



# Cancer Awareness and Screening Among Females

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# Agenda

INTRODUCTION

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WIDE SCOPE LOOK AT THE  
DATA

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CANSER AWARENESS AND  
SCREENING CONSIDERING  
SOCIAL ECONOMICS  
EFFECTS

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RECOMMENDATIONS

# Introduction

- Most common cancer in women: Breast, Lung, Colorectal, and Cervical cancer
- Cancer awareness and screening among females
- Health Information National Trends Survey (HINTS)  
<https://hints.cancer.gov/data/download-data.aspx>
- HINTS 5, Cycle 4 (2020) dataset, updated May 2022
- Survey => categorical data
- Original 3865 observations and 438 columns (18 years and older)
- Subset of 2204 observations and 21 columns (only females 18 years old and older)



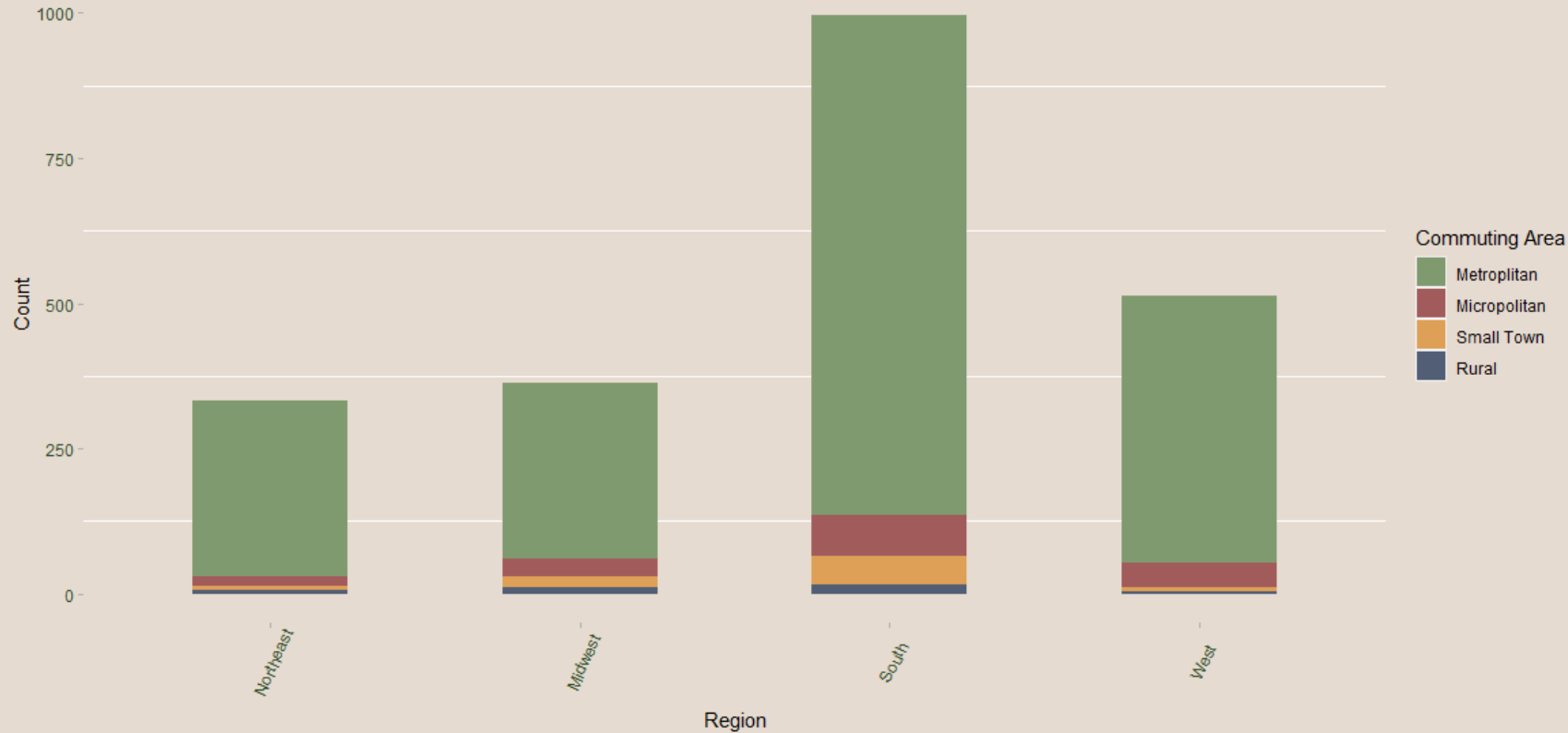
# What We Know About the Sample

	White (N=1211)	African American (N=309)	Hispanic (N=342)	Asian (N=80)	Other (N=63)	Total (N=2204)
<b>Age (years)</b>						
Mean (SD)	56.9 (17.2)	56.8 (15.5)	50.2 (17.1)	55.0 (17.4)	47.8 (15.9)	56.5 (17.3)
Median [Min, Max]	59.0 [18.0, 98.0]	57.0 [19.0, 102]	49.0 [18.0, 94.0]	57.0 [18.0, 95.0]	49.0 [21.0, 81.0]	58.0 [18.0, 102]
Missing	7 (0.6%)	8 (2.6%)	4 (1.2%)	1 (1.3%)	1 (1.6%)	31 (1.4%)
<b>BMI</b>						
Mean (SD)	27.9 (6.83)	31.1 (7.89)	29.2 (6.74)	24.1 (4.64)	29.8 (6.87)	28.5 (7.06)
Median [Min, Max]	26.6 [13.8, 66.3]	29.5 [13.9, 62.3]	28.3 [17.9, 61.0]	23.6 [16.8, 42.5]	30.1 [17.3, 45.3]	27.3 [13.8, 70.3]
Missing	31 (2.6%)	11 (3.6%)	9 (2.6%)	3 (3.8%)	0 (0%)	73 (3.3%)
<b>Smoking</b>						
Current	138 (11.4%)	34 (11.0%)	28 (8.2%)	3 (3.8%)	7 (11.1%)	231 (10.5%)
