Avoiding overtreatment in patients with limited stage Diffuse Large B-Cell Lymphoma: a MUHC Quality Improvement Project

Background

Given clinical equipoise Drs. Anna Nikonova and Catherine Sohier-Poirier were interested in harmonizing the treatment strategy across the MUHC for patients diagnosed with limited stage diffuse large B-cell lymphoma (DLBCL), while reducing toxicity to patients

Request

TAU received a request from Dr. Nikonova (Division of Hematology) in January 2024 to perform statistical analyses assessing the heterogeneity in current practices among hematologists and radiation oncologists for treatment strategies in patients with limited stage DLBCL

Method

Data of patients were collected and provided by Dr. Catherine Sohier-Poirier. TAU helped with cleaning and verification of the data before conducting data analysis.

Descriptive statistics and survival analyses were performed to answer the 6 objectives set by Drs. Nikonova and Sohier-Poirier.

All analyses were performed with software R version 4.3.3.

Method

Objective 1	Frequency table was created to verify that there was no discrepancy between stage assessed by physician vs by PET scan
Objective 2	Frequency was determined for patients with a disease in the bone marrow among patients that had bone marrow at staging
Objective 3	Among patients who had negative interim PET scan, frequency was determined for patients who : 1) received 4 cycles of RCHOP and no radiation (**group A**) 2) received 6 cycles of RCHOP and no radiation (**group B**) 3) received 4 cycles of RCHOP and radiation (**group C**) 4) received 6 cycles of RCHOP and radiation (**group D**)
Objective 4	Among patients with negative interim PET scan, toxicities were compared between patients in **group A** and **group comprising of B, C and D**
Objective 5	• Kaplan-Meier survival curves were created to compare mortality and progression between patients in **group A** and **group comprising of B, C and D** • Hazard ratios for mortality and progression between patients in **group A** and **group comprising of B, C and D** were estimated in Cox models. They were adjusted for age at diagnosis, stage by PET, tumour size, stage modified IPI and Charlson's comorbidity index
Objective 6	Fisher's exact test was used to compare the frequency of toxicity between patients in **group A** and **group comprising of B, C and D**

Results

Given that Drs. Nikonova and Sohier-Poirier would like to publish the results from our analysis, we will add them once they are published