

Organized screening  
Programs for the early  
Detection of Cancer....*the  
OBSP as a flagship example*



# What I hope you will gain from this presentation.....

A better understanding of:

- 1) the meaning and critical components of organized cancer screening programs
- 2) why the OBSP is an example of the value of organized screening
- 3) how we are performing in Southeastern Ontario
- 4) how Oncology Nurses can contribute to screening
- 5) what is on the horizon for organized screening in Ontario





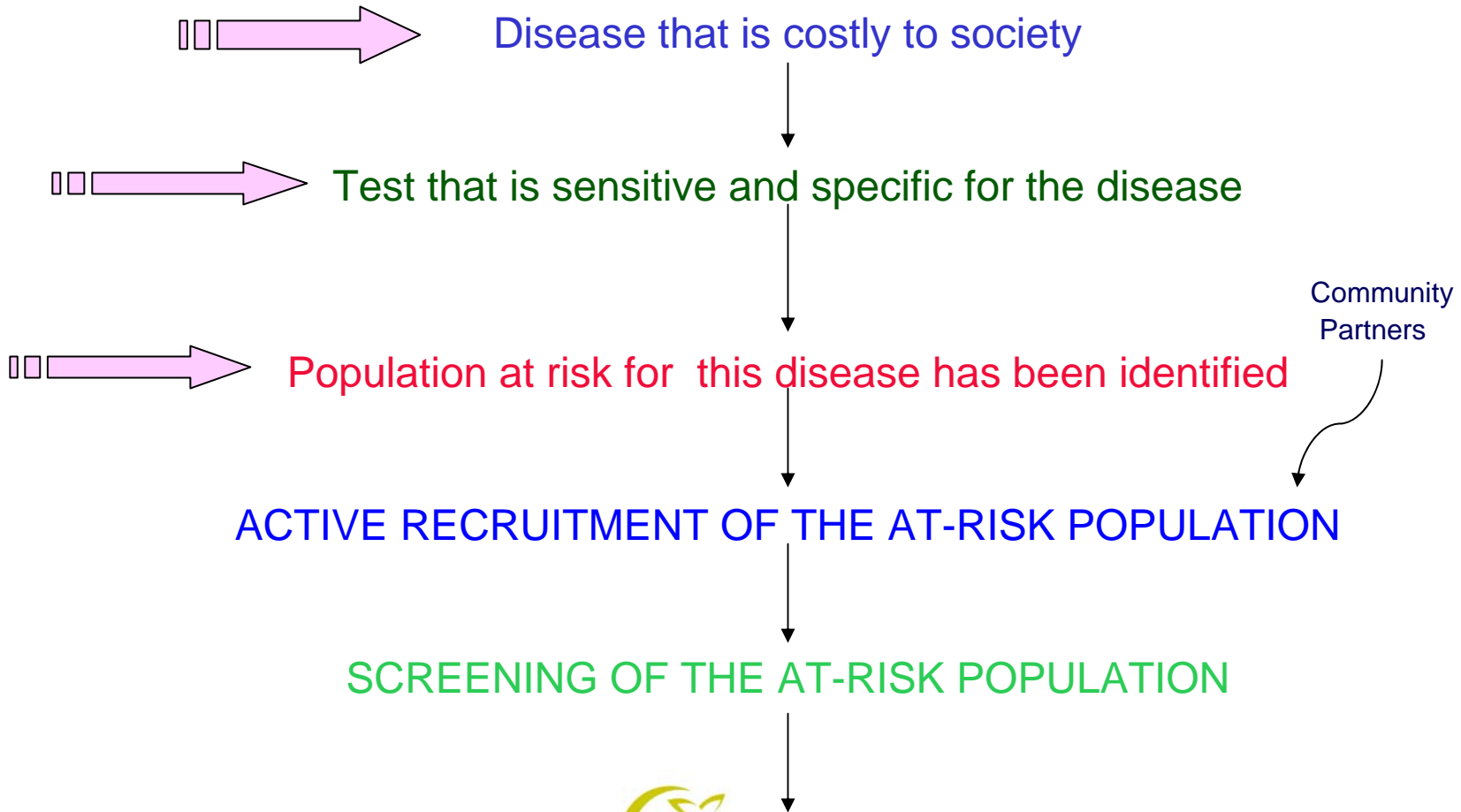
# So what is screening anyway?



