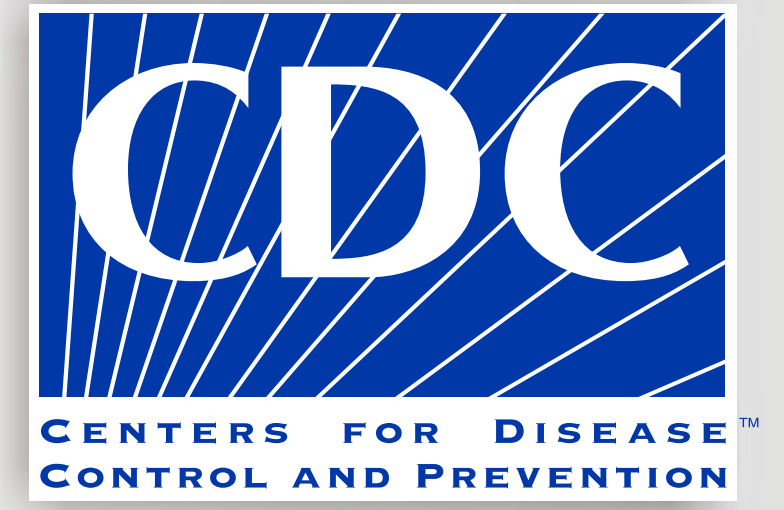




Public and provider awareness of a CA-125 test as a screen for ovarian cancer



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INTRODUCTION

- Ovarian cancer is the fifth leading cause of cancer death among women and the deadliest gynecologic malignancy in the United States (1).
- Effective strategies for the early detection of ovarian cancer do not currently exist.
- The U.S. Preventive Services Task Force recommended against routine screening the general population with CA-125 for ovarian cancer in 2004 (2).
- Recently, a large randomized screening trial in the United States investigating the use of CA-125 alone or in combination with transvaginal ultrasound (TVU) found that these modalities failed to detect the majority of ovarian cancer cases at early stages. This study concluded that screening the asymptomatic, average-risk population for ovarian cancer is not beneficial, and that current U.S. Preventive Service Task Force recommendation against routine screening with CA-125 should not be changed (3).

- In view of the widespread discussion and continued research into the use of CA-125 as a screen, the primary objective of this study is to assess clinician beliefs about the effectiveness of screening for ovarian cancer with CA-125. Additionally, we assessed women's familiarity with the CA-125 test.

METHODS

- In 2008, CDC funded the collection of data as part of its national awareness campaign, *Inside Knowledge: Get the Facts About Gynecologic Cancer*. Several questions about CA-125 were included as part of a simple, random sample survey administered by Porter Novelli annually.
- The DocStyles survey included 1,250 physician respondents of family/general practitioners (n=510), internists (n=490), and obstetrician/gynecologists (OB/GYNs) (n=250). Physicians were eligible to take part in the DocStyles 2008 survey if they practiced in the United States, treated at least 10 patients a week, worked in an individual, group, or hospital practice, and had practiced medicine for at least three years.
- The HealthStyles survey included 2,991 female respondents age ≥ 18 years, and data were poststratified and weighted so that the sample distribution of age, race/ethnicity, sex, household size, and household income matched that of the general population according to U.S. Census benchmarks.
- All statistical analyses, including chi-square tests and logistic regression, were performed with SAS version 9.2 (SAS Institute, Cary, NC).

RESULTS

Table 1. Physician responses regarding whether CA-125 is an effective screen for the asymptomatic, average risk population

