

Family Cancer Risk: The Relative Accuracy of Family Cancer History Knowledge in a Younger Population



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Social Support & Cancer

- Prior work focuses on social support *after* the cancer diagnosis
 - Specifically spousal support after the diagnosis
- Can spousal support benefit *before* the diagnosis
 - Screening behaviors; diet; physical exercise
 - But spouses need to know *what to encourage*
 - Can't encourage if not aware
- Spousal encouragement



Cancer statistics

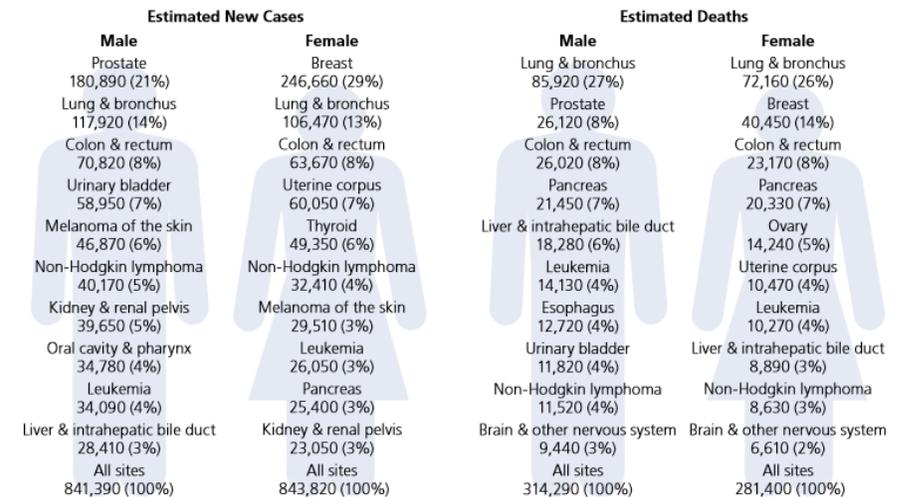
American Cancer Society estimates:

1,685,21 will be diagnosed in 2016

595,690 Americans will die

Screening and risk-reducing behavior can reduce mortality

Figure 3. Leading Sites of New Cancer Cases and Deaths – 2016 Estimates



Estimates are rounded to the nearest 10, and cases exclude basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder.

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Contributions of lifestyle

Modifiable factors:

- Obesity and physical inactivity
- Diet and lifestyle choices
- Alcohol intake
- Smoking
- Screening reduces mortality
 - Through removal of polyps
 - Through early detection
 - And family history = early screening

Reduce your risk of cancer.

1. Get screened regularly.
2. Maintain a healthy weight throughout life.
3. Adopt a physically active lifestyle.
4. Consume a healthy diet with an emphasis on plant sources; specifically
 - Choose foods and beverages in amounts that help achieve and maintain a health weight.
 - Limit consumption of red and processed meat.
 - Eat at least 2 ½ cups of vegetables and fruits each day.
 - Choose whole grains instead of refined grain products.
5. If you drink alcoholic beverages, limit consumption.
6. Avoid tobacco products

Social Support & Cancer

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- Can spousal support benefit *before* the diagnosis
 - Screening behaviors; diet; physical exercise
 - But spouses need to know *what to encourage*
 - Can't encourage what they don't know
- Spousal encouragement of screening behavior
 - Partner needs to be aware of his/her own family Cancer history



How young adults think about cancer ...

Younger adults: “Only older adults get cancer. I don’t have to worry about this for a long, long time ...”



Today's behaviors impacts tomorrow's health

- Many cancers are related to family risk; young adults don't know their own family risk
- Knowing family risk may help younger adults make better behavior decisions
 - A family history means younger screening.
 - Physician recommendation—patient doesn't inform the doctor, because they don't know themselves.



Today's behaviors affect tomorrow's health

- When younger individuals are unaware of family cancer history
 - Can't share with spouse
 - Can't share with physician
 - Can't make important decisions today
 - Better diet
 - Increase sunscreen use
 - Limit alcohol use
 - Eliminate tobacco use
 - Screening decisions

Study Aims

Individuals can make better cancer risk-reducing decisions if they are aware of their increased risk via family cancer diagnoses.

