Racial/Ethnic Differences in Cancer Risk Perception and Screening Among Women

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September 11,2006
AANCART

Outline of Presentation

- Communication of Cancer Risk Project
- Disparities in cancer screening
- Risk perception
- Factors related to risk perception
- Differences by ethnicity
- Summary of findings and conclusion

Disparities in Cancer Incidence Rates for Women

Ethnicity	Colorectal Cancer Incidence	Breast Cancer Incidence	Cervical Cancer Incidence
African American	56.0	119.4	11.1
White	51.1	141.1	8.7
Latina	32.3	89.9	15.8
Asian	39.7	96.6	8.9

SEER data 1998-2002; per 100,000 women.

Disparities in Cancer Death Rates for Women

Ethnicity	Colorectal Cancer Deaths	Breast Cancer Deaths	Cervical Cancer Deaths
African American	34.0	34.7	5.3
White	24.3	25.9	2.5
Latina	17.7	16.7	3.5
Asian	16.2	12.7	2.7

SEER data 1998-2002; per 100,000 women.

Factors Related to Disparities in Cancer Screening

- System and Access to care
  - Financial barriers: lack of insurance
  - Logistic barriers: transportation, location
- Provider
  - Provider-patient interactions
  - Physician bias and lack of culturally & linguistically appropriate services
- Patients
  - Knowledge and attitude
  - Perceived risk and benefits of screening

Limitations in Current Literature

- Risk perception as a factor influencing preventive health behavior
- Ethnic differences in cancer risk perception
- Inaccurate risk perception and informed decision-making

Research Objectives

- To evaluate patients' risk perception about breast, colorectal, and cervical cancer.
  - Are there differences in cancer risk perception between ethnic groups?
  - Is cancer risk perception related to screening?

Study Design

- Cross sectional survey (10/2003 to 12/2005)
  - Telephone
  - In-person
- Eligibility Criteria:
  - Women 50-80 years old
  - Had at least 1 visit to primary care physician in the previous 2 years
    - Ambulatory practices at UCSF
    - San Francisco community clinics
    - Chinatown Public Health Center
- Languages: English, Spanish, Chinese

Study Protocol

- Obtained physicians' consent to contact patients for enrollment in the study
- Sent letter & postcard to potential participants then followed-up with phone calls 2 weeks after the letter
- Trained interviewers conducted telephone screener and in-person interviews
- Conducted in-person recruitment and interviews at the Chinatown Public Health Center

Sample Population

1,319

completed baseline screener

↓

1,162 (88%)

completed in-person

↓

1,160

final sample

(2 cases dropped due to ineligible ethnicity)

Methods

- Descriptive statistics
- Multiple regression analyses
- Linear and multivariate logistic regression models

Primary Outcome Variables

- Perception of getting breast, cervical, or colon cancer
  - Numerical scale of 0 to 100
  - In words: “no risk” to “very high risk”
- Cancer Screening History
  - Pap-test
  - Mammogram
  - Fecal Occult Blood Test (FOBT)
  - Sigmoidoscopy
  - Colonoscopy

Other Predictors

- Ethnicity (Primary Predictor Variable)
- Age
- Education
- Income
- Cancer history (self/family)
- Insurance
- Health status
- Numeracy

Study Population

ETHNICITY	
White	29% (338)
African American	14% (167)
Latina	21%(239)
Asian*	36% (416)
TOTAL	N=1,160

* 353 (85%) of Asian are Chinese.

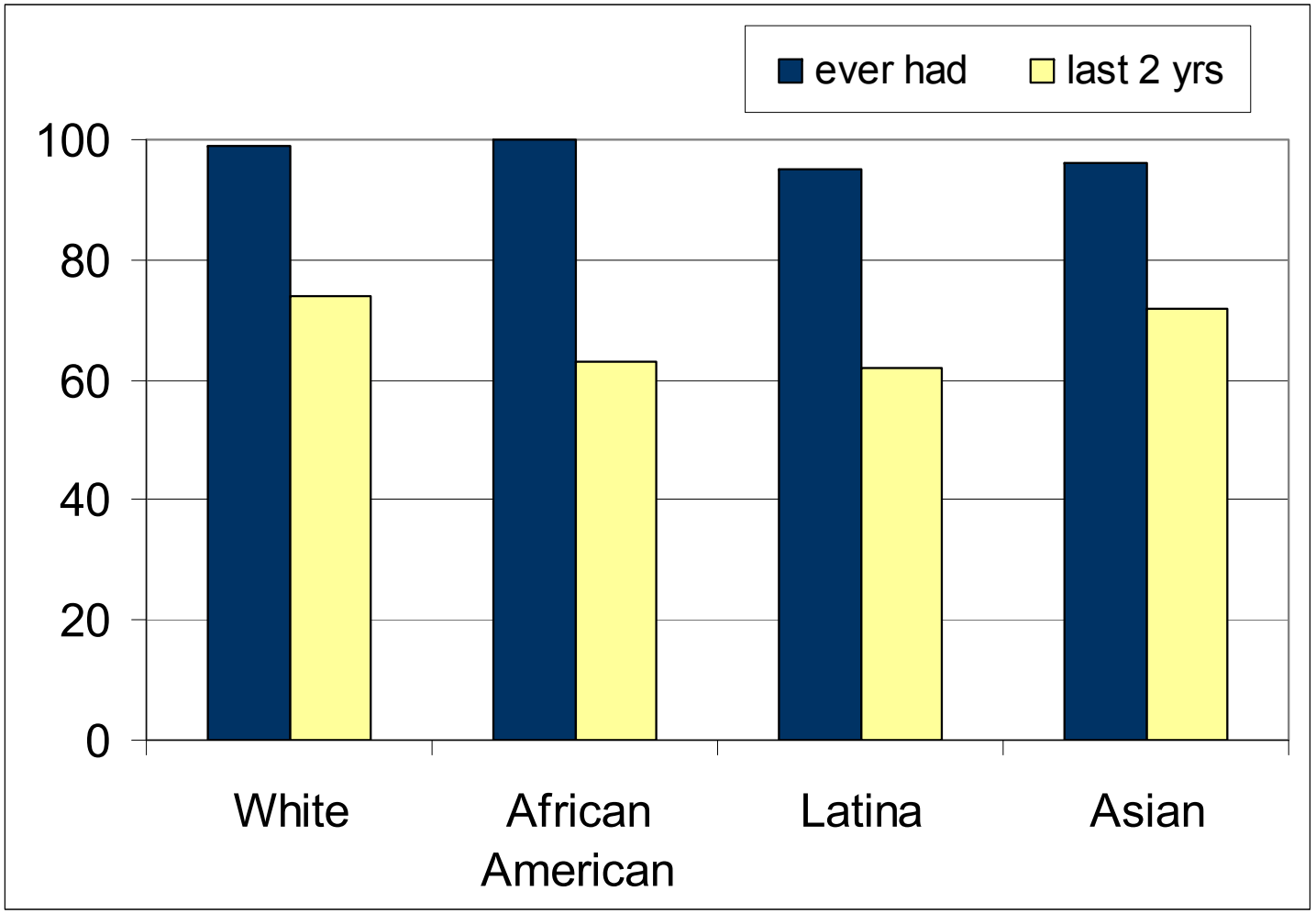
Study Population Characteristics

	All (1,160)	Asian (416)
Age		
50-59	49%	50%
60-69	32%	33%
70-80	19%	17%
Education		
<High School	36%	59%
High School/GED	12%	13%
> High School	52%	28%
Income		
<=$20,000	46%	60%
$20,001-50,000	24%	23%
>$50,000	30%	17%

