

THE UNIVERSITY OF CHICAGO

# GLOBAL HEALTH INITIATIVE

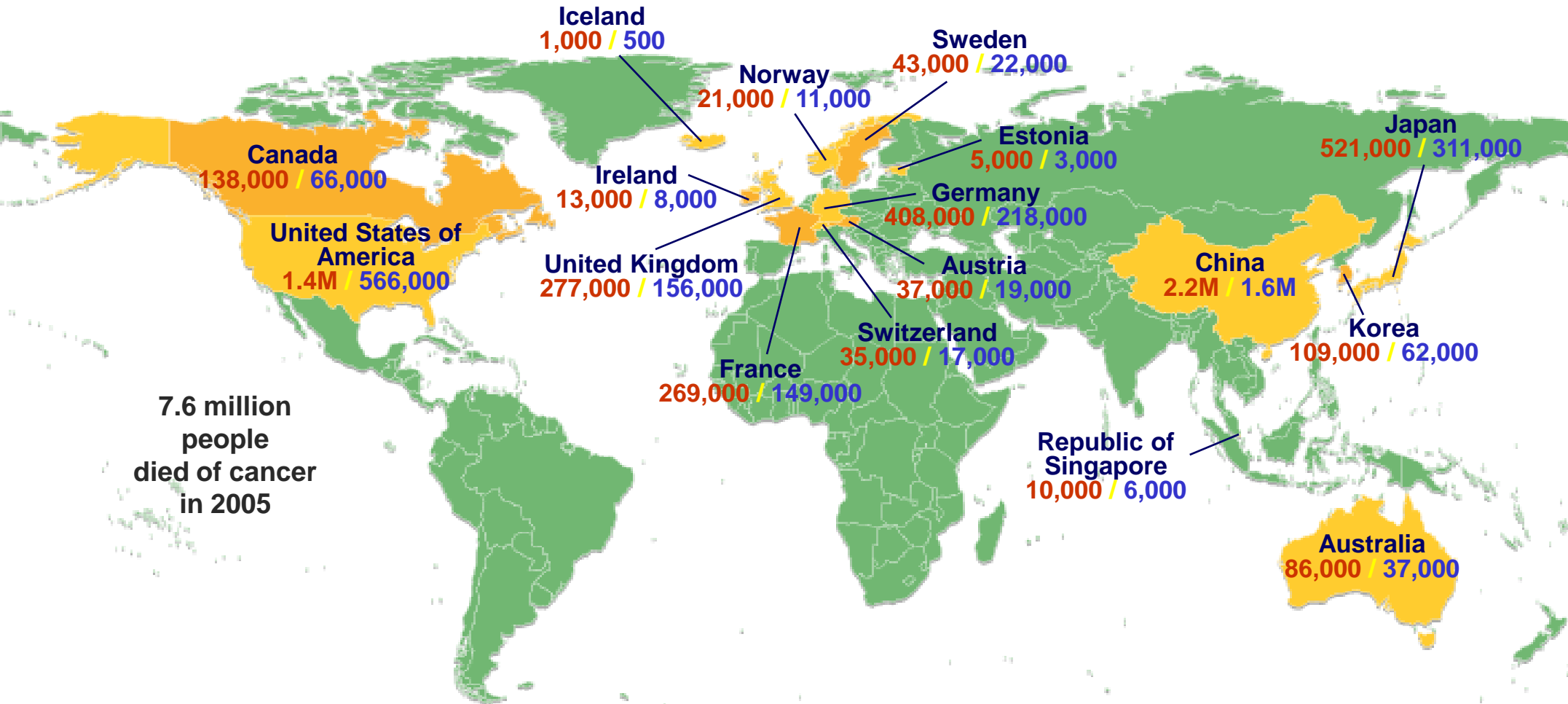
Democratizing education and saving lives  
in our backyard and throughout the world

