Non-Mass Breast Lesions. Vol. 12, no. 6, 19 June 2017, pp. e0179182, https://doi.org/10.1371/journal.pone.0179182.

2. Zhang, Y., et al. "The comparison of efficacy and safety evaluation of vacuum-assisted Elite 10-G system and the traditional BARD 14-G core needle in breast diagnosis: an open-label, parallel, randomized controlled trial." International Journal of Surgery 109:1180–1187, April 2023, http://dx.doi.org/10.1097/JS9.0000000000000257

3. Szynglarewicz, B., et al. "Pain Experienced by Patients during Minimal-Invasive Ultrasound-Guided Breast Biopsy: Vacuum-Assisted vs Core-Needle Procedure." European Journal of Surgical Oncology (EJSO), vol. 37, no. 5, May 2011, pp. 398–403, https://doi.org/10.1016/j.ejso.2011.02.002.

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