Former	318 (26.3%)	49 (15.9%)	38 (11.1%)	6 (7.5%)	12 (19.0%)	462 (21.0%)
Never	740 (61.1%)	221 (71.5%)	273 (79.8%)	70 (87.5%)	44 (69.8%)	1478 (67.1%)
Missing	15 (1.2%)	5 (1.6%)	3 (0.9%)	1 (1.3%)	0 (0%)	33 (1.5%)
<b>5 or more drinks on one occasion in the last 30 days</b>						
Never	370 (30.6%)	65 (21.0%)	72 (21.1%)	15 (18.8%)	20 (31.7%)	585 (26.5%)
1 or 2 times	121 (10.0%)	33 (10.7%)	31 (9.1%)	8 (10.0%)	7 (11.1%)	213 (9.7%)
3 to 5 times	49 (4.0%)	4 (1.3%)	7 (2.0%)	2 (2.5%)	2 (3.2%)	68 (3.1%)
6 to 10 times	13 (1.1%)	3 (1.0%)	3 (0.9%)	0 (0%)	1 (1.6%)	20 (0.9%)
11 or more times	19 (1.6%)	3 (1.0%)	3 (0.9%)	0 (0%)	1 (1.6%)	26 (1.2%)
Missing	639 (52.8%)	201 (65.0%)	226 (66.1%)	55 (68.8%)	32 (50.8%)	1292 (58.6%)
<b>Education</b>						
Less than High School	43 (3.6%)	22 (7.1%)	58 (17.0%)	8 (10.0%)	3 (4.8%)	159 (7.2%)
High School Graduate	204 (16.8%)	75 (24.3%)	83 (24.3%)	8 (10.0%)	8 (12.7%)	436 (19.8%)
Some College	351 (29.0%)	91 (29.4%)	99 (28.9%)	14 (17.5%)	14 (22.2%)	600 (27.2%)
College Graduate or More	610 (50.4%)	117 (37.9%)	99 (28.9%)	50 (62.5%)	38 (60.3%)	946 (42.9%)
Missing	3 (0.2%)	4 (1.3%)	3 (0.9%)	0 (0%)	0 (0%)	63 (2.9%)
<b>Household Income</b>						
Less than \$20,000	167 (13.8%)	78 (25.2%)	82 (24.0%)	6 (7.5%)	15 (23.8%)	400 (18.1%)
\$20,000 to < \$35,000	135 (11.1%)	56 (18.1%)	55 (16.1%)	5 (6.3%)	10 (15.9%)	282 (12.8%)
\$35,000 to < \$50,000	144 (11.9%)	38 (12.3%)	48 (14.0%)	17 (21.3%)	8 (12.7%)	266 (12.1%)
\$50,000 to < \$75,000	181 (14.9%)	49 (15.9%)	52 (15.2%)	9 (11.3%)	12 (19.0%)	315 (14.3%)
\$75,000 or More	482 (39.8%)	56 (18.1%)	87 (25.4%)	34 (42.5%)	17 (27.0%)	692 (31.4%)
Missing	102 (8.4%)	32 (10.4%)	18 (5.3%)	9 (11.3%)	1 (1.6%)	249 (11.3%)

