

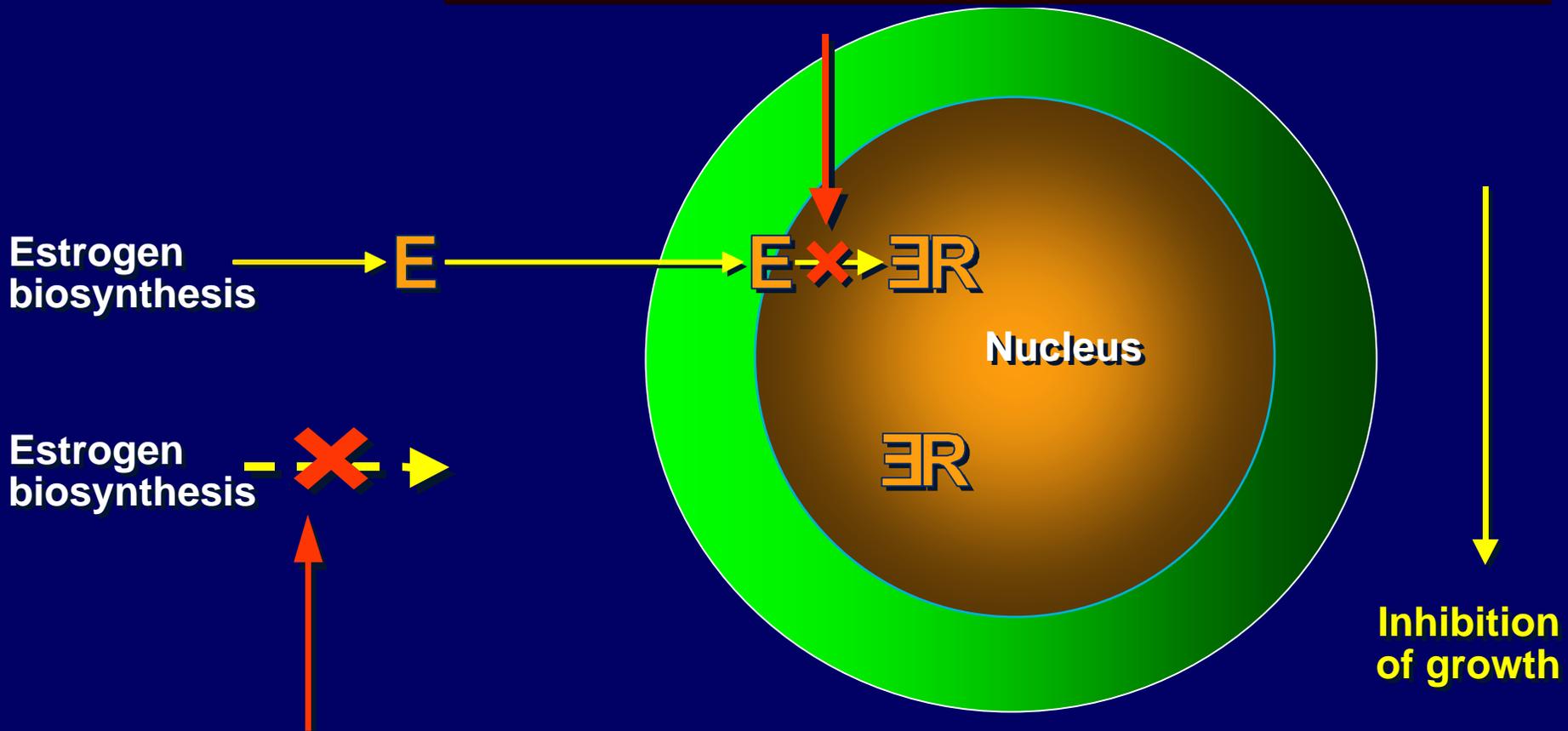
# AROMATASE INHIBITORS AND BREAST CANCER

