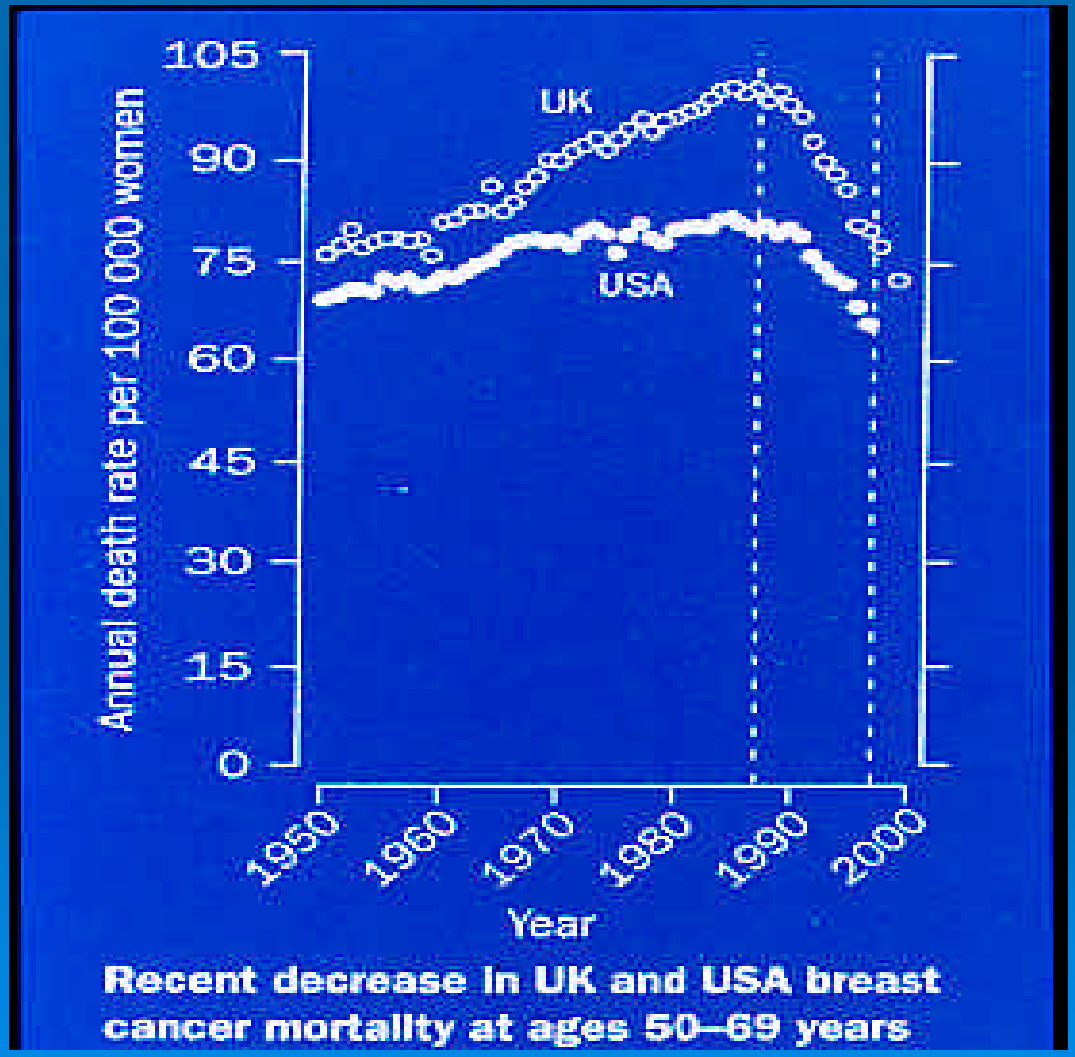
Breast Cancer in New Zealand

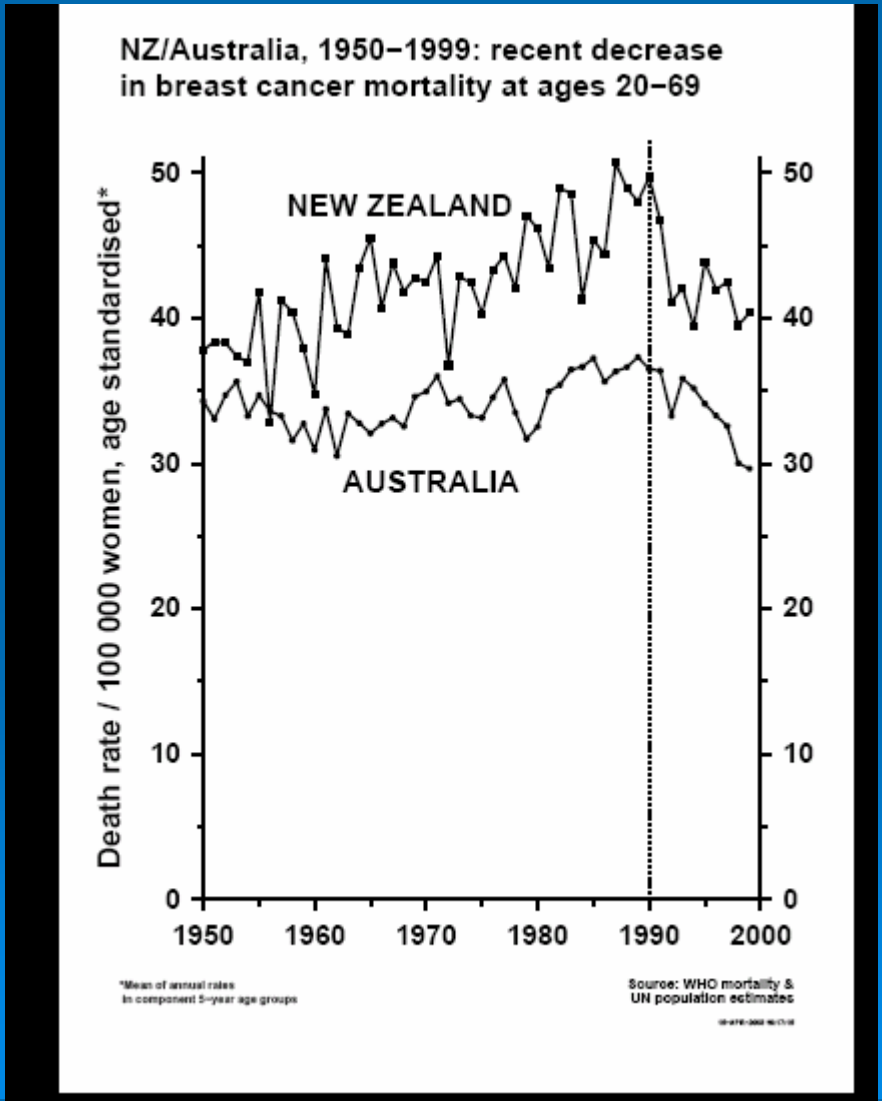
V. Harvey - November 2005

Decrease in Breast Cancer Mortality
UK/US
1990 - 2000



Recent decrease in UK and USA breast cancer mortality at ages 50–69 years

Decrease in Breast Cancer Mortality
NZ/AUS
1990 - 2000



The Good Things

- Cancer is a National Health Priority
- Establishment of Cancer Control Strategy
  - To ensure national equity
  - To ensure effective screening/early detection
  - To provide optimal treatment for cancer
  - To ensure access to multidisciplinary management
  - To develop defined standards