Study Population Characteristics

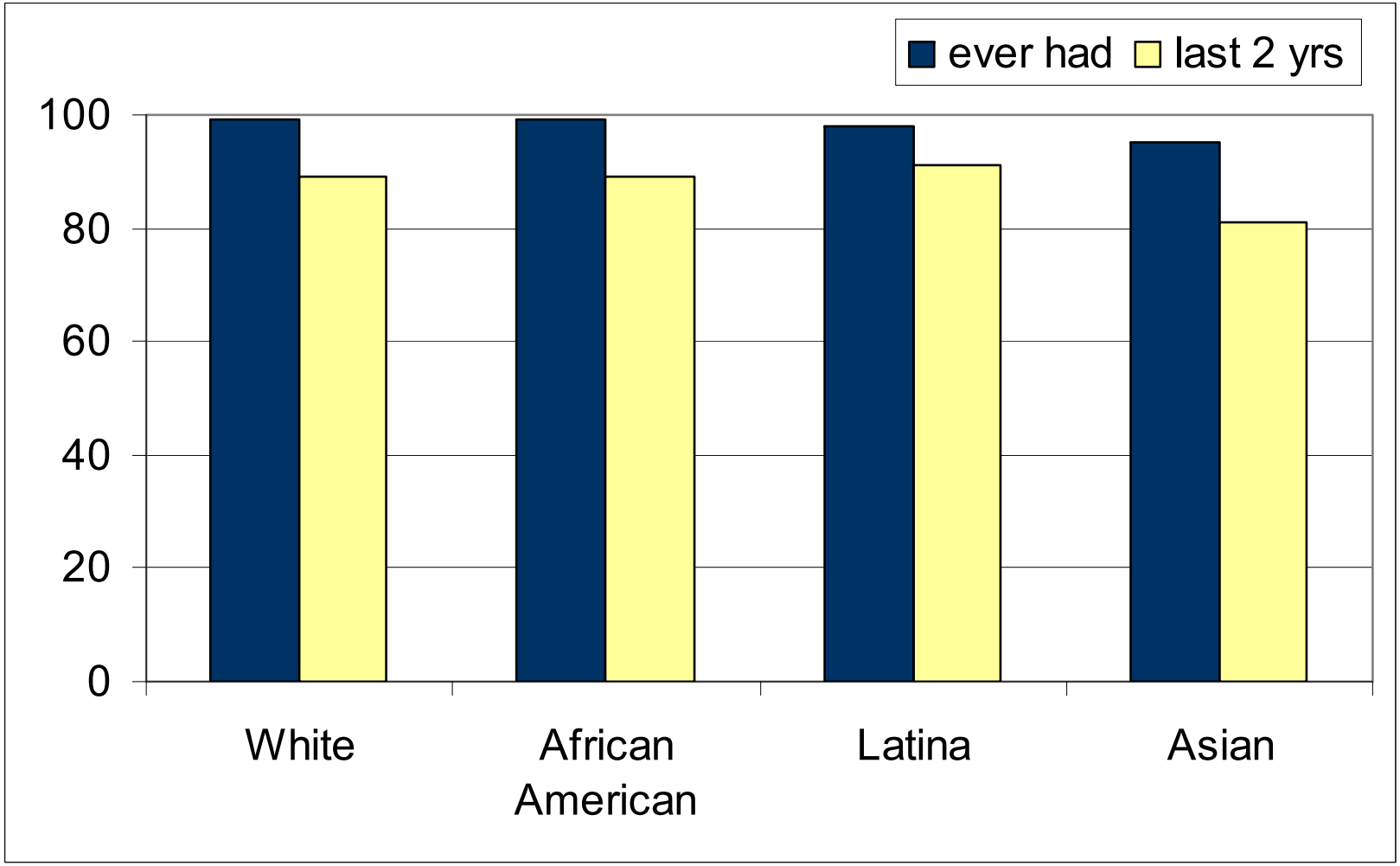
	All (1,160)	Asian (416)
Insurance:		
Uninsured	19%	38%
Private	49%	30%
Public	32%	32%
Health Status		
Poor	13%	21%
Fair	33%	39%
Good	30%	29%
Very Good/Excellent	24%	11%
Cancer History-Self	18%	10%
Cancer History-Family	42%	25%
US Born	44%	7%

