

## Differences by cancer type

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### Background

Cancer worry, an emotional reaction to the threat of cancer (Hay et al., 2005), is an important behavioral determinant that has received a great deal of attention in health behavior theory and research. However, relatively little research has examined the potential influence of sociodemographic factors on cancer worry, and how the influence of these factors might differ based on the type of cancer being considered. The few studies that have analyzed the association between sociodemographic factors and cancer worry have largely focused on breast cancer, and the data have been mixed. Older age has been shown to be associated with lower breast cancer worry (Hay et al., 2005), while race and ethnicity have shown variable associations with breast cancer worry in different studies (Consedine et al., 2004; Miller and Champion, 1997; Hughes et al., 1996). Gender differences in levels of cancer worry have not been found in at least two studies of colon cancer (Wardle et al., Zajac et al., 2006).

Understanding how sociodemographic factors influence worry about different types of cancer has important implications for determining how cancer worry may impact screening behaviors and contribute to health disparities.

The aim of this study was to examine the association between sociodemographic factors and worry specific to three different cancers—colon, skin, and lung—to determine if the influence of these factors differed by type of cancer.

### Methods

Participants (N=5586) in the 2005 Health Information National Trends Survey (HINTS) were randomly assigned to answer the cancer worry survey item for one of three cancers: colon, skin, or lung. Participants were excluded if they had a personal history of these cancers.

Cancer worry was assessed by respondents' level of agreement with a single item, *"How often do you worry about getting (colon, skin, lung) cancer?"*

Participants rated their level of agreement with this question using a four point scale, ranging from *"rarely or never"* to *"all the time"*.

Descriptive and multivariate logistic regression analyses were conducted using SUDAAN®.

### Results

#### Demographic Characteristics

	N <sup>1</sup>	(% <sup>2</sup> )		N	(%)
<b>Age</b>			<b>Gender</b>		
18-29	670	(23)	Female	3657	(52)
30-49	1857	(38)	Male	1929	(48)
50-69	1929	(28)			
70-96	1112	(11)			
<b>Education</b>			<b>Ethnicity</b>		
<HS	687	(23)	Non-Hispanic	4874	(87)
HS graduate	1643	(34)	Hispanic	496	(13)
Some college	1349	(28)			
College graduate	1696	(23)			
<b>Race</b>			<b>Cancer History</b>		
White	4378	(80)	No	4657	(11)
Black	462	(11)	Yes	873	(87)
Other	339	(7)	Yes, but misdiagnosed	50	(0.7)

<sup>1</sup> sample size; total N=5586; <sup>2</sup> weighted percentages

#### Multivariate Analyses

	Cancer worry by cancer type*							
	Colon cancer N=1788		Skin cancer N=1584		Lung cancer N=1777			
	OR	95% CI	PV	OR	95% CI	PV		
<b>Age</b>			.05			<.001		
18-29	1.00			1.00				
30-49	2.04	1.19-3.51		1.44	0.85-2.45	1.23	0.72-2.11	
50-69	2.01	1.14-3.56		1.05	0.69-1.60	0.99	0.56-1.73	
70-96	2.07	1.13-3.79		0.38	0.23-0.63	0.38	0.18-0.79	
<b>Education</b>			.02			.17		
< HS	1.00			1.00				
HS graduate	0.53	0.29-0.95		1.27	0.64-2.55	1.00	0.29-1.14	
Some college	0.42	0.23-0.76		1.67	0.77-3.64	0.43	0.21-0.90	
College graduate	0.40	0.21-0.75		1.76	0.92-3.39	0.26	0.13-0.53	
<b>Race</b>			.08			.009		
White	1.00			1.00				
Black	1.95	1.00-3.80		0.27	0.12-0.64	1.00	0.49-1.70	
Other	1.50	0.79-2.84		0.87	0.44-1.73	1.16	0.60-2.26	
<b>Gender</b>			.17			<.001		
Female	1.00			1.00				
Male	1.25	0.90-1.72		0.59	0.43-0.79	0.78	0.53-1.16	
<b>Ethnicity</b>			<.001			.80		
Non-Hispanic	1.00			1.00				
Hispanic	2.26	1.40-3.65		1.09	0.55-2.17	1.00	0.79	0.38-1.64
<b>Cancer History</b>			.74			.25		
No	1.00			1.00				
Yes	0.93	0.61-1.40		1.27	0.87-1.84	0.93	0.55-1.60	
Yes, but misdiagnosed	0.48	0.07-3.47		0.56	0.20-1.60	0.05	0.02-0.15	

\*unequal N by cancer type due to missing data

### Main Findings

**Age:** Older age was associated with lower levels of skin and lung cancer worry, but higher levels of colon cancer worry

**Education:** Higher education level was associated with lower levels of colon and lung cancer worry

**Race:** Non-white race was associated with lower levels of skin cancer worry

**Gender:** Male gender was associated with lower levels of skin cancer worry

**Ethnicity:** Hispanic ethnicity was associated with higher colon cancer worry

**Cancer History:** False positive diagnosis for lung cancer was associated with lower levels of lung cancer worry

### Conclusions

These findings show that cancer worry differs according to several sociodemographic factors, and the strength of these associations varies by type of cancer. Future research in this area is warranted to elucidate the mechanisms that give rise to these relationships.

Potential limitations of this study include:

- Cross sectional data— limits causal inferences
- Potentially important variables that could influence cancer worry not assessed (e.g., lifestyle factors, family history of cancer)
- Cancer worry measured using a single item of unknown validity

### References

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