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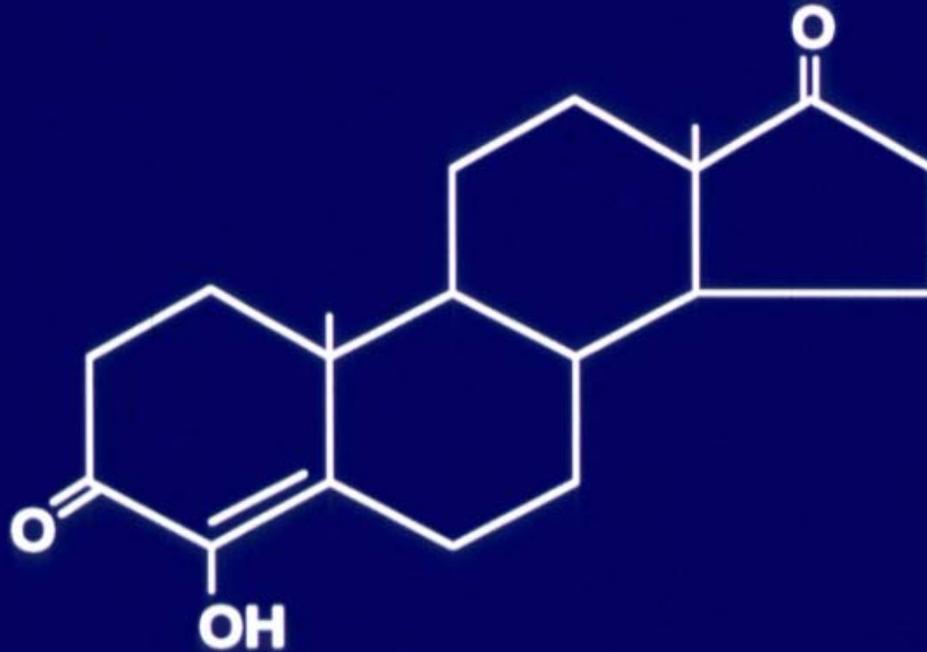
# Mechanism of Aromatase Inhibitors & Antiestrogens in Breast Cancer

