REAL-WORLD ADHERENCE TO NATIONAL COMPREHENSIVE CANCER NETWORK (NCCN) GUIDELINES REGARDING THE USAGE OF PET/CT AND REPORTED DEAUVILLE SCORES IN ADVANCED STAGE CLASSICAL HODGKIN LYMPHOMA: A COMMUNITY ONCOLOGY PRACTICE PERSPECTIVE

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Background

- Current National Comprehensive Cancer Network (NCCN) guidelines recommend one of three frontline (1L) regimens to treat stage III or IV classical Hodgkin Lymphoma (cHL):
  - Doxorubicin, bleomycin, vinblastine, and dacarbazine (ABVD)
  - Brentuximab vedotin, doxorubicin, vinblastine, and dacarbazine (A+AVD)
  - Bleomycin, etoposide, doxorubicin, cyclophosphamide, vincristine, procarbazine, and prednisone (escalated dose; eBEACOPP)[1]

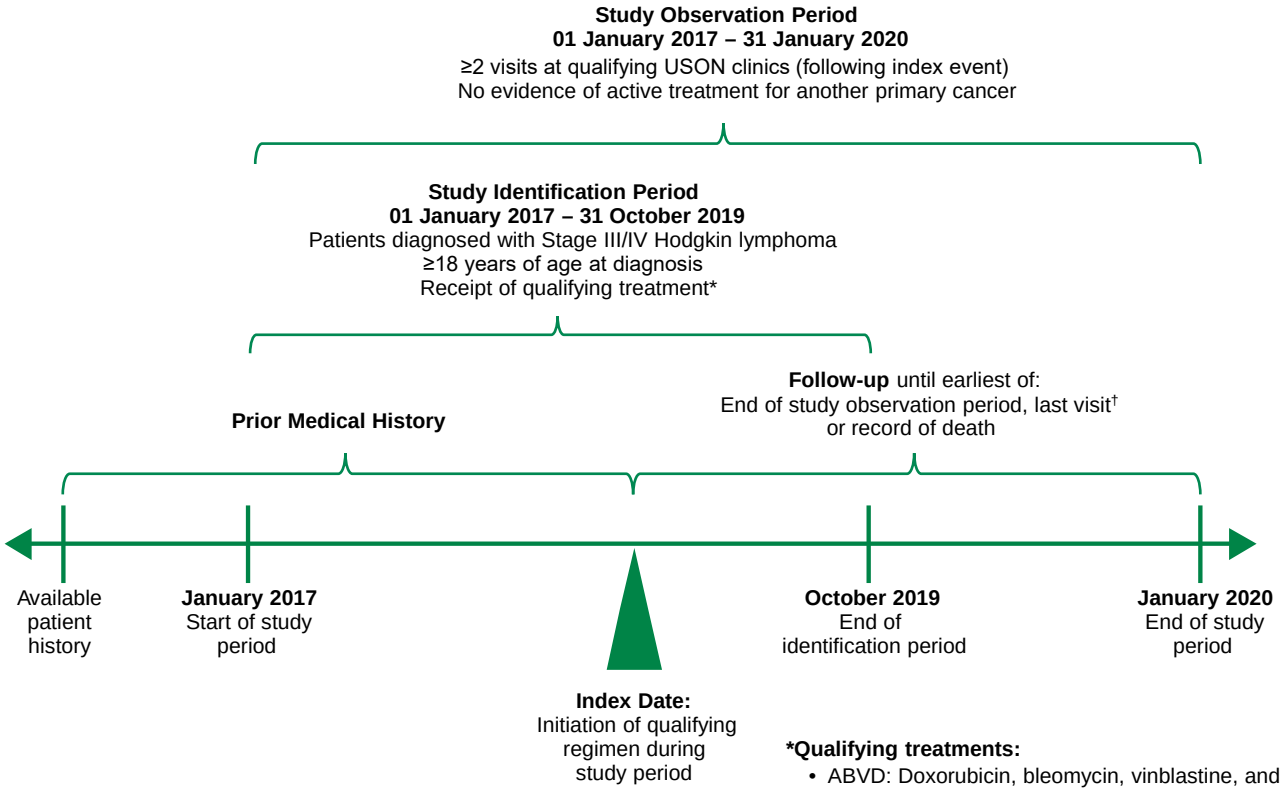
- PET/CT imaging is important at initial staging and during follow-up, including after two cycles (interim PET2) to assess and adapt treatment based on response for patients who newly start treatment with ABVD[2]
- Despite recommendation in the NCCN guidelines, physicians in community oncology practices may face challenges optimizing outcomes for ABVD patients utilizing the interim PET2 adaptive approach

