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POSTER ABSTRACTS

624.HODGKIN LYMPHOMAS AND T/NK CELL LYMPHOMAS: CLINICAL AND EPIDEMIOLOGICAL

Clinical Features, Treatment Patterns and Outcomes of 864 Newly Diagnosed Hodgkin Lymphoma Patients in Latin America and the Impact of PET Scan Availability on Survival: A Study from the Grupo De Estudio Latinoamericano De Linfoproliferativos (GELL)

Sofía Gabriela Rivarola, MD¹, German R. Stemmelin, MD², Jule F Vasquez, MD³, Maria Elvira Enciso Arrua, MD⁴, Seisha Von Glasenapp, PhD⁵, Carolina Oliver, MD⁶, Fernando Warley, MD⁷, Maria Orlova, MD⁷, Rosa Oliday Rios Jiménez⁸, Alfredo Reinaldo Quiroz, MD⁹, Marialejandra Torres Viera, MD^{10,11}, Henry Idrobo Quintero^{12,13,14,15}, Diego Fernando Garces Paz, MD¹⁶, Denisse Castro, MD^{17,18,19,20,19}, Julio D Fernández Águila, MD²¹, Victoria Irigoín, MD²², Jorge J. Castillo, MD²³, Brady E Beltran, MD^{24,25}, Luis Vilela, MD²⁶, Bryan Valcarcel, MDMPH²⁷, Luis Enrique Malpica Castillo, MD²⁸

¹ Hospital Británico de Buenos Aires, CABA, Argentina

² Hospital Británico BS.AS, Buenos Aires, ARG

³ Oncosalud - AUNA, Lima, Peru

⁴ Departamento de Hematología, Hospital Central Instituto de Previsión Social, Asunción, Paraguay

⁵ Department of Hematology, INSTITUTO DE PREVISION SOCIAL, Asuncion, Paraguay

⁶ British Hospital, Montevideo, Uruguay

⁷ Hospital Italiano de Buenos Aires, Buenos Aires, Argentina

⁸ Hospital Clínico Quirúrgico Hermanos Ameijeiras, La Habana, Cuba

⁹ Hospital Central IPS, Asuncion, Paraguay

¹⁰ Clínica Santa Sofia, Caracas, VEN

¹¹ Unidad Linfomas, Instituto Hematología y Oncología Universidad Central Venezuela, Caracas, Venezuela (Bolivarian Republic of)

¹² Universidad del Valle, Cali, Colombia

¹³ Centro Médico Julián Coronel, Cali, Colombia

¹⁴ Clínica la Estancia, Popayan, Colombia

¹⁵ Asociación Colombiana de Hematología y Oncología (ACHO), Bogotá, Colombia

¹⁶ Instituto Nacional de Oncología Ospedale INOOS, Bogota, Colombia

¹⁷ MAMLAB CENTER, Lima, Peru

¹⁸ Hospital Edgardo Rebagliati Martins, Lima, Peru

¹⁹ Hospital Nacional Edgardo Rebagliati Martins, Lima, Peru

²⁰ Centro de Investigación de Medicina de Precisión, Universidad de San Martín de Porres, Lima, Peru

²¹ Hospital Universitario Dr Gustavo Aldereguía Lima, Cienfuegos, Cuba

²² Hospital De Clínicas, Montevideo, URY

²³ Dana-Farber Cancer Institute, Bing Center for Waldenström Macroglobulinemia, Boston, MA

²⁴ Instituto de Investigaciones en Ciencias Biomédicas (INICIB). Universidad Ricardo Palma, Lima-Perú., Lima, Peru

²⁵ Servicio Oncología Médica, Hospital Edgardo Rebagliati, Lima, Peru

²⁶ Hospital Fernando Ocaranza ISSSTE/ Dr. Ignacio Chávez ISSSTESON. Hermosillo Sonora Universidad Autónoma de Sinaloa., Sinaloa, Mexico

²⁷ The George Washington University, Washington, DC

²⁸ Department of Lymphoma and Myeloma, University of Texas MD Anderson cancer Center, Houston, TX

Background: Hodgkin lymphoma (HL) is a lymphoid neoplasm with high cure rates. Around 90% of patients (pts) will achieve response to first-line treatment. Real-world studies in Latin America (LATAM) are lacking. Moreover, inequity in the access to imaging technology and drugs represent a real challenge for Latin American countries with palpable influences in patient outcomes. Herein, we describe the clinical features, treatment patterns, and outcomes of HL pts managed in LATAM.