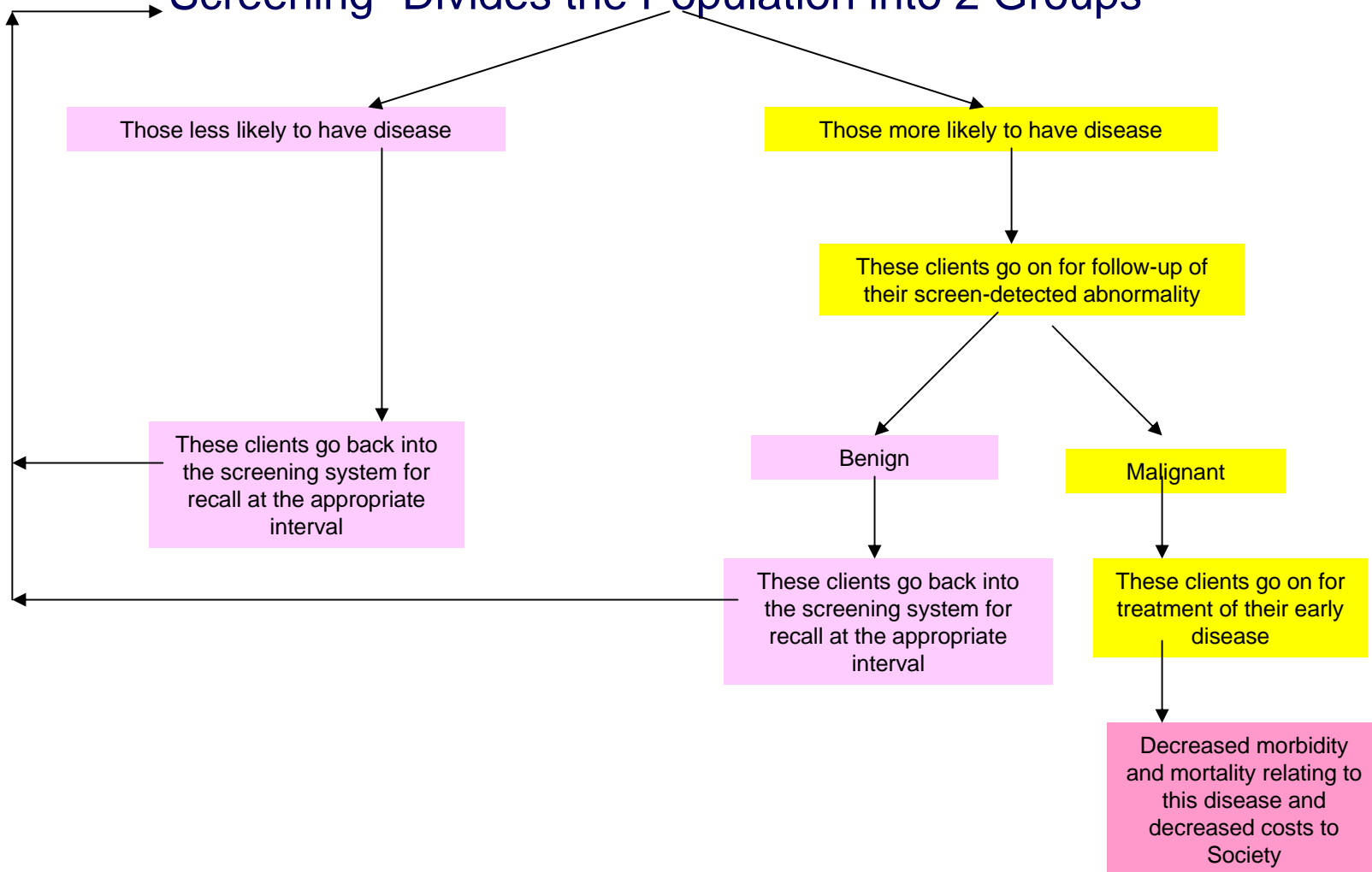
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# The Screening Paradigm



# Screening Divides the Population into 2 Groups



# Now we understand what screening is but what is an 'Organized' Program?

- Active recruitment of the at risk population
- Self-referral is a critical component
- Automatic Recall at the appropriate interval
- Results sent to each woman and her physician
- Follow-up of abnormalities- monitoring outcomes
- Quality control
- Ongoing monitoring and evaluation to ensure women are getting maximum benefit of services (e.g. satisfaction surveys, feedback cards)



# What specifically is breast screening?

Regular examination  
of a woman's breasts to find  
breast cancer early



# OBSP Program Goal

To reduce  
breast cancer deaths  
in Ontario women  
age 50 years and over  
through an organized  
breast screening program