Objectives & Methods

This study evaluated interim PET2 utilization and reported Deauville scores in patients with stage III or IV cHL treated in the 1L setting.

- **Study design:** Retrospective observational chart review study using US Oncology Network (USON) electronic medical records
- **USON Practice Setting**:
  - ~1,400 affiliated physicians operating in over 450 sites of care across the US
  - Represents ~12% of newly diagnosed US cancer patients
  - Collects data for >100 cancer types, with ~6.5M patient records documenting over 115 million total patient visits
- **Study population:**
  - Adult patients (aged ≥18 years) diagnosed with stage III or IV cHL
  - Initiated 1L ABVD, A+AVD, or eBEACOPP
  - ≥2 visits within the USON during study observation period
  - Patients enrolled in clinical trials or who received treatment for another primary cancer diagnosis were excluded

Methods: Study Design



†*Last visit = last physical encounter*

***Qualifying treatments:**

- ABVD: Doxorubicin, bleomycin, vinblastine, and dacarbazine
- A+AVD: Brentuximab vedotin, doxorubicin, vinblastine, dacarbazine
- BEACOPP: Bleomycin, etoposide, doxorubicin, cyclophosphamide, vincristine, procarbazine, prednisone

Methods

- **Data Source:** Patient data were sourced from the USON's electronic health records database, iKM™
  - Demographic, clinical, and treatment characteristics were sourced from structured iKM elements
  - Interim PET2 details, including Deauville score, were obtained from manual chart review
- **Analysis:** Descriptive statistics were generated for all patient demographics and clinical and treatment characteristics
  - Categorical variables were reported as frequency and percentage, and continuous variables as mean, standard deviation, median, and range
  - Chi-square testing was used to assess associations between categorical variables
  - Depending on normality, analysis of variance/t-tests or Kruskal-Wallis tests were used for continuous variables

Results: Patient demographics by initiating 1L treatment regimen

Variable	Overall (n=262)	ABVD (n=194)	A+AVD (n=66)	eBEACOPP (n=2)
Median age, years*	41.2	39.7	47.3	27.2
Age category, n (%)				
≤39 years	128 (48.9%)	99 (51.0%)	27 (40.9%)	2 (100.0%)
40-59 years	75 (28.6%)	55 (28.4%)	20 (30.3%)	0 (0.0%)
60+ years	59 (22.5%)	40 (20.6%)	19 (28.8%)	0 (0.0%)
Gender, n (%)				
Male	149 (56.9%)	110 (56.7%)	38 (57.6%)	1 (50.0%)
Female	113 (43.1%)	84 (43.3%)	28 (42.4%)	1 (50.0%)
Race, n (%)*				
White	154 (58.8%)	116 (59.8%)	38 (57.6%)	0 (0.0%)
Black	30 (11.5%)	22 (11.3%)	8 (12.1%)	0 (0.0%)
Other[1]	17 (6.5%)	14 (7.2%)	1 (1.5%)	2 (100.0%)
Not documented	61 (23.3%)	42 (21.6%)	19 (28.8%)	0 (0.0%)
Practice location, n (%)				
West	128 (48.9%)	90 (46.4%)	36 (54.5%)	2 (100.0%)
South	82 (31.3%)	61 (31.4%)	21 (31.8%)	0 (0.0%)
Midwest	34 (13.0%)	28 (14.4%)	6 (9.1%)	0 (0.0%)
Northeast	18 (6.9%)	15 (7.7%)	3 (4.5%)	0 (0.0%)