Method: We conducted a retrospective cohort study of adults aged ≥ 17 years with newly diagnosed HL across academic centers in 7 LATAM countries from 2003 to 2022, with follow-up through July 2023. Medical records were manually reviewed, and data were abstracted in a standardized form. Cancer staging was performed by Ann Arbor and German HL Study Group criteria. Survival probabilities were estimated with the Kaplan-Meier method and compared with the Log-rank test. Multivariable Cox regression models were fitted by cancer stage stratification. A landmark analysis was performed to assess the lack of PET scan availability at the end of treatment (EOT) in LATAM.

Results: Of 965 pts identified, 864 had sufficient data for analysis. Pts were young (56% < 40 years; median 36 [17-88]) with slight male predominance (53%). 9 (3%) pts were HIV positive. Nodular sclerosing (62%) and mixed cellularity (22%) were the most common HL subtypes ($p < 0.01$). Clinically, most pts had good performance status (ECOG ≤ 1 , 96%), no B symptoms (62%) and normal serum LDH (60%). Mediastinal presentation was seen in 14%, bulky mass (> 10 cm) 23%, nodal involvement > 3 sites 34% and extranodal involvement 25%. Advanced stage was common (57%); 22% and 21% had favorable and unfavorable limited stage HL, respectively. ABVD was the most common first-line regimen (96%); 8 pts received BEACOPP, and 1 BV-AVD. Radiation was utilized in 40% of limited and 21% of advanced stage HL. Only 63% and 48% had interim (iPET) and EOT PET scan, respectively. Most pts were managed at private than public institutions (59%, $p < 0.01$). With a median follow up of 65 [59-71] months the 5-yr overall survival (OS) and progression-free survival (PFS) rates in all HL pts were 85% (82-88, 95% CI not reached, NR) and 64% (60-69, 95% CI NR), respectively. Better OS and PFS were seen in pts younger than 60 ($p < 0.01$), ECOG ≤ 1 ($p < 0.01$) and limited stage HL ($p < 0.01$). Overall response rate at the EOT assessed by either PET or CT scan was 89% (76% complete and 13% partial). In those assessed by iPET, results yielded 86% keeping same plan, 7% de-escalation and 3% escalation. In our cohort, 11% had refractory HL and 18% relapsed after achieving response. Given the inferior PFS to first-line seen in our LATAM HL pts compared to historical cohorts, we looked at possible factors associated to early relapse. Those assessed by PET at the EOT had significantly superior 5-yr PFS than those assessed by CT scan (PET vs CT: favorable HL 91 vs 71%; unfavorable 83 vs 35%; advanced 79 vs 51%) (**Figure**). OS was inferior only in pts with unfavorable HL not assessed by PET (94 vs 76%, $p = 0.03$). In the multivariable analysis, the lack of PET assessment at the EOT was associated with short PFS in unfavorable (aHR 7.81 [1.46-41.88], $p = 0.02$) and advanced (aHR 17.35 [4.66-64.61], $p < 0.01$), and a non-statistically significant worse PFS in favorable HL (aHR 5.05 [0.56-45.72], $p = 0.15$). Other factors associated to short PFS were extranodal disease (aHR 35.29 [5.62-209.07], $p < 0.01$) in unfavorable, and high serum LDH (aHR 2.31 [1.2-4.46], $p = 0.01$) in advanced HL. Interestingly, pts with advanced HL managed in public institution had less risk for relapse than those in private institutions (aHR 0.13 [0.03-0.51], $p < 0.01$).