  - To define and monitor quality
  - To increase participation in clinical trials
  - To ensure appropriate introduction of new therapies
  - To define public entitlement

Some Good Things

- National screening programme 45-69yrs
- Establishment of Multidisciplinary Clinics/Meetings
- National process for evaluation of new medicines
- Regional Oncology Services

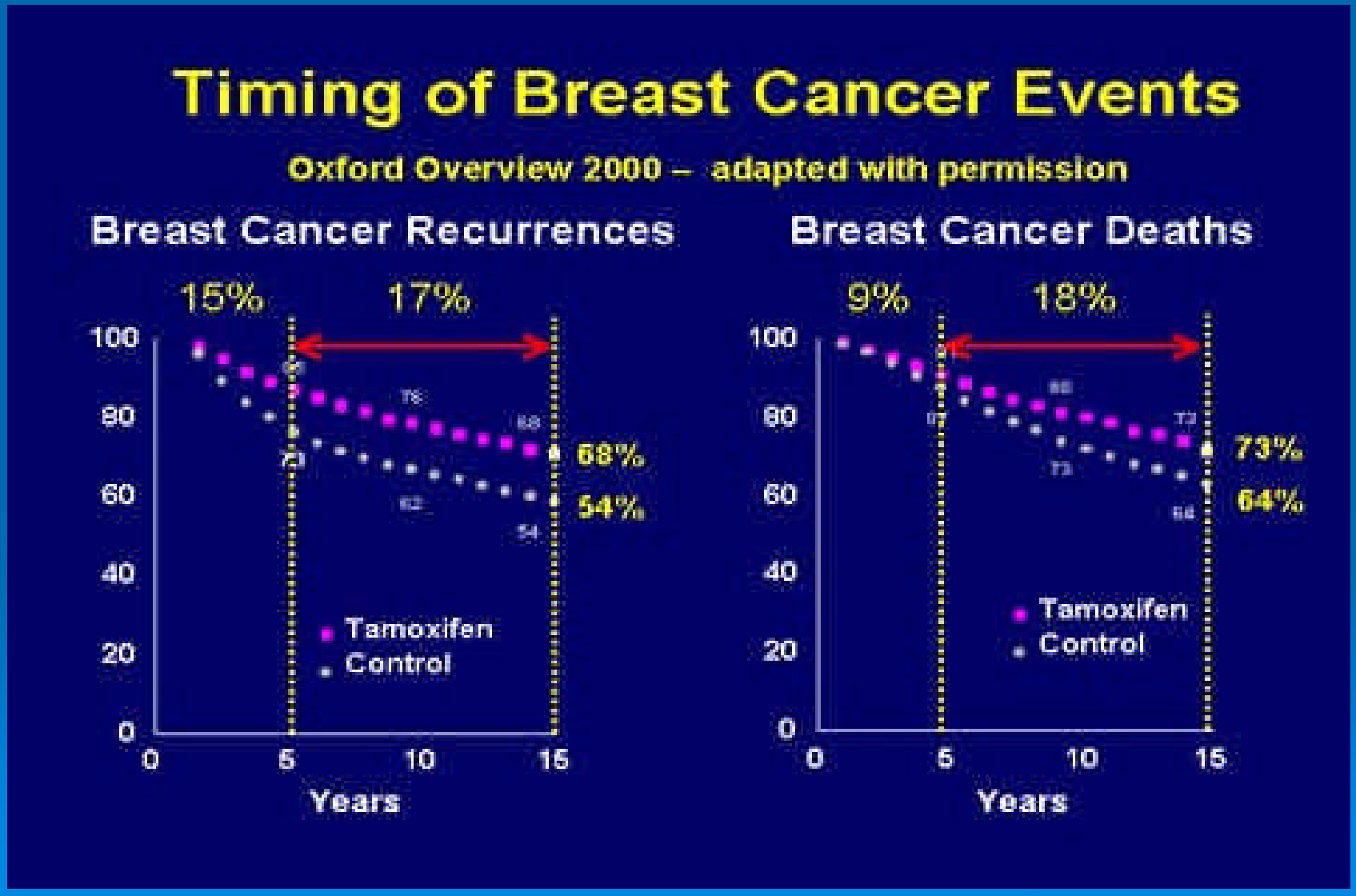
Some of the Problems

- A limited workforce
- A limited budget
- High patient expectation
- Highly informed patient population
- Acceptance of therapy for smaller gains
- A technology revolution in medicine

