# Understanding knowledge, attitudes and beliefs regarding breast and cervical cancer screening among Pacific Islander and Southeast Asian women

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# Southeast Asian and Pacific Islander Women

- Higher rates of breast and cervical cancer
- Higher mortality from cancer
- Lowest rates of screenings
- Solution from public health standpoint?

# Knowledge, Attitudes, & Beliefs (KAB)

- Cultural differences in knowledge, attitudes, and beliefs
  - Knowledge of cancer prevention behavior and symptoms
  - Attitudes regarding cancer and prevention behavior
  - Beliefs regarding cancer risks, symptoms, and prevention
  - Influence health utilization and behavior
  - Influence rate of screening among SEA & PI women

# Background

# Asian American and Pacific Islander Women

- AAPI one of the fastest growing minority groups in U.S.
- Largest percentage of AAPI in country reside in California

- **Southeast Asian (SEA) and Pacific Islander (PI) women severely underrepresented**

# United States Demographics

- 2000 Census: Southeast Asian and Pacific Islander populations

| | |
|---|---|
| Cambodian: | 206,052 |
| Laotian: | 198,203 |
| Thai: | 150,283 |
| Tongan: | 36,840 |
| --- | --- |
| **Total:** | **591,378** |

# AAPI and Cancer

- Southeast Asian (SEA) and Pacific Islander (PI) women suffer greater mortality from breast and cervical cancer
  - Late diagnosis
  - More advanced stages of cancer
- Lower rates of screening
  - Less mammograms and pap smears
  - Screenings vital for early detection and treatment

# AAPI and Culture

- Lack of sociocultural compatibility between patients and healthcare providers is a growing reason (Simon, 2006)
- Influence of culture in cancer screening behavior growing in importance
- **Culture: Difficult to define; comprised of shared ideas, meanings, and values**
  - **Socially constructed and learned**
  - **Not genetically created**
  - **Behaviors guided by these ideas**
- Strong link between cultural competence and health care improvements
- Little is known about cancer knowledge and beliefs among SEA and PI women

# AAPI and Healthcare

- Importance of access for AAPI in healthcare system has been growing issue
- Federal requirements
  - Title VI of the 1964 Civil Rights Act
  - Executive Order 13166
  - DHHS Office for Civil Rights Policy Guidance
  - Office of Minority Health CLAS Standards
- Strong need for effective culturally sensitive strategies for increasing prevention and awareness

