(PS2103) CLINICAL CHARACTERISTICS AND EFFICACY OF MYC/BCL-2 DOUBLE-EXPRESSING DIFFUSE LARGE B-CELL LYMPHOMA: REAL-WORLD DATA FROM THE BELIEVE STUDY

Topic: 19. Large B cell lymphomas - Clinical

Pengpeng Xu*[1], Hongmei Jing[2], Keshu Zhou[3], Wenrong Huang[4], Jianzhen Shen[5], Songfu Jiang[6], Xiaoxi Zhou[7], Xiaojing Yan[8], Ting Niu[9], Xiuhua Sun[10], Xiaobo Wang[10], Wuping Li[11], Haisheng Liu[12], Sujiang Zhang[13], Ou Bai[14], Bing Xiu[15], Wei Sang[16], Guohui Cui[17], Jing-Yan Xu[18], Yingyu Nan[19], Yao Liu[19], Xiaolei Wei[20], Hongling Peng[21], Yanli Yang[22], Meiyun Fang[23], Chunling Wang[24], Xudong Zhang[25], Ying Lu[26], Li-Jie Xing[27], Qianqian Cai[28], Jinhai Ren[29], Zhengzi Qian[30], Zhimin Zhai[31], Zhenling Li[32], Weili Zhao[1]

[1]Shanghai Institute of Hematology, Shanghai, China;[2]Peking University Third Hospital, Beijing, China;[3]Henan Cancer Hospital, Affiliated Cancer Hospital of Zhengzhou University, Zhengzhou, China;[4]The fifth Medical Center,Chinese PLA General Hospital, Beijing, China;[5]Fujian Medical University Union Hospita, Fuzhou, China;[6]The First Affiliated Hospital of Wenzhou Medical University, Wenzhou, China;[7]Tongji Hospital Affiliated to Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China;[8]The First Hospital of China Medial University, Shenyang, China;[9]West China Hospital of Sichuan University, Chengdu, China;[10]The Second Hospital of Dalian Medical University, Dalian, China;[11]Jiangxi Cancer Hospital, Nanchang, China;[12]The Fourth Hospital of Hebei Medical University, Shijiazhuang, China;[13]Ruijin North Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China;[14]The First Hospital of Jilin University, Changchun, China;[15]Tongji Hospital, Shanghai, China;[16]The Affiliated Hospital of Xuzhou Medical University, Xuzhou, China;[17]Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China;[18]Nanjing Drum Tower Hospital, Nanjing, China;[19]Chongqing Cancer Hospital, Chongqing, China;[20]Nanfang Hospital, Southern Medical University, Guangzhou, China;[21]The Second Xiangya Hospital of Central South University, Changsha, China;[22]The First Affiliated Hospital of Bengbu Medical College, Bengbu, China;[23]Affiliated Zhongshan Hospital Of Dalian University, Dalian, China;[24]Huai'an First People's Hospital, Huai'an, China;[25]The First Affliated Hospital of Zhengzhou University, Zhengzhou, China;[26]The Affiliated People's Hospital of Ningbo University, Ningbo, China;[27]Shandong Cancer Hospital and Institute, Shandong University, Jinan, China;[28]Ningbo Medical Treatment Center Lihuili Hospital, Ningbo, China;[29]The Second Hospital of Hebei Medical University, Shijiazhuang, China;[30]Tianjin Medical University Cancer Institute and Hospital, Tianjin, China;[31]The Second Affiliated Hospital of Anhui Medical University, Hefei, China;[32]China-Japan Friendship Hospital, Beijing, China;

Background

Diffuse large B-cell lymphoma (DLBCL) displays marked molecular heterogeneity. The phase Ⅱ GUIDANCE-01 trial showed that subtype-guided immunochemotherapy (R-CHOP-X) improves anti-tumor efficacy with manageable safety *(Cancer Cell 2023:41:1705-1716)*. The phase Ⅲ DEB trial confirmed that R-CHOP plus chidamide significantly prolongs survival in MYC/BCL-2 double-expressing DLBCL (DEL-DLBCL) *(ASH 2025 oral 475)*.

Aims

We present the large-scale Chinese real-world BELIEVE study (NCT06026488) to assess the effectiveness of different therapeutic strategies in DEL-DLBCL and generate real-world evidence to support clinical decision-making.

Methods

This retrospective study enrolled DLBCL patients who underwent next-generation sequencing (NGS). Baseline characteristics, treatments, efficacy, and survival data were collected. The primary endpoint was progression-free survival (PFS); key secondary endpoints included objective response rate (ORR), complete response rate (CRR), and overall survival (OS).

Results

Among 3773 DLBCL patients, 28.8% (1088/3773) were classified as DEL. Median age was 61 years (IQR 51–69); 51.5% male; 60.5% had Ann Arbor stage III–IV disease; 34.4% had ≥2 extranodal sites; 69.5% had non-GCB phenotype; and 42.2% had IPI score 3–5. R-CHOP-like was the most frequent treatment regimen (52.5%), followed by R-CHOP plus target agents (16.4%).
Among 1051 DEL-DLBCL patients evaluable for efficacy, ORR and CRR were 75.9% and 57.5%, lower than non-DEL-DLBCL patients (ORR 84.1%, CRR 68.4%). R-CHOP plus target agents achieved higher ORR than R-CHOP (84.2% vs. 75.6%). Within R-CHOP plus target agents combinations, BTK inhibitor was commonly used. Among patients prescribed R-CHOP+BTKi regimens (n=69), ORR and CRR were 88.4% and 75.4%. Orelabrutinib was the commonly used BTKi (n=43) with ORR and CRR were 88.3% and 76.7%.

Summary/Conclusion

In this large Chinese real-world cohort, DEL-DLBCL accounts for ~30% of DLBCL and is characterized by aggressive clinicopathological features and inferior outcomes compared with non-DEL DLBCL, confirming its high-risk nature. R-CHOP-like therapy shows limited efficacy in DEL-DLBCL, whereas R-CHOP plus BTKi show promising efficacy, supporting individualized, evidence-based treatment options for DEL-DLBCL. This study provides real-world evidence to optimize DEL-DLBCL management. Long-term survival analyses including PFS are ongoing.