**Antiestrogens: Block the action of estrogen**



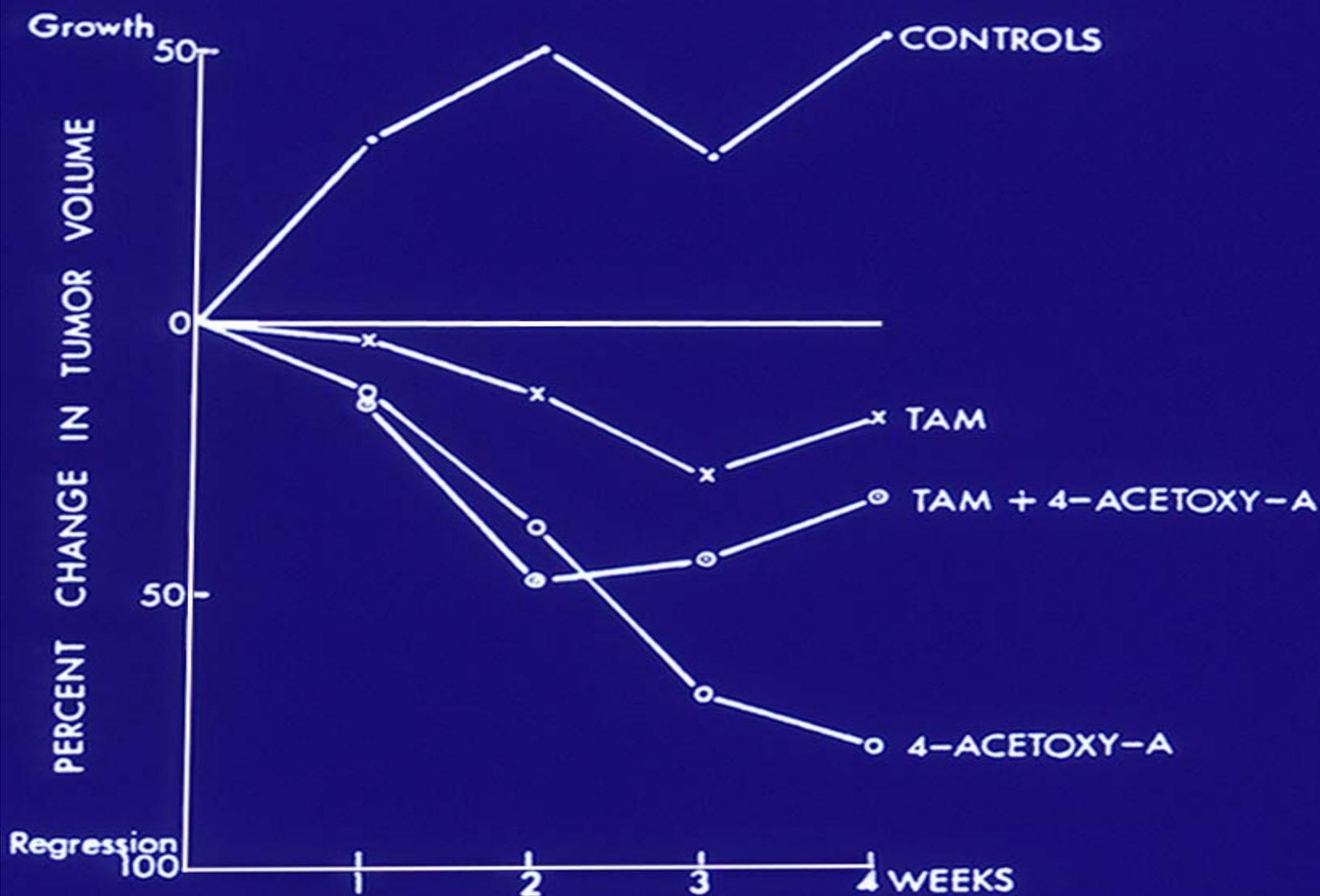
**Aromatase inhibitors: Block the synthesis of estrogen**

# AROMATASE INHIBITOR



**4-hydroxyandrostenedione**  
**4-OHA**

# The Effect of Combined Antiestrogen & Aromatase Inhibitor Treatment on DMBA-induced Rat Mammary Tumors



Tamoxifen 22ug/rat/day;  
4-acetoxy-A 100mg wafers and injections 1.8 mg/rat/day.

# Randomized Trial of Letrozole in Postmenopausal Patients with Early Breast Cancer treated with Tamoxifen for 5 years

- Total 5187 patients

- *Treatment 2.4 years*

Letrozole

Placebo

- Local, Mets, or  
New primaries

75

132

- Death from breast cancer

9

17

- Goss et al., NEJM 349:Nov 6,2003

# Randomized Trial of Exemestane vs. Tamoxifen in Postmenopausal Patients with Early Breast Cancer treated with Tamoxifen for 2-3 years

- Total 4742 patients

- *Treatment 2.6 years:*                      Exem                      Tam

- **Local, Mets, or  
New primaries**                                      **183**                                      **266**

- **Deaths**    **93**    **106**

- **Coombes et al., NEJM 350: 1081, 2004**



**Angela Brodie, Ph.D.**  
**Professor of Pharmacology and Experimental  
Therapeutics**

**Winner of the 2005 General Motors Cancer  
Research Foundation Kettering Prize**

# General Motors Cancer Research Foundation Awards

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The General Motors Cancer Research Awards were established in 1978 to recognize the outstanding accomplishments of basic scientists and clinical scientists in cancer research, with the intention of encouraging crucial research against this devastating disease. Since that time, the Awards have recognized the accomplishments of 108 Laureates, 13 of whom have gone on to win Nobel Prizes. In the cancer community, these award are considered the “Nobel prizes of cancer.”