The New Drugs

- **Aromatase Inhibitors**
  - Anastrazole (Arimidex)
  - Letrozole (Femara)
- **Taxanes**
  - Paclitaxel (Taxol)
  - Docetaxel (Taxotere)
- **Trastuzumab**
  - Herceptin

The Effect of Tamoxifen



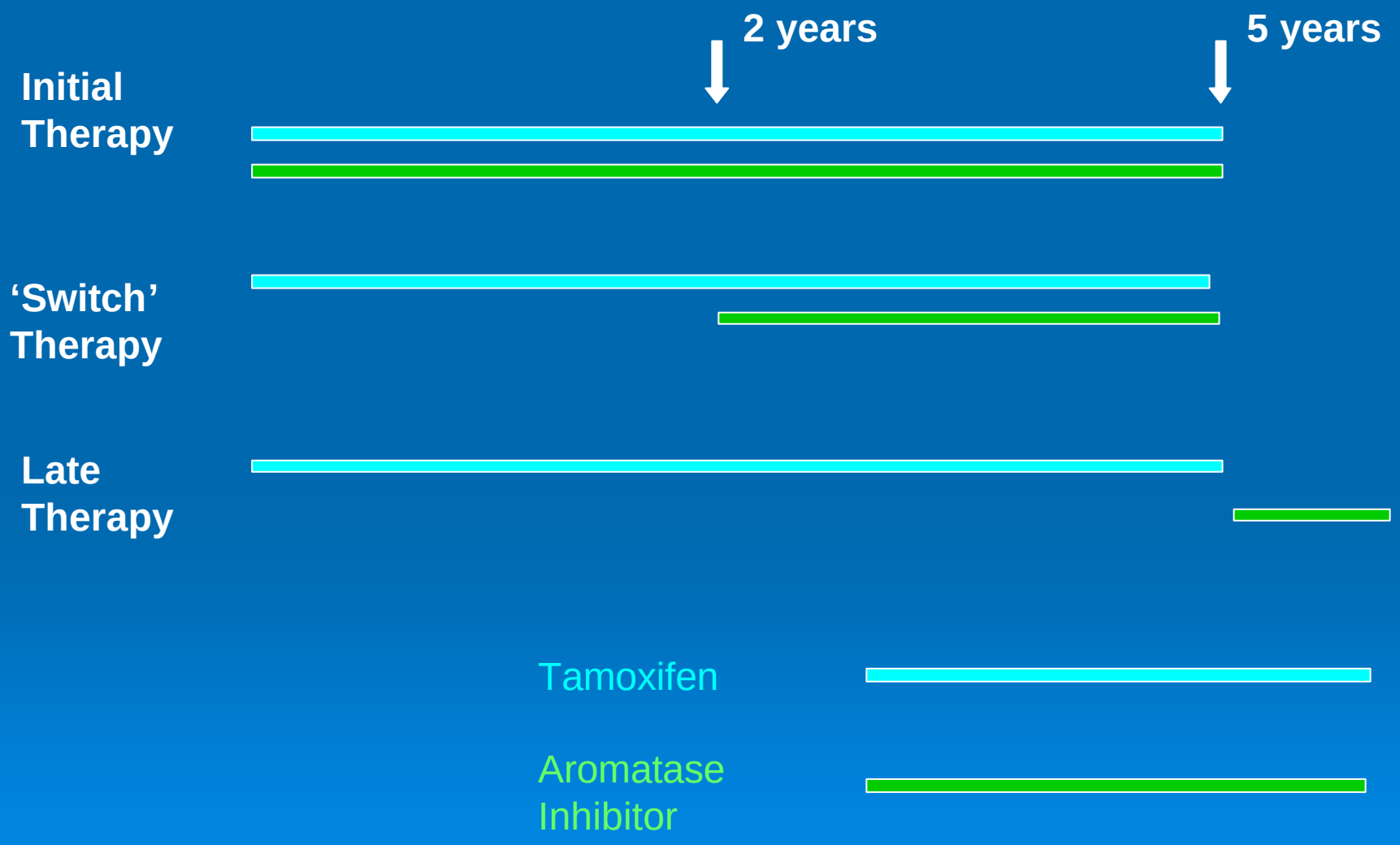
The Aromatase Inhibitors

Anastrazole/Letrozole

Tamoxifen Challenged

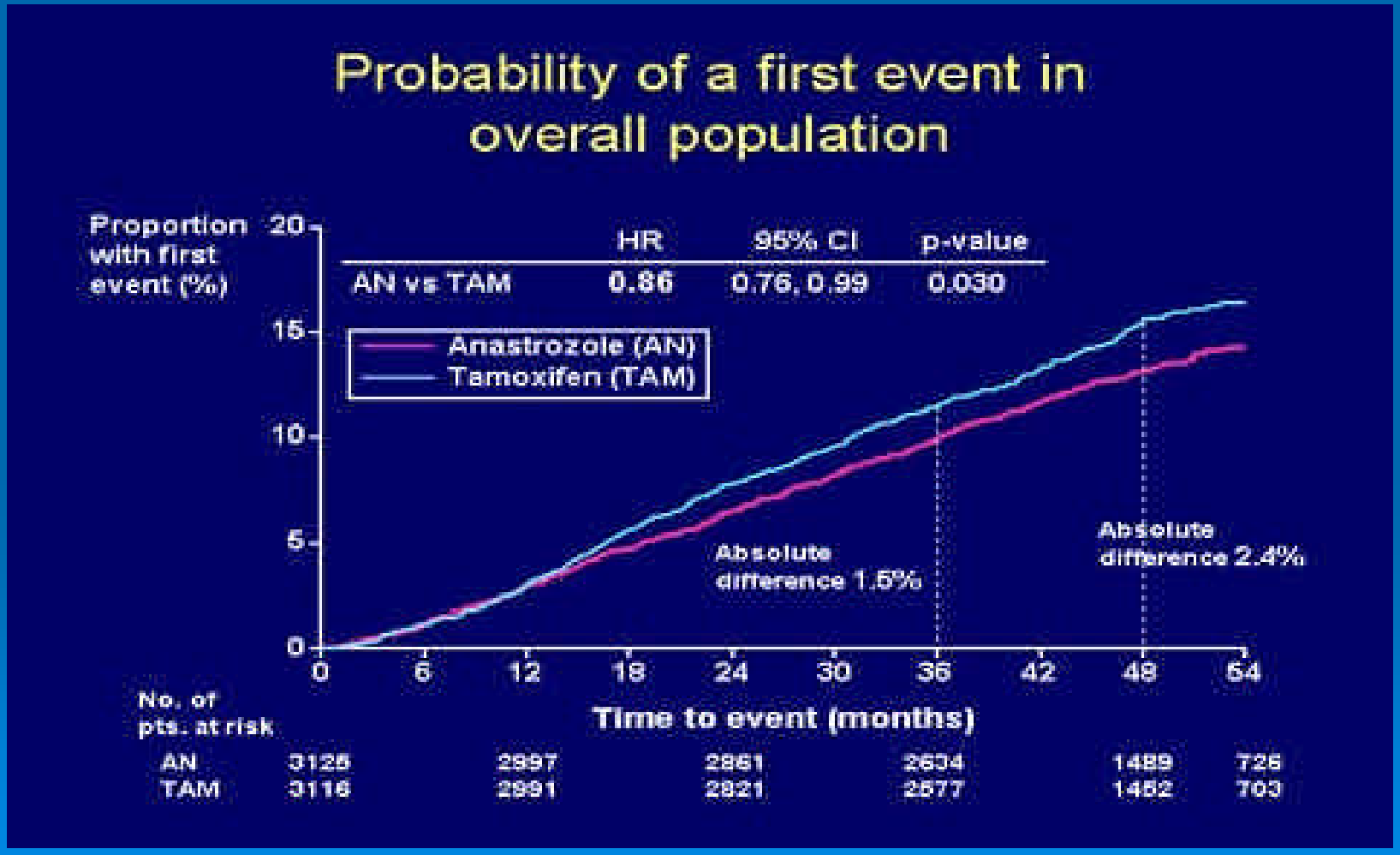
- Advanced Breast Cancer
  - greater disease shrinkage than tamoxifen
  - longer disease control than tamoxifen
- Early Breast Cancer
  - fewer recurrences than tamoxifen

Strategies of using Aromatase Inhibitors



ATAC Trial

Anastrazole vs Tamoxifen



Aromatase Inhibitors

- **Compared to tamoxifen**
  - **Similar**
    - Hot flushes
  - **Less**
    - Gynaecological problems
    - Venous thromboembolism (DVT)