# Current Study

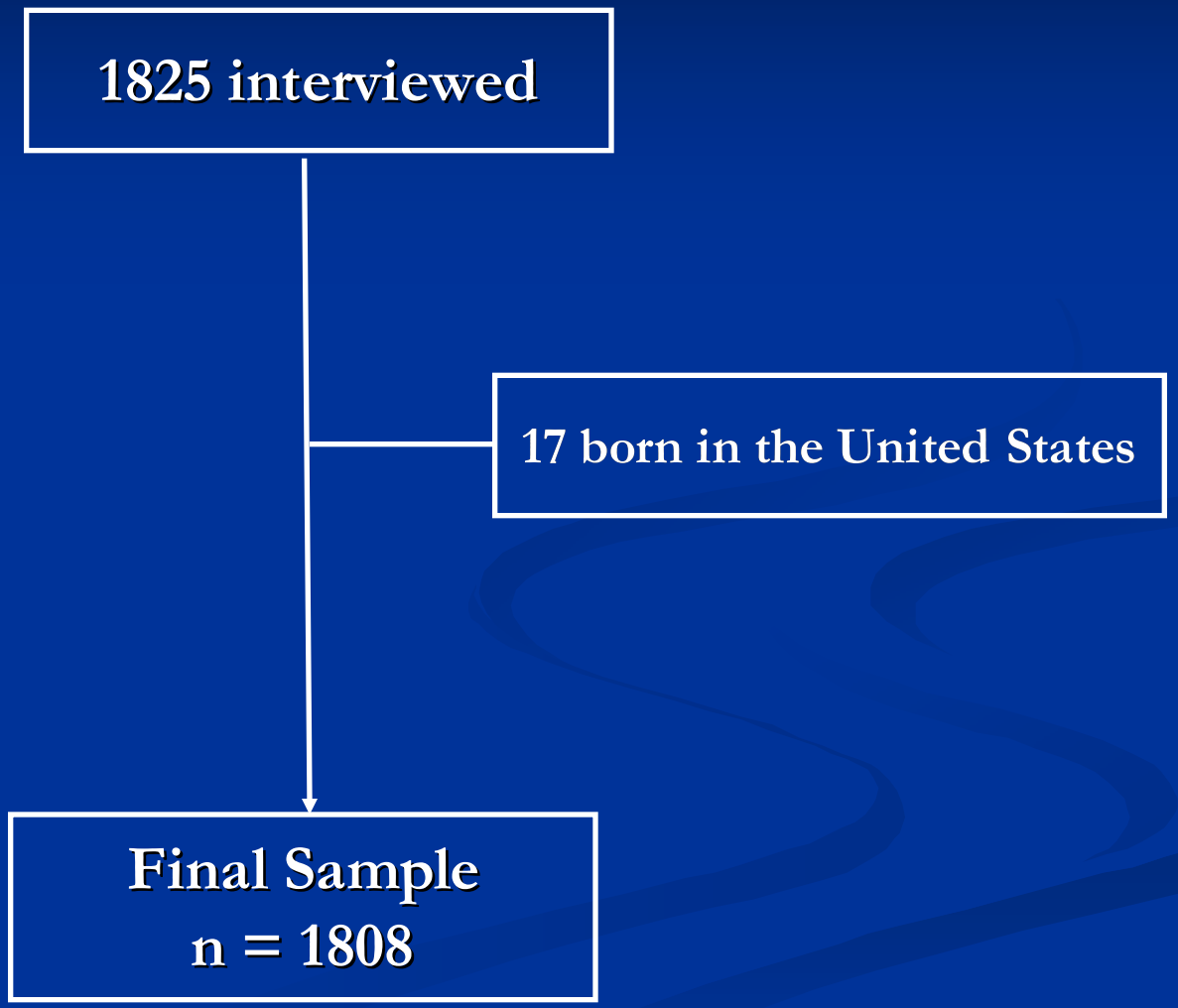
- Evaluated screening behavior among SEA and PI women
- Evaluated the KABs pertaining to cancer and prevention among SEA and PI women
  - Knowledge of breast and cervical cancer symptoms
  - Attitudes about screening behavior and prevention
  - Beliefs about cancer risks and causes