[1] Other: Asian, bi-racial

*p<0.05

1L, frontline; A+AVD, brentuximab vedotin + doxorubicin, vinblastine, and dacarbazine; AVBD, doxorubicin, bleomycin, vinblastine, and dacarbazine; eBEACOPP, escalated bleomycin, etoposide, doxorubicin, cyclophosphamide, vincristine, procarbazine, and prednisone

Results: Clinical characteristics by initiating 1L treatment regimen

The majority of patients had stage IV cHL (50.8%), low (<4) International Prognostic Score (76.0%), and completed most treatment cycles (median = 6 [IQR 2-4])

Variable	Overall (n=262)	ABVD (n=194)	A+AVD (n=66)	eBEACOPP (n=2)
ECOG, n (%)				
0-1	185 (70.6%)	138 (71.1%)	45 (68.2%)	2 (100.0%)
2-3	22 (8.4%)	15 (7.7%)	7 (10.6%)	0 (0.0%)
Not documented	55 (21.0%)	41 (21.1%)	14 (21.2%)	0 (0.0%)
Stage, n (%)*				
III	129 (49.2%)	107 (55.2%)	22 (33.3%)	0 (0.0%)
IV	133 (50.8%)	87 (44.8%)	44 (66.7%)	2 (100.0%)
IPS, n (%)**				
Low (0-3)	199 (76.0%)	160 (82.5%)	37 (56.1%)	2 (100.0%)
High (≥4)	56 (21.4%)	27 (13.9%)	29 (43.9%)	0 (0.0%)
Not documented	7 (2.7%)	7 (3.6%)	0 (0.0%)	0 (0.0%)
Time from initiation of 1L treatment until receipt of interim PET/CT (days)				
Median (Q1, Q3)	54.0 (50.0, 59.0)	54.0 (50.0, 58.0)	55.0 (51.0, 63.0)	40.5 (39.0, 42.0)