Characteristics (n)	CA-125 (and not TVU)		Both CA-125 and TVU		Neither CA-125 nor TVU		p
	%	95% CI	%	95% CI	%	95% CI	
Sex							0.89
Male	742	10.8% (8.5, 13.0)	52.2%(48.6, 55.8)		37.1%(33.6, 40.5)		
Female	219	10.1% (6.1, 14.0)	53.9%(47.3, 60.5)		36.1%(29.7, 42.4)		
Age (years)							0.02
25-44	538	12.3% (9.5, 15.0)	48.9%(44.7, 53.1)		38.9%(34.7, 43.0)		
45+	423	8.5% (5.9, 11.2)	57.2%(52.5, 61.9)		34.3%(29.8, 38.8)		
Race							<0.0001
White	691	8.1% (6.1, 10.1)	51.8%(48.1, 55.5)		40.1%(36.4, 43.7)		
Black	37	8.1% (0.7, 16.9)	67.6%(52.5, 82.7)		24.3%(10.5, 38.1)		
Asian	165	17.6%(11.8, 23.4)	51.5%(43.9, 59.1)		30.9%(23.9, 38.0)		
Other**	68	20.6%(11.0, 30.2)	54.4%(42.6, 66.2)		25.0%(14.7, 35.3)		
Ethnicity							0.33
Hispanic	36	16.7% (4.5, 28.8)	55.6%(39.3, 71.8)		27.8%(13.1, 42.4)		
Non-Hispanic	924	10.4% (8.4, 12.4)	52.4%(49.2, 55.6)		37.2%(34.1, 40.3)		
Specialty							<0.0001
Family/general practitioner	393	11.2% (8.1, 14.3)	54.5%(49.5, 59.4)		34.4%(29.7, 39.0)		
Internist	382	13.6%(10.2, 17.0)	56.5%(51.6, 61.5)		29.8%(25.3, 34.4)		
Obstetrician/gynecologist	186	3.2% (0.7, 5.8)	40.3%(33.3, 47.4)		56.5%(49.3, 63.6)		
Practice type							0.01
Individual practice	172	8.1% (4.1, 12.2)	63.4%(56.2, 70.6)		28.5%(21.7, 35.2)		
Group practice	612	10.3% (7.9, 12.7)	49.7%(45.7, 53.8)		40.0%(36.1, 43.9)		
Hospital/clinic	177	14.1% (9.0, 19.3)	52.0%(44.6, 59.3)		33.9%(26.9, 40.9)		
Privileges at teaching hospital	521	10.9% (8.3, 13.6)	51.8%(47.5, 56.1)		37.2%(33.1, 41.4)		0.87
No. of yrs practicing medicine							0.16
3-10 years	445	11.9% (8.9, 14.9)	49.7%(45.0, 54.3)		38.4%(33.9, 42.9)		
11-20 years	300	10.7% (7.2, 14.2)	51.7%(46.0, 57.3)		37.7%(32.2, 43.2)		
21 or more years	216	7.9% (4.3, 11.5)	59.7%(53.2, 66.3)		32.4%(26.2, 38.7)		
Financial situation of majority of patients							0.62
Very poor - poor	44	9.1% (0.6, 17.6)	47.7%(33.0, 62.5)		43.2%(28.5, 57.8)		
Poor - lower middle class	130	14.6% (8.5, 20.7)	50.8%(42.2, 59.4)		34.6%(26.4, 42.8)		
Lower middle class - middle class	367	11.7% (8.4, 15.0)	51.2%(46.1, 56.3)		37.0%(32.1, 42.0)		
Middle class - upper middle class	381	8.9% (6.1, 11.8)	54.9%(49.9, 59.9)		36.2%(31.4, 41.0)		
Upper middle class - affluent	39	5.1% (1.8, 12.1)	53.9%(38.2, 69.5)		41.0%(25.6, 56.5)		

*TVU = transvaginal ultrasound
**Other category includes Native Hawaiian/other Pacific Islander, American Indian/Alaska Native

Table 2. Factors associated with responding neither CA-125 nor TVU are effective screens for the asymptomatic, average risk population

Physician Characteristics	OR	95% CI	p
Sex			
Male	reference		
Female	0.87	(0.64, 1.18)	0.38
Age (years)			
25-44	1.36	(1.04, 1.77)	0.02
45+	reference		
Race			
White	reference		
Black	0.78	(0.35, 1.64)	0.48
Asian	0.92	(0.64, 1.33)	0.66
Other*	0.66	(0.37, 1.15)	0.14
Specialty			
Family/general practitioner	reference		
Internist	0.85	(0.63, 1.14)	0.27
Obstetrician/gynecologist	1.98	(1.44, 2.73)	<0.0001
Practice type			
Individual practice	reference		
Group practice	1.42	(0.99, 2.03)	0.06
Hospital/clinic	1.33	(0.85, 2.09)	0.22

*Other category includes Native Hawaiian/other Pacific Islander, American Indian/Alaska Native

HealthStyles Respondent Characteristics and Familiarity (having heard of/having had) CA-125 Blood Test