# Methods

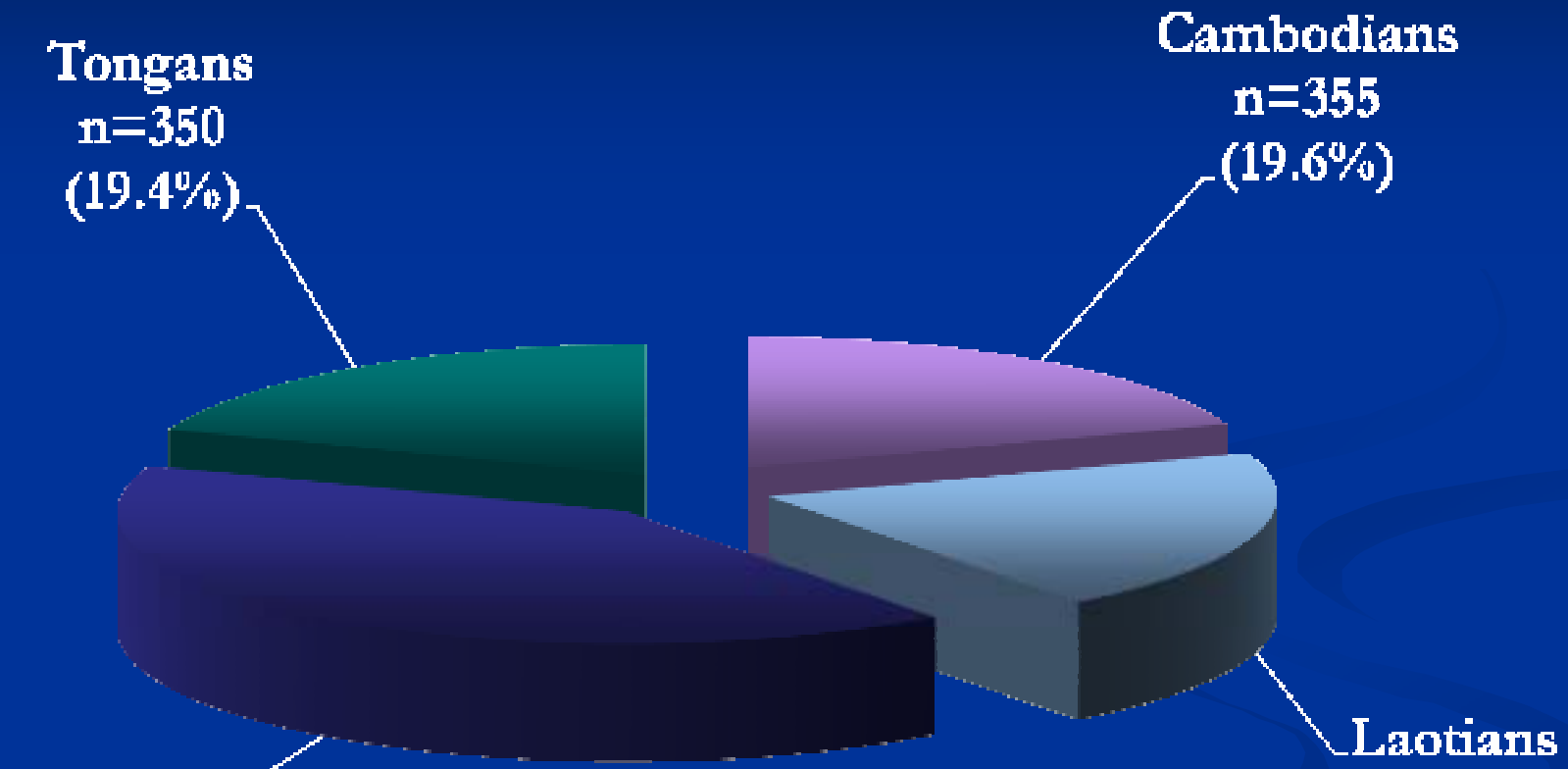
# PATH Study

- "Promoting Access To Health"
- Funded by CDC and The California Endowment
- Focus on underserved AAPI communities SEA and PI women
- Northern and Southern California
- Eliminate inequities in breast and cervical cancer
- Culturally tailored interventions

# Inclusion/Exclusion Criteria



# Ethnic Breakdown of Final Sample



# Measures and Variable Information

- Sociodemographic variables
- Source of information on breast and cervical cancer
- Healthcare Utilization and Awareness
  - Mammograms
  - CBE
  - Pap smears
- Knowledge, Attitude, and Beliefs (KAB) Variables
  - Breast cancer symptoms
  - Screening behavior (Mammogram & Pap Smears)
  - Breast and cervical cancer prevention

# Data Analysis

- Demographics were run under listwise deletion
- Missing data for KAB variables replaced by multiple imputation
- Chi-square statistics were used
- Results grouped by ethnicity:
  - Cambodian
  - Laotian
  - Thai
  - Tongan

