

INTRODUCTION

- E-cigarettes are becoming increasingly used for both recreational and smoking cessation among adolescents, young adults and patients who currently smoke
- Canadian guidelines recommend against vaping unless patients remain recalcitrant to other evidence-based therapies or express reluctance to pursue other interventions.
- The prevalence of e-cigarette use and perceptions of associated harms remains poorly characterized among cancer survivors in Canada
- A cross-sectional survey study was administered in outpatient clinics at the Princess Margaret Cancer Centre from May 2023 to August 2025 to better understand the extent of e-cigarette use and explore perspectives on vaping among patients with cancer

METHODS

Study Design

- Cross-sectional survey study (pilot project)
- Self-administered paper-based questionnaire
- Study population: Outpatient oncology clinics at Princess Margaret Cancer Centre (PMCC), Toronto, ON

Survey Instrument & Measures

- Socio-demographics variables
- History of both tobacco and e-cigarette usage
- Perceived benefits and/or harms of vaping
- Patient sources of information on vaping-related health impacts
- Potential future cigarette or e-cigarette usage

Chart review for clinicopathological variables

Participants & Eligibility

Inclusion criteria	Exclusion criteria
- Age ≥ 18 years - Current or prior diagnosis of malignant tumor - Received treatment at PMCC - Ability to read, write and communicate in English	- Unable to provide informed consent - Significant cognitive impairment

Data Analysis

- Descriptive statistics were used to summarize baseline characteristics and patterns of e-cigarette/tobacco consumption
- Logistic regression analysis was performed to identify predictors of e-cigarette usage
- All statistical analyses were performed using R software (version 4.6.1)

RESULTS

	Overall (n= 565)	No History of E-cigarette Use (n = 497)	Any History of E-cigarette Use (n = 68)
Age, median (IQR)	66 (53-74)	67 (57-75)	51 (37-63)
Sex (%)			
Female	46%	47%	43%
Race (%)			
White	68%	68%	62%
Black	3%	3%	3%
Other	29%	28%	35%
Education (%)			
Completed college/university	65%	65%	68%
Occupation Type (%)			
Blue collar	34%	32%	49%
Income (%)			
<\$80,000	47%	46%	56%
≥\$80,000	53%	54%	44%

Table 1: Sociodemographic and clinical characteristics of participants stratified by e-cigarette exposure