Self Report of Pap-test



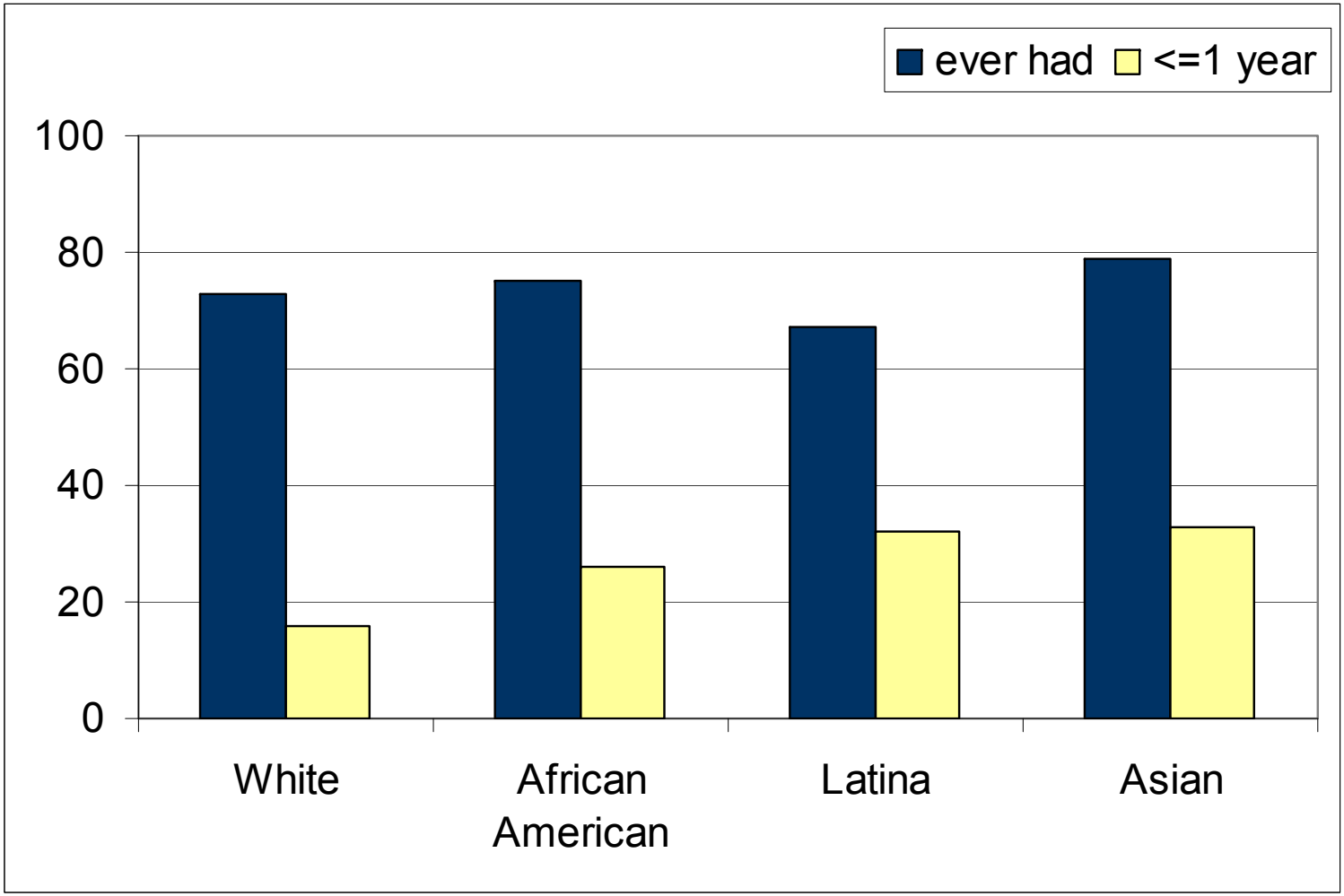
Chi-square test significant at $p<0.01$

Self Report of Mammogram



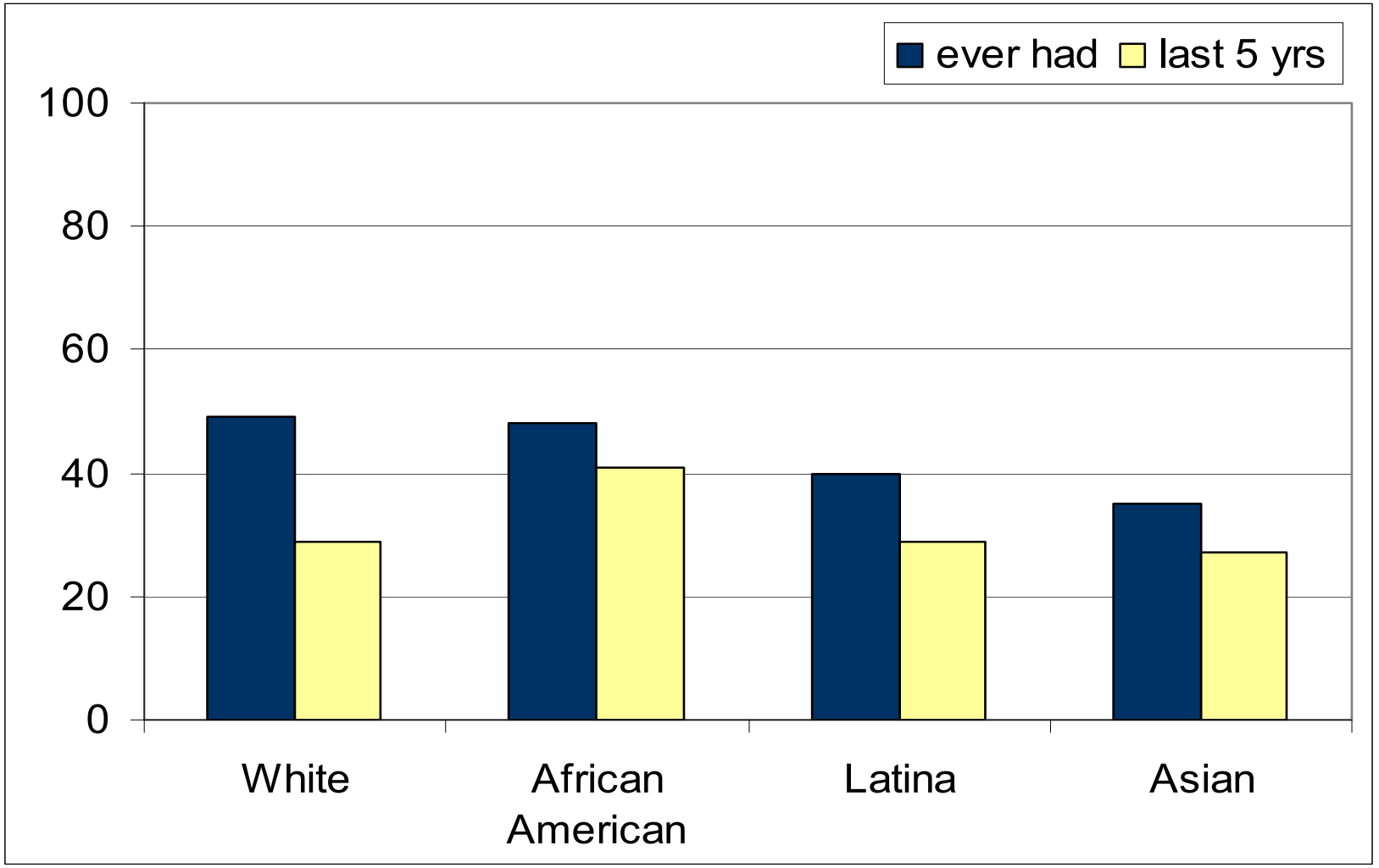
Chi-square test significant at $p<0.01$