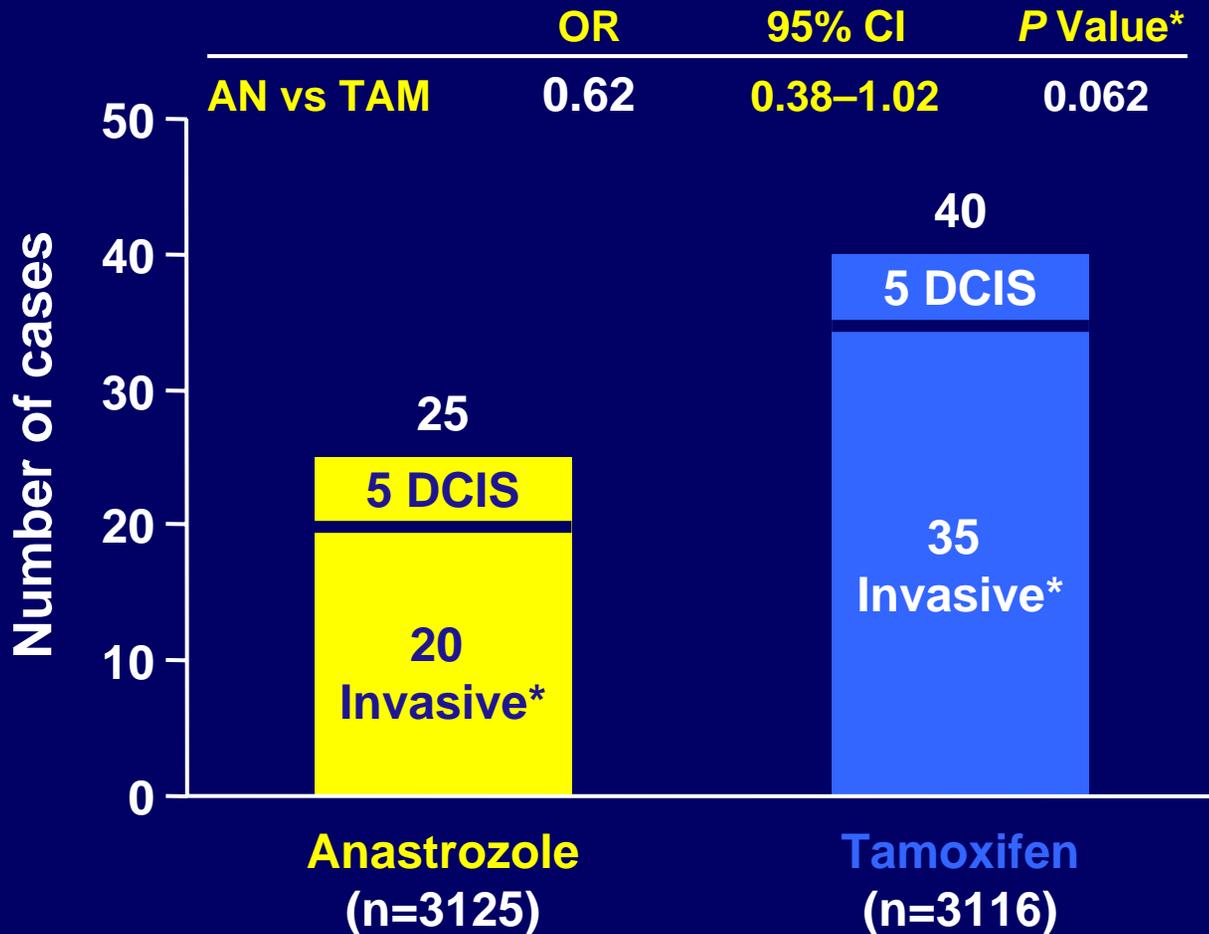
# General Motors Cancer Research Foundation Kettering Prize