    - Uterine cancer
  - **More**
    - Joint aches (arthralgia/arthritis)
    - Fractures
    - Osteoporosis

Aromatase Inhibitors

- **Who**
  - Postmenopausal women
- **Why**
  - 2 – 6% lower recurrence rate
- **When**
  - Initially – in place of tamoxifen (HER2+: ?ER+ PR-)
  - After 2-3 years of tamoxifen (most)
  - After 5 years of tamoxifen (if nearing end of 5 years Tamoxifen)
- **Which**
  - No obvious clinical difference

Aromatase Inhibitors

- **Who pays**
  - PHARMAC
    - Advanced disease
    - Early breast cancer
      - Intolerant of tamoxifen
      - Contraindication for tamoxifen
  - Patient
    - Early disease
      - Except as above ($30/month)

The Taxanes

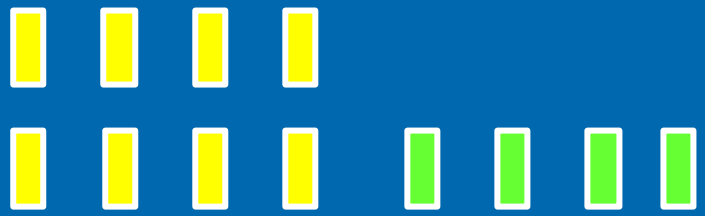
- Paclitaxel (Taxol)
- Docetaxel (Taxotere)