Self Report of FOBT



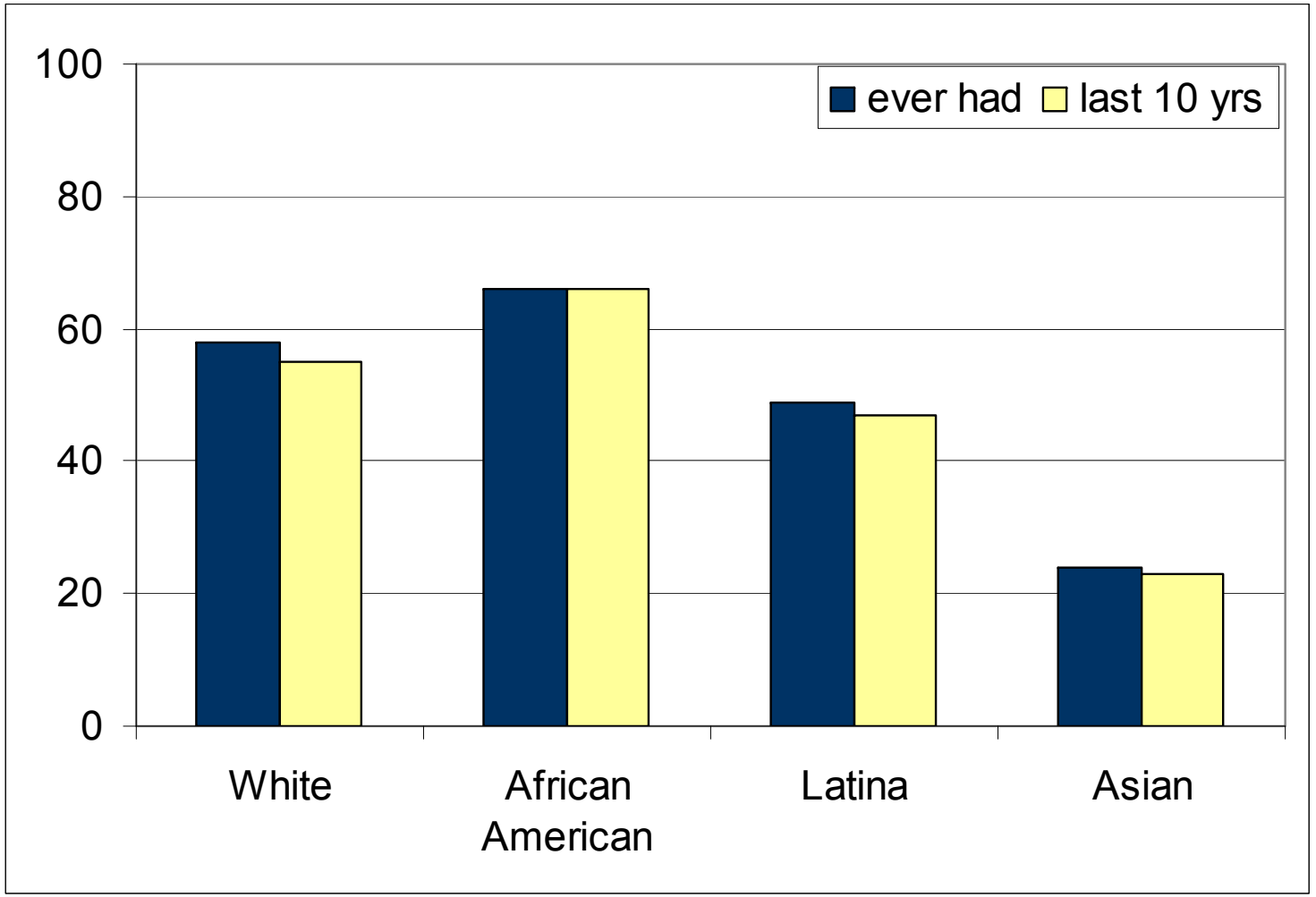
Chi-square test significant at $p<0.01$

Self Report of Sigmoidoscopy



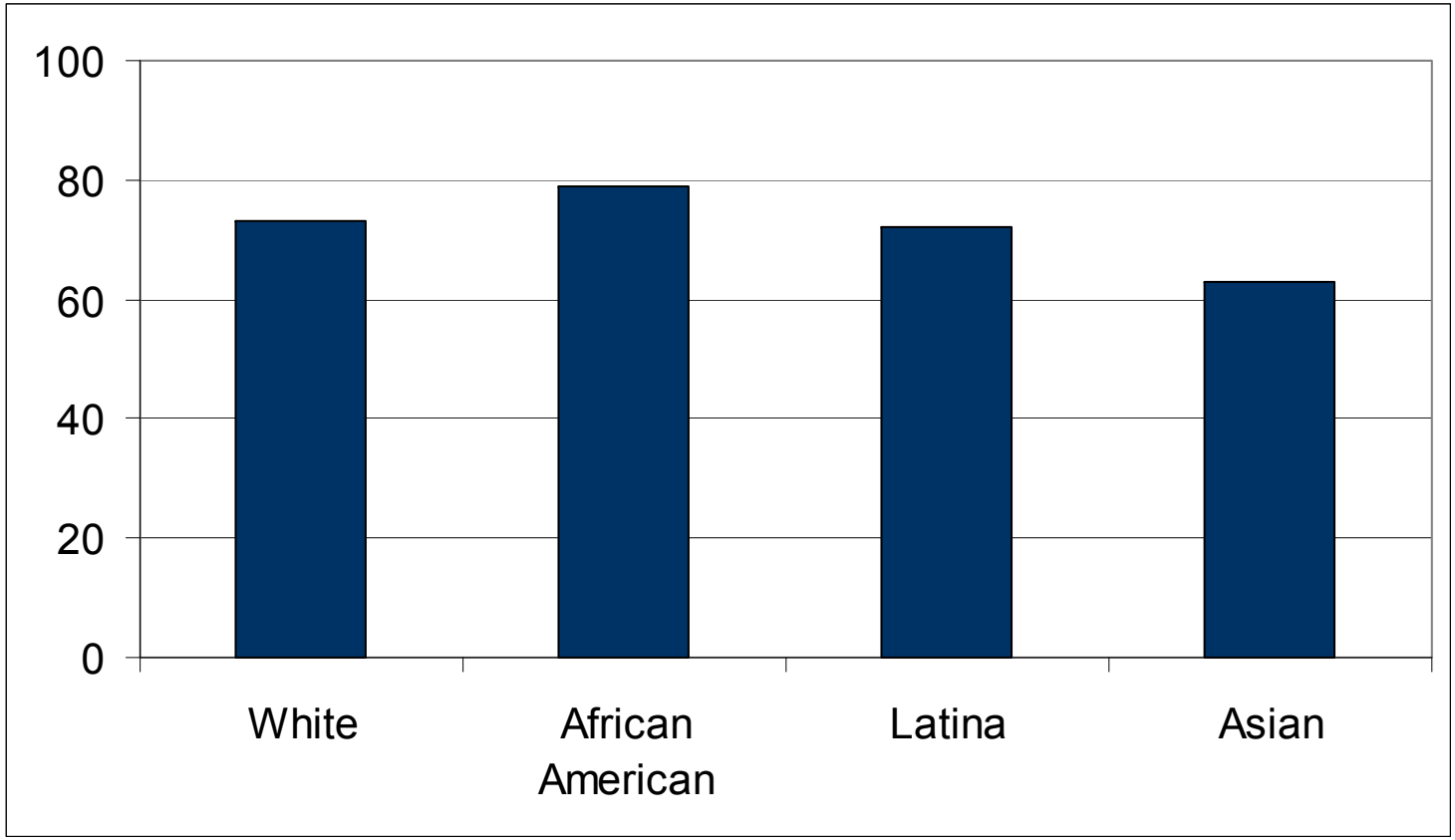
Chi-square test significant at $p<0.01$.