- Aim: to examine family cancer history awareness in a younger population

Methods-recruitment

- Part of a broader feasibility study
- 60 adults aged 18-35
 - Before recommended age of screening
- All had to be married (part of the larger study)
- No personal history of cancer except non-melanoma skin cancer.



Methods-measures

- Demographics
- Family Cancer History Awareness (via Qualtrics)
- Family Cancer History Awareness (hard copy)
- Physiological Health
 - Health Questionnaire-exercise, smoking, alcohol, caffeine, sleep
- Interview

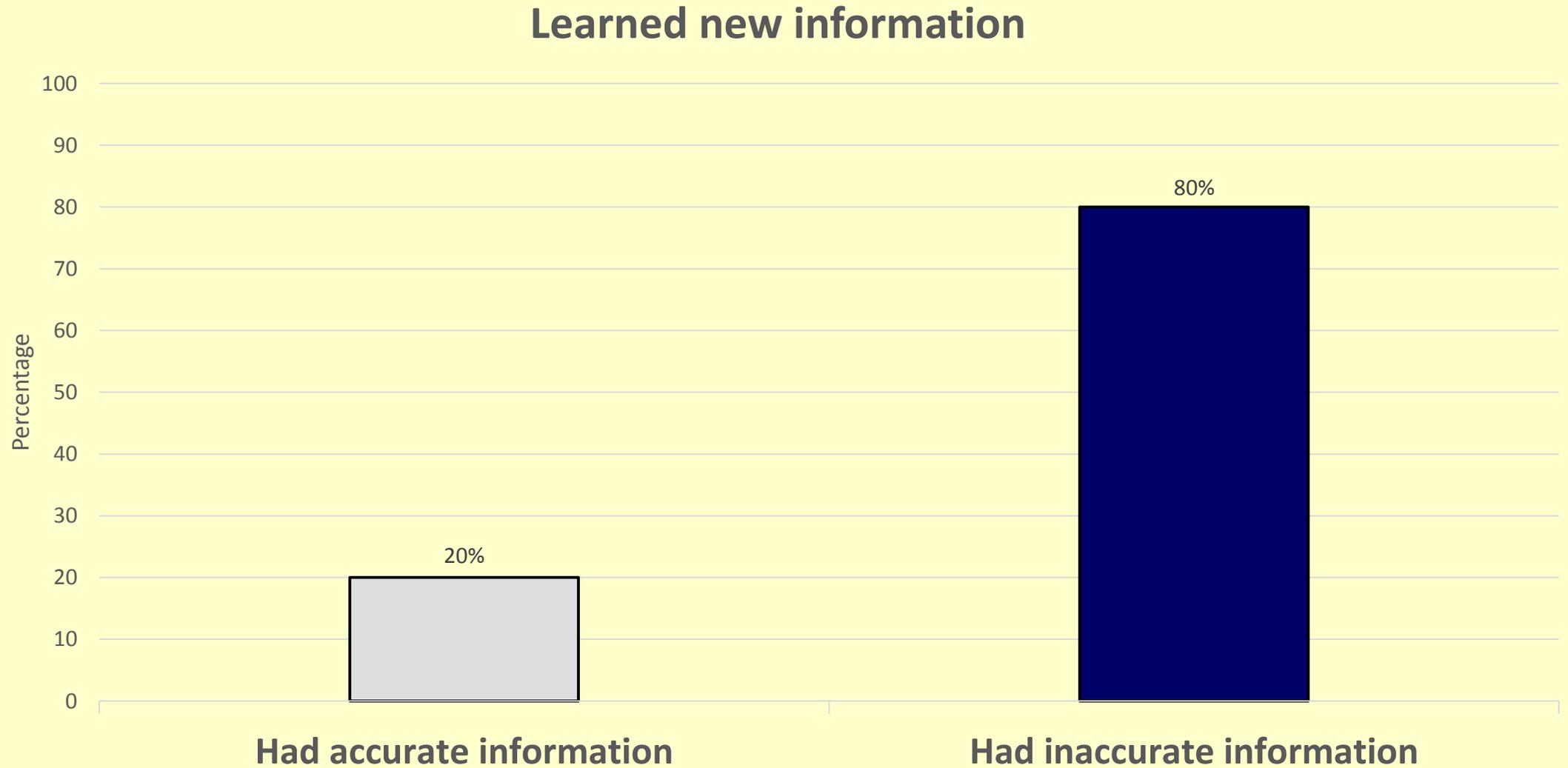
Parents	
Was your biological mother ever diagnosed with any form of cancer?	Yes No I don't know
Please indicate the type of cancer	
Please indicate the age of diagnosis	
Please indicate any further explanation if needed	
Was your biological father ever diagnosed with any form of cancer?	Yes No I don't know
Please indicate the type of cancer	
Please indicate the age of diagnosis	
Please indicate any further explanation if needed	

