

<https://doi.org/10.29289/25945394V36S11084>

1084 – Use of brentuximab vedotin in breast implant–associated anaplastic large cell lymphoma: a scoping review

Ana Clara da Costa Souza, Izadora Fernandes Marques, Eduardo Carizzi Silva, Luiz de Paula Silveira Júnior, Luiz de Paula Silveira Neto, Maria Luiza Bessa de Paula

¹Centro Universitário de Mineiros – Goiânia (GO), Brazil.

²Pontifícia Universidade Católica de Goiás – Goiânia (GO), Brazil.

Introduction: Brentuximab vedotin (BV) is an antibody-drug conjugate that revolutionized the treatment of CD30 lymphomas, being incorporated into the management of breast implant–associated anaplastic large cell lymphoma (BIA-ALCL). By binding it to CD30, it internally releases a cytotoxic agent, promoting tumor cell death, therefore becoming an ally in surgical management.

Methodology: A scoping review based on PRISMA and Joanna Briggs Institute guidelines. The search was conducted through PubMed and Scopus using the descriptors “brentuximab vedotin AND BIA-ALCL,” covering a 10-year period. From thirteen initial studies, eight were selected (case reports, systematic reviews, and guidelines) based on clinical relevance and data rigor.

Results: In the reports, BV demonstrated significant clinical efficacy, complete and partial metabolic responses, tumor downstaging, and enabled curative surgeries, with sustained remission in several patients (>3–4 years). Administration occurred both as monotherapy and in combination. BV monotherapy was typically used for 6–8 cycles, mainly in the neoadjuvant (pre-surgical) setting, indicated when there was extracapsular extension with significant invasion of adjacent structures, to reduce thoracic masses and lymph node involvement, allowing for resection. Combined regimens (BV-CHP: brentuximab + cyclophosphamide + doxorubicin + prednisone) were used for approximately 6 cycles, both as primary and adjuvant therapies, associated with complete metabolic responses and, in some cases, avoidance of mutilating resections. One report documented therapeutic failure associated with an unfavorable genomic profile (absence of STAT3 mutation; novel mutations), suggesting resistance mechanisms. Overall, BV was well tolerated and allowed completion of cycles; however details on doses and intervals were scarce.

Conclusion: BV is a valuable option in systemic therapy for advanced BIA-ALCL, promoting tumor control, downstaging, and facilitating curative surgery. It can be used as a monotherapy or in combination, however, responses may vary, and genomic evaluation may help predict resistance and optimize therapeutic choice.

Ethics: Public data – Literature review.

Keywords: breast implants; brentuximab vedotin; lymphoma large-cell anaplastic; drug therapy.