Strategies to incorporate Taxanes

Additional regimen

NSABP B28

CALGB 9344



AC

Taxol

Drug Replacement

BCIRG 001

FAC

TAC

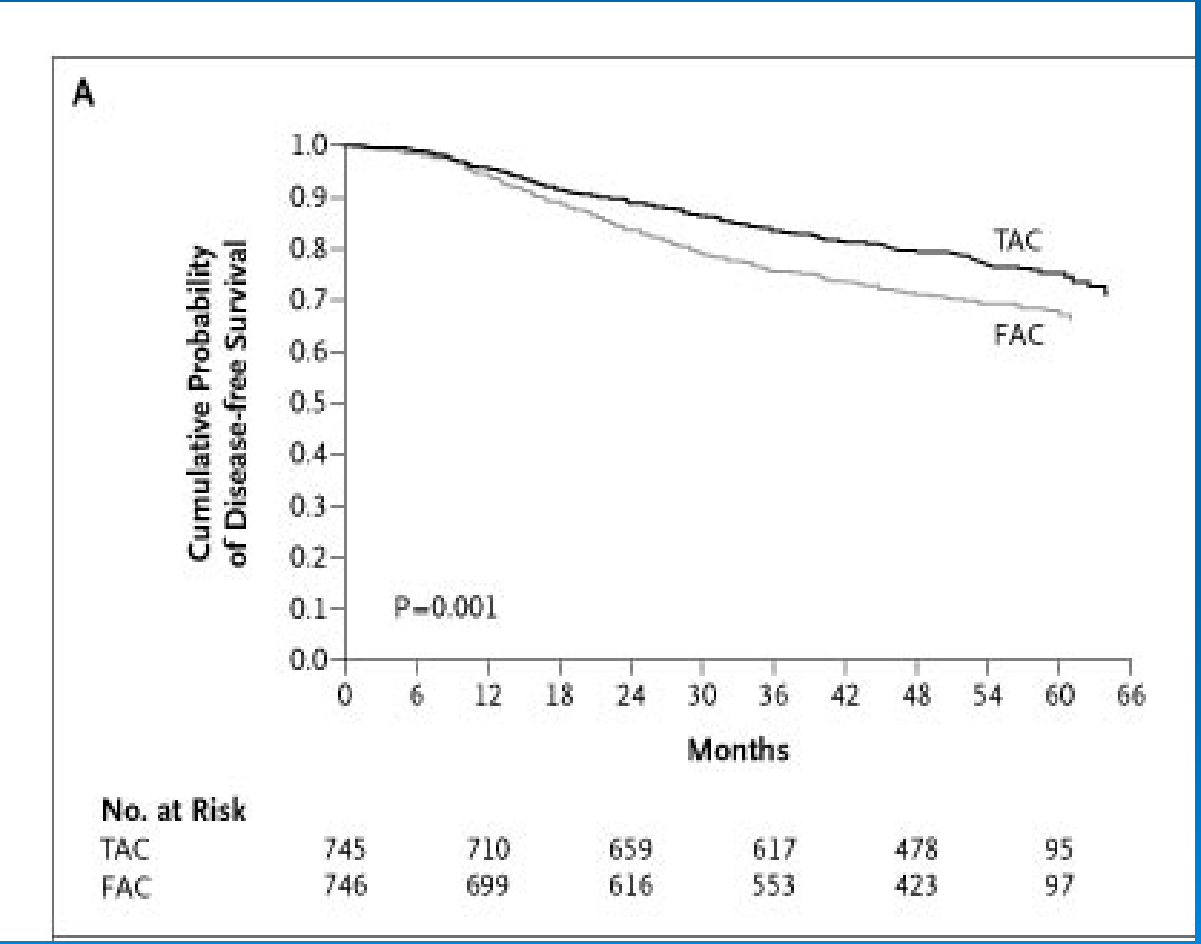
Regimen Replacement

PACS 01

FEC

Taxotere

Disease free Survival
BCIRG 01 – TAC x6 vs FAC x6



Results of adding Taxanes

5 Year Disease Free Survival

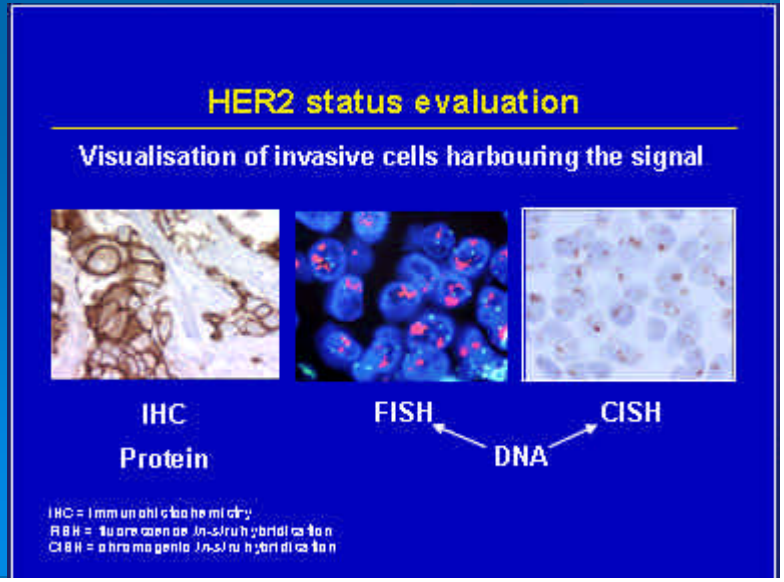
	Control	Taxane Group	Benefit ↑ DFS	Risk of Recurrence	Benefit Overall Survival
CALGB 9344	65%	70%	+5%	↓ **17%**	↑ 18%
NSABP B-28	72%	76%	+4%	↓ **17%**	None
BCIRG 001	68%	75%	+7%	↓ **28%**	↑ 30%
PACS 01	73.2%	78.2%	+5%	↓ **17%**	↑ 23%

