



DOI: 10.4274/ejbh.galenos.2026.2026-7-15

Eur J Breast Health 2026;22(4):523-524

Methodological Considerations on Tomosynthesis-Guided Vacuum-Assisted Excision for B3 Breast Lesions

Erina Alushi¹, Tommaso Perretta²

¹Department of Surgical Science, Tor Vergata University, Rome, Italy

²Department of Diagnostic Imaging, Molecular Imaging, Interventional Radiology and Radiotherapy, Policlinico Tor Vergata, Rome, Italy

Keywords: B3 lesions; breast biopsy; surgical de-escalation; upgrade risk; vacuum-assisted-excision

Dear Editor,

The article by Valkovic Zujic et al. (1) addresses whether vacuum-assisted excision (VAE) can safely reduce surgical overtreatment of B3 lesions diagnosed by tomosynthesis-guided vacuum-assisted biopsy (VAB). The study is commendable for its focus on multidisciplinary de-escalation in a field where practice remains heterogeneous (2).

Several methodological aspects, however, deserve attention when interpreting the conclusion that VAE represents a safe alternative to surgical excision (SE) for B3 lesions (1). The comparison between VAE and SE is intrinsically shaped by allocation decisions made by the multidisciplinary team: lesions considered radiologic-pathologic concordant and lower risk were directed toward VAE, whereas lesions with greater concern for underestimation were preferentially referred for surgery (1). This allocation is clinically appropriate, but has important methodological implications: the VAE and SE cohorts are enriched for different baseline oncologic risk profiles and do not represent equivalent treatment arms; the 30.8% upgrade rate observed in the SE group is a direct consequence of this selection strategy (1, 3).

Second, the absence of malignant upgrades in the VAE group should be interpreted with caution, given the limited number of VAE-treated lesions and the shorter mean follow-up compared with that of the surgical cohort (1). In published retrospective series, upgrade after VAE or VAB is uncommon but not negligible, and is consistently influenced by histologic subtype, particularly by the presence of atypia (3, 4). Recent single-centre data on 366 screen-detected B3 microcalcifications further confirm non-zero upgrade rates despite vacuum-assisted sampling (4).

A zero-upgrade rate in a small, highly selected series is therefore reassuring, yet is better viewed as hypothesis-generating than as definitive proof of long-term oncologic safety (1, 3). This interpretation aligns with current guideline-based stratification. The 2024 European recommendations (European Society of Breast Cancer Specialists/European Society of Breast Imaging/European Society of Pathology/European Society of Surgical Oncology) support VAE or surveillance for selected B3a lesions when there is radiologic-pathologic concordance, while recommending surgery for ADH/AIDEP and lobular carcinoma *in situ*/lobular intraepithelial neoplasia grade 2, whose upgrade rates remain higher (2, 4). In the present study, ADH/AIDEP accounted for most surgical upgrades, reinforcing that VAE's

Corresponding Author: Erina Alushi, MD, MSc;

E-mail: dr.alushierina@gmail.com **ORCID:** orcid.org/0000-0002-4847-0971

Received: 26.07.2026 **Accepted:** 26.08.2026 **Available Online Date:** 23.09.2026

Cite this article as: Alushi E, Perretta T. Methodological considerations on tomosynthesis-guided vacuum-assisted excision for B3 breast lesions. Eur J Breast Health. 2026;22(4):523-524



©Copyright 2026 The Author(s). Published by Galenos Publishing House on behalf of Turkish Federation of Breast Diseases Societies.
This is an open access article under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 (CC BY-NC-ND) International License.

strength lies in selective use rather than in broad substitution for surgery (1). Prior ultrasound-guided 8-gauge VAE experience with BI-RADS 3–4 masses points in the same direction, with lesion size and imaging features emerging as key determinants of complete excision (5). Although ultrasound-guided and tomosynthesis-guided settings are not directly superimposable, both approaches converge on the same practical message: minimally invasive excision is most reliable when grounded in strict radiologic-pathologic concordance and subtype-specific risk assessment (1, 2, 5).

These observations contextualise rather than diminish the authors' contribution. The study supports multidisciplinary team-guided de-escalation, but underscores the need for larger prospective registries, standardized subtype-specific reporting, and longer follow-up before equivalence with surgery can be claimed (3). In this evolving field, the challenge is not simply to replace surgery with minimally invasive excision, but to match the intensity of intervention to the biological and radiologic risk of each B3 lesion, so that de-escalation becomes a matter of precision rather than simplification.

Footnotes

Authorship Contributions

Concept: E.A., T.P.; Design: E.A., T.P.; Data Collection and/or Processing: E.A.; Analysis and/or Interpretation: E.A., T.P.; Literature Search: E.A., T.P.; Writing: E.A., T.P.

Conflict of Interest: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

References

1. Valkovic Zujic P, Bartolovic N, Rnjak J, Vojta L, Madunic M, Avirovic M, et al. Tomosynthesis-guided vacuum-assisted excision of B3 breast lesions: reducing overtreatment without compromising safety. *Eur J Breast Health*. 2026; 22: 190-198. (PMID: 41873956) [[Crossref](#)]
2. Rubio IT, Wyld L, Marotti L, Athanasiou A, Regitnig P, Catanuto G, et al. European guidelines for the diagnosis, treatment and follow-up of breast lesions with uncertain malignant potential (B3 lesions) developed jointly by EUSOMA, EUSOBI, ESP (BWG) and ESSO. *Eur J Surg Oncol*. 2024; 50: 107292. Erratum in: *Eur J Surg Oncol*. 2024; 50: 107943. (PMID: 38061151) [[Crossref](#)]
3. Giannotti E, James JJ, Chen Y, Sun R, Karuppiiah A, Yemm J, et al. Effectiveness of percutaneous vacuum-assisted excision (VAE) of breast lesions of uncertain malignant potential (B3 lesions) as an alternative to open surgical biopsy. *Eur Radiol*. 2021; 31: 9540-9547. Erratum in: *Eur Radiol*. 2022; 32: 742. (PMID: 34100998) [[Crossref](#)]
4. Bianchi S, Caini S, Vezzosi V, Orzalesi L, Piovesan L, Mantellini P, et al. Upgrade rate to malignancy of uncertain malignant potential breast lesions (B3 lesions) diagnosed on vacuum-assisted biopsy (VAB) in screen detected microcalcifications: analysis of 366 cases from a single institution. *Eur J Radiol*. 2024; 170: 111258. (PMID: 38091661) [[Crossref](#)]
5. Perretta T, Lamacchia F, Ferrari D, Beninati E, DI Tosto F, DE Stasio V, et al. Evaluation of ultrasound-guided 8-gauge vacuum-assisted excision system for the removal of US-detectable breast lesions. *Anticancer Res*. 2020; 40: 1719-1729. (PMID: 32132080) [[Crossref](#)]