RISK AND PROGNOSIS OF SECOND PRIMARY MALIGNANCIES IN PATIENTS WITH FOLLICULAR LYMPHOMA IN THE ERA OF RITUXIMAB: A POPULATION STUDY BASED ON THE SEER DATABASE

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Introduction

Follicular lymphoma (FL) patients have achieved favorable long-term survival since the introduction of rituximab. However, the development of second primary malignancies (SPMs) indicates a poor survival prognosis for FL patients, and large-scale studies in this field remain limited.

Objective/Aim

This study investigates the prognostic factors for FL patients in the rituximab era, as well as the clinical features, risk factors, and prognosis for patients who developed SPMs.

Methods

From 2000 to 2020, a total of 33,104 patients with pathologically confirmed FL were identified within the Surveillance, Epidemiology, and End Results (SEER) database. Competing-risk regression analysis was used to assess prognostic factors for lymphoma-specific survival (LSS), risk factors for developing SPMs, and prognosis in FL patients.

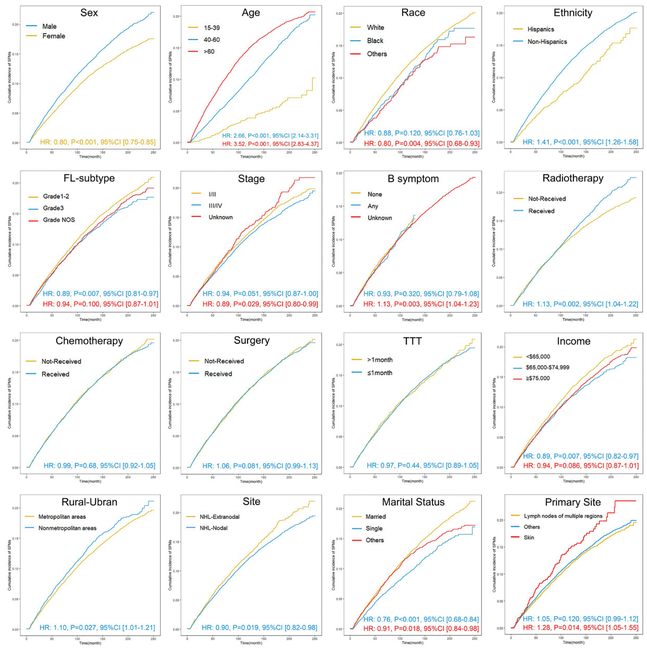


Figure1. Cumulative incidence of second primary malignancies in patients with follicular lymphoma diagnosed between 2000 and 2020.

Results

- **SPM Incidence & Risk Factors**

(1)11.5% (3,822/33,104) developed SPMs

(2)↑ Risk: Age >40, Non-Hispanic

(3)↓ Risk: Female, No initial RT, Grade 3, Dx 2015–2019

- **Survival Impact**

SPM patients had↓ Overall Survival (5-yr OS: 83.5% vs 78.4%; median OS: 150 vs 210 m);↑ Late mortality (OS risk ↑91m post-Dx; LSS risk ↑175m);↓ Lymphoma deaths (LSS HR=0.66) but ↑ Other cancers (5.3% vs 0% deaths).

- **Key Prognostic Drivers**

All FL patients:

Worse OS/LSS: Age≥40, Black race, Unmarried, Advanced stage, B symptoms

Better OS/LSS: Female, High income, Dx post-2005, Delayed treatment (>1mo), Surgery/RT

SPM subgroup:

Worse OS: Age>60, Unmarried, Dx post-2010

Better OS/LSS: Initial RT

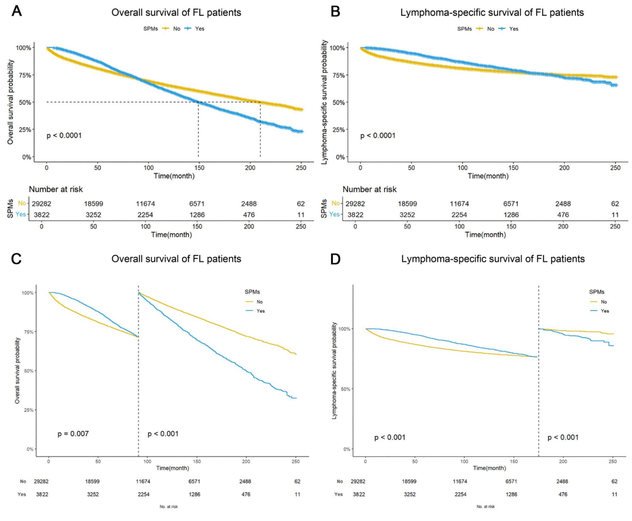


Figure2. Survival analysis of follicular lymphoma patients based on SPMs status.

Summary/Discussion

Based on a large-scale SEER database analysis, this study provides translational insights into risk-adapted surveillance and clinical management for second primary malignancies in follicular lymphoma patients treated with rituximab, informing personalized strategies and guiding future research.

References

1.Carbone A, Roulland, et al. Follicular lymphoma. Nat Rev Dis Primers.

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