

The Comparison of Primary B-Cell and NKT-Cell Non-Hodgkin Lymphomas in Nasopharynx, Nasal Cavity, and Paranasal Sinuses

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Abstract : Background: We aimed to compare clinical and survival differences between B-cell (B-NHL) and NKT-cell non-Hodgkin lymphomas (NKT-NHL) located in the nasal cavity, nasopharynx and paranasal sinuses, which are always categorized as one sinonasal type. Methods: Patients diagnosed with primary B-NHL and NKT-NHL in the nasal cavity, nasopharynx, and paranasal sinuses from the SEER database were included. We identified these patients based on histological types and anatomical sites and subsequently conducted univariate and multivariate Cox regression and Kaplan-Meier analyses to examine cancer-special survival (CSS) outcomes. Results: Overall, most B-NHL cases originated from the nasopharynx, while the majority of NKT-NHL cases occurred in the nasal cavity. Notably, the CSS outcomes improved significantly in all sinonasal B-NHL cases over time, whereas no such improvement trend was observed in each sinonasal NKT-NHL type. Additionally, increasing age was linked with an elevated risk of death in B-NHL, particularly in the nasal cavity (HR:3.37), rather than in NKT-NHL. Compared with B-NHL, the adverse effect of the higher stage on CSS was more evident in NKT-NHL, particularly in its nasopharynx site (HR: 5.12). Furthermore, radiotherapy was beneficial for survival in patients with sinonasal B-NHL and NKT-NHL, except in those with NKT-NHL in the nasopharynx site. However, chemotherapy has only been beneficial for CSS in patients with B-NHL in paranasal sinuses (HR: 0.42) since 2010, rather than in other types of B-NHL or NKT-NHL. Conclusions: Although B-NHL and NKT-NHL in the nasal cavity, nasopharynx and paranasal sinuses have similar anatomical locations, their clinic demographics and prognoses are largely different and should be treated and studied as distinct diseases.

Keywords : B-cell non-Hodgkin lymphomas, NKT-cell non-Hodgkin lymphomas, nasal cavity lymphomas, nasal sinuses lymphomas, nasopharynx lymphomas

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