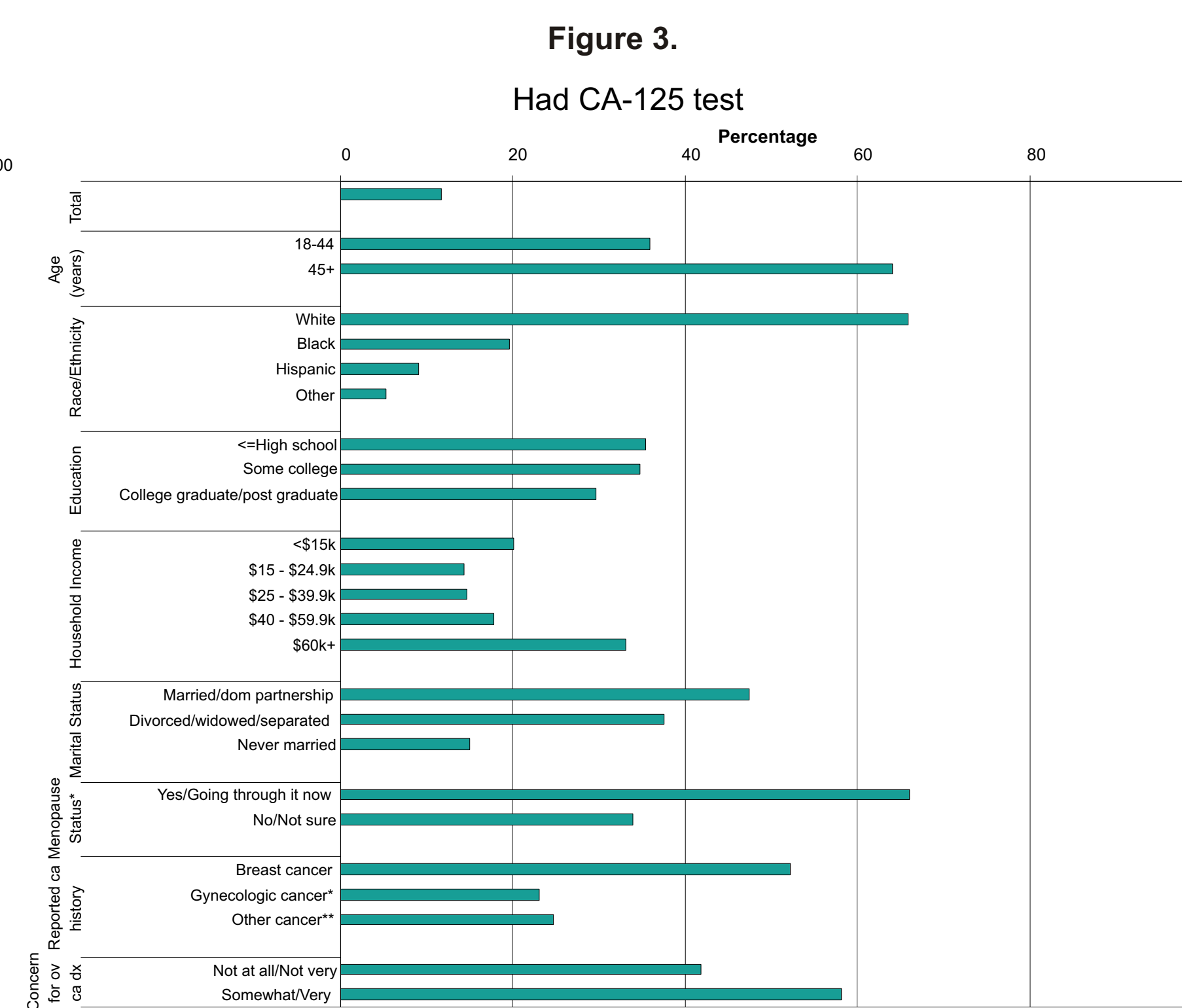