Conclusion: To our knowledge, this is the largest cohort of newly diagnosed HL pts in LATAM in the real-world setting. We observed similar clinical features in LATAM HL pts than those previously reported. ABVD was widely utilized in LATAM, and the 5-yr OS of 85% in all pts aligns with international estimates. However, our findings underscore the impact of limited access to PET scan at the EOT in LATAM, leading to lower PFS outcomes compared to those reported in developed countries. Despite this challenge, salvage therapy seems to rescue our LATAM HL pts, thus, OS remains optimal. To improve outcomes and minimize late effects following treatment completion, increasing the use of PET-adapted therapy for managing adult pts with HL in LATAM should be prioritized.

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Table. Clinical and treatment features of LATAM HL

Characteristics	Total (N=864), (%)	Limited stage (N=176), (%)	Advanced stage (N=487), (%)	Unknown stage (N=201), (%)	p value, (%)
Country					< 0.001
Peru	271 (31)	76 (43)	179 (37)	16 (8)	
Argentina	280 (32)	63 (36)	207 (43)	10 (5)	
Colombia	14 (2)	0 (0)	0 (0)	14 (7)	
Cuba	65 (8)	5 (3)	9 (2)	51 (25)	
Paraguay	25 (3)	8 (5)	17 (3)	0 (0)	
Uruguay	99 (11)	24 (14)	75 (15)	0 (0)	
Venezuela	110 (13)	0 (0)	0 (0)	110 (55)	
Age at diagnosis					0.357
Median	36	33	37	34	
Range	12 - 88	15 - 83	15 - 88	12 - 84	
Age group					0.581
N-Miss	4	0	0	4	
15-39y	481 (56)	103 (59)	264 (54)	114 (58)	
40-59y	209 (24)	45 (26)	119 (24)	45 (23)	
≥60y	170 (20)	28 (16)	104 (21)	38 (19)	
Sex					0.300
Females	405 (47)	88 (50)	217 (45)	100 (50)	
Males	459 (53)	88 (50)	270 (55)	101 (50)	
HL subtype					0.005
HL-NOS	89 (10)	21 (12)	61 (13)	7 (3)	
LDHL	6 (1)	2 (1)	3 (1)	1 (0)	
LRHL	36 (4)	13 (7)	18 (4)	5 (2)	
MCHL	194 (22)	36 (20)	113 (23)	45 (22)	
NSHL	539 (62)	104 (59)	292 (60)	143 (71)	
Healthcare system					0.337
N-Miss	15	0	1	14	
Private	520 (61)	100 (57)	300 (62)	120 (64)	
Public	329 (39)	76 (43)	186 (38)	67 (36)	
ECOG score					0.500
N-Miss	170	38	125	7	
0-1	667 (96)	135 (98)	346 (96)	186 (96)	
2-3	27 (4)	3 (2)	16 (4)	8 (4)	
3-stage approach					
N-Miss	226	17	8	201	
Advanced	363 (57)	0 (0)	363 (76)	0	
Favorable	139 (22)	91 (57)	48 (10)	0	
Unfavorable	136 (21)	68 (43)	68 (14)	0	
Bulky, tumor >10 cm					< 0.001
N-Miss	54	0	31	23	
No	623 (77)	176 (100)	308 (68)	139 (78)	
Yes	187 (23)	0 (0)	148 (32)	39 (22)	
B symptoms					< 0.001
N-Miss	23	0	7	16	
No	519 (62)	172 (98)	248 (52)	99 (54)	
Yes	322 (38)	4 (2)	232 (48)	86 (46)	
First-line regimen					0.172
N-Miss	42	11	17	14	
ABVD	793 (96)	159 (96)	452 (96)	182 (97)	
BEACOPP/esc	8 (1)	0 (0)	4 (1)	4 (2)	
BV-AVD	1 (0)	0 (0)	1 (0)	0 (0)	
Others	20 (2)	6 (4)	13 (3)	1 (1)	
Interim PET (iPET)					< 0.001
N-Miss	55	7	39	9	
No	303 (37)	46 (27)	92 (21)	165 (86)	
Yes	506 (63)	123 (73)	356 (79)	27 (14)	
Action taken by iPET					0.832
N-Miss	549	88	279	182	
De-escalation	21 (7)	7 (8)	12 (6)	2 (11)	
Escalation	9 (3)	1 (1)	7 (3)	1 (5)	
Avoid radiation	2 (1)	0 (0)	2 (1)	0 (0)	
No changes	271 (86)	76 (86)	179 (86)	16 (84)	
Unknown	12 (4)	4 (5)	8 (4)	0 (0)	
Combined response*					0.002
N-Miss	114	19	74	21	
CR	569 (76)	131 (83)	297 (72)	141 (78)	
PR	95 (13)	16 (10)	52 (13)	27 (15)	
Refractory	86 (11)	10 (6)	64 (15)	12 (7)	
Relapse/Refractory					< 0.001
N-Miss	114	19	74	21	
No	530 (71)	125 (80)	265 (64)	140 (78)	
R/R	220 (29)	32 (20)	148 (36)	40 (22)	