# Where the Data is Coming From

## A Break Down of the Sample by Region and Commuting Area

The majority of the data is from the South

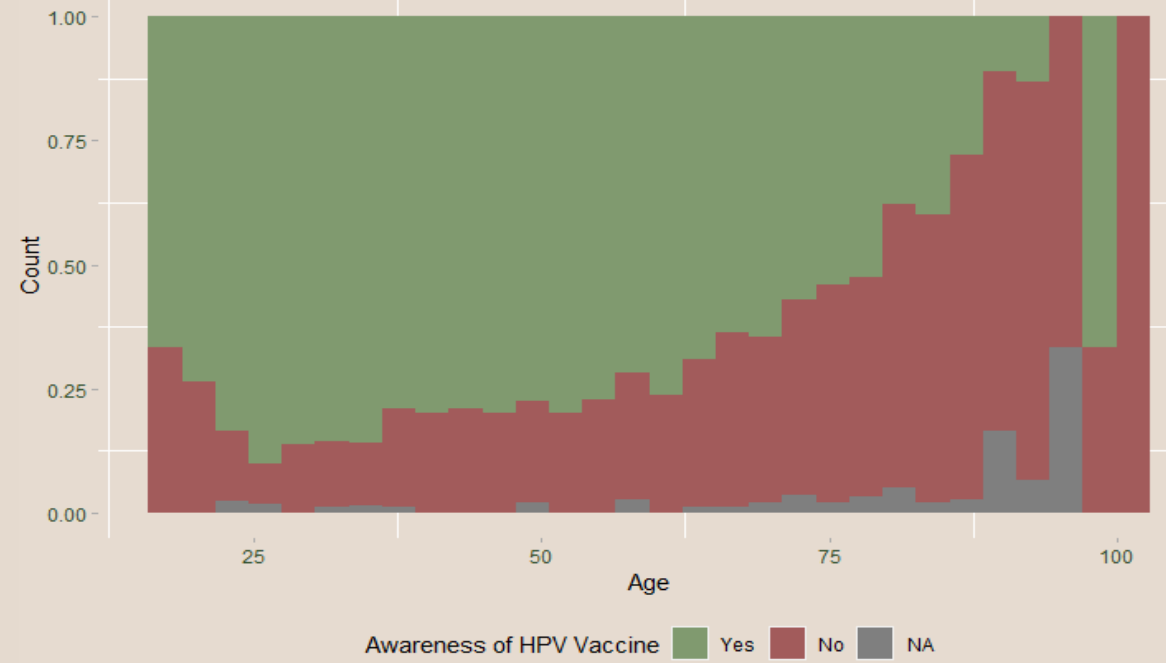


Source: National Cancer Institute - HINTS 5, Cycle 4 (2020)  
<https://hints.cancer.gov/data/download-data.aspx>

