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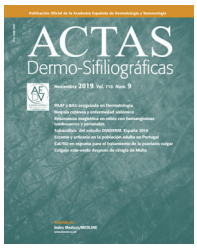

RESIDENT'S FORUM

# [Translated article] RF – Neoadjuvant Therapy in Melanoma

## FR – Neoadyuvancia en melanoma

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**KEYWORDS**
Neoadjuvant therapy;
Melanoma;
Pathologic response;
Index lymph node;
Conservative surgery

**PALABRAS CLAVE**
Neoadyuvancia;
Melanoma;
Respuesta patológica;
Ganglio índice;
Cirugía conservadora

Neoadjuvant therapy refers to the use of systemic anticancer drugs prior to surgery. The goal is the same as that of adjuvant therapy: to treat undetected locoregional or distant metastasis.[1,2] While neoadjuvant treatment regimens have been standardized in certain stages of breast, lung, and rectal cancer, they are still under investigation in melanoma.

The ideal candidates for neoadjuvant therapy in melanoma are patients with nodal disease detected by clinical or ultrasound examination (stage IIIB, IIIC, or IIID disease according to the eighth edition of the American Joint Committee on Cancer Staging Manual) or resectable oligometastatic disease (stage IV).[1,2] Most studies of neoadjuvant therapy in melanoma have investigated immunotherapeutic agents, although some have focused on targeted therapies.

The main advantage of neoadjuvant therapy is that it enables the early treatment of microscopic distant disease, while in many cases also reducing the volume of lymph node disease and hence decreasing surgical morbidity.[3] Histologic evaluation of resected tumor specimens from patients who have received neoadjuvant therapy helps determine pathologic responses and potential treatment benefits. The resulting information can also be used to individualize future treatment schedules and durations. A greater understanding of pathologic responses may also enable modifications to current surgical techniques.

The advent of neoadjuvant therapy has given oncologists the possibility of using conservative lymph node surgery instead of complete lymph node dissection (CLND) in patients with complete pathologic response in the lymph node harboring the metastasis (the index node). Two notable

DOI of original article:
https://doi.org/10.1016/j.ad.2021.05.032
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https://doi.org/10.1016/j.ad.2021.05.034

studies in this regard are MeMaLoc[4] and PRADO,[5] in which patients with clinically or ultrasound-detected stage III melanoma and lymph node metastasis were started on immunotherapy prior to surgery. Just a few weeks after initiation of treatment, the index node was marked with a magnetic (MeMaLoc) or radioactive (PRADO) seed. After 6 weeks of immunotherapy, the 12 patients in the MeMaLoc study underwent CLND. In all cases, pathologic index node responses were congruent with responses in the rest of the nodes. Patients with a complete or near-complete pathologic response in the index node had no metastases in the rest of the basin. The PRADO study went a step further and stratified patients by pathologic response after removal and examination of the index node to identify candidates for CLND. Of the 99 patients studied, 59 achieved a pathologic response of more than 90% and did not undergo CLND. The remaining 40 patients underwent CLND, and those with more than 50% viable tumor continued treatment with immunotherapy or targeted therapy.

The risks of neoadjuvant therapy include rendering a patient who does not respond to treatment inoperable due to tumor progression or general worsening of their condition due to toxicity. Adequate selection of patients who could benefit from neoadjuvant therapy in the setting of melanoma will therefore be crucial in the near future.

## Conflicts of Interest

Aranzazu Arrieta and María Blanco de Tord declare no conflicts of interest.

Aram Boada has received fees from or participated in clinical trials sponsored by Novartis, Roche, Pierre-Fabre, BMS, and MSD.

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