

## Introduction

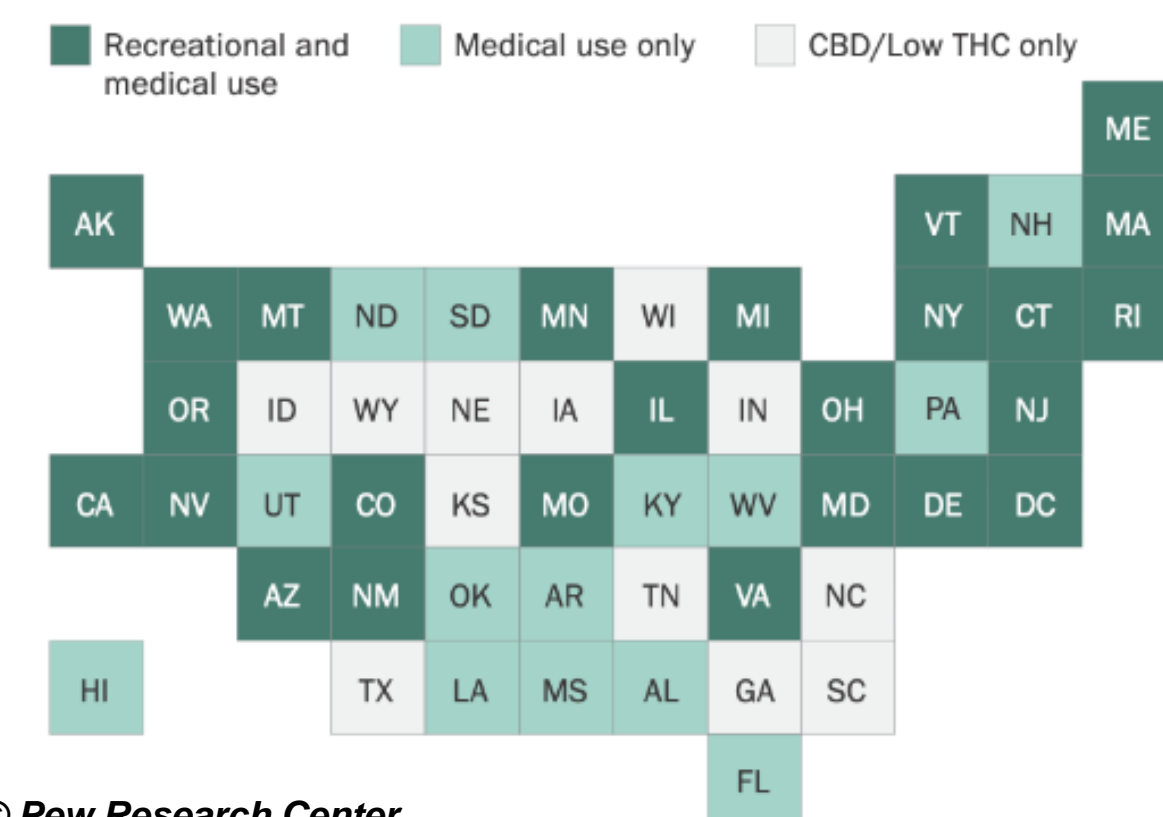
- Marijuana use is prevalent among cancer survivors for symptom control with or without medical direction.
- With more states legalizing marijuana in the United States (US), it is pertinent that clinicians are cognizant of marijuana use predictors to provide timely education regarding drug-herb interactions and potential health effects associated with long-term frequent use.
- Therefore, this study aims to evaluate characteristics of marijuana users using a large US cohort of cancer patients.

## Methods

- All of Us Research Program:** Funded and overseen by NIH, the research program aims to gather data (medical records, social determinants of health, lifestyle habits, genetic information, wearable data, and other participant-reported survey data) from diverse populations to improve healthcare for all.
- Eligibility:** Cancer survivors (≥18 years old) based on self-reported medical history.
- Marijuana use:** Any use in the past three months.
- Frequent marijuana use:** "Daily or almost daily" use in the past three months.
- Potential predictors:** Sociodemographic, health-related, and cancer-related characteristics.
- Statistical analysis:** Descriptive statistics were employed to identify differences between frequent, infrequent and non-users of marijuana. Utilizing multivariate logistic regression, we investigated statistically significant predictors of marijuana use (vs non-use, Bonferroni-corrected  $\alpha=0.0017$ ).