# Education and Awareness of HPV Vaccine and What Type of Cancer the Virus Could Cause

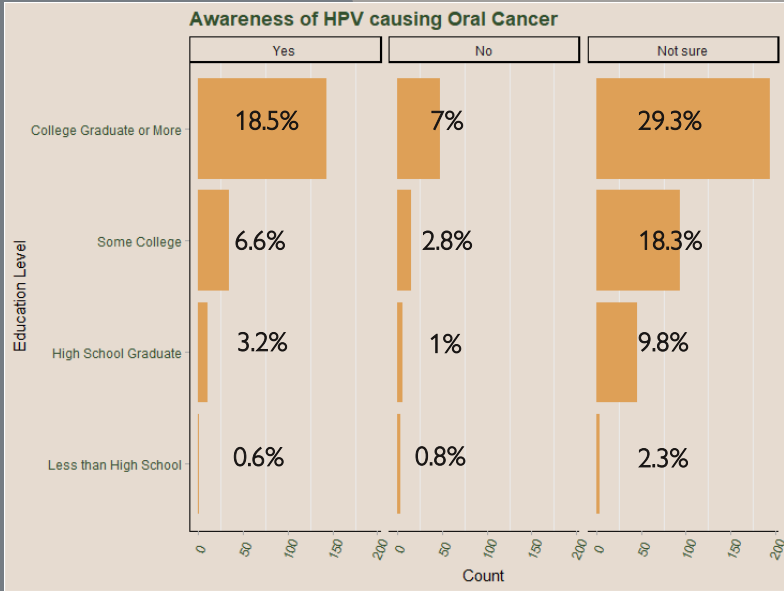
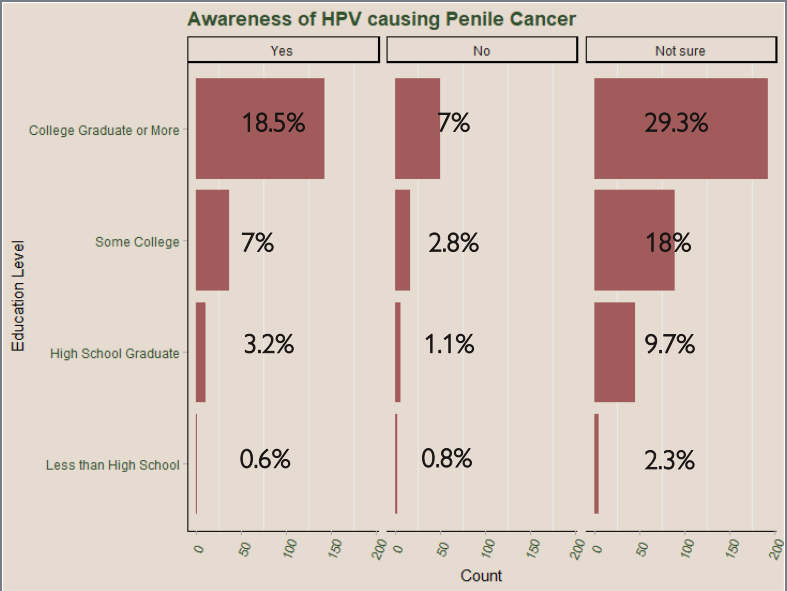
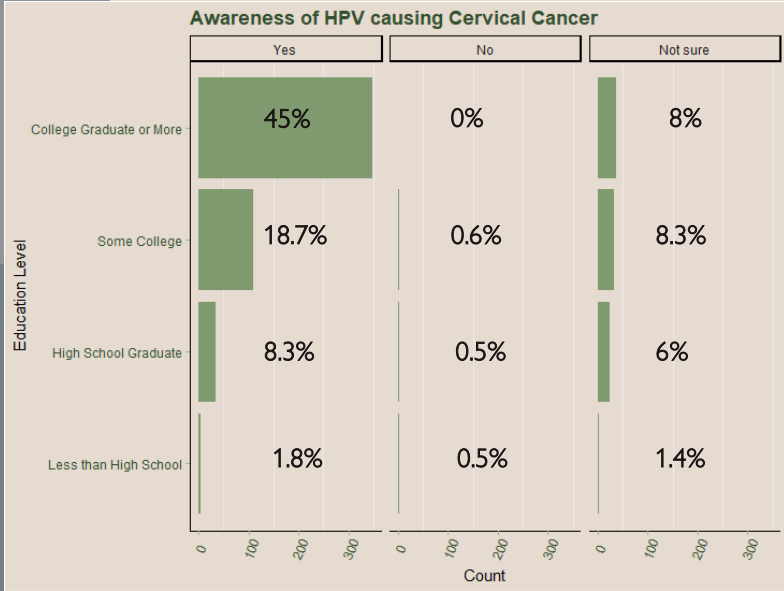
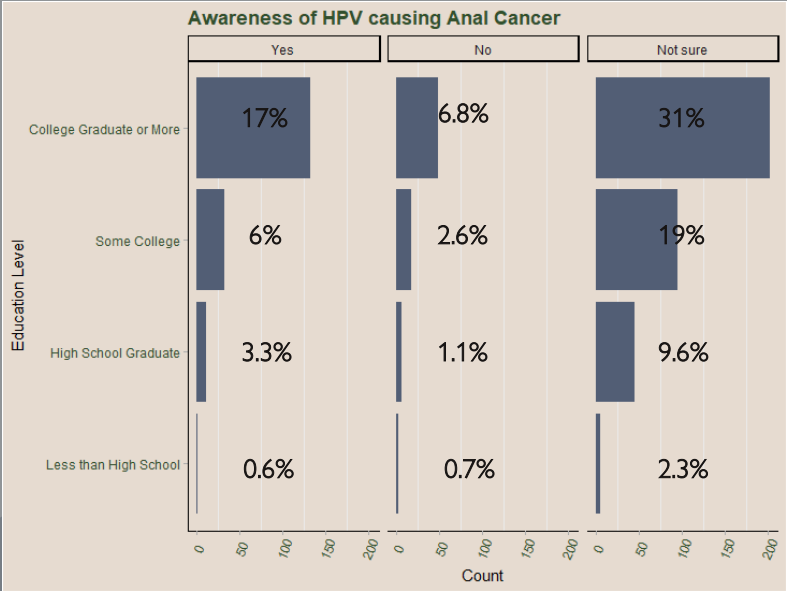
Awareness of HPV vaccine