# Results

# Demographic Characteristics

| | Cambodian (n = 355) | Laotian (n = 361) | Thai (n = 742) | Tongan (n = 350) | Effect Statistic | p |
|---|---|---|---|---|---|---|
| Age in years, mean (SD) | 50.90 (11.95) | 50.98 (12.72) | 49.02 (10.97) | 51.4 (11.30) | F = 3.54 | .014 |
| Years in the U.S., mean (SD) | 16.73 (5.55) | 18.69 (5.30) | 13.49 (9.37) | 19.32 (9.28) | F = 56.94 | .000 |
| Employment | | | | | | |
| No | 251 (72.3) | 248 (68.9) | 191 (25.8) | 218 (64.9) | $\chi^2$ = 322.31 | .000 |
| Yes | 96 (27.7) | 112 (31.1) | 548 (74.2) | 118 (35.1) | | |
| Ability to pay for necessities | | | | | | |
| Not difficult | 157 (45.5) | 82 (23.0) | 22 (3.0) | 11 (3.3) | $\chi^2$ = 377.18 | .000 |
| Difficult | 188 (54.5) | 274 (77.0) | 707 (97.0) | 318 (96.7) | | |
| Have Insurance | | | | | | |
| No | 27 (7.6) | 58 (16.2) | 359 (48.8) | 148 (44.6) | $\chi^2$ = 250.17 | .000 |
| Yes | 326 (92.4) | 300 (83.8) | 377 (51.2) | 184 (55.4) | | |

# Demographic Characteristics

| | Cambodian (n = 355) | Laotian (n = 361) | Thai (n = 742) | Tongan (n = 350) | Effect Statistic | p |
|---|---|---|---|---|---|---|
| Education (US) | | | | | | |
| High school or lower | 169 (48.0) | 120 (35.6) | 265 (39.4) | 114 (54.5) | $\chi^2 = 26.02$ | .000 |
| Higher than high-school/Other | 183 (52.0) | 217 (64.4) | 408 (60.6) | 95 (45.5) | | |
| Education (Country of Birth) | | | | | | |
| High school or lower | 323 (91.5) | 316 (90.3) | 426 (57.4) | 304 (87.4) | $\chi^2 = 253.26$ | .000 |
| Higher than high-school/Other | 30 (8.5) | 34 (9.7) | 316 (42.6) | 44 (12.6) | | |

# Demographic Characteristics

| | Cambodian (n = 355) | Laotian (n = 361) | Thai (n = 742) | Tongan (n = 350) | Effect Statistic | p |
|---|---|---|---|---|---|---|
| **Marital Groups** | | | | | | |
| Unmarried | 167 (47.3) | 111 (30.9) | 373 (50.3) | 70 (20.1) | $\chi^2 = 110.49$ | .000 |
| Married | 186 (52.7) | 248 (69.1) | 368 (49.7) | 278 (79.9) | | |
| **Source of Information** | | | | | | |
| Health Education | | | | | | |
| No | 31 (23.3) | 194 (62.6) | 409 (58.2) | 207 (60.3) | $\chi^2 = 67.15$ | .000 |
| Yes | 102 (76.7) | 116 (37.4) | 294 (41.8) | 136 (39.7) | | |
| Media | | | | | | |
| No | 190 (54.6) | 252 (81.3) | 335 (47.7) | 279 (81.3) | $\chi^2 = 172.89$ | .000 |
| Yes | 158 (45.4) | 58 (18.7) | 368 52.3) | 64 (18.7) | | |
| Family/Friends | | | | | | |
| No | 178 (51.3) | 179 (57.7) | 301 (42.9) | 42 (12.2) | $\chi^2 = 169.22$ | .000 |
| Yes | 169 (48.7) | 131 (42.3) | 401 (57.1) | 301 (87.8) | | |
| Health Care Provider | | | | | | |
| No | 309 (88.8) | 207 (66.8) | 550 (78.2) | 330 (96.2) | $\chi^2 = 112.87$ | .000 |
| Yes | 39 (11.2) | 103 (33.2) | 153 (21.8) | 13 (3.8) | | |