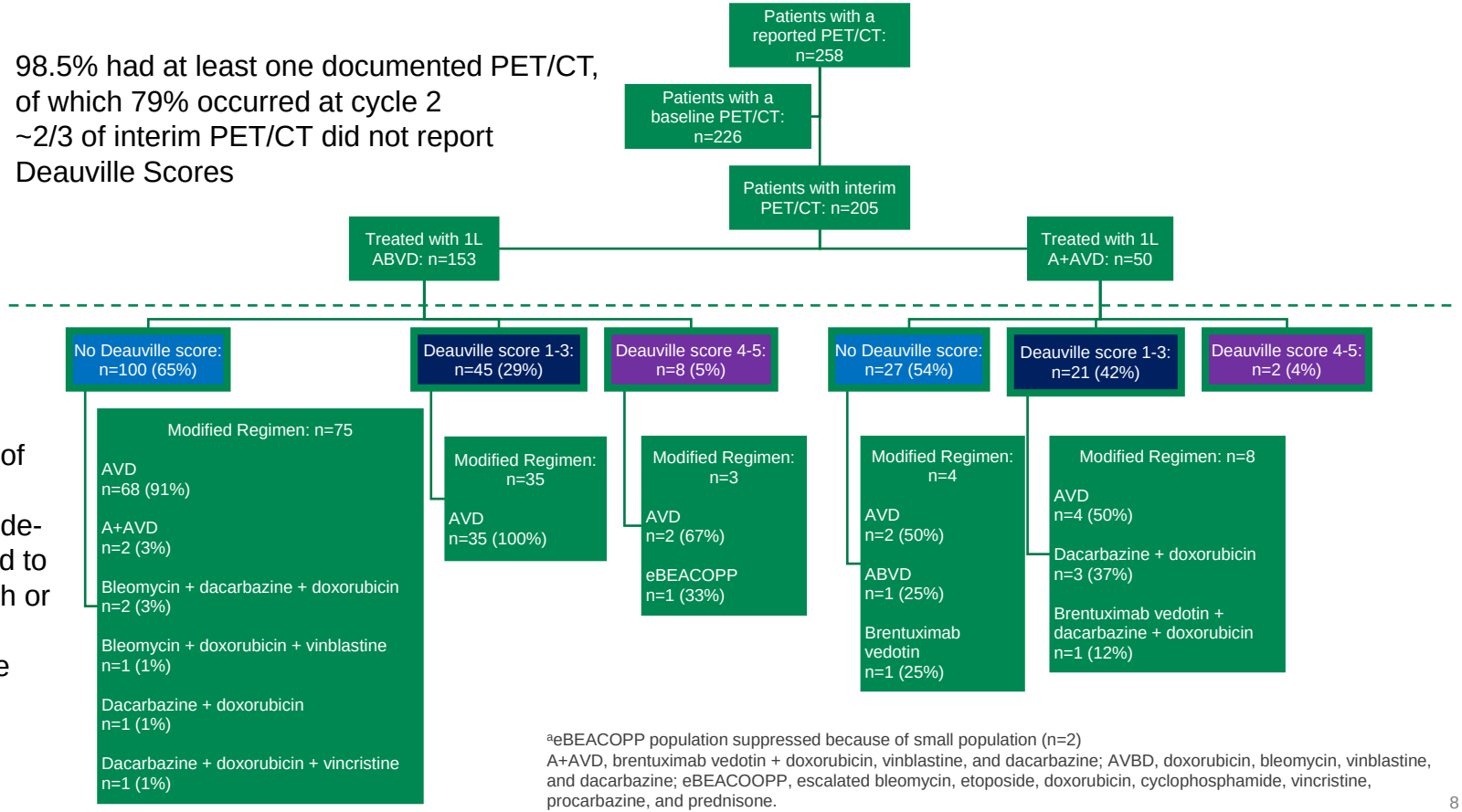
1L, frontline; A+AVD, brentuximab vedotin + doxorubicin, vinblastine, and dacarbazine; AVBD, doxorubicin, bleomycin, vinblastine, and dacarbazine; eBEACOPP, escalated bleomycin, etoposide, doxorubicin, cyclophosphamide, vincristine, procarbazine, and prednisone; ECOG, Eastern Cooperative Oncology Group; IPS, International Prognostic Score.

*p<0.05
**p<0.0001

Results: PET/CT Utilization Stratified by Treatment Regimen[a]

- 98.5% had at least one documented PET/CT, of which 79% occurred at cycle 2
- ~2/3 of interim PET/CT did not report Deauville Scores

- Majority of ABVD patients de-escalated to AVD, with or without Deauville Score



[a]eBEACOPP population suppressed because of small population (n=2)
A+AVD, brentuximab vedotin + doxorubicin, vinblastine, and dacarbazine; AVBD, doxorubicin, bleomycin, vinblastine, and dacarbazine; eBEACOOPP, escalated bleomycin, etoposide, doxorubicin, cyclophosphamide, vincristine, procarbazine, and prednisone.

Limitations

- Inaccurate coding may introduce some level of misclassification bias
- External generalizability of the results, as USON may not be representative of other community oncology practice sites
- Despite these inherent limitations, USON is one of the largest community oncology networks in the US and provides key insights into real-world practice patterns in the community setting

Conclusions

- Interim PET/CT is commonly utilized in patients with stage III or IV cHL treated with 1L ABVD in the community oncology setting
- Deauville scores to inform escalation or de-escalation of treatment decisions were only reported for a third of interim PET/CT scans
- Despite this, de-escalation from ABVD to AVD was common; eBEACOPP was rarely observed
- There is an opportunity to educate oncologists and radiologists on the importance of consistently reporting PET/CT Deauville scores to ensure treatment modifications are optimized

References and Disclosures

1. Hoppe RT, et al. J Natl Compr Canc Netw. 2020;18:755-781.
2. Johnson P, et al. N Engl J Med 2016; 374: 2419-2429

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