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## TREATMENT OF RELAPSED AND REFRACTORY LYMPHOMAS WITH NIVOLUMAB IN A LIMITED RECOURSE COUNTRY

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**Background** Programmed cell death proteins and their ligands have been under research in recent years, as their inhibitors provide promising results in relapsed and refractory lymphoma treatment.<sup>1</sup> However, in Armenia, number of patients receiving Nivolumab is small and does not represent a real indication number, since it is problematic to provide it. The main aim of this monocenter retrospective study is to evaluate the outcome with Nivolumab among Armenian lymphoma cases.

**Methods** Data was taken from the Hematology Center after prof. R. Yeolyan ambulatory cards. Study duration: 2013-2021. Patient number: 10. Eight patients were diagnosed with Hodgkin's lymphoma (HL), one patient with Primary mediastinal B large cell lymphoma (PMBCL), another one with ALK-positive T-large cell anaplastic lymphoma (ALK+ ALCL). In all patients, the primary diagnosis was established in advanced stages.

**Results** Nivolumab performed after 2nd relapse in 5 patients, of which 4 were with HL and one with ALK+ ALCL. First-line therapy was started with BEACOPP scheme in all HL patients, after which BV, ABVD, VGPP, DHAP, CVPP, ViG-EPP3 were also the regimens of choice over Nivolumab. The PMBCL patient was treated with R-CHOEP, R-DHAP before Nivolumab + Venetoclax. At initial diagnosis he had skin necrosis of about 15 cm, which worsened after radiation, but partial skin recovery was observed after Nivolumab + Venetoclax regimen, skin biopsy showed no tumour activity. The patient with ALK+ ALCL was treated with R-CHOP, BV-CHP, BV before Nivolumab. 3 patients received Nivolumab after initial therapy failure, 1 of them with PMBCL and 2 with HL. One patient did not attend after Nivolumab+ BV courses, but no mortality status. One HL patient was diagnosed with HIV and is currently in partial remission (PR) after BEACOPP + Nivolumab + auto-HSCT. CR after Nivolumab was achieved in 3 patients, 2 of them with HL and 1 with PMBCL. PR was achieved in one HL patient. Progression after Nivolumab was observed in 5 patients, of which 4 had HL and one had ALK+ ALCL. Auto-HSCT was performed in 3 patients, 2 of them with HL and 1 with PMBCL, and CR was achieved in PMBCL.

**Conclusions** Overall, CR was achieved in 30% of lymphoma patients, among whom patients received Nivolumab at doses of 100, 160 and 200 mg. Some patients received reduced doses of Nivolumab 40 mg and did not respond to a treatment. Based on a limited number of patients, additional studies are needed for a definitive conclusion.

### REFERENCE

1. Xie W, Medeiros LJ, Li S, Yin CC, Khoury JD, Xu J. PD-1/PD-L1 pathway and its blockade in patients with classic Hodgkin lymphoma and Non-Hodgkin large-cell lymphomas. *Current Hematologic Malignancy Reports*. 2020;**15**(4):372–81.

<http://dx.doi.org/10.1136/jitc-2022-SITC2022.0423>