Disadvantages of Adding Taxanes

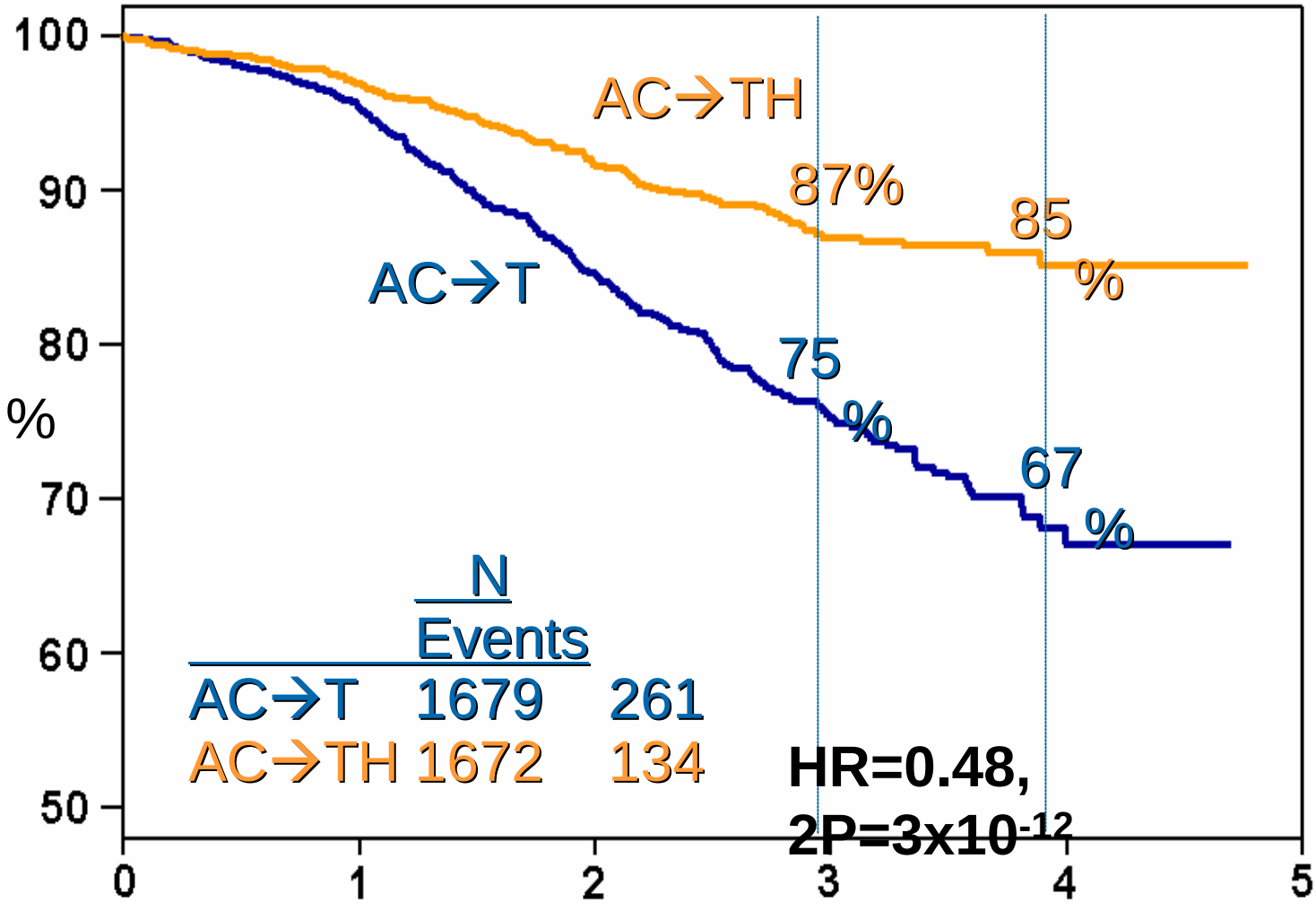
- Increased side-effects
  - Muscular aches and pains
  - Febrile neutropenia (TAC vs FAC)
- Increased duration of treatment
  - AC vs AC → Taxol - 3 vs 6 months
- Increased cost
  - $20 – 25,000 (Not yet funded by PHARMAC)

Herceptin (Trastuzumab)

- HER2 receptor found on 20-30% of breast cancers
- Associated with
  - More aggressive disease
  - Destroyed by Herceptin



NSABP B-31/NCCTG 9831
Disease-Free Survival



B31/N983

Results of adding Herceptin

Disease Free Survival

	Control	Herceptin Group	Benefit DFS	Benefit HR
NSABP B-31 N9871	75% 74% 78%	87% 87% 87%	+12% +13% + 9%	**52%** **55%** **45%**
HERA	77%	86%	+9%	**46%**
BCIRG 006		AC → TH TCH		**51%** **39%**

Disadvantages of Adding Herceptin

- Increased side-effects
  - Fevers & chills – usually minor
  - Cardiac impairment - reversible
- Increased duration of therapy
  - Currently 1 year (possibly longer)
- Increased Cost
  - $90 – 150,000 (Not funded by PHARMAC)

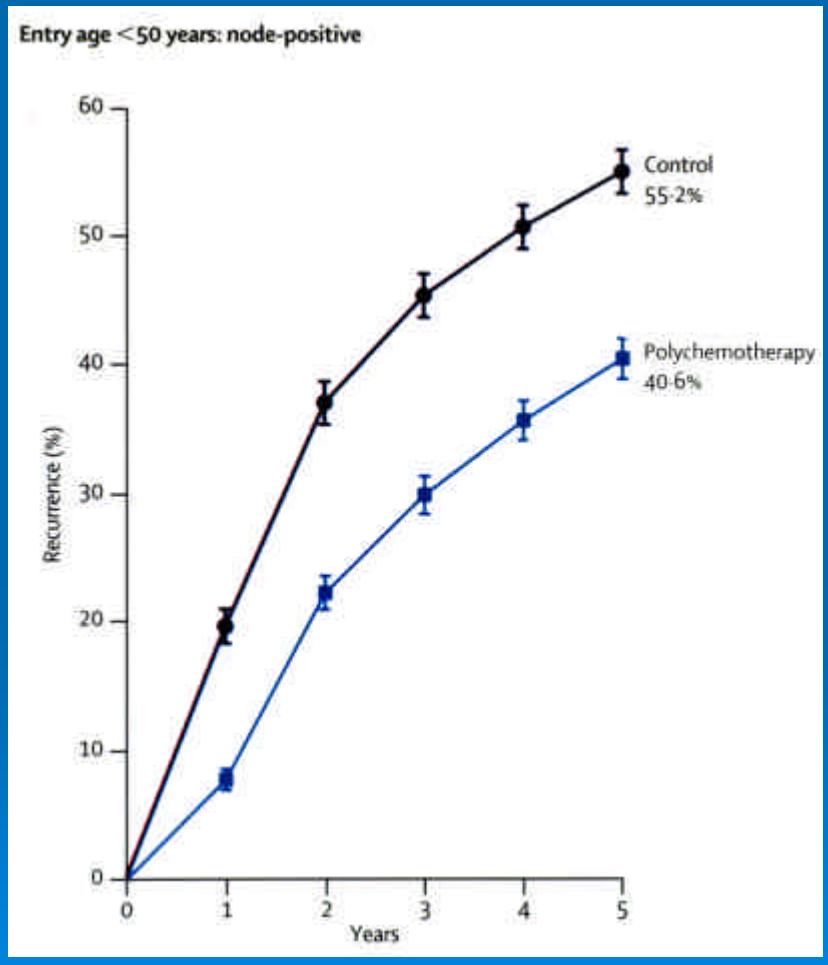
What do the New Chemotherapies Add?

