

## Domain Expert Advice

Dear Esteemed Doctor,

I am Vasundhara Acharya , a PhD student at Rensselaer Polytechnic Institute. I am conducting a survey to determine risk of developing of breast cancer among women across the world. Using a google survey form I have managed to collect 200 responses from women. The questions regarding their first-degree relatives having breast cancer, age at which they gave birth to their first kid, if they had taken diethylstilbestrol (DES) and birth control pills, if they underwent benign biopsy and so on have been included.

I kindly request you to provide your domain expertise in labeling few of the cases that I obtained. I will be grateful to you for your help. Please note that this project is only used to demonstrate the data collection method( it won't be used for any research study). I have also obtained the consent form from all the participants in the study.

I am focusing on three labels: Low Risk, Moderate Risk and High Risk.

The below are the few of the cases:

CASE 1:

- Have you ever had a breast biopsy with a benign (not cancer) diagnosis?

Response: Yes

- What was your age when you gave birth to your first child?

Response: 20-30

- If any women in your family have had breast cancer, check their relationship to you?

Response: Mother

- Was your mother, sibling, or child diagnosed with breast cancer before the age of 50?

Response: Yes

- Have you taken the medicine diethylstilbestrol (DES), or did your mother take it while pregnant with you?

Response: No

- Has a mammogram shown that you have dense breasts?

Response: No

- How many breast biopsies with a benign diagnosis have you had?

Response: 1

- Have you ever had a breast biopsy with atypical hyperplasia?

Response: No

**Label: HIGH RISK.**

CASE 2:

Have you ever had a breast biopsy with a benign (not cancer) diagnosis?

Response: No

- What was your age when you gave birth to your first child?

Response: 20-30

- If any women in your family have had breast cancer, check their relationship to you?

Response: Aunt

- Was your mother, sibling, or child diagnosed with breast cancer before the age of 50?

Response: No

- Have you taken the medicine diethylstilbestrol (DES), or did your mother take it while pregnant with you?

Response: Yes

- Has a mammogram shown that you have dense breasts?

Response: No

- How many breast biopsies with a benign diagnosis have you had?

Response: Zero

- Have you ever had a breast biopsy with atypical hyperplasia?

Response: No

**Label: MODERATE RISK**

CASE 3:

Have you ever had a breast biopsy with a benign (not cancer) diagnosis?

Response: No

- What was your age when you gave birth to your first child?

Response: 20-30

- If any women in your family have had breast cancer, check their relationship to you?

Response: None

- Was your mother, sibling, or child diagnosed with breast cancer before the age of 50?

Response: No

- Have you taken the medicine diethylstilbestrol (DES), or did your mother take it while pregnant with you?

Response: No

- Has a mammogram shown that you have dense breasts?

Response: No

- How many breast biopsies with a benign diagnosis have you had?

Response: Many

- Have you ever had a breast biopsy with atypical hyperplasia?

Response: Yes

**Label: HIGH RISK**

CASE 4:

Have you ever had a breast biopsy with a benign (not cancer) diagnosis?

Response: Yes

- What was your age when you gave birth to your first child?

Response: 20-30

- If any women in your family have had breast cancer, check their relationship to you?

Response: None

- Was your mother, sibling, or child diagnosed with breast cancer before the age of 50?

Response: No

- Have you taken the medicine diethylstilbestrol (DES), or did your mother take it while pregnant with you?

Response: No

- Has a mammogram shown that you have dense breasts?

Response: No

- How many breast biopsies with a benign diagnosis have you had?

Response: 1

- Have you ever had a breast biopsy with atypical hyperplasia?

Response: No

**Label: LOW RISK.**

CASE 5:

Have you ever had a breast biopsy with a benign (not cancer) diagnosis?

Response: No

- What was your age when you gave birth to your first child?

Response: No child

- If any women in your family have had breast cancer, check their relationship to you?

Response: None

- Was your mother, sibling, or child diagnosed with breast cancer before the age of 50?

Response: No

- Have you taken the medicine diethylstilbestrol (DES), or did your mother take it while pregnant with you?

Response: Yes

- Has a mammogram shown that you have dense breasts?

Response: No

- How many breast biopsies with a benign diagnosis have you had?

Response: None

- Have you ever had a breast biopsy with atypical hyperplasia?

Response: No

**Label: MODERATE RISK**



The image shows a handwritten signature in blue ink above a circular official seal. The seal contains the following text: "Dr. [illegible] / [illegible]", "MD, PhD, DABO", "Reg. No. 64611", "Gynecologist & Obstetrician", and "Minimally Invasive Surgeon".

**Signature and Seal of the Domain Expert**