Awareness of HPV vaccine among young females could be improved

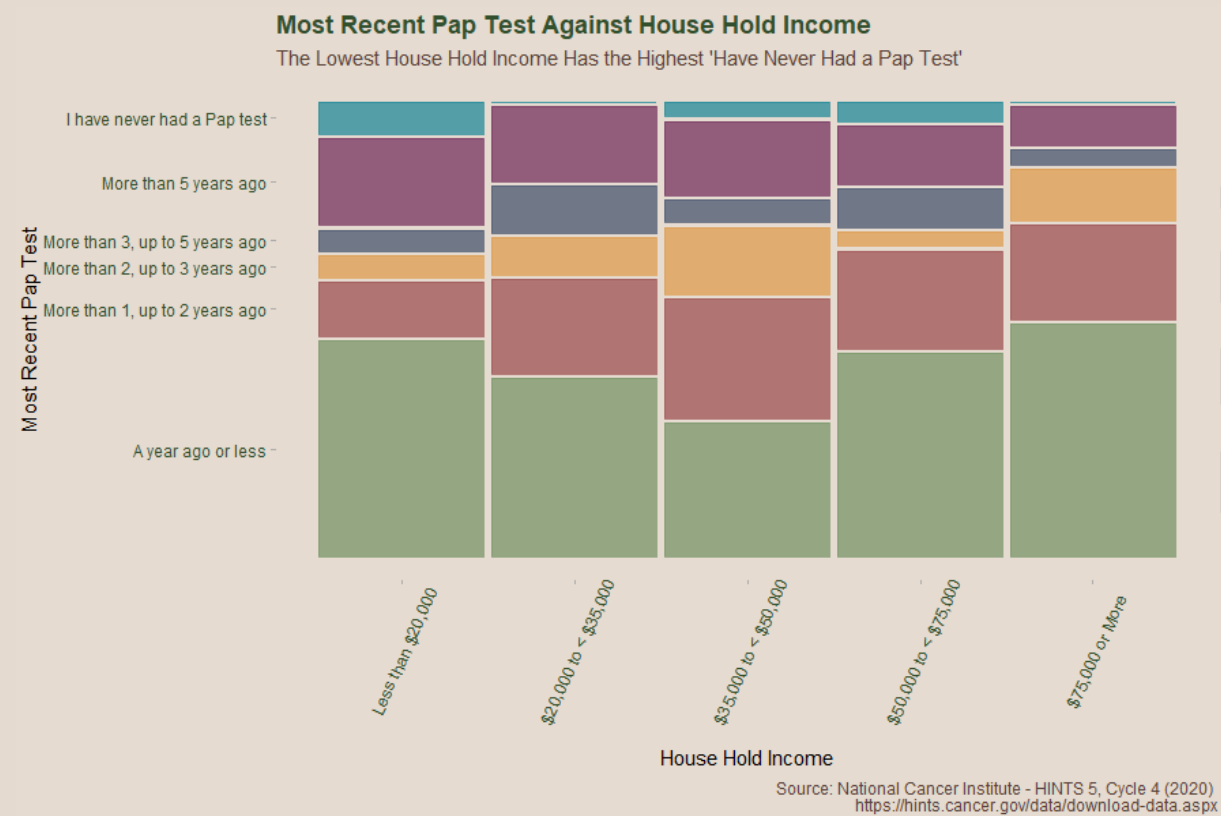
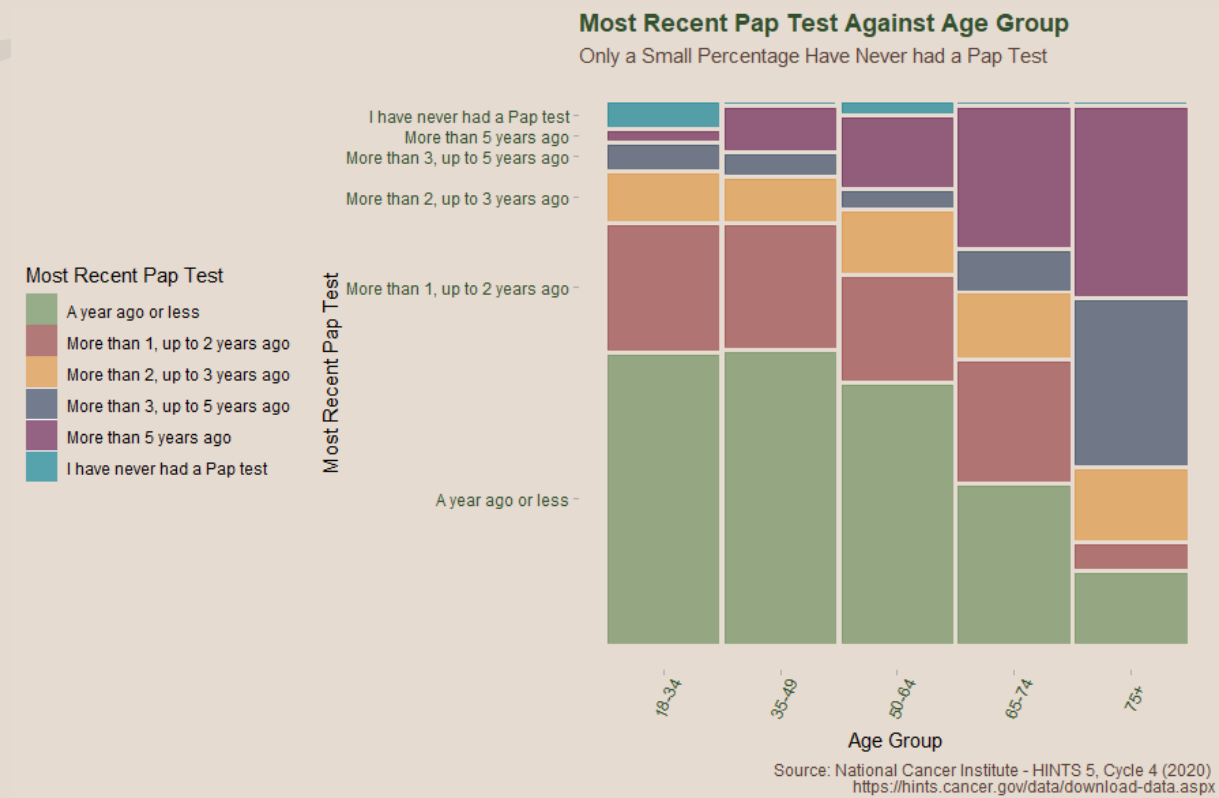


Source: National Cancer Institute - HINTS 5, Cycle 4 (2020)  
<https://hints.cancer.gov/data/download-data.aspx>