ASSOCIATE DEAN  
FUNMI OLOPADE, MD, FACP



*Istockphoto.com*

# The Global Cancer Problem

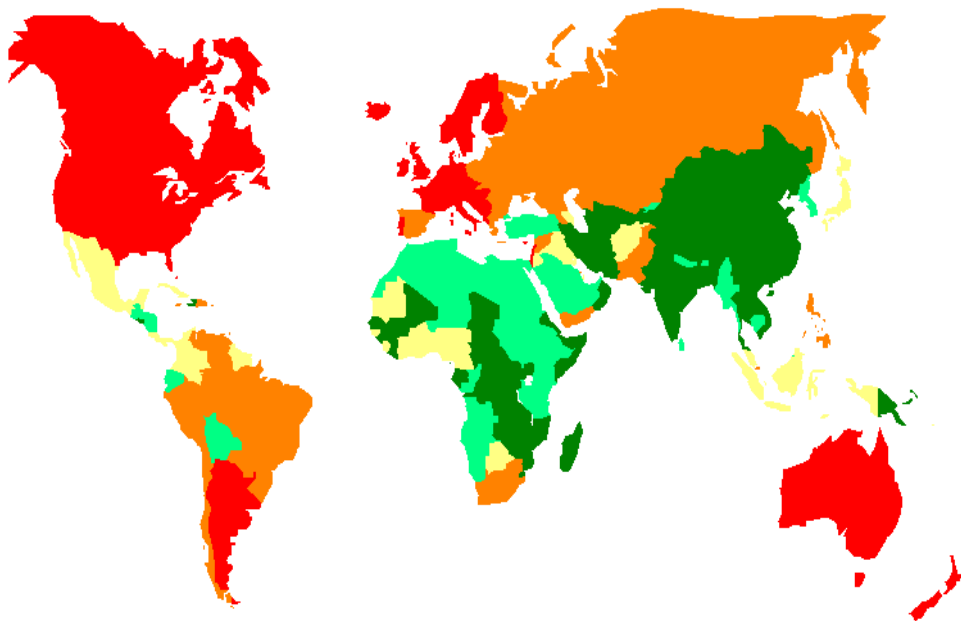


Cancer **Incidence** / **Mortality** per year

# Breast Cancer Epidemiology – Global Disparities: Disease Incidence vs Mortality

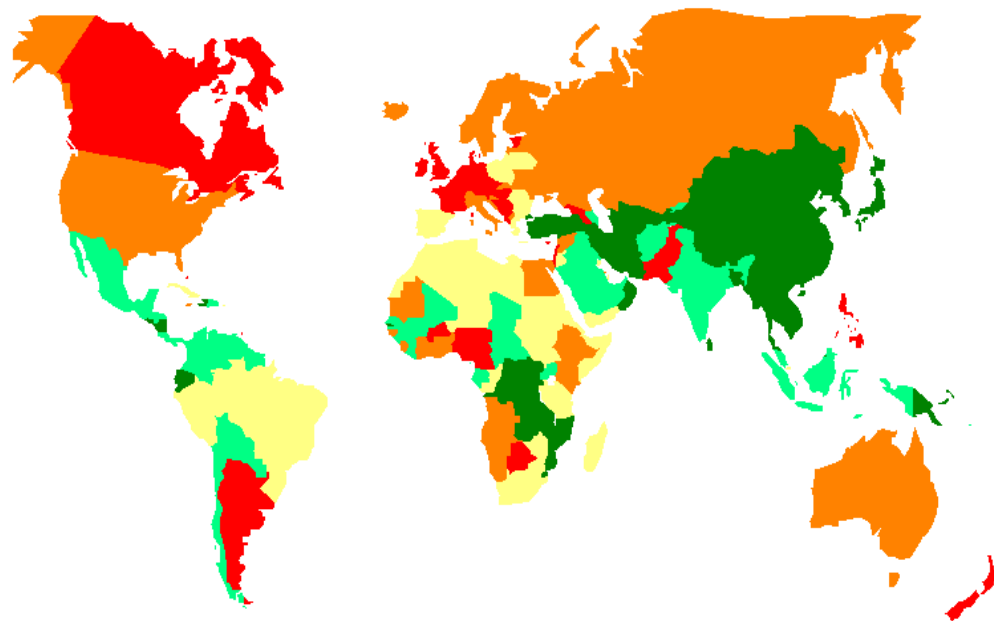
(Globocan 2002, IARC)