Therapy response assessment by PET scan and/or CT scan.

CR=Complete response, HL=Hodgkin lymphoma, iPET=Interim PET, LDHL=Lymphocyte deficient HL, LRHL=Lymphocyte rich HL, NSHL=Nodular sclerosing HL, MCHL=Mixed cellularity HL, PR=Partial response

Figure. PFS in LATAM HL by access to PET

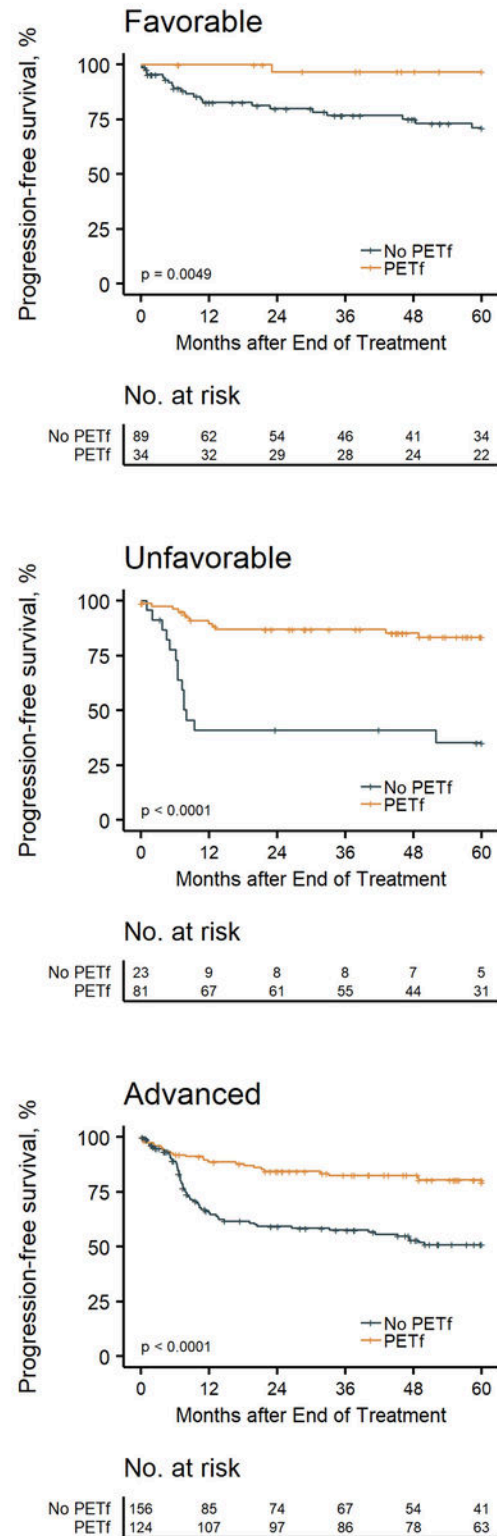


Figure 1

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