Conclusions

- **Taxanes**
  - Reduces risk of recurrence (⬇17-28%)
  - Increases survival (⬆18-30%)
- **Herceptin**
  - Reduces risk of recurrence (⬇~50%)
  - Possible increase in survival

Problem is how to fund

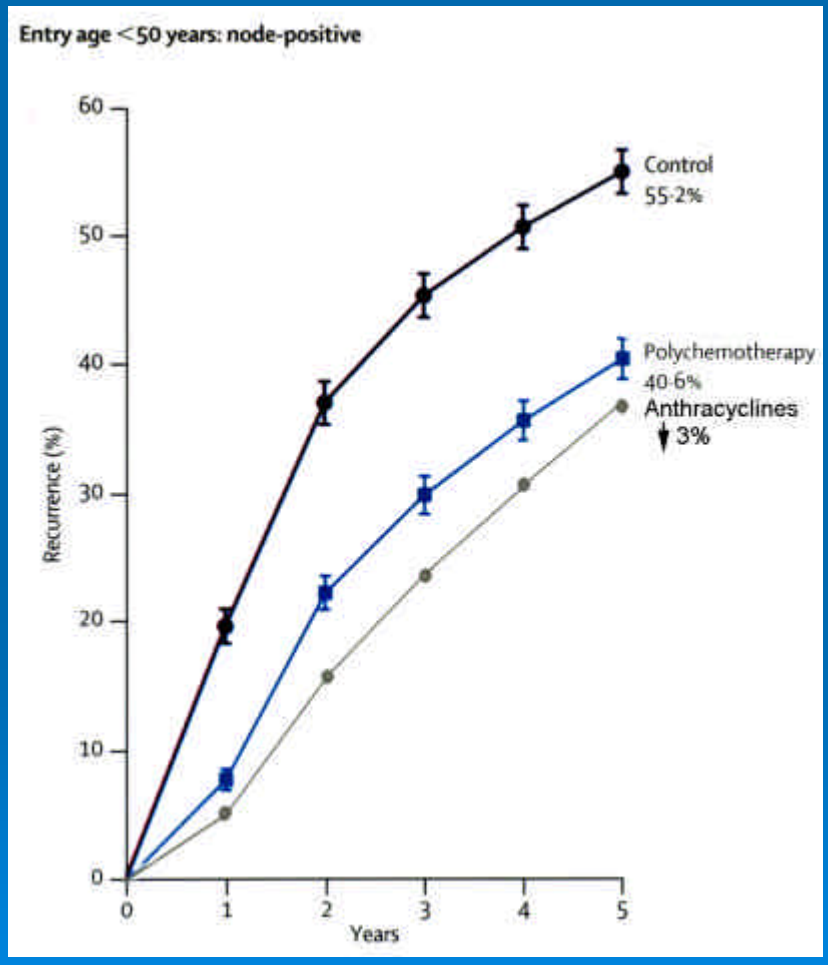
Breast Cancer Recurrence
Benefit of Chemotherapy