## Nearly half of states have legalized the recreational use of marijuana

Legal allowance of marijuana at the state level, as of February 2024



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SR\_24.04.10\_marijuana\_5.png (840x932) (pewresearch.org)

**Table 1: Participant characteristics**

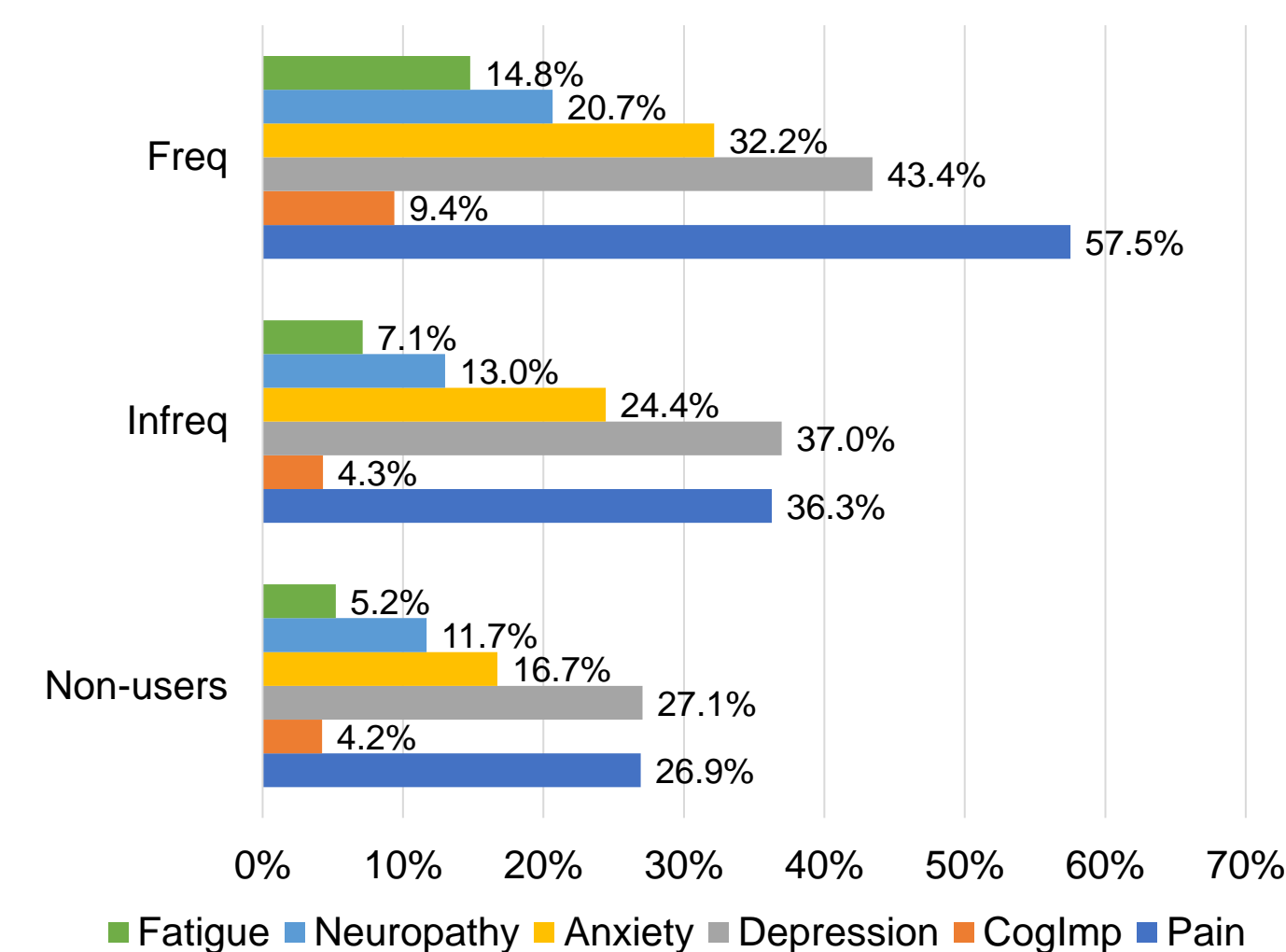
Characteristics	N=37,055
<b>Marijuana use</b>	
Infrequent users (Infreq)	3%
Frequent users (Freq)	1%
<b>Living in states with recreational marijuana</b>	
	37%
<b>Age</b>	
18-39	5%
40-64	38%
65+	56%
<b>Female</b>	
	59%
<b>Non-Hispanic White</b>	
	84%
<b>Bachelor or more</b>	
	65%
<b>Household income ≥100k/year</b>	
	49%
<b>Married</b>	
	61%
<b>Cancer-related characteristics</b>	
On-treatment	33%
Skin cancer	43%
Breast cancer	20%
Prostate cancer	11%
<b>Health outcomes</b>	
Pain	28%
Depression	28%
Anxiety	17%
Neuropathy	12%
Chronic fatigue	5%
Cognitive impairment (CogImp)	4%

## Results

### (A) Univariate analysis (Freq vs Infreq vs Non-users)

- Compared to non-users, marijuana users were younger, female, minoritized, less educated, earned less income, and reported more pain, cognitive impairment, depression, anxiety, neuropathy, and fatigue ( $p<0.05$ ).