Self Reported Colonoscopy



Chi-square test significant at $p<0.01$

Self Report of Any Colon Cancer Screening

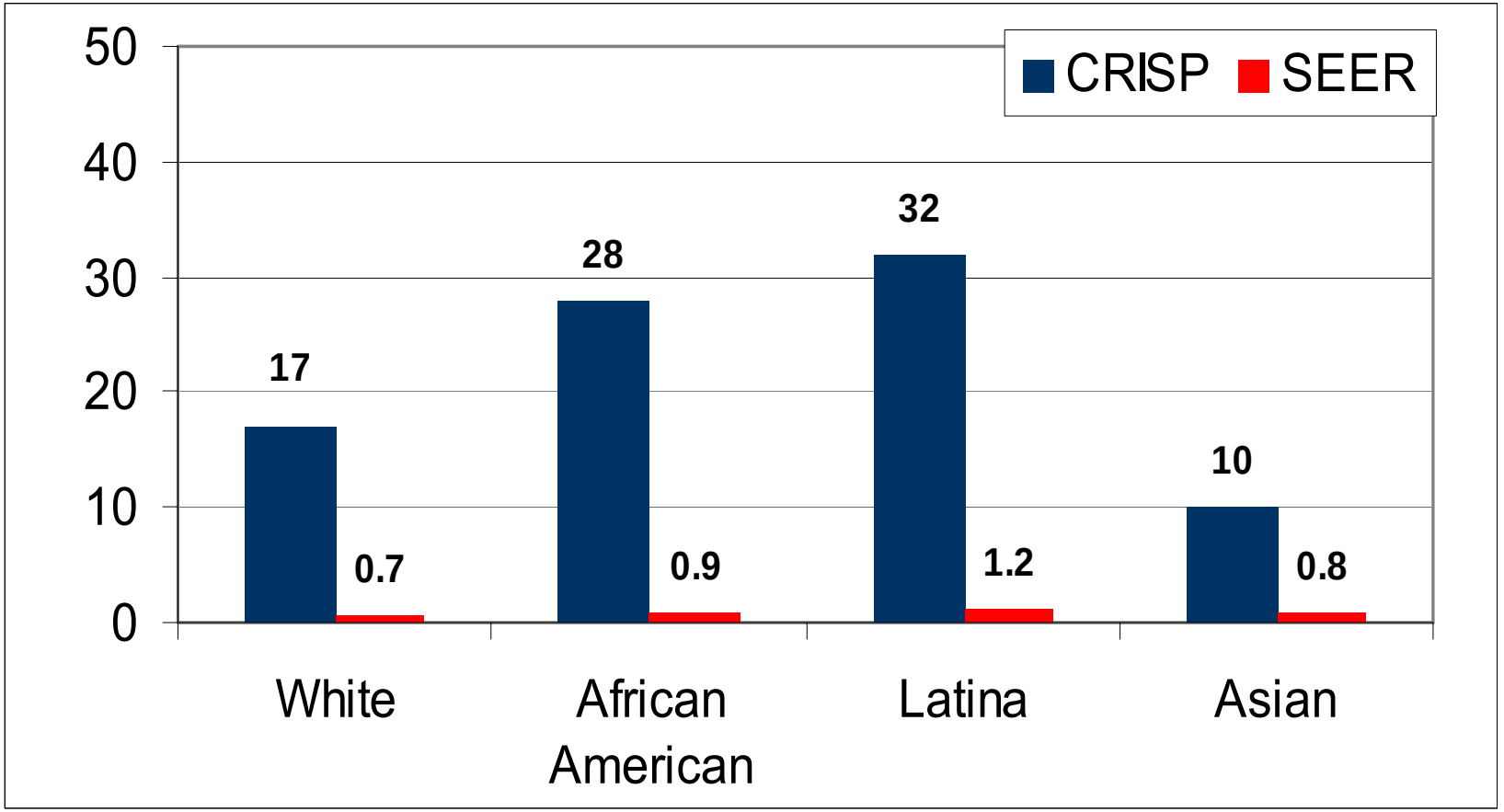


Chi-square test significant at $p<0.01$

Risk Perception of Cancer

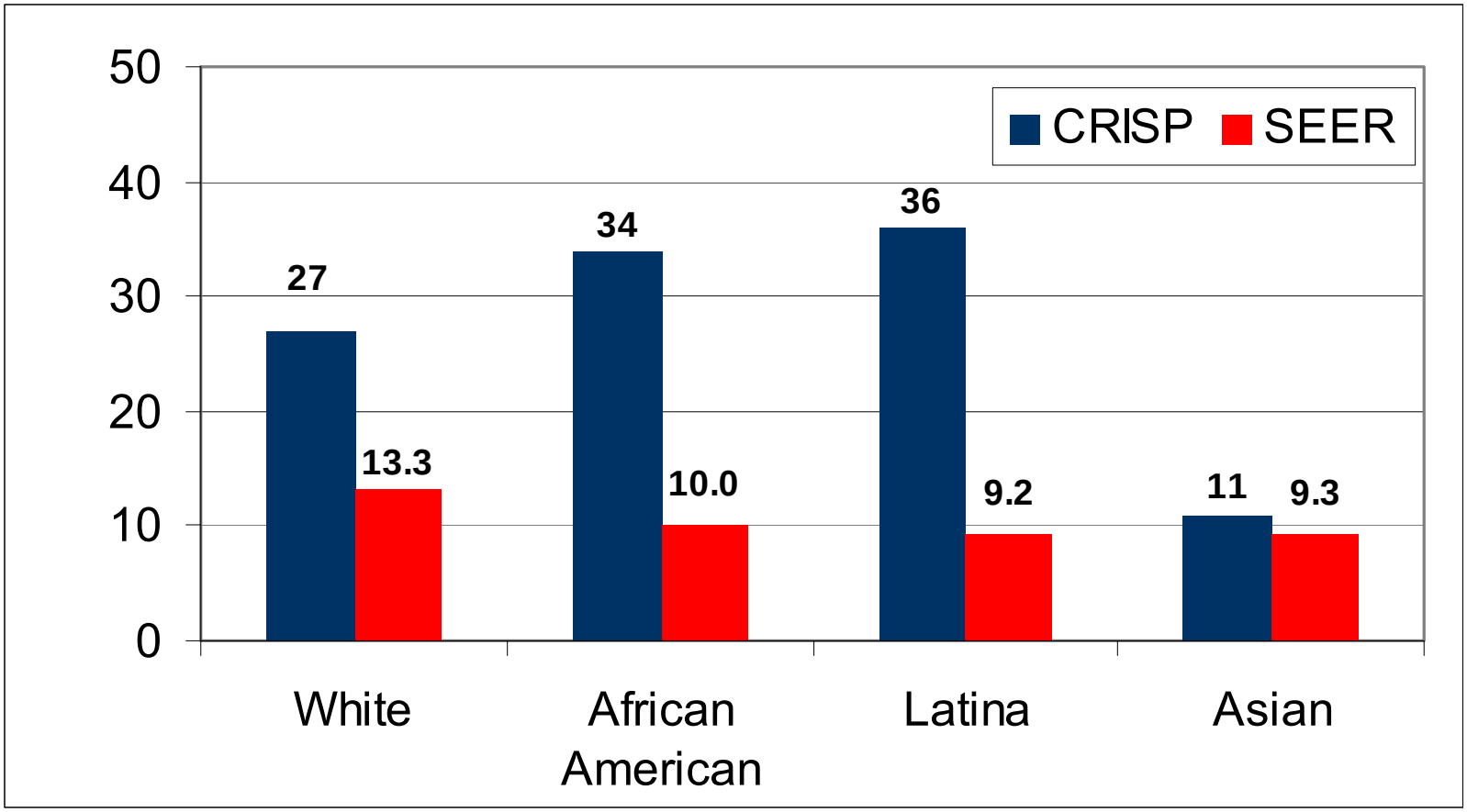
- On a scale of 0-100, where 100 means it will definitely happen and 0 means it will definitely not happen, how would you rate the risk of getting :
  - breast cancer over your lifetime
  - cervical cancer over your lifetime
  - colon cancer over your lifetime

