DISPARITIES IN ACCESS TO BIOLOGICAL MARKERS FOR NHL IN BRAZIL

M. EMMERICK[1], R. DALFEOR[2], F. Z. PIAZERA[3], T. FISCHER[4], A. C. LOPES[5], T. VANELLI[6], C.S. CHIATTONE[7]

1. AstraZeneca, Onco-Hematology, Rio de Janeiro, Brazil; 2. Centron, DASA Oncologia, Rio de Janeiro, Brazil; 3. Oncoclínicas, Distrito Federal, Brazil; 4AC Camargo Cancer Center, Hematology, São Paulo, Brazil; 5. Real Hospital Português, Recife, Brazil; 6. Santa Casa, Porto Alegre, Brazil; 7. Santa Casa Medical School, São Paulo, Brazil.

Introduction

Non-Hodgkin lymphoma (NHL) is a group of heterogeneous diseases with diverse mechanisms, biological markers, and clinical presentations. About 85% of NHL cases are B-cell-derived, predominantly diffuse large B-cell lymphoma (DLBCL) and follicular lymphoma (FL). NHL subtypes are classified using clinical findings, morphology, immunohistochemistry (IHC), immunophenotyping, and genetics. FL shows BCL-2 overexpression, mantle cell lymphoma (MCL) involves the t(11;14) leading to cyclin D1 overexpression, and DLBCL can be further divided into GCB-like and non-GCB-like using IHC markers CD10, BCL6, and IRF4/MUM1. Although biological markers play a crucial role in the classification of NHL, access to IHC testing remains uneven across healthcare systems such as Brazil's, largely due to socioeconomic and regional disparities.

Objective

This study examines disparities in NHL biological markers access in Brazil.

Methods

An online form was used to assess the disparities between Brazil's public and private healthcare sectors for NHL patients. Out of the 49 questions in the survey, 12 focused on the ability to access tests for common NHL biological markers.

Results

The survey was completed by 153 hematologists: 56% work in both sectors, 31% in private only, and 13% in public only.

In public healthcare, 70% reported Ki67 availability and testing for NHL patients; 92% in private care reported consistent testing (Figure 1A). For Cyclin D1, 63% in public settings reported testing availability, compared to 93% in private care (Figure 1B).

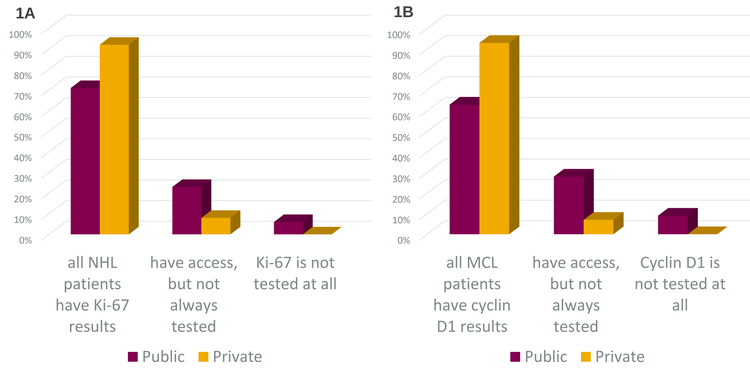


Figure 1. Access to biological markers before starting treatment. 1A) access to Ki-67 in NHL patients; 1B) access to cyclin D1 in patients with MCL.

Regarding TP53, 30% of public respondents lacked access to IHC and 36% to molecular tests, versus 5% and 14% in private, respectively. Over 50% in both settings reported BCL-2 and MYC IHC access; 35% in private care used IHC and FISH, while in public, IHC and FISH was 9% for BCL-2 and 7% for MYC (Table 1). The Hans algorithm was consistently used by 79.5% in private and 64% in public sectors for DLBCL classification.

Interestingly, 50% across both sectors sought second opinions on pathology reports due to report accuracy concerns.

	Public	Private
TP53		
IHC Only	22%	43%
Molecular biology only	1%	4%
IHC and molecular biology	3%	22,5%
IHC for TP53 is not available	30%	6%
Molecular biology for TP53 is not available	36%	14%
TP53 testing won´t change my treatment decision	4%	3%
BCL-2		
IHC Only	64%	52%
FISH Only	1%	2%
IHC and FISH	9%	34%
IHC for BCL-2 is not available	5%	0%
FISH for BCL-2 is not available	17%	8%
BCL-2 testing won´t change my treatment decision	3%	1%
MYC		
IHC Only	52%	48%
FISH Only	2%	2%
IHC and FISH	7%	35,5%
IHC for MYC is not available	14%	3%
FISH for MYC is not available	20%	8%
MYC testing won´t change my treatment decision	3%	0%

Table 1. Access to TP53, BCL-2 and MYC tests in public and private settings.

Conclusion

Significant disparities in biological markers access, including IHC and molecular tests, exist between Brazil's public and private healthcare systems, which may impact NHL classification. Addressing these inequalities is crucial for improving outcomes and ensuring equitable healthcare access.

References

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