Interview

- To whom did you go to get accurate family information
 - Did that person have to go elsewhere to get information
- Did you learn any new information?
 - Cancer cases
 - Age of relative at diagnosis
 - Type of cancer
- Have you shared this new information with our spouse?
- Have you shared this new information with your primary care physician?
- Current health practices

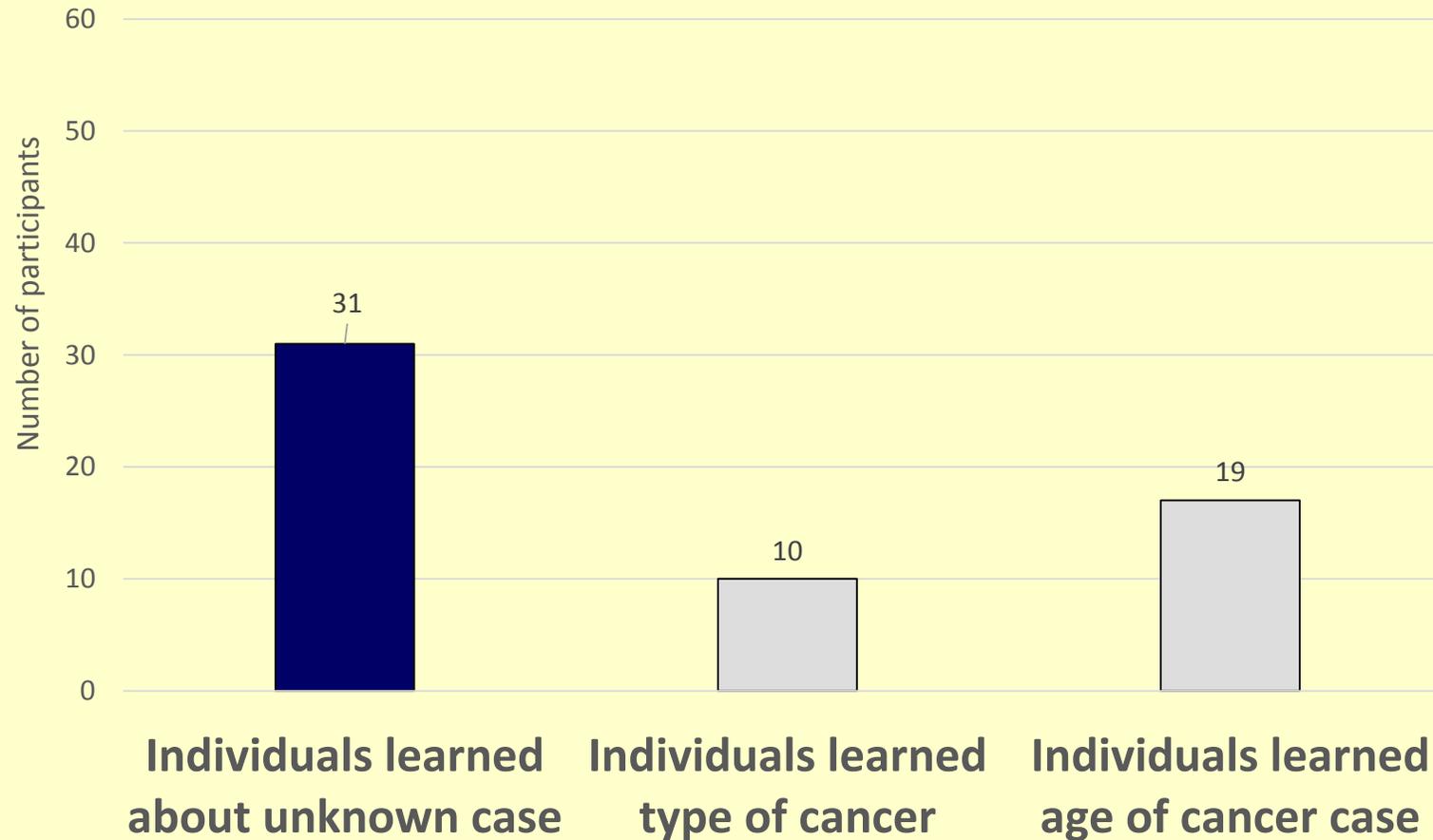
Sample demographics		MEN N=28 46.7%	WOMEN N=32 53.3%	Total N=60
Age, Mean (SD) (Range 19-33)		24.6 (1.6)	23.3 (3.3)	23.9 (2.7)
Ethnicity				
Non-Latino White		82%	78.1%	80%
Latino		7.1%	9.4%	8.3%
Attends church weekly		89.3%	84.4%	86.7%
Household income				
\$20,000 to \$29,999		17.9%	9.4%	13.3%
\$30,000 to \$39,000		14.3%	12.5%	13.3%
\$40,000 and over		10.7%	15.6%	13.3%
Education level				
Some college		46.4%	46.7%	45%
College graduate/professional school		42.8%	50%	46.7%