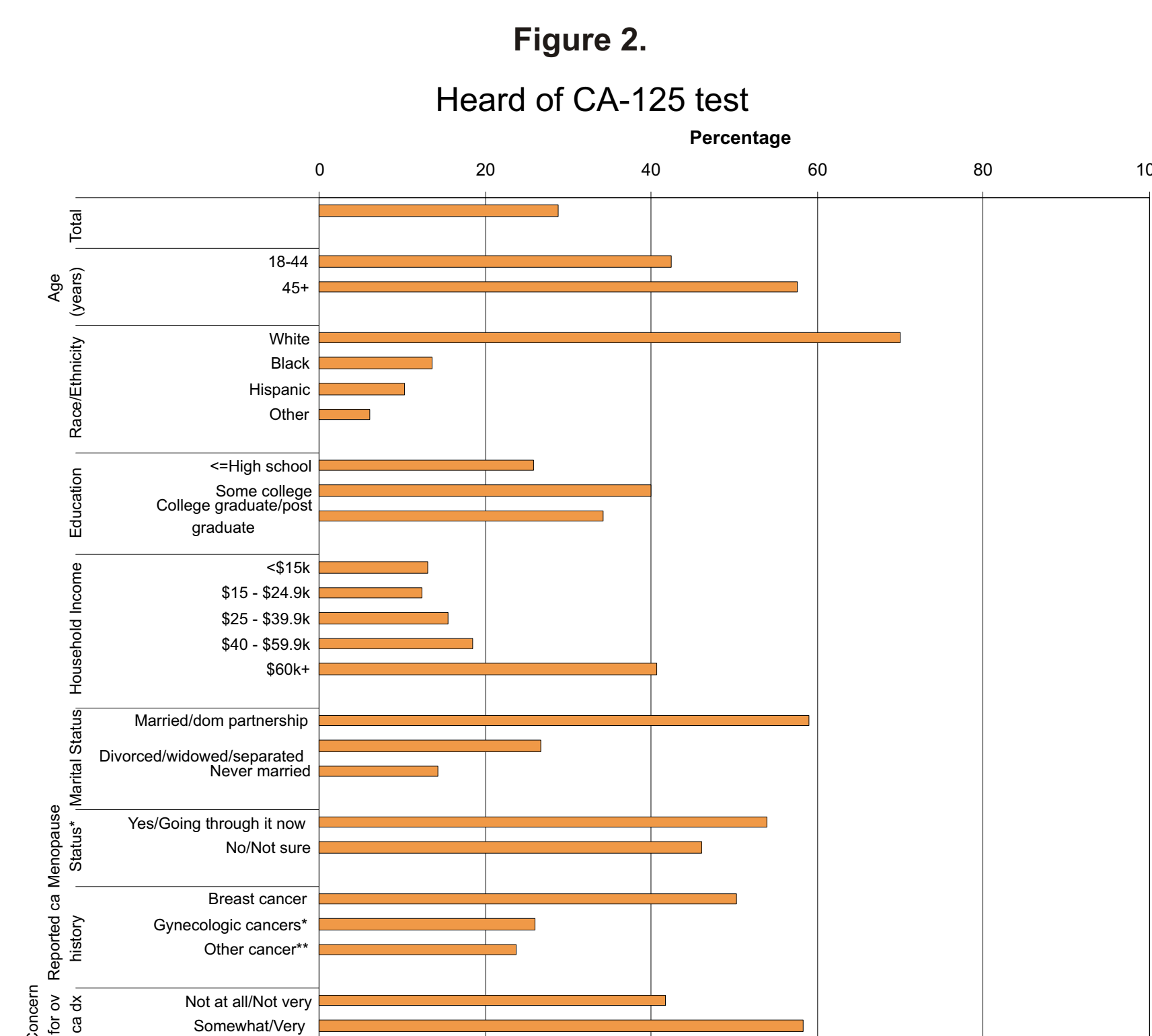
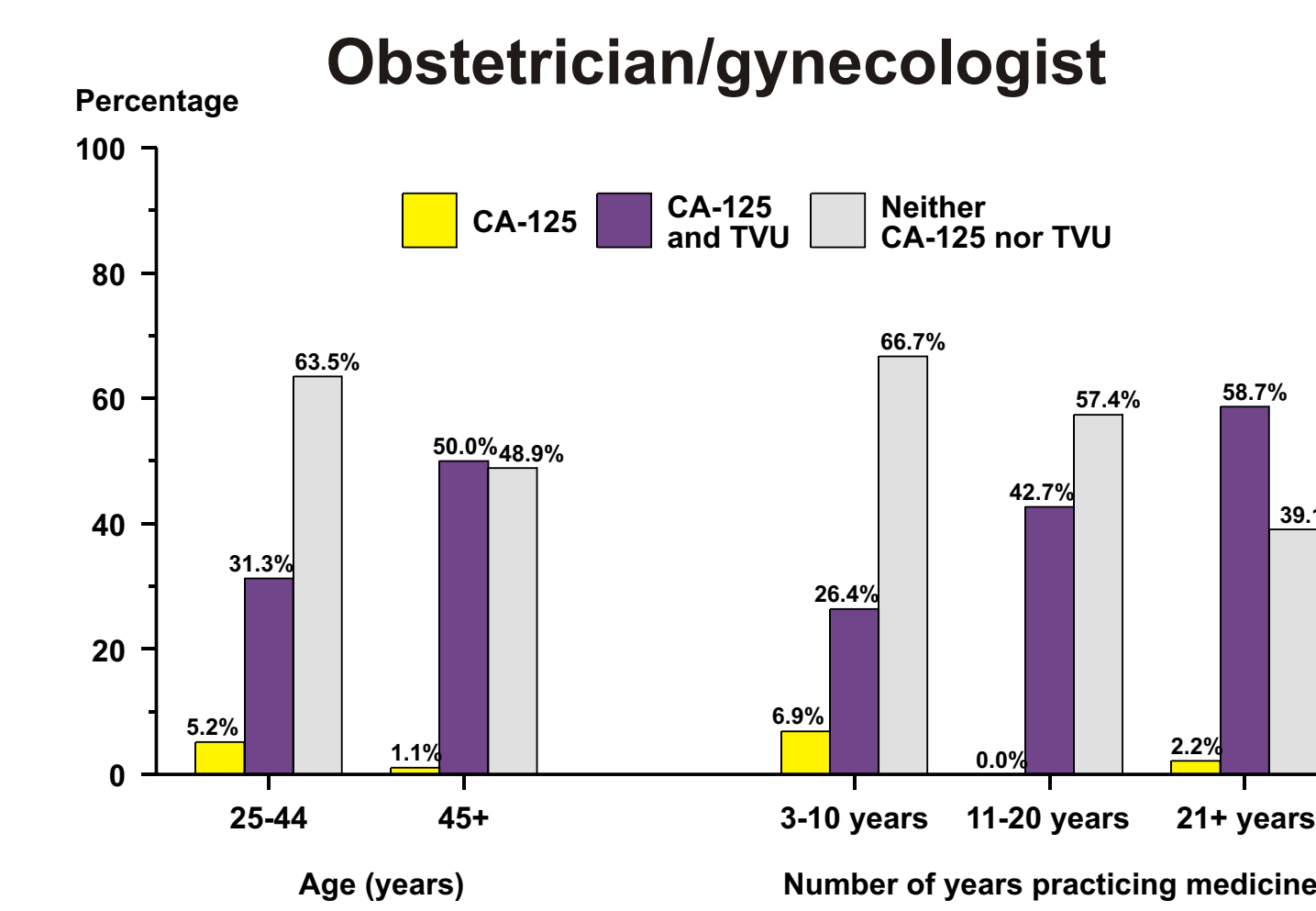