Breast  
Age-Standardized incidence rate per 100,000



■ < 19.5   ■ < 25.9   ■ < 34.2   ■ < 52.2   ■ < 101.1  
GLOBOCAN 2002, IARC

Breast  
Age-Standardized mortality rate per 100,000



■ < 10.3   ■ < 13.9   ■ < 17.0   ■ < 20.0   ■ < 29.6  
GLOBOCAN 2002, IARC

# Breast Cancer Epidemiology – Global Disparities: Survival

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## 5 year survival

- Age-adjusted survival:
  - ◆ 73% for all Developed countries
  - ◆ 57% for developing countries
    - (32% for Sub-Saharan Africa)
- Relative 5 yr survival:
  - ◆ 89% American women diagnosed 1999-2005,
  - ◆ 80% U.K. women from 2001-2003

# Breast Cancer Risk Factors

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- Female gender
- Age
- **Family Hx**
- Early menarche
- Late first birth
- Nulliparity
- Previous Hx of Br or Ov cancer
- Late menopause
- Obesity
- Alcohol consumption
- Exogenous hormone use
- Hx of radiation exposure
- Many More ----



RETIREMENT BLUES: HOW SAFE IS YOUR PENSION?

# Newsweek

The Hunt for the

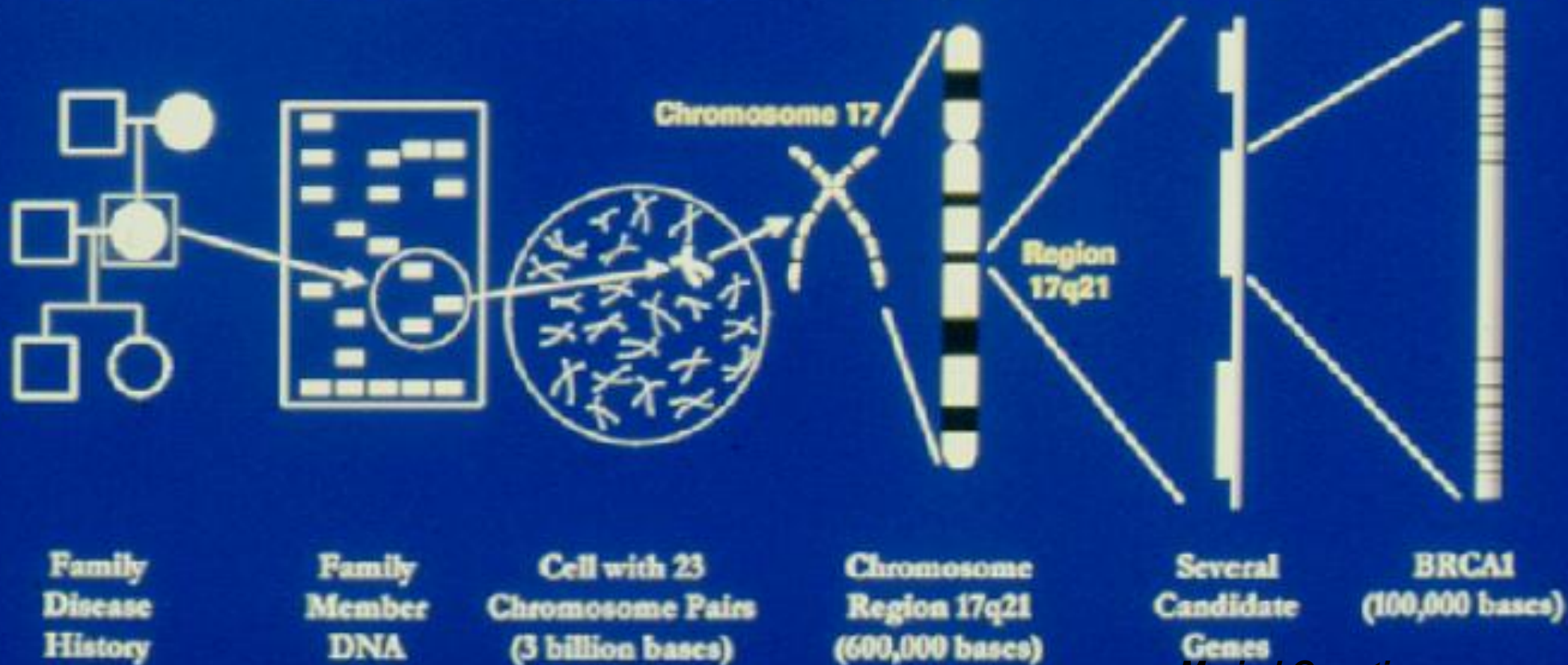
## Breast Cancer Gene

Jo Cunningham, 59, had breast cancer. Her daughter Julie, 29, had a preventive mastectomy. Will Alexandra, 5, be spared?



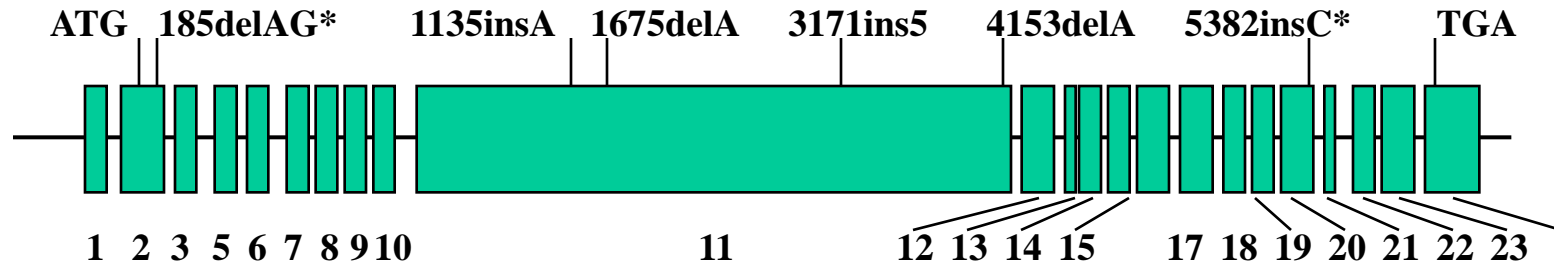
# Discovery of BRCA1

Studying Families → Analyzing the DNA → Locating the Chromosomes → Narrowing the Region → Isolating Candidates → Identifying BRCA1

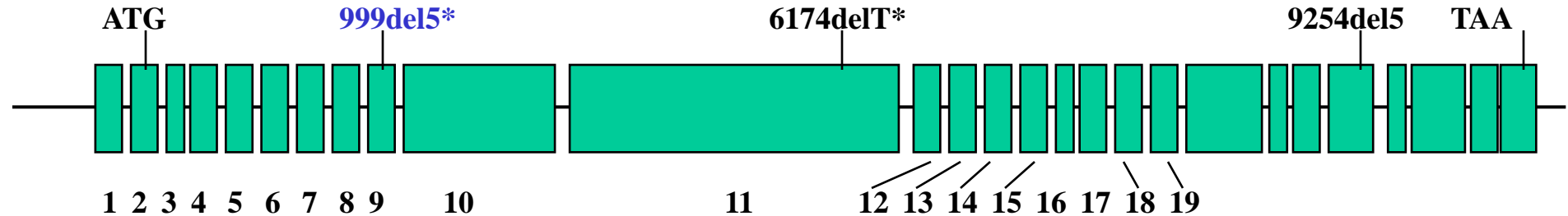


# Mutations with Founder Effect In Diverse Populations

*BRCA1*



*BRCA2*



\* Ashkenazi

\* Iceland

Fackenthal & Olopade, 2007  
*Nature Reviews Cancer*



# Translating the Science

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Cancer Risk Clinic Founded January 1992