# Ethnicity & Healthcare Utilization

| | Cambodian (n = 355) | Laotian (n = 361) | Thai (n = 742) | Tongan (n = 350) | Effect $\chi^2$ | p |
|---|---|---|---|---|---|---|
| Have you ever had a mammogram? | | | | | | |
| Yes | 180 (50.7) | 226 (62.6) | 495 (66.7) | 91 (26.0) | 171.03 | .000 |
| No | 175 (49.3) | 135 (37.4) | 247 (33.3) | 259 (74.0) | | |
| Have you ever had a CBE? | | | | | | |
| Yes | 222 (62.5) | 287 (79.5) | 637 (85.8) | 81 (23.1) | 458.07 | .000 |
| No | 133 (37.5) | 74 (20.5) | 105 (14.2) | 269 (76.9) | | |
| Have you ever had a pap smear? | | | | | | |
| Yes | 252 (71.0) | 307 (85.0) | 662 (89.2) | 63 (18.0) | 631.90 | .000 |
| No | 103 (29.0) | 54 (15.0) | 80 (10.8) | 287 (82.0) | | |

# Ethnicity & Healthcare Awareness

| | Cambodian (n = 355) | Laotian (n = 361) | Thai (n = 742) | Tongan (n = 350) | Effect $\chi^2$ | p |
|---|---|---|---|---|---|---|
| Have you ever heard of a mammogram? | | | | | | |
| Yes | 310 (87.3) | 303 (83.9) | 672 (90.6) | 326 (93.1) | 18.61 | .000 |
| No | 45 (12.7) | 58 (16.1) | 70 (9.4) | 24 (6.9) | | |
| Have you ever heard of a pap smear? | | | | | | |
| Yes | 310 (87.3) | 334 (92.5) | 722 (97.3) | 302 (86.3) | 56.06 | .000 |
| No | 45 (12.7) | 27 (7.5) | 20 (2.7) | 48 (13.7) | | |

# Breast Cancer Beliefs

| A mammogram is only needed if I feel I have symptoms. | | | | |
|---|---|---|---|---|
| | Agree n (%) | Disagree n (%) | $\chi^2$ | p |
| Cambodian (n = 355) | 297 (83.7) | 58 (16.3) | 436.56 | >.001 |
| Laotian (n = 361) | 112 (31.0) | 249 (69.0) | | |
| Thai (n = 742) | 529 (71.3) | 213 (28.7) | | |
| Tongan (n = 350) | 77 (22.0) | 273 (78.0) | | |

# Breast Cancer Beliefs

| I need a mammogram only when I have a breast lump. | | | | |
|---|---|---|---|---|
| | Agree n (%) | Disagree n (%) | $\chi^2$ | p |
| Cambodian (n = 355) | 269 (75.8) | 86 (24.2) | 473.12 | >.001 |
| Laotian (n = 361) | 115 (31.9) | 246 (68.1) | | |
| Thai (n = 742) | 577 (77.8) | 165 (22.2) | | |
| Tongan (n = 350) | 69 (19.7) | 281 (80.3) | | |

# Breast Cancer Beliefs

| I think I would rather not know if I had breast cancer. | | | | |
|---|---|---|---|---|
| | Agree n (%) | Disagree n (%) | $\chi^2$ | p |
| Cambodian (n = 355) | 104 (29.3) | 251 (70.7) | 61.91 | .000 |
| Laotian (n = 361) | 87 (24.1) | 274 (75.9) | | |
| Thai (n = 742) | 302 (40.7) | 440 (59.3) | | |
| Tongan (n = 350) | 69 (19.7) | 281 (80.3) | | |