Lifetime Cervical Cancer Risk Perception



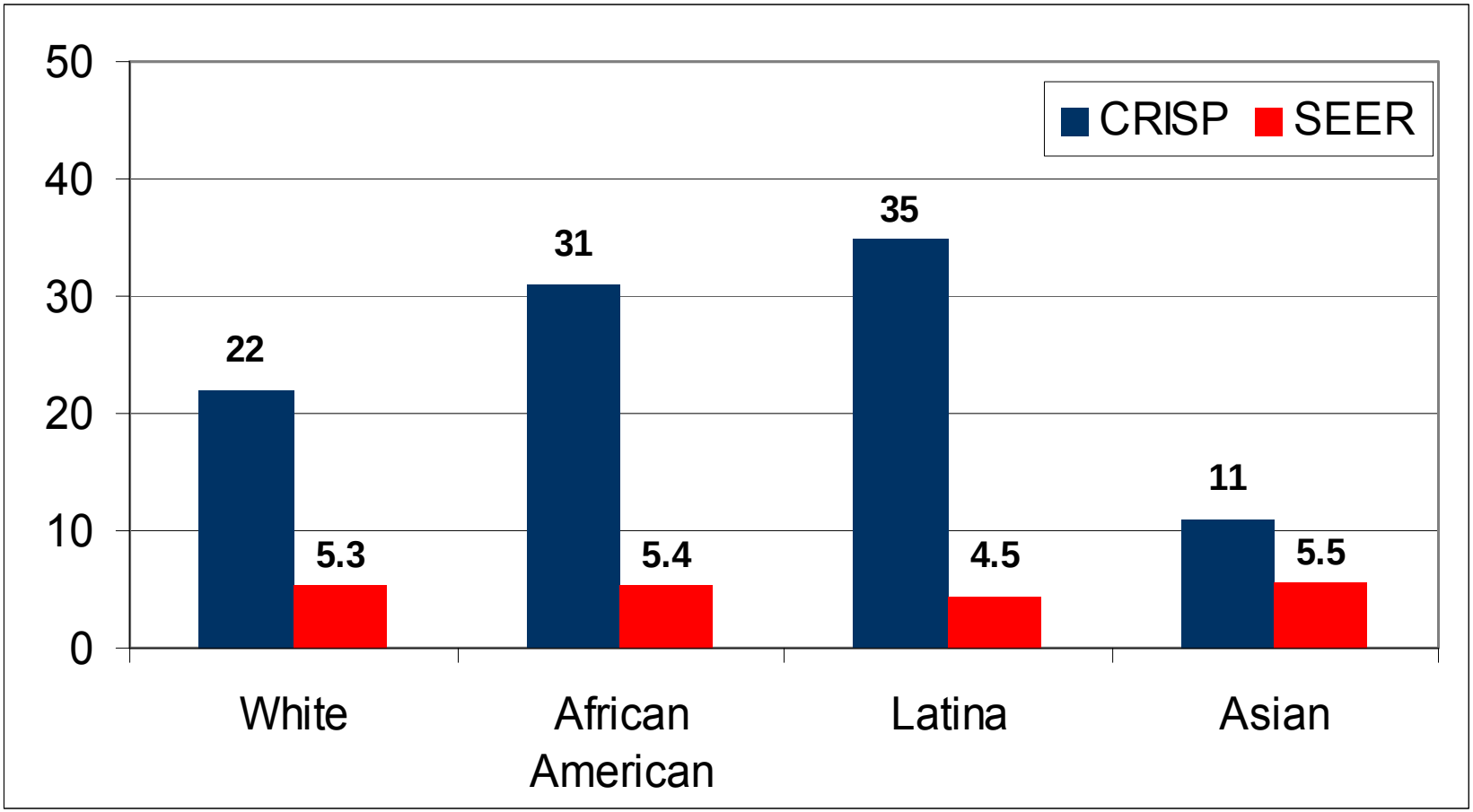
SEER data 2001-2003

Lifetime Breast Cancer Risk Perception



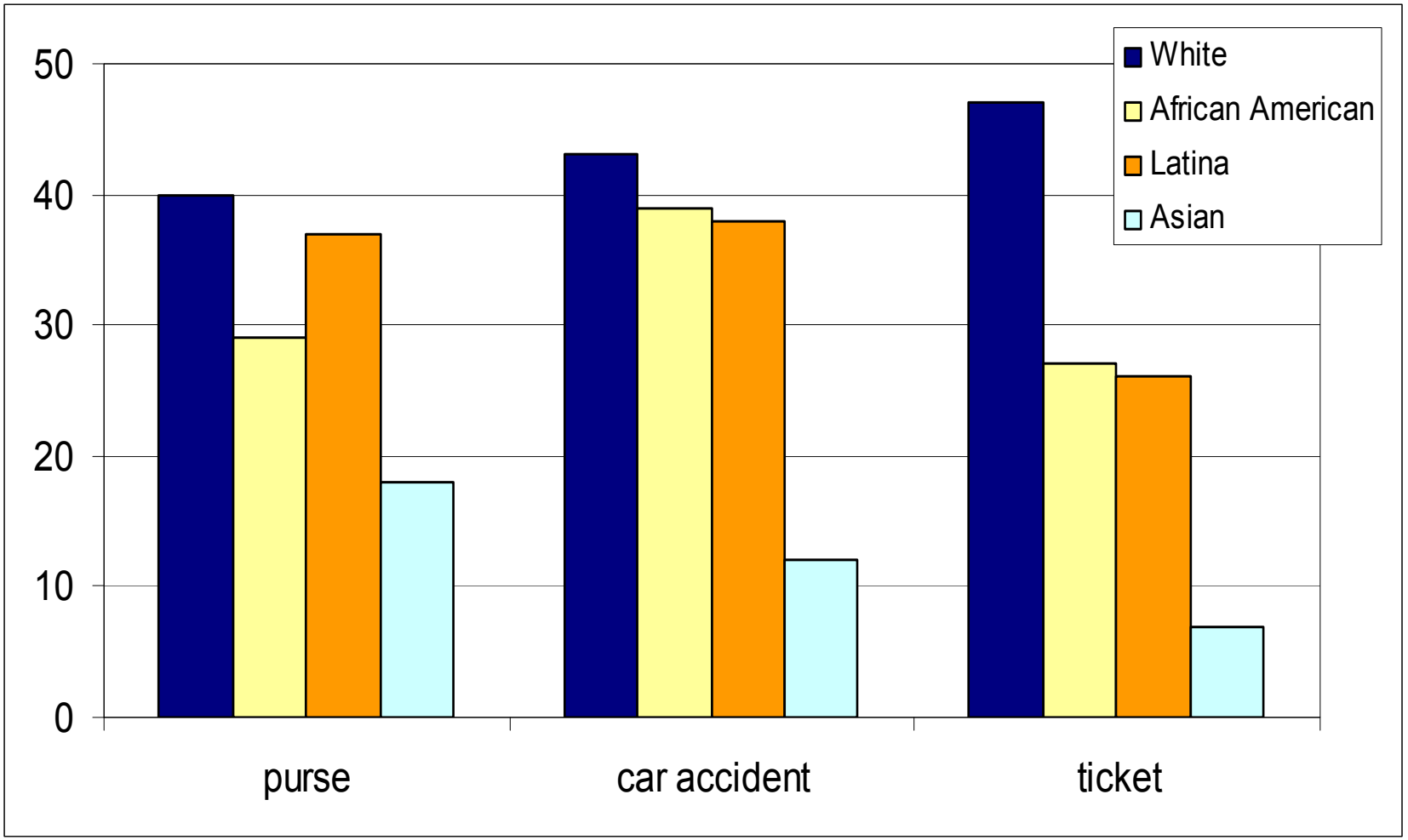
SEER data 2001-2003

Lifetime Colorectal Cancer Risk Perception



SEER data 2001-2003

Other Lifetime Risk Perception



Ethnicity and Perception of Risk (Scale 0-100)