Cancer Knowledge



Cancer Cases

Knowledge of cancer CASES, TYPES, and AGE OF DIAGNOSIS in family cancer history



Of the 31 individuals who found previously unknown cancer cases, 8 learned of multiple cases of cancer in their family, for a total of 40 previously unknown cancer cases.

Interviews

Cancer

“She [my aunt] had ovarian cancer so that was surprising to me”

“I didn’t know my grandma had breast cancer!”

“I had no idea.”

“...and I didn’t know that he [my grandfather] died of pancreatic cancer.”

“Yeah I didn’t know my grandma had uterine cancer and I didn’t know that my grandpa had two types of cancer at like a year apart from each other.”

“I didn’t know my grandpa had had bone cancer.”

“...didn’t realize my grandmother had pancreatic cancer!”

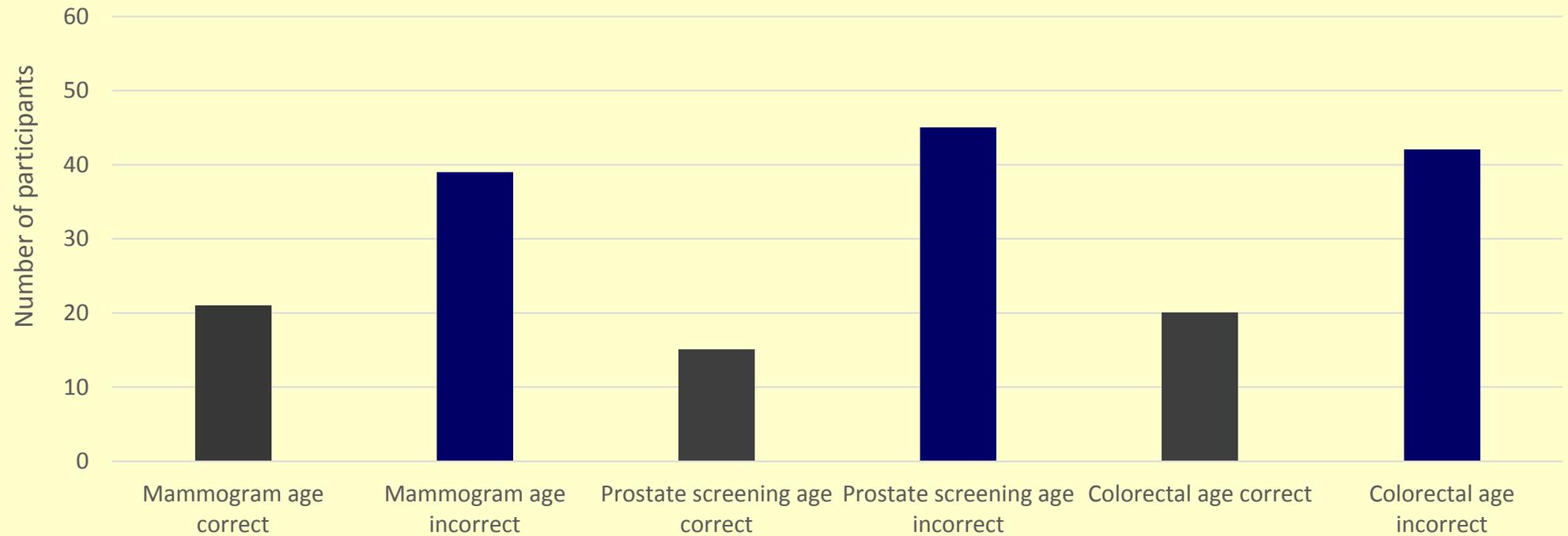
“ ... yeah I didn’t know that my grandpa had skin cancer.”

