

中文題目：原發性乳房瀰漫性大細胞淋巴瘤：台中榮總病例對照研究

英文題目：Primary Breast Diffuse Large B Cell Lymphoma: a Single Center Case-control Study

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### **Background:**

Primary breast lymphoma is rare and distinctive in primary breast tumors. Among the primary breast lymphoma, the diffuse large B cell(DLBCL) is the most common. In the IELSG study, the 5-year progression-free survival was 54%, and 5-year overall survival rate was 63%, which was poor compared with lymphoma of other origins. However, recent studies showed conflicting results and whether the prognosis is inferior remained unclear. This study aims to compare the treatment response and prognosis of primary breast DLBCL (PB-DLBCL) to non-breast DLBCL in the Rituximab era.

### **Method:**

We analyzed the patients' characteristics, treatment and treatment response in primary breast DLBCL in VGHTC in the past 16 years, from January 2005 to December 2021. We also collect the patients with non-breast DLBCL for the control group, matching sex, age, and Ann Arbor stage to the cases of primary breast DLBCL. The data from the two groups were collected and compared, including overall survival, progression-free survival, and relapse patterns.

### **Results:**

A total of 14 cases matched the definition of primary breast lymphoma. Two cases were excluded because pathology showed non-DLBCL (1 Burkitt's lymphoma and 1 MALT-oma). Among the twelve cases with primary breast DLBCL, all patients were female, and the median age was 57.5-year-old. Four cases were stage I, and 8 cases were stage II in primary breast DLBCL, with the same distribution in the stage in the non-breast DLBCL group. The performance status, LDH level, R-IPI score, and CNS-IPI showed no significant difference between the two groups. In the PB-DLBCL group, eight cases had very good R-IPI score (R-IPI=0) and 4 cases had good R-IPI score (1-2). All patients with primary breast lymphoma had a low CNS-IPI score (0-1).

In the breast DLBCL group, all patients received chemotherapy (11/12, 91.7% with CHOP-like regimen) and rituximab. The treatment regimens and local control rate with radiotherapy and/or surgery were similar in the two groups. All patients with primary breast lymphoma had complete response after initial treatment, and 3 cases had disease relapse, including 1 case with CNS relapse. We found there were no differences of progression-free survival and overall survival between the two groups (5-year PFS rate: PB-DLBCL vs. non-breast DLBCL: 73.3% vs. 84.8%,  $p = 0.391$ ) and overall survival (5-year OS rate: PB-DLBCL vs. non-breast DLBCL: 81.8% vs. 84.0%,  $p = 0.609$ ). In addition, the two groups also showed similar relapse rates and CNS relapse rates.

### **Conclusion:**

We found prognosis of breast DLBCL is non-inferior to DLBCL of other origins under treatment back-bone with Rituximab and CHOP-like regimen.