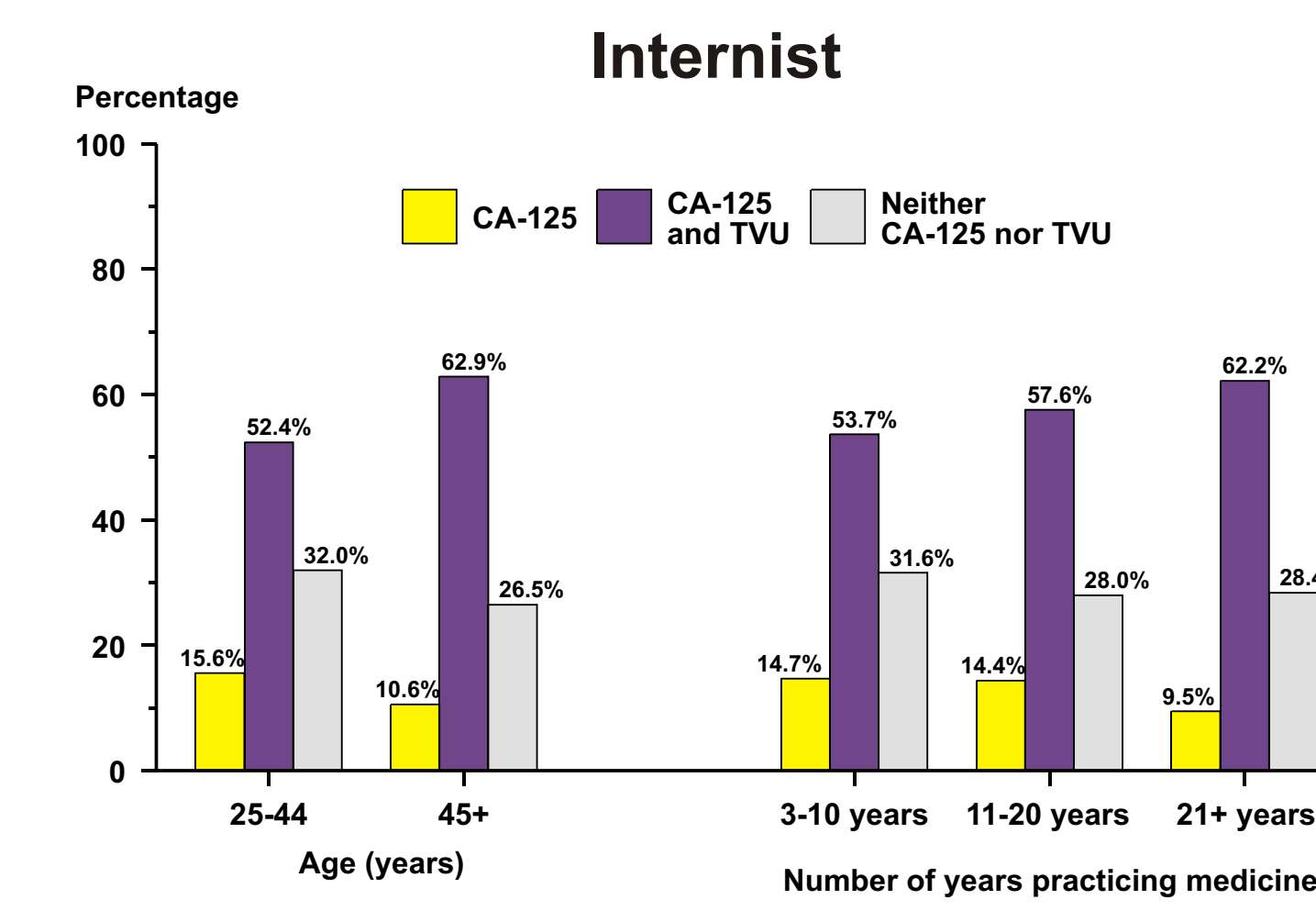