“I didn’t know [both] of my grandparents, his parents, had cancer.”

“I found out that my grandmother had cancer before she died, and that my uncle had cancer... “

Cancer Cases

Knowledge of Recommended Age to Begin Screening



Colorectal Cancer Screening

So do you know at what age men and women should be getting their colorectal cancer screenings?

- 40? 50? These are all guesses. I have no idea.
- I really don't know, honestly.
- Is that one 30... I want to say 35 on that one.
- Um, thirty?
- RA: Do you know what age men and women should get colonoscopies?
 - I: No
- I hope never. I don't know. I don't know.
- Oh goodness, I have no idea... I would say 40s.

Breast Cancer Screening

So do you know at what age women should be getting their mammograms?

- I don't
- No
- I do not.
- I thought it was 21 but I'm over 21 and it hasn't happened so I don't know
- 21? I don't know.
- I don't know the exact age, I think it's like once every 10 years until they're—I forget what age—until menopause?
- Um I don't know the exact age, I believe it's um somewhere between the ages of like 18 and 25, I would guess uh 20.

Prostate Cancer Screening

So do you know what age men should start talking to their physicians about prostate cancer screening?

- No
- I don't. I would probably assume it's around the same age. I would assume. Maybe 40?
- 36?
- 35?
- Um I imagine it would be a similar age, uh but um I'm really not, not very aware, so I would guess probably 45.
- Yeah, then I have no idea about prostate [screening].
- I have no idea. I don't know.

- RA: so the parts that were surprising to you were the type of diagnosis, the diagnosis itself or that they had even had cancer
- P: Just that they had even had cancer ... yeah I didn't—I wasn't aware of anyone in the family having issues with cancerI had no idea [my family] had been [so] touched by cancer before.

P: I knew that my grandparents from my dad's side had cancer, I just didn't really know like the extent of it. I mean I knew a few things you know but I didn't know that they had multiple forms of cancer.

P: But it was very surprising like 'oh wow.' 'Cause both my grandma and my grandpa had it and then my dad had it. I didn't know anything about that.

Implications

- Younger individuals who are unaware of their own family cancer history may not make risk-reducing lifestyle choices such as diet, exercise, sunscreen use, and early-screening if needed.
- Younger individuals in our study were mostly unknowledgeable about their own family cancer history.
- Families should determine ways to share cancer family history to allow individuals to begin risk-reducing behaviors early.

But

P: I would say older as in, once I'm over 35. That's probably when I'd start thinking about it more seriously. For the next ten years, probably not.

Limitations

- Mostly white
- And fairly religious
- Educated
- Source of information was mostly mothers, who may not adequately know the fathers' family history



Thanks to my **BYU** research lab students:



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Chelsea Romney, BS
(UCLA graduate program)



Kristen Ray

Our lab