EBCTCG Lancet 2005:365:1687-1717

Breast Cancer Recurrence

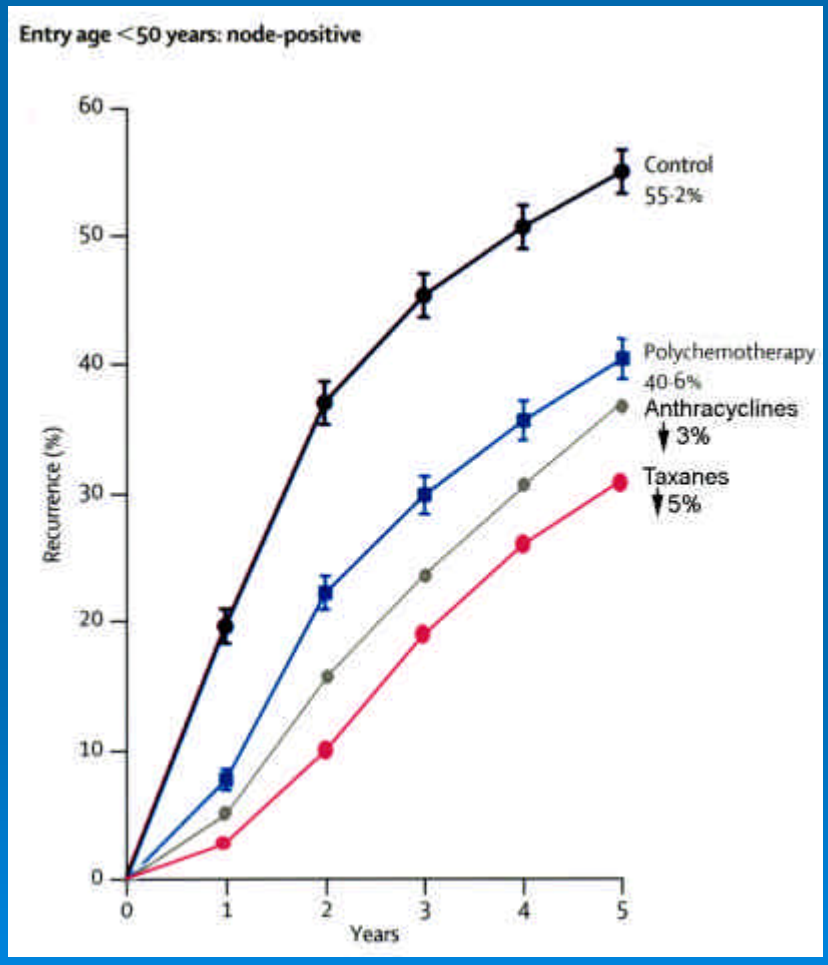
Additional Benefit of Anthracyclines



EBCTCG Lancet 2005:365:1687-1717

Breast Cancer Recurrence

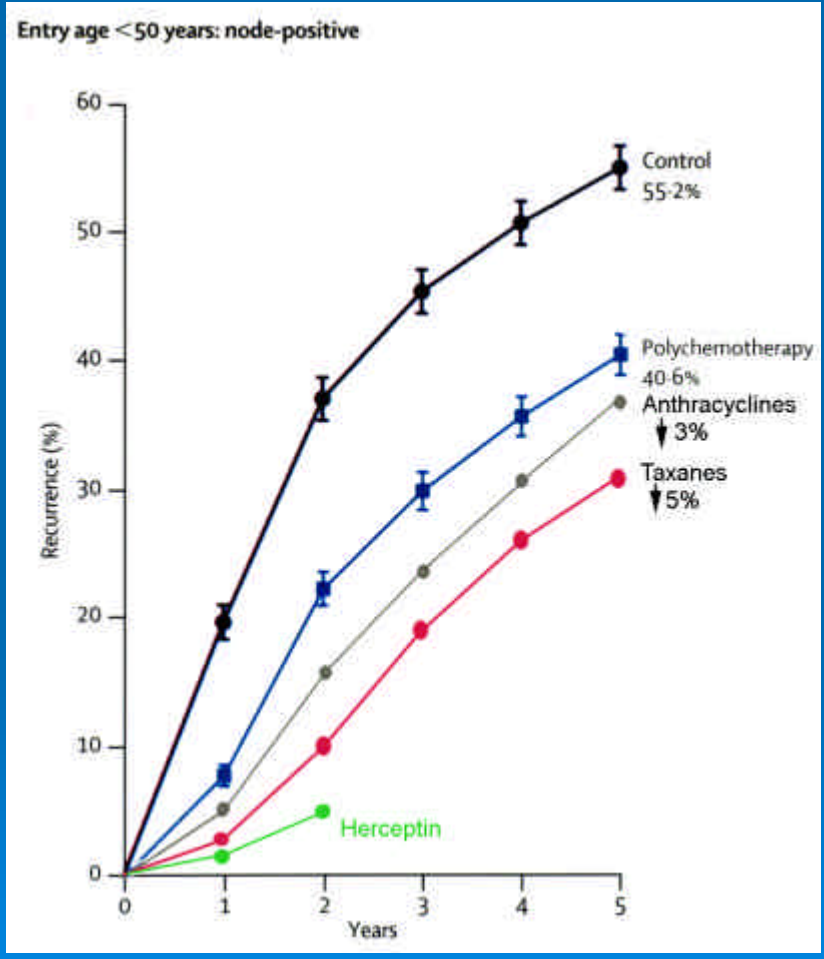
Additional Benefit of Taxanes



Adapted from EBCTCG Lancet 2005:365:1687-1717

Breast Cancer Recurrence

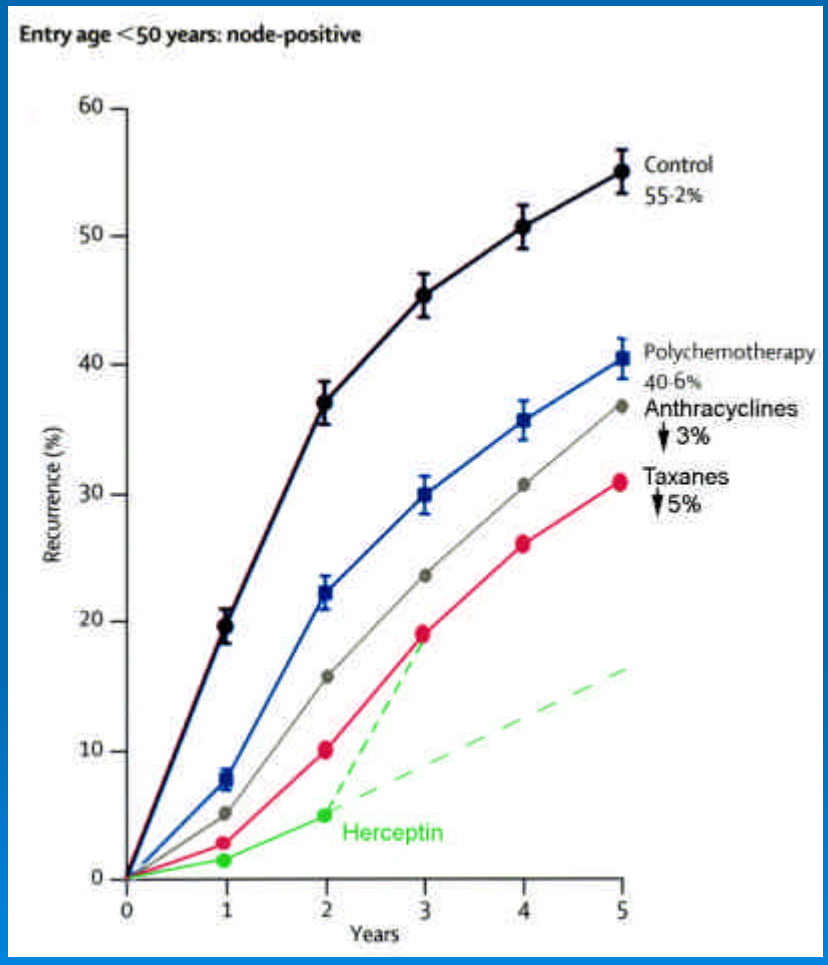
Additional Benefit of Herceptin



Adapted from EBCTCG Lancet 2005:365:1687-1717

Breast Cancer Recurrence

Additional Benefit of Herceptin - Possibilities



Adapted from EBCTCG Lancet 2005:365:1687-1717