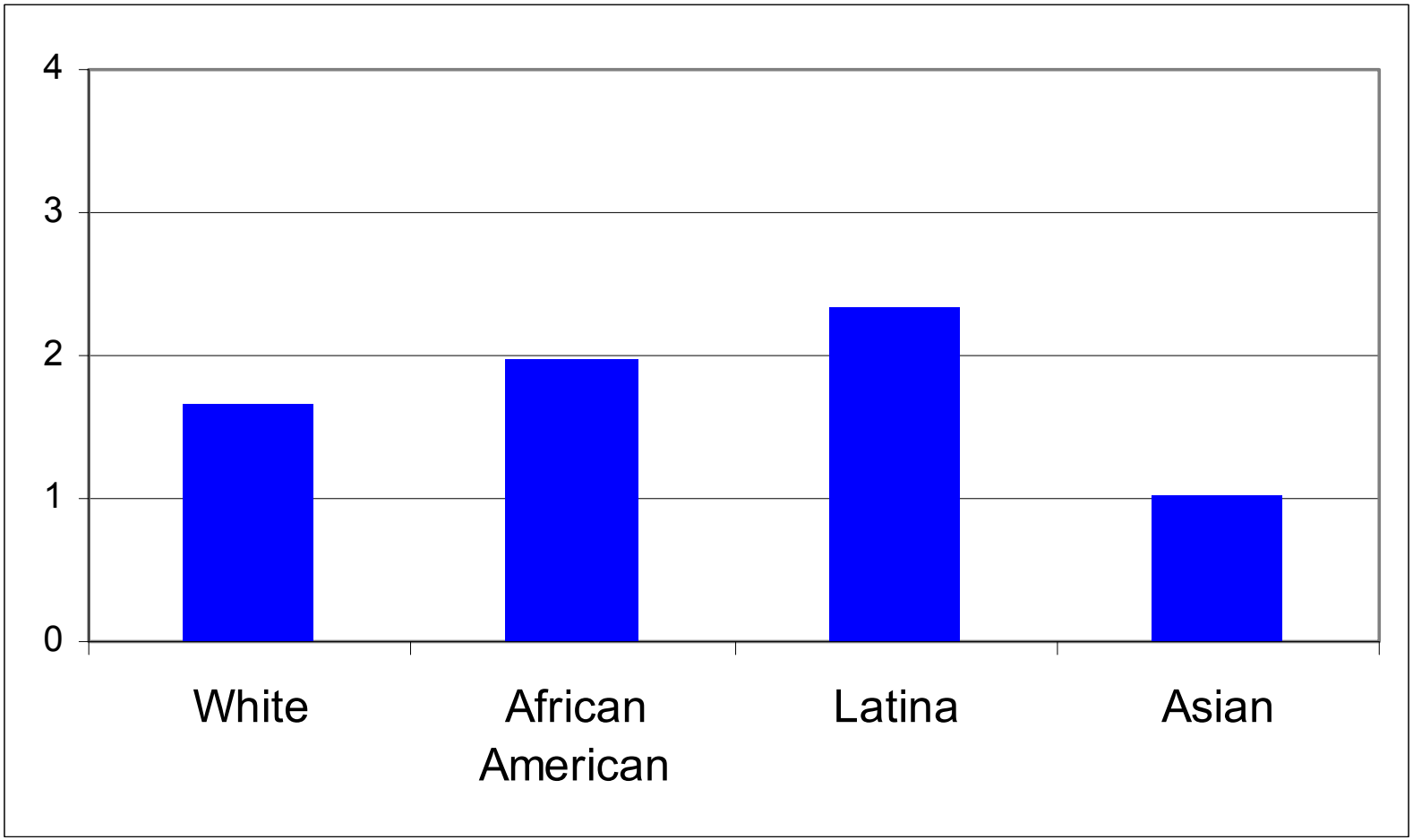
	Cervical Cancer Risk Perception
White	Ref.
African-American	7.1
Latina	13.7
Asian	-7.9

p<0.01; (Adjusted by age, education, income, cancer history, health status, numeracy)