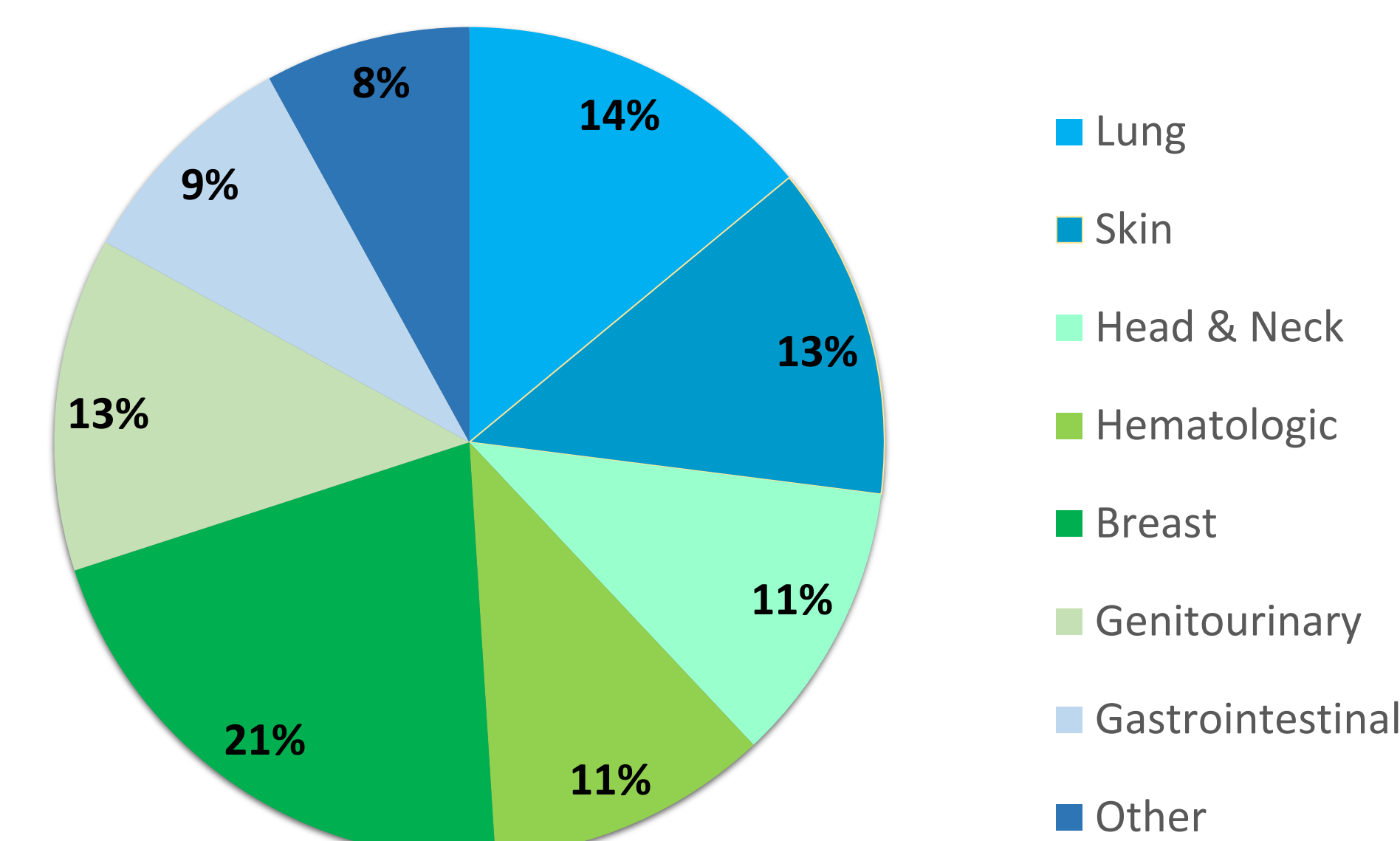


Figure 1: Distribution of most common cancer disease sites among participants (n = 565)

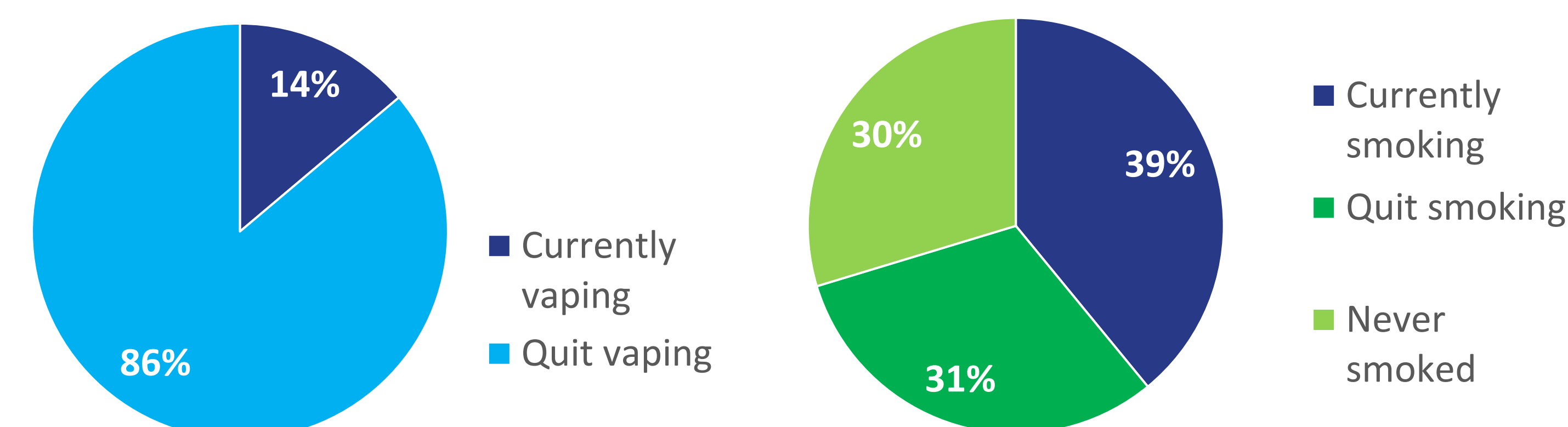


Figure 2: Vaping and cigarette smoking status distribution of cancer survivors with a history of e-cigarette use (n = 68)

Predictor	Comparison	Unadjusted OR (95% CI)	P-value	Adjusted OR (95% CI)	P-value
Age	Per year increase	0.95 (0.93 - 0.96)	P<0.001	0.93 (0.91 – 0.95)	P<0.001
Smoking history	Ever Smoked vs Never Smoked	3.40 (1.97 – 6.09)	P<0.001	7.54 (3.90 – 15.47)	P<0.001
Marital status (Married/common-law vs single)	Married/common-law vs single	0.49 (0.29 – 0.83)	P = 0.007		
Employment status	Employed vs Unemployed	2.98 (1.76-5.12)	P<0.001		
Blue collar vs white collar occupation	Blue Collar vs White Collar	1.95 (1.16 – 3.28)	P = 0.011		

Table 2: Factors associated with e-cigarette use among cancer survivors - unadjusted and adjusted odds ratios derived from backward stepwise multivariable logistic regression analysis.