Heard of HPV vaccine		Less than High School	High School Graduate	Some College	College Graduate or More	Row Total
Cell Contents ----- N Chi-square contribution N / Row Total N / Col Total N / Table Total	Yes	56 27.431 0.037 0.357 0.027	217 22.488 0.145 0.514 0.103	429 0.288 0.287 0.727 0.203	793 23.915 0.530 0.843 0.376	1495  0.709
	No	101 66.681 0.164 0.643 0.048	205 54.667 0.333 0.486 0.097	161 0.699 0.262 0.273 0.076	148 58.135 0.241 0.157 0.070	615  0.291
	Column Total	157 0.074	422 0.200	590 0.280	941 0.446	2110

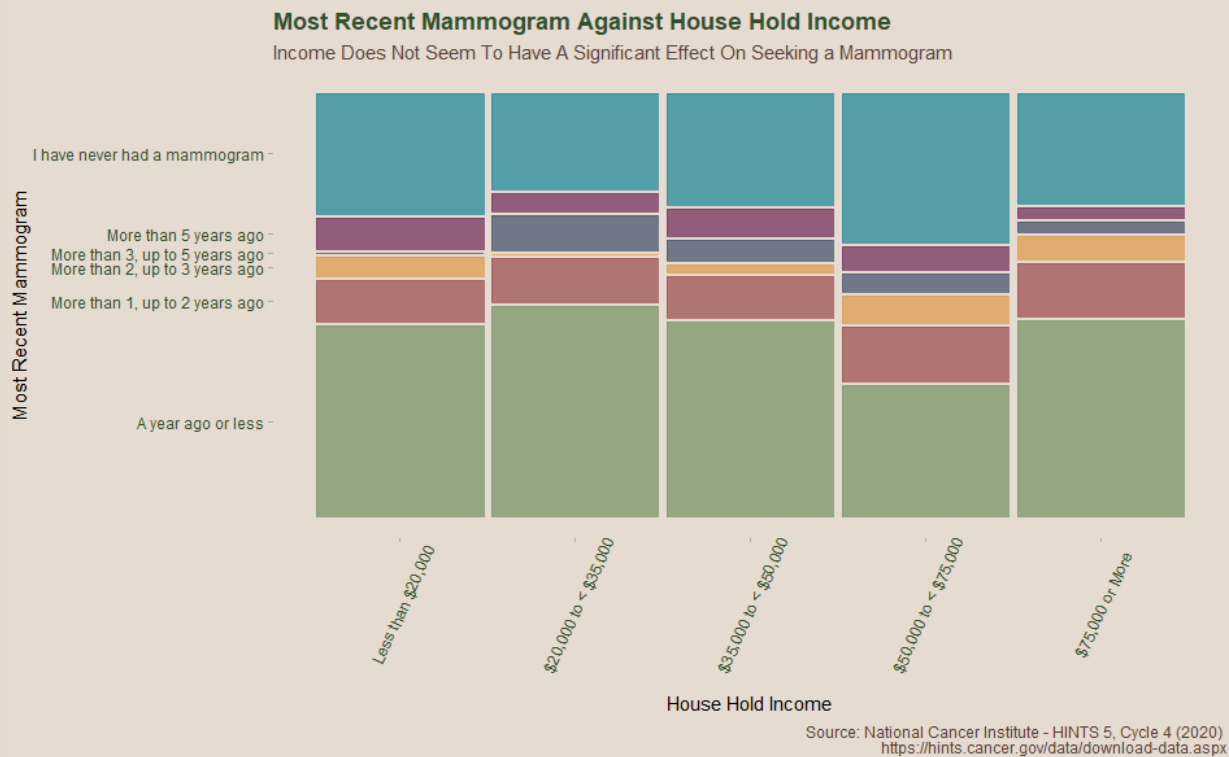
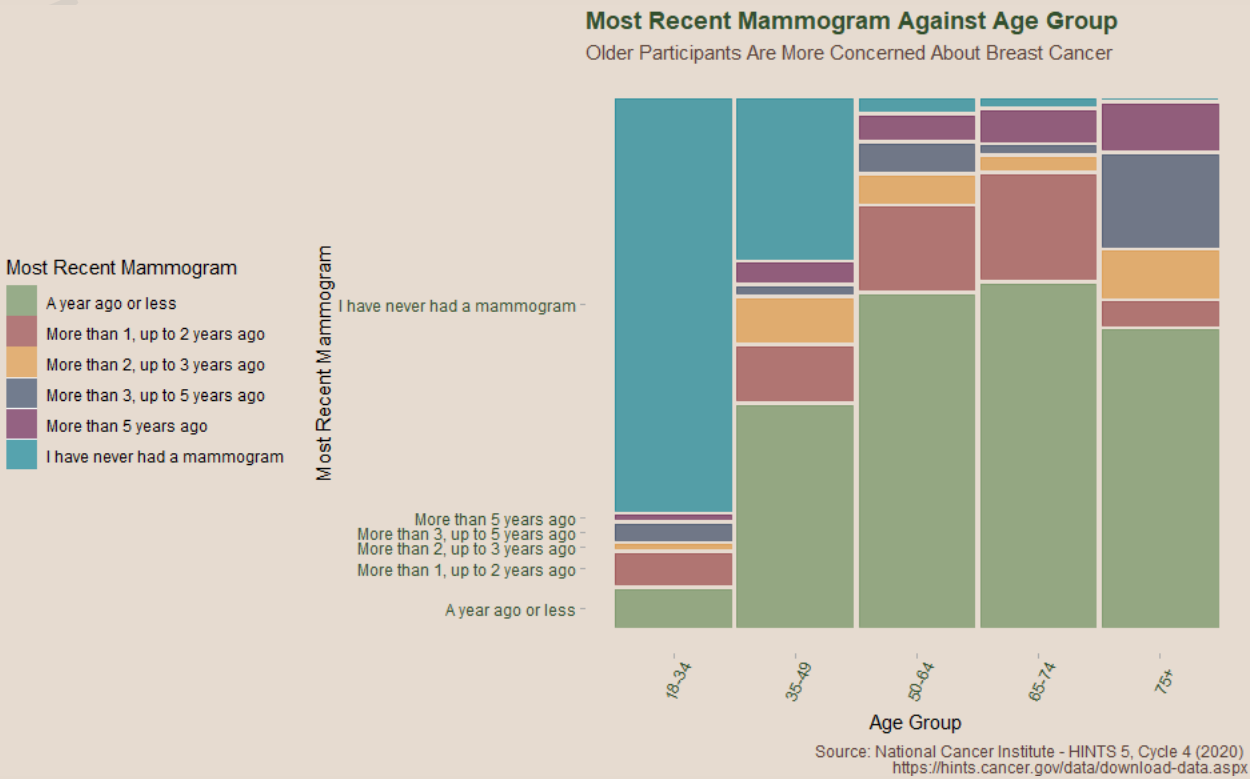