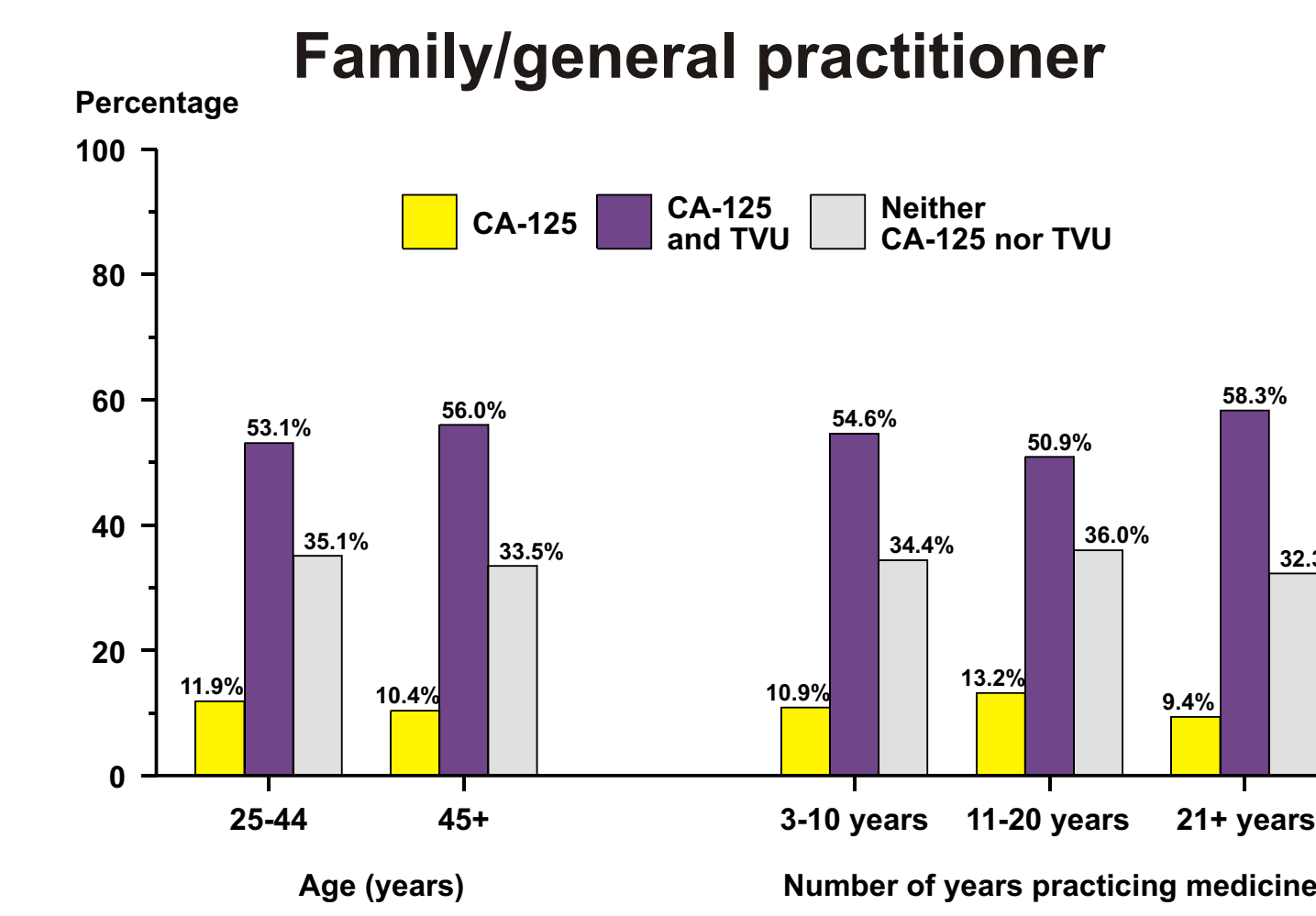