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The Kettering Prize honors the single scientist in the entire world who has *made the most important advance in the diagnosis or treatment of cancer*



# ATAC: Incidence of New (Contralateral) Breast Primaries in Overall Population

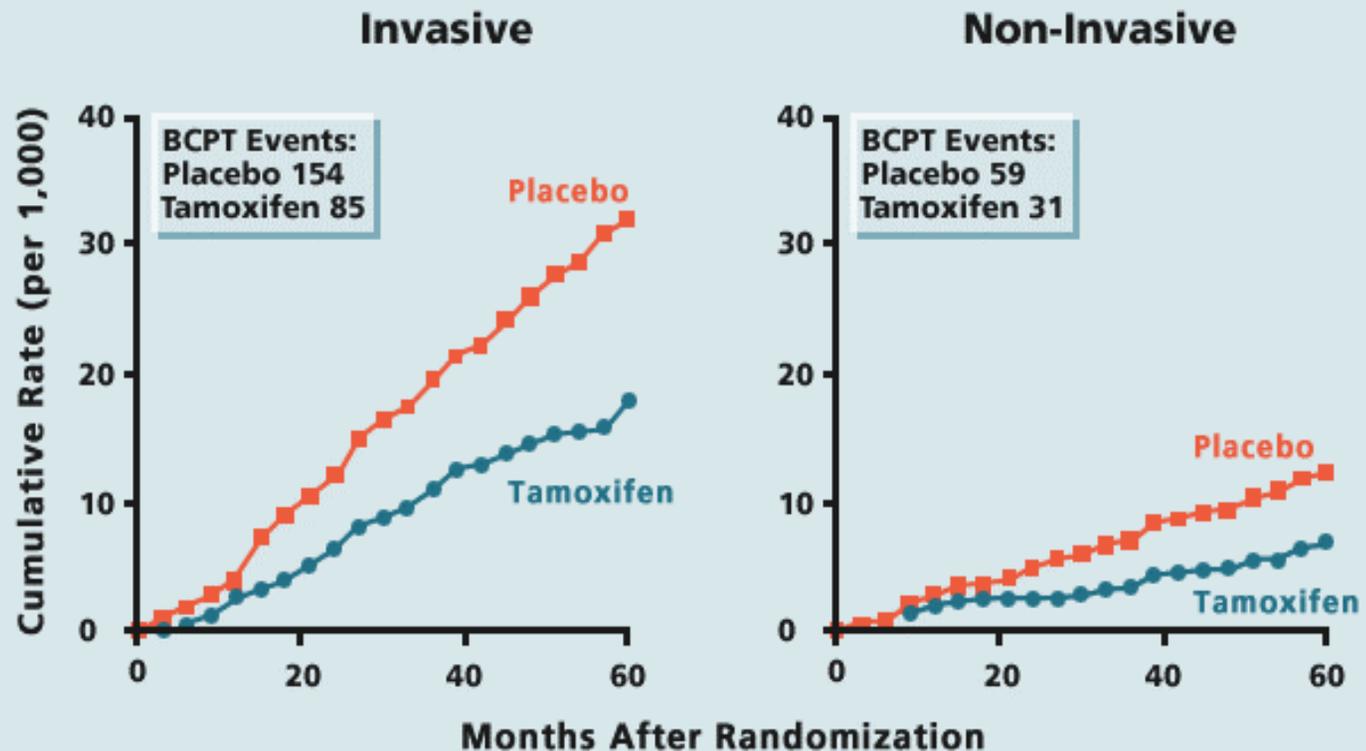


\***P=0.044** for invasive only. Retrospective analysis.

# P1 Prevention Study

## Cumulative Rates of Breast Cancers (as of 1/31/98)

[to main menu](#)



# Breast Cancer Prevention

## EXCEL Trial

4500 postmenopausal women at high risk for  
BC

US, Canada, Spain

Randomization



**Exemestane**

**Placebo**