# Most Recent Pap Test Against Age and Income





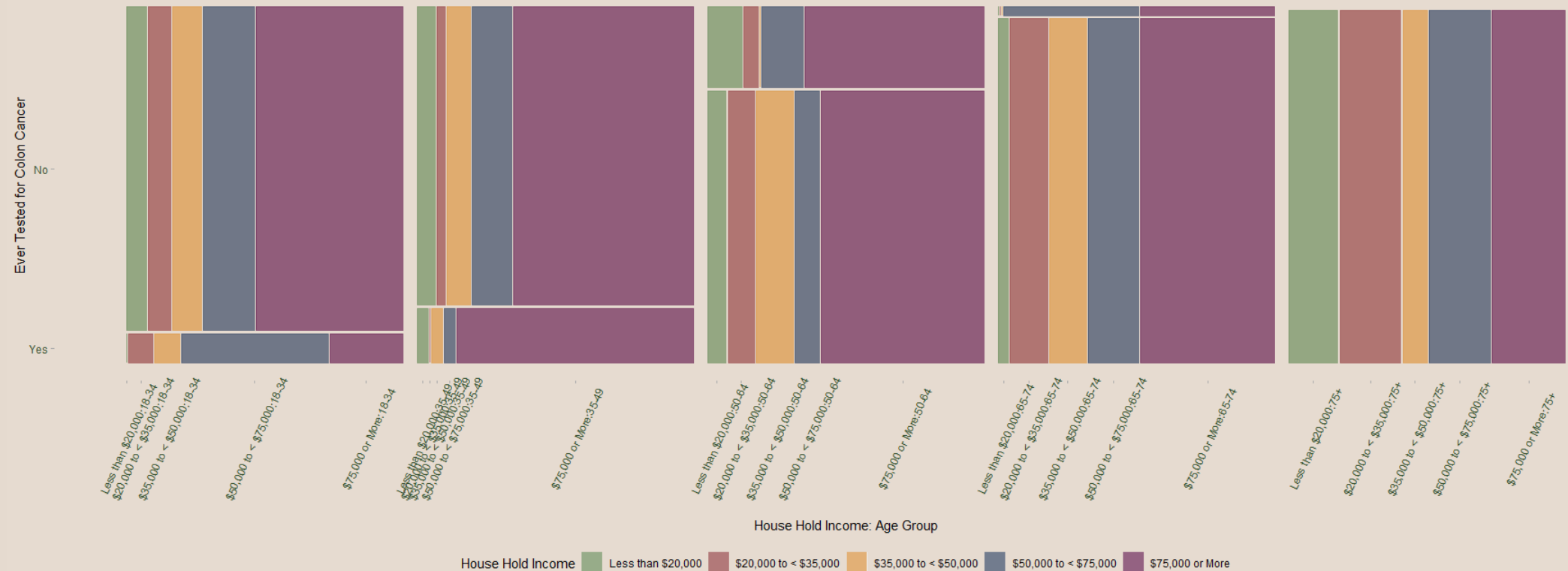
# Most Recent Mammogram Against Age and Income