# Breast Cancer Beliefs

| There is not much that I can do to prevent breast cancer. | | | | |
|---|---|---|---|---|
| | Agree n (%) | Disagree n (%) | $\chi^2$ | p |
| Cambodian (n = 355) | 173 (48.7) | 182 (51.3) | 169.60 | .000 |
| Laotian (n = 361) | 136 (37.7) | 225 (62.3) | | |
| Thai (n = 742) | 522 (70.4) | 220 (29.6) | | |
| Tongan (n = 350) | 124 (35.4) | 226 (64.6) | | |

# Breast Cancer Symptoms

| Breast lump | | | | |
|---|---|---|---|---|
| | Yes<br>n (%) | No<br>n (%) | $\chi^2$ | p |
| Cambodian<br>(n = 355) | 288 (81.1) | 67 (18.9) | 98.34 | .000 |
| Laotian<br>(n = 361) | 288 (79.8) | 73 (20.2) | | |
| Thai<br>(n = 742) | 706 (95.1) | 36 (4.9) | | |
| Tongan<br>(n = 350) | 333 (95.1) | 17 (4.9) | | |

# Breast Cancer Symptoms

| Bloody breast discharge | | | | |
|---|---|---|---|---|
| | Yes<br>n (%) | No<br>n (%) | $\chi^2$ | p |
| Cambodian<br>(n = 355) | 89 (25.1) | 266 (74.9) | 298.79 | .000 |
| Laotian<br>(n = 361) | 168 (46.5) | 193 (53.5) | | |
| Thai<br>(n = 742) | 485 (65.4) | 257 (34.6) | | |
| Tongan<br>(n = 350) | 298 (85.1) | 52 (14.9) | | |

# Breast Cancer Symptoms

| Puckered breast skin | | | | |
|---|---|---|---|---|
| | Yes<br>n (%) | No<br>n (%) | $\chi^2$ | p |
| Cambodian<br>(n = 355) | 55 (15.5) | 300 (84.5) | 325.11 | .000 |
| Laotian<br>(n = 361) | 152 (42.1) | 209 (57.9) | | |
| Thai<br>(n = 742) | 398 (53.6) | 344 (46.4) | | |
| Tongan<br>(n = 350) | 287 (82.0) | 63 (18.0) | | |

# Breast Cancer Symptoms

| Painful breasts | | | | |
|---|---|---|---|---|
| | Yes<br>n (%) | No<br>n (%) | $\chi^2$ | p |
| Cambodian<br>(n = 355) | 184 (51.8) | 171 (48.2) | 131.66 | .000 |
| Laotian<br>(n = 361) | 251 (69.5) | 110 (30.5) | | |
| Thai<br>(n = 742) | 627 (84.5) | 115 (15.5) | | |
| Tongan<br>(n = 350) | 250 (71.4) | 100 (28.6) | | |

# Breast Cancer Symptoms

| Changes in breast size from normal | | | | |
|---|---|---|---|---|
| | Yes<br>n (%) | No<br>n (%) | $\chi^2$ | p |
| Cambodian<br>(n = 355) | 55 (15.5) | 300 (84.5) | 530.26 | .000 |
| Laotian<br>(n = 361) | 177 (49.0) | 184 (51.0) | | |
| Thai<br>(n = 742) | 607 (81.8) | 135 (18.2) | | |
| Tongan<br>(n = 350) | 284 (81.1) | 66 (18.9) | | |

# Knowledge of Cervical Cancer

| A woman is more likely to get cervical cancer if she has had many sexual partners | | | | |
|---|---|---|---|---|
| | Agree n (%) | Disagree n (%) | $\chi^2$ | p |
| Cambodian (n = 355) | 294 (82.8) | 61 (17.2) | 3.13 | .372 |
| Laotian (n = 361) | 282 (78.1) | 79 (21.9) | | |
| Thai (n = 742) | 586 (79.0) | 156 (21.0) | | |
| Tongan (n = 350) | 275 (78.6) | 75 (21.4) | | |