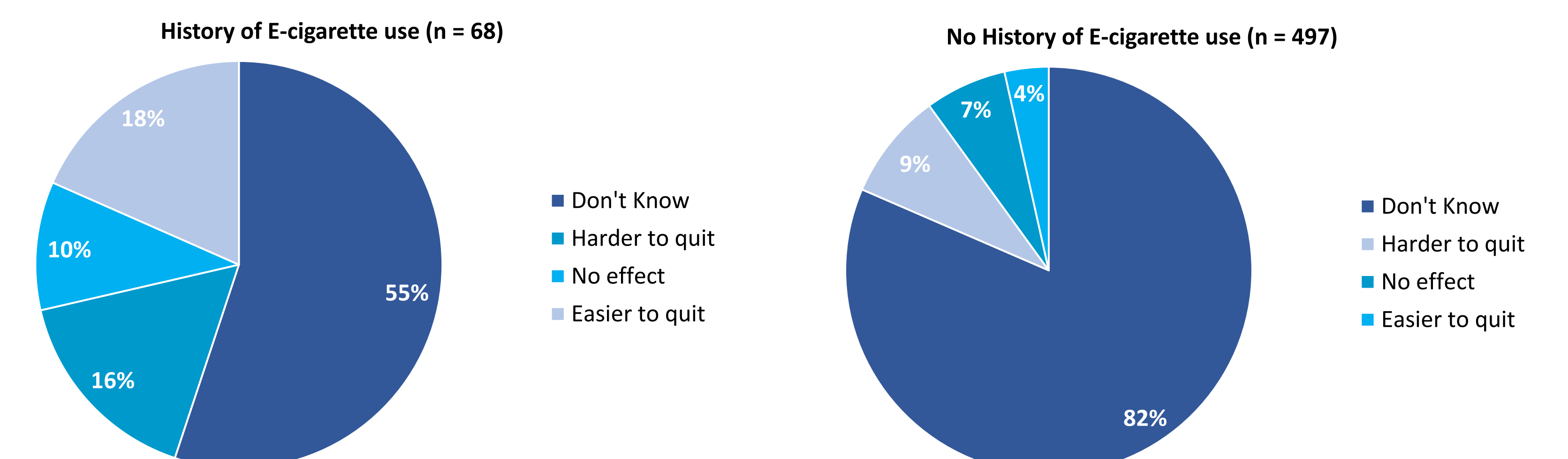


Figure 3: Perceived effect of vaping on smoking cessation stratified by prior e-cigarette use expressed as percentages

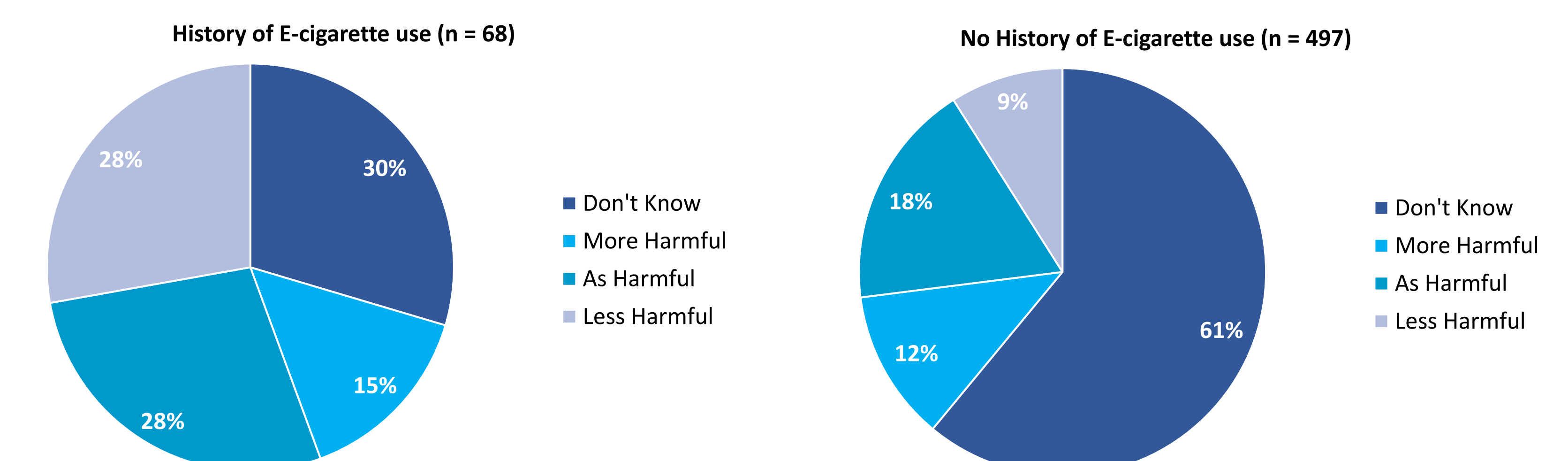


Figure 4: Patient perceptions of harms associated with e-cigarettes relative to conventional cigarettes stratified by prior vaping history expressed as percentages

CONCLUSIONS

- E-cigarette prevalence was markedly less common than conventional cigarette smoking among cancer survivors in this cohort.
- Most participants were uncertain about the health effects of e-cigarettes, highlighting a substantial knowledge gap.
- Consistent with existing literature, younger age and a prior smoking history were each associated with higher odds of e-cigarette use.
- Further research into the long-term effects of e-cigarettes in cancer survivors is needed, alongside targeted educational counseling at clinic visits to help survivors make informed decisions.