# Have Ever Done a Colon Cancer testing Against Age and Income

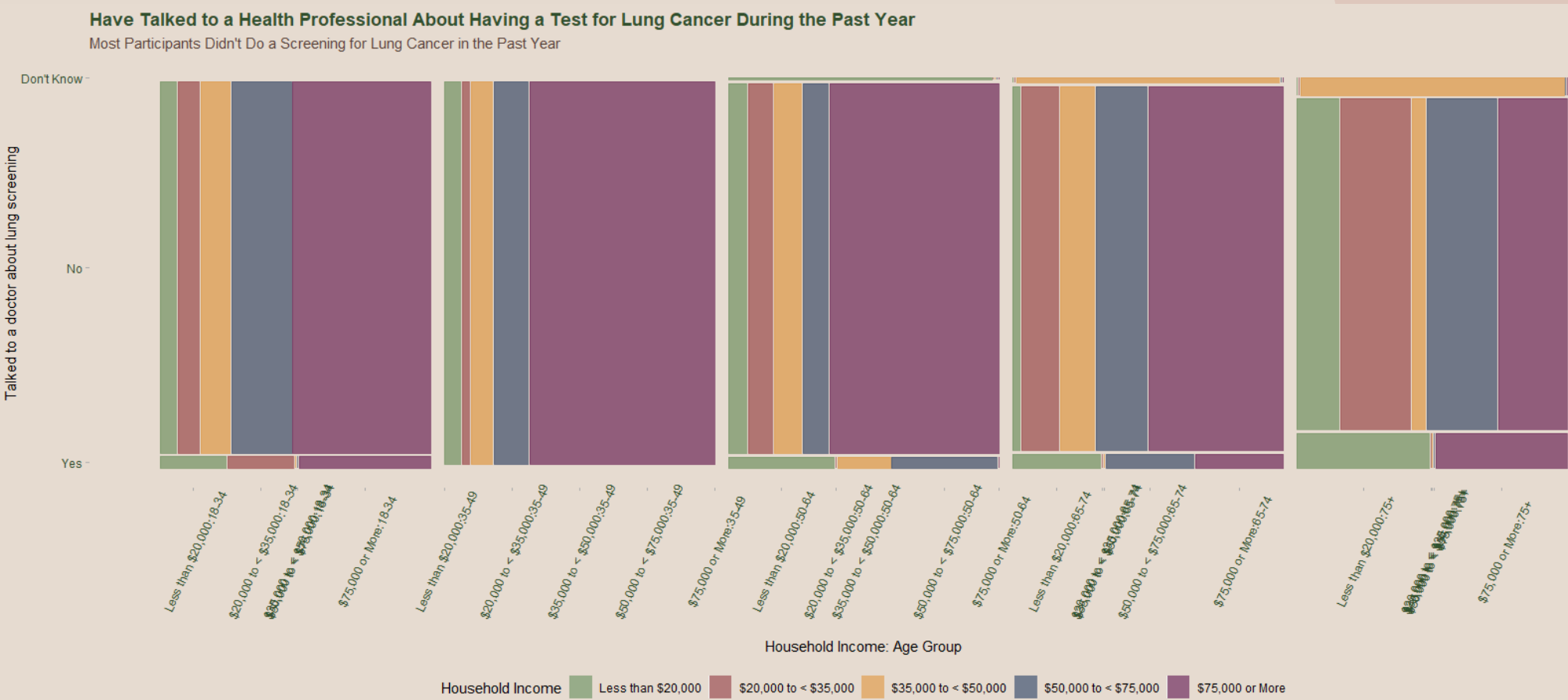
Have at Least Done One Type of Testing for Colon Cancer Against Age and Household Income

Older Individuals are More Concerned About Colon Cancer



Source: National Cancer Institute - HINTS 5, Cycle 4 (2020)  
<https://hints.cancer.gov/data/download-data.aspx>

# Talked to a professional About Lung Cancer Screening in the Past Year



Source: National Cancer Institute - HINTS 5, Cycle 4 (2020)  
<https://hints.cancer.gov/data/download-data.aspx>

# Contingency Table for Current and Former Smokers and Those Who Asked For Lung Cancer Testing

Talked to Doctor	Lung Cancer	Smoke Status			Row Total
		Current	Former	Never	
	Yes	35	40	40	115
		42.356	9.589	18.611	0.054
		0.304	0.348	0.348	
		0.154	0.087	0.027	
		0.016	0.019	0.019	
	No	186	416	1386	1988
		3.077	0.226	0.923	0.928
		0.094	0.209	0.697	
		0.816	0.906	0.952	
		0.087	0.194	0.647	
	Don't Know	7	3	30	40
		1.770	3.618	0.293	0.019
		0.175	0.075	0.750	
		0.031	0.007	0.021	
		0.003	0.001	0.014	
Column Total		228	459	1456	2143
		0.106	0.214	0.679	

# Recommendations

- Increase awareness of HPV vaccine among young females
- Look into the rate of HPV vaccination
- Increase awareness about what HPV could cause (besides cervical cancer)
- Encourage females to follow the recommendations for the pap test
- Encourage females who are 40 years and older to perform an annual mammogram
- Encourage females who are 45 years and older to perform a regular colon cancer screening
- Encourage current and former smoker females who are 50-80 years old to perform a lung cancer screening

The background features a light gray base with large, soft-edged organic shapes in muted red and olive green. A thin white line outlines a shape on the right side. In the top left, there is a faint, light gray sketch of a leafy branch.

Questions?