# Knowledge of Cervical Cancer

| A woman is more likely to get cervical cancer if her husband has had many sexual partners | | | | |
|---|---|---|---|---|
| | Agree n (%) | Disagree n (%) | $\chi^2$ | p |
| Cambodian (n = 355) | 267 (75.2) | 88 (24.8) | .402 | .940 |
| Laotian (n = 361) | 272 (75.3) | 89 (24.7) | | |
| Thai (n = 742) | 548 (73.9) | 194 (26.1) | | |
| Tongan (n = 350) | 260 (74.3) | 90 (25.7) | | |

# Knowledge of Cervical Cancer

| A woman is more likely to get cervical cancer if she is exposed to cigarette smoke | | | | |
|---|---|---|---|---|
| | Agree n (%) | Disagree n (%) | $\chi^2$ | p |
| Cambodian (n = 355) | 146 (41.1) | 209 (58.9) | 9.37 | .025 |
| Laotian (n = 361) | 176 (48.8) | 185 (51.2) | | |
| Thai (n = 742) | 302 (40.7) | 440 (59.3) | | |
| Tongan (n = 350) | 134 (38.3) | 216 (61.7) | | |

# Knowledge of Cervical Cancer

| A woman is more likely to get cervical cancer if she uses birth control pills | | | | |
|---|---|---|---|---|
| | Agree n (%) | Disagree n (%) | $\chi^2$ | p |
| Cambodian (n = 355) | 225 (63.4) | 130 (36.6) | 36.78 | .000 |
| Laotian (n = 361) | 223 (61.8) | 138 (38.2) | | |
| Thai (n = 742) | 348 (46.9) | 394 (53.1) | | |
| Tongan (n = 350) | 198 (56.6) | 152 (43.4) | | |

# Conclusions

- Some perceptions regarding breast and cervical cancer and prevention behavior are different from public health recommendations
  - Mammograms seen as unnecessary unless they begin to see symptoms
  - Possible explanations
    - Do not believe that regular screenings are important in early detection
    - Do not fully understand the importance of early detection
- "There is not much that I can do to prevent breast cancer"
  - 52.8% of sample agreed with this statement!
  - Could they be unaware of the role screenings play in early detection and prevention?

# Conclusions

- Knowledge of breast cancer symptoms
  - Majority across all ethnic groups knew about breast lump
  - Less women knew about other symptoms
    - Change in breast size
    - Puckered skin
    - Discharge
    - Cambodian and Laotians
- Less women knew about certain cervical cancer risks
- Strong ethnic differences among some variables
  - Cambodian and Thai shared trends in many of the breast cancer beliefs questions
  - Cambodian and Laotians shared trends in breast cancer symptom questions
  - May need to consider specific ethnic variability in future research

# Limitations

- Several extraneous variables could influence results
  - Acculturation
  - Ethnic variability
  - Sociodemographic variables (education, years in U.S., etc.)
- Only reviewed frequencies for KAB variables
  - Cannot imply causality
- Sample from California
  - Not generalizeable to all SEAs PIs
- Questions are broad
  - Dichotomous responses
  - Difficult to draw conclusions regarding specific beliefs and attitudes

# Study Questions for Future

- Interaction between ethnicity and KABs
  - Why similarities between ethnic groups on some variables and differences in others?
- Influence of socioeconomic factors on KABs
- How KABs influence healthcare utilization among SEA PI women
- Conduct more in-depth interviews based on survey questions
  - More details regarding KAB variables
  - Specific questions re: cultural beliefs regarding cancer

# Implications for Future…

- **Culturally tailored interventions important to increasing knowledge and awareness regarding breast and cervical cancer**
  - Projects like PATH for Women
  - Implement existing policy to modify and shape interventions
  - Increase awareness and information about cancer detection and prevention among underrepresented SEA PI women
  - Cultural sensitivity crucial in:
    - Understanding patients in this population
    - Helping patients understand cancer

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