Figure 1. Responses regarding whether CA-125 is an effective screen for the asymptomatic, average risk population by physician specialty and years in practice



RESULTS

DocStyles

- The majority (53%) of physicians thought both CA-125 and TVU were effective screening tests for ovarian cancer.
- A greater proportion of OB/GYNs (57%) reported neither CA-125 nor TVU were effective as screening tests for asymptomatic women in the average risk population than family/general practitioners (34%) or internists (30%) (p<0.0001).
- Younger (aged 25-44) OB/GYNs and those in practice for 3-10 years more often said neither CA-125 or TVU were effective screening tests (64% and 67%, respectively) compared to OB/GYNs aged 45 and older and those in practice for 21 years or more (49% and 39%, respectively).
- Responses from internists and general practitioners were similar by age and years in practice.
- Regression modeling showed that younger physicians (aged 25-44, p=0.02) and OB/GYNs (p<0.0001) were significantly more likely to report that neither CA-125 nor TVU were effective screens for ovarian cancer in the asymptomatic, average risk population.

HealthStyles

- Overall, 29% of women heard of the CA-125 test.
- Women who had heard of CA-125 were more often aged 45 or older (57%), white (70%), married or in a domestic partnership (59%), and peri- or post-menopausal (54%).
- About 50% of women with a history of breast cancer reported having heard of the CA-125, and 58% of women who said they were somewhat or very concerned about getting ovarian cancer reported having heard of it.
- Overall, 12% of women respondents had a CA-125 test.
- Demographic patterns were similar among those who had heard of and those who had a CA-125 test.

CONCLUSIONS

- The large percentage of physicians who believe CA-125 is an effective screen for ovarian cancer signals the need for improved education, especially among internists and general practitioners.
- Women may be consulting their physicians currently about the CA-125 test, based on their reported familiarity with it.
- Educational efforts geared toward the public and providers that include both lack of evidence for screening with CA-125, as well as the potential harms of false-positive CA-125 tests, should be a priority for public health programs and awareness campaigns.

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The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention

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