# Risk Reduction Strategies

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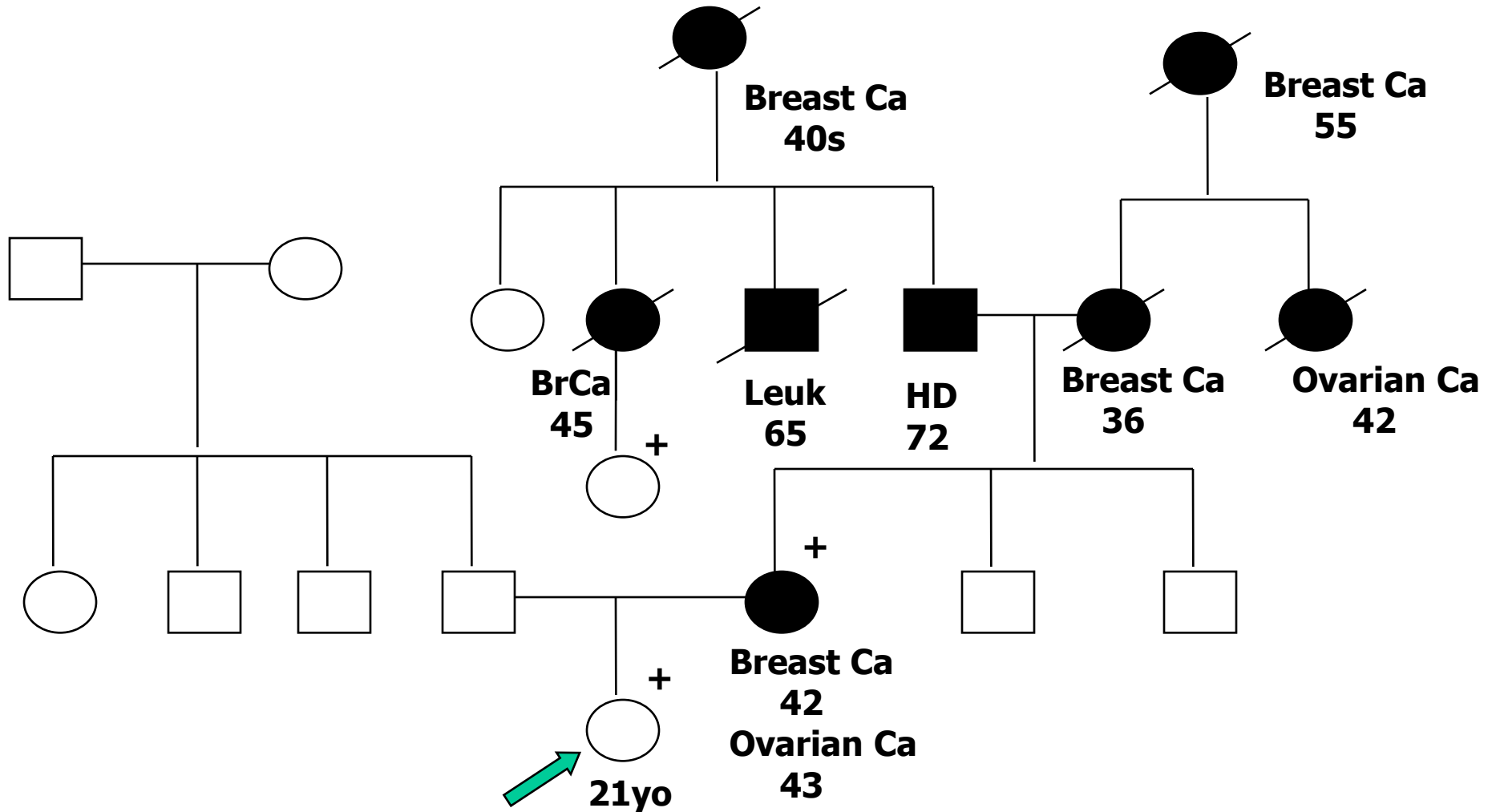
- **Intensive Surveillance: BSE, Mammogram, U/S, MRI**
- **Chemoprevention**
  - Tamoxifen, Raloxifen, others
- **Prophylactic Surgery**
  - **Breasts**
  - **Ovaries**
    - **> 90% Decrease Ovarian Cancer Risk**
    - **~ 50% Decrease Breast Cancer Risk**
- **Lifestyle Changes: ? Exercise, breast feeding**

# Global Oncology Fellows

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# A Clinical Case



# Breast Cancer Screening in Turkey

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***Aytekin Oto, MD  
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University of Chicago***