Analyzing racial disparities among inpatient admissions for Kaposi's sarcoma of the skin in the United States

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INTRODUCTION

- In the last decade, the global incidence of Kaposi's sarcoma (KS) has dramatically decreased with the widespread availability and scale-up of antiretroviral therapy (ART). Yet, cases of KS are still seen in the United States (US), with higher incidence rates in the US documented among young Black men compared to their non-Hispanic white counterparts.[1]
- While higher incidence rates may be linked to late-stage HIV diagnoses and delayed treatment, the severity of KS in this population has not yet been reported nationally.
- Here we aimed to characterize inpatient admissions among patients with a diagnosis of KS of the skin using the 2017 Nationwide Inpatient Sample (NIS), a representative sample of inpatient admissions in the US.

METHODS

- We searched the 2017 NIS, a stratified representative sample of all hospital admissions in the US, for all hospital admissions of adult patients with a primary or secondary discharge diagnosis of KS of the skin or subcutaneous type (ICD-10 C46.0-C46.1).
- Cross sectional analysis was performed to report demographics of admitted patients, discharge diagnoses, and characteristics of hospital stay. Chi square and one-way ANOVA analyses were performed in SPSS ® (version 28.0.1).
- Frequencies are reported with NIS weighting, to more accurately represent the full spectrum of hospitalizations in the US.

Distribution of Inpatient Admissions of Patients Diagnosed with Kaposi's sarcoma (KS) of the Skin in the U.S. in 2017

	White		Black		Other	
	n = 300		n = 360		n = 215	
	Frequency (n)	%	Frequency (n)	%	Frequency (n)	%
Age (categorical) (years)						
18-39	90	30.0	165	45.8	55	25.6
40-49	70	23.3	70	19.4	75	34.9
50-59	60	20.0	65	18.1	40	18.6
>60	80	26.7	60	16.7	45	20.9
Sex						
Male	280	93.3	320	88.9	185	86.0
Female	20	6.7	40	11.1	215	100.0
Median Household Income - Quartile						
0 – 25%	85	28.3	180	50.0	80	37.2
26 – 50%	55	18.3	90	25.0	45	20.9
51 – 75%	75	25.0	55	15.3	35	16.3
76 – 100%	80	26.7	30	8.3	45	20.9
Bedsize of Hospital						
Small	75	25.0	60	16.7	25	11.6
Medium	70	23.3	70	19.4	30	14.0
Large	155	51.7	230	63.9	160	74.4
Teaching Status						
Rural	10	3.3	5	1.4	5	2.3
Urban/ Non-Teaching	25	8.3	55	15.3	40	18.6
Urban/ Teaching	265	88.3	300	83.3	170	79.1
Region of Hospital						
Northeast	40	13.3	85	23.6	45	20.9
Midwest	45	15.0	55	15.3	10	4.7
South	110	36.7	195	54.2	70	32.6
West	105	35.0	25	6.9	90	41.9
Disposition						
Admitted and Treated	150	50.0	245	68.1	135	62.8
Short-term hospital	20	6.7	20	5.6	15	7.0
Another type of facility	60	20.0	30	8.3	20	9.3
Home health care (HHC)	40	13.3	45	12.5	20	9.3
Died	25	8.3	15	4.2	25	11.6
Primary Payer						
Medicare	105	35.0	125	34.7	65	30.2
Medicaid	75	25.0	140	38.9	100	46.5
Private Insurance	80	26.7	65	18.1	40	18.6
Self-Pay	25	8.3	20	5.6	10	4.7
No Charge	0	0.0	5	1.4	0	0.0
Other	15	5.0	5	1.4	0	0.0

RESULTS

- We extracted data for **890 weighted inpatient cases of KS**. The median age was 46 years (46 years (IQR 34, 56)), most patients were male (89%) and either listed as White (34%) or Black (41%). Of 890 discharges, **84%** were admitted with a primary or secondary diagnosis of **HIV**.
- The largest proportion of patients were in the bottom quartile for median household income by zip code (39.3%), with the **highest disparity among Black patients** compared with White patients - 50.7% vs. 28.8% in the bottom quartile, respectively (p <.001).
- The largest proportion of cases were seen in the US South (42%), where most Black patients were admitted (54%).
- Black patients had the **longest mean length of stay** of 9.2 days, compared with all other races (p<.001). Among the total cohort, 7.3% of all admissions died.

CONCLUSION

- The distribution of inpatient admissions of patients diagnosed with KS of the skin in the US is largely skewed towards Black males in the lowest income bracket of the US, especially in the US South.
- Stark disparities seen in this population raise important questions about structural racism and upstream causes of HIV-related admissions in the US healthcare system.
- Prospective studies are needed to better characterize racial disparities among patients suffering from ***all types*** of severe KS as well as the root cause of such outcomes, especially as preventive measures for severe infection are widely available.

References:

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