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**1756 Evaluating the Impact of Prophylactic Intrathecal  
Chemotherapy in Diffuse Large B Cell Lymphoma (DLBCL)  
Patients with High Central Nervous System International  
Prognostic Index (CNS-IPI) Scores: A Comprehensive Review and  
Meta-Analysis**

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# 1756 Evaluating the Impact of Prophylactic Intrathecal Chemotherapy in Diffuse Large B Cell Lymphoma (DLBCL) Patients with High Central Nervous System International Prognostic Index (CNS-IPI) Scores: A Comprehensive Review and Meta-Analysis📌

Program: Oral and Poster Abstracts  
Session: 627. Aggressive Lymphomas: Clinical and Epidemiological: Poster I  
Hematology Disease Topics & Pathways:  
Research, Clinical Research, health outcomes research, Combination therapy, Therapies

Saturday, December 9, 2023, 5:30 PM-7:30 PM

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## Introduction

Diffuse large B cell lymphoma (DLBCL) with a high CNS-IPI score poses an increased risk for relapse involving the central nervous system (CNS). Despite various studies seeking to validate the use of CNS prophylaxis, including intrathecal chemotherapy, results have been equivocal. This ambiguity may be partly attributed to the lack of prospective data, patient heterogeneity, limited sample sizes, and outdated methodologies in pre-rituximab studies. Consequently, administering CNS prophylaxis with intrathecal chemotherapy is not a standardized practice, and decisions are often based on individual factors such as anatomical location, disease stage, and specific case characteristics.

## Methods

This systematic review and meta-analysis were conducted and reported using the PRISMA guidelines. A thorough search was conducted across multiple online databases, including Google Scholar, Science Direct, PubMed, Cochrane, CINAHL, EMBASE, ProQuest Dissertation and Theses, ISI web of knowledge, PsycINFO, and Embase for articles on this topic. The date range of the articles included was between 2013-2023 and were limited to English language, peer-reviewed articles, cohort studies, retrospective studies & randomized controlled trials. The inclusion and exclusion criteria for studies helped to determine suitable studies

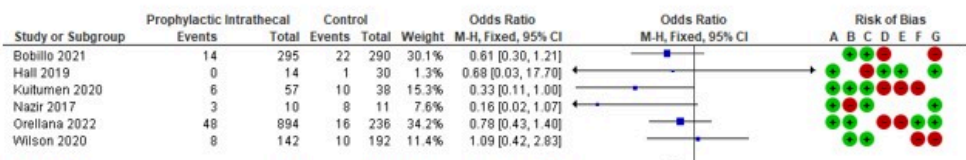
## Results

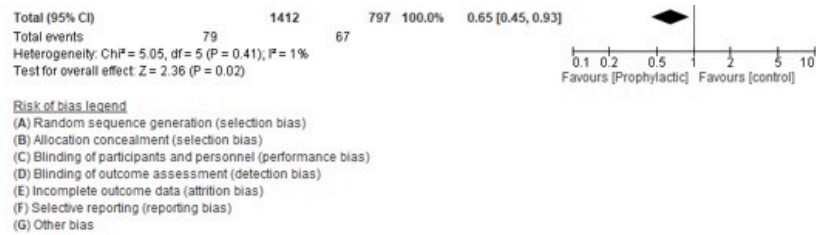
Out of 179 studies retrieved from the database search and 2 from other studies' reference lists, 6 met the inclusion criteria for qualitative and quantitative analysis. Data from 2209 patients in these 6 studies was analyzed using a random-effects model to perform a subgroup analysis of the benefits and risks of prophylactic intrathecal chemotherapy for patients with DLBCL and a high CNS-IPI score. The results demonstrated a significant improvement in overall treatment success, with a difference of 0.60 (95% Confidence Interval, 0.45 to 0.93) on a 0-10 Visual Analogue Scale (VAS). The heterogeneity of the studies was determined to be significant (P=0.02), further substantiating the positive impact of prophylactic intrathecal chemotherapy on the therapy success rate for DLBCL patients with high CNS-IPI scores.

## Conclusion

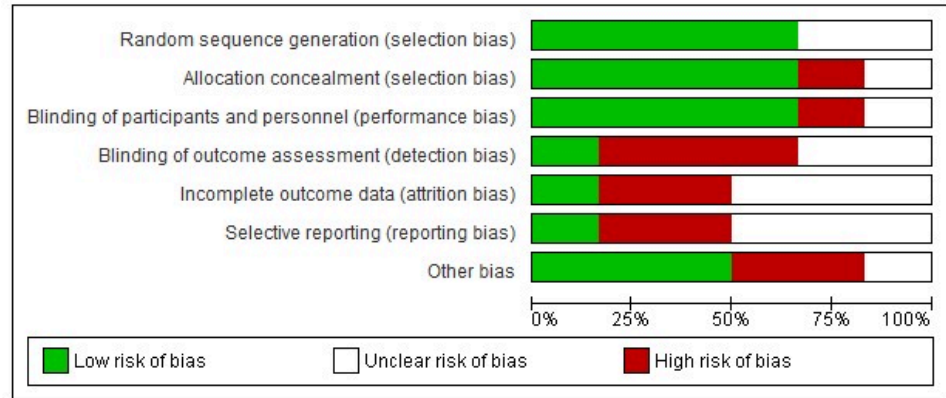
Our review elucidates that intrathecal chemotherapy as a prophylactic measure can reduce the rate of CNS relapse and enhance overall survival for patients with DLBCL possessing a high CNS-IPI score. However, it underscores the necessity to thoroughly assess each patient's unique clinical situation when determining if intrathecal chemotherapy is the appropriate therapeutic approach.

**Figure 1: Forest Plot demonstrating subgroup analysis of the benefits and risks of prophylactic intrathecal chemotherapy for patients with diffuse large B-cell lymphoma (DLBCL) and high Central Nervous System International Prognostic Index (CNS-IPI) score.**





**Figure 2: Risks of different types of bias in the meta-analysis.**



**Disclosures:** No relevant conflicts of interest to declare.

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