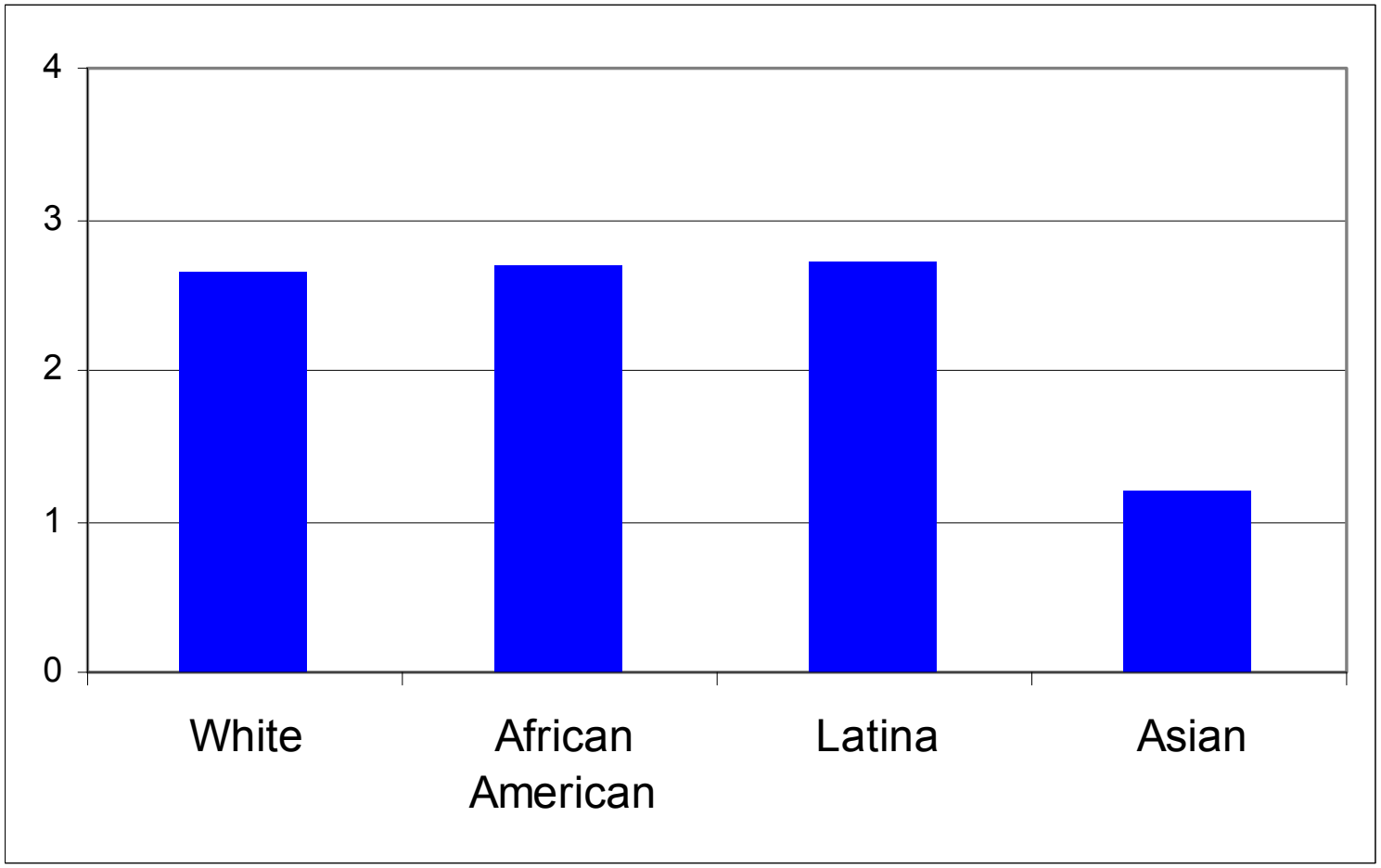
Risk Perception of Cancer

- What would you say is your risk of getting____?
  - Cervical cancer
  - Breast cancer
  - Colon cancer
- Response choices:
  - 0 - No risk
  - 1 - Very low risk
  - 2 - Somewhat low risk
  - 3 - Moderate risk
  - 4 - High risk/very high risk

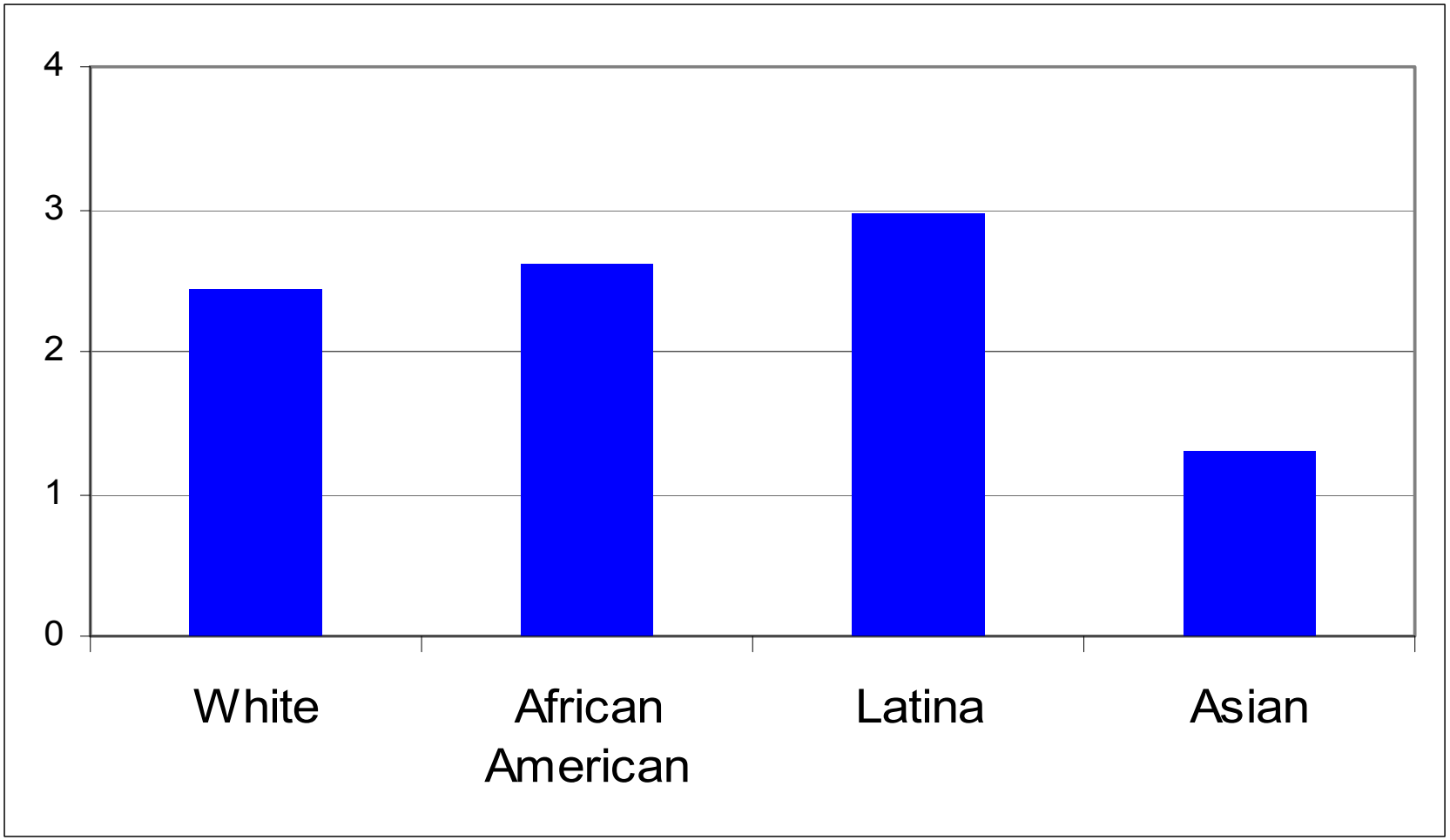
Cervical Cancer (Scale 0-4)



Breast Cancer (Scale 0-4)



Colorectal Cancer (Scale 0-4)



Recent Screening and Perception of Risk

- Positive relationship between risk perception for cervical and colon cancer to screening.
  - Pap-test
  - Any colon cancer screening
- No relationship between risk perception for breast cancer and having had a mammogram.

Factors Related to Perception

- Cervical cancer
  - Screening
  - Ethnicity
  - Cancer history
  - Health status
  - Health insurance
  - Numeracy
- Breast cancer
  - Ethnicity
  - Education
  - Income
  - Cancer history
- Colon cancer
  - Screening
  - Ethnicity
  - Education
  - Self cancer history
  - Numeracy

Summary of Findings

- All ethnic groups had high rate of cervical and breast cancer screening.
- Women had higher perception of cancer risk than actual lifetime risk for all 3 cancer types.
- Latina women had highest risk perception and Asian women had the lowest risk perception.
- Higher risk perception for cervical cancer was related to having had a Pap-test.
- Higher risk perception for colon cancer was related to being current on colon cancer screening.

Conclusions

- Risk perception
  - Most women do not have an accurate understanding of their cancer risk.
  - Ethnic differences persist in cancer risk perception even after controlling for education, age, income, and cancer history (self and family).
- Certain forms of cancer screening may be affected by cancer risk perception.
  - Cervical and colon cancer

Study Limitations

- Cross-sectional study: difficult to establish causality.
- Possible recall bias: self-reported screening behavior may be less accurate.
- Findings generalizable to patients with access to primary care.

Implication and Future Research

- Communicating cancer risk to patients
- Recommendation to patients
- Community based outreach
- Future Research
  - Longitudinal data collection
  - Factors that influence risk perception and screening behaviors

CRISP Team Acknowledgments

- Eliseo Pérez-Stable, MD
- Celia Kaplan, DrPH
- Sabrina Wong, PhD, RN
- George Sawaya, MD
- Judith Walsh, MD

Thank you.

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