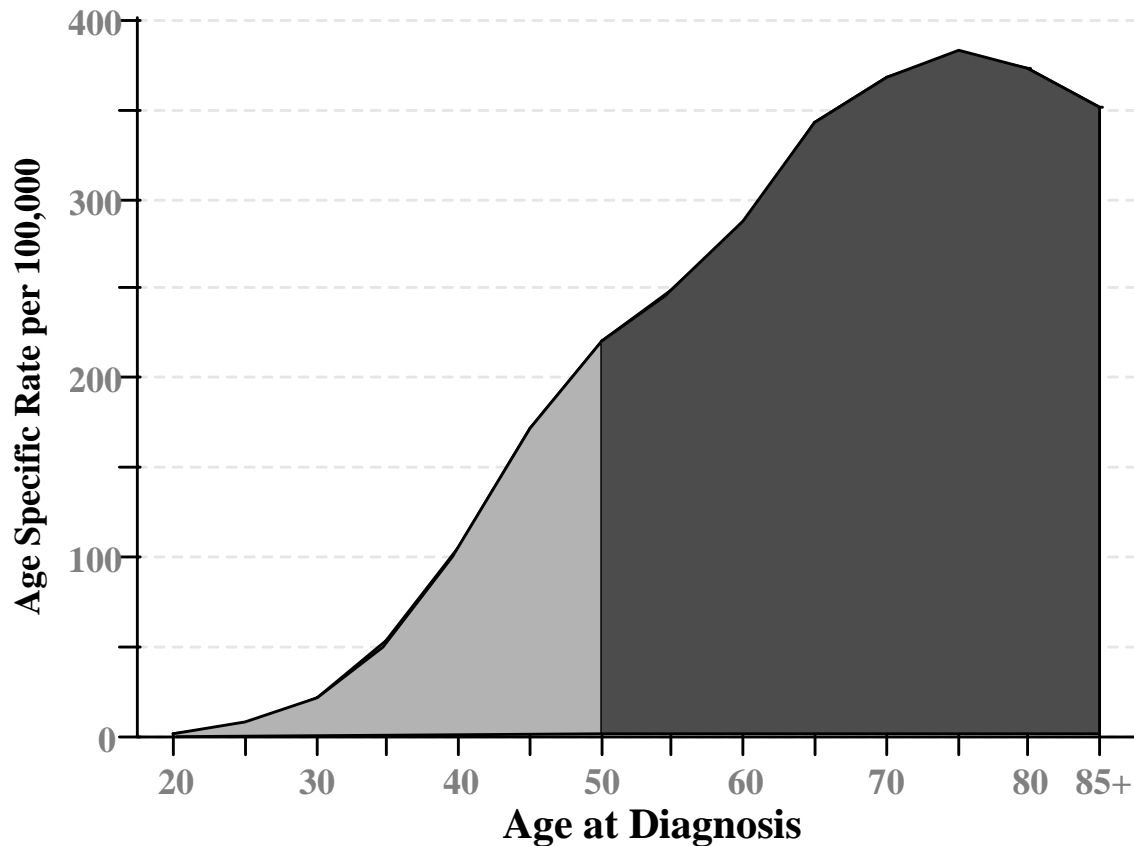
# Oh and by the way, did I mention that...

- We need to recruit 90% of eligible women by the Year 2020 ( *Cancer 2020 Document* )

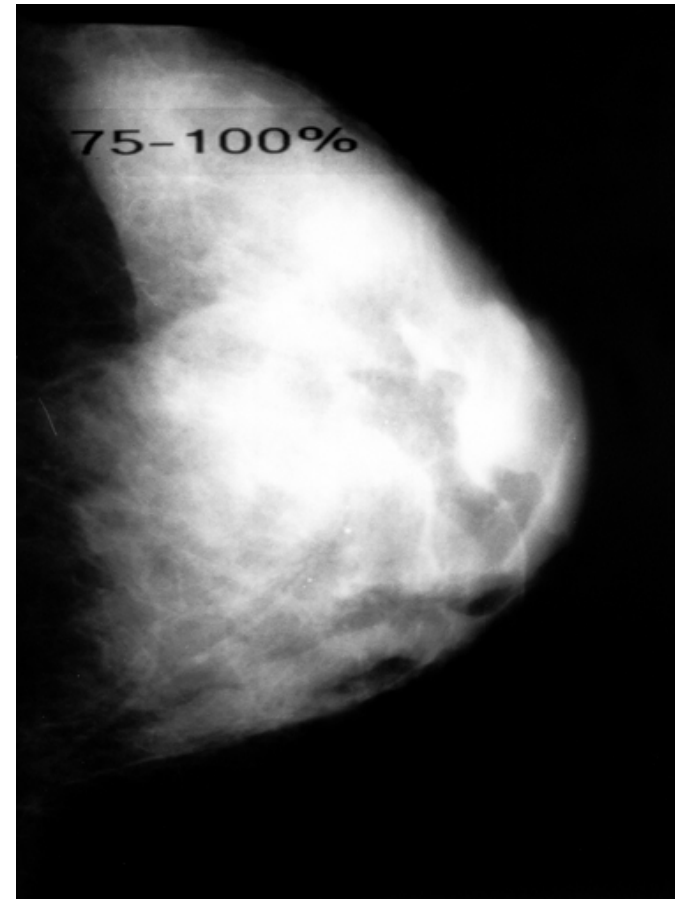