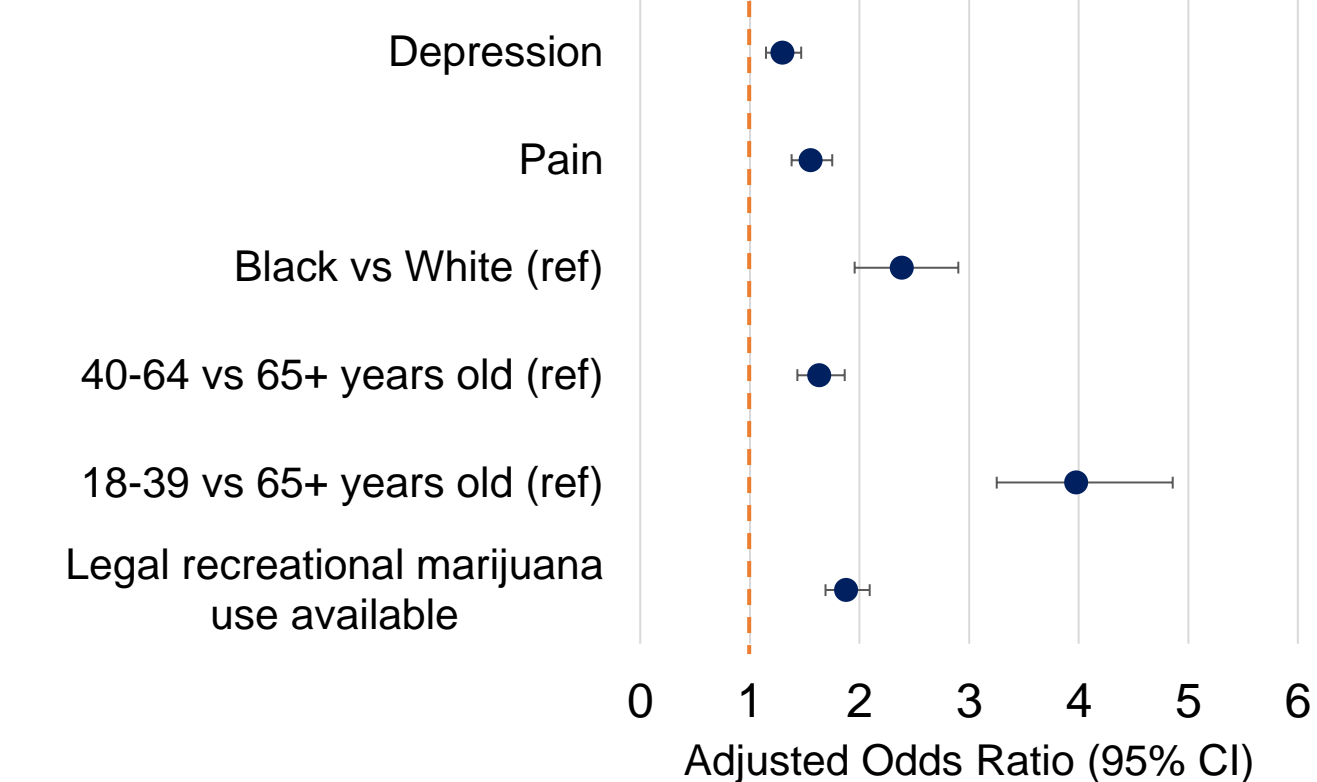
Fig 1: Health outcomes by Marijuana use



### (B) Multivariate analysis (Users vs Non-users)

- Marijuana use was significantly associated with younger age (<65 years old), non-Hispanic Black racial-ethnicity, depression, pain, and residing in states with legalized recreational marijuana (all  $p<0.0017$ )

Fig 2: Statistically Significant characteristics associated with Marijuana use after covariate adjustment



## Conclusions

- Marijuana use is common in young and ethnically minoritized cancer survivors with concurrent neuropsychiatric symptoms and residing in US states with legalized recreational marijuana.
- Future studies should evaluate long-term health outcomes associated with marijuana usage in cancer survivors impacted by social determinants of health.

## References

- All of Us Research Program Investigators, et al. N Engl J Med. 2019 Aug 15;381(7):668-676.

## Acknowledgement

- We gratefully acknowledge the participants and research team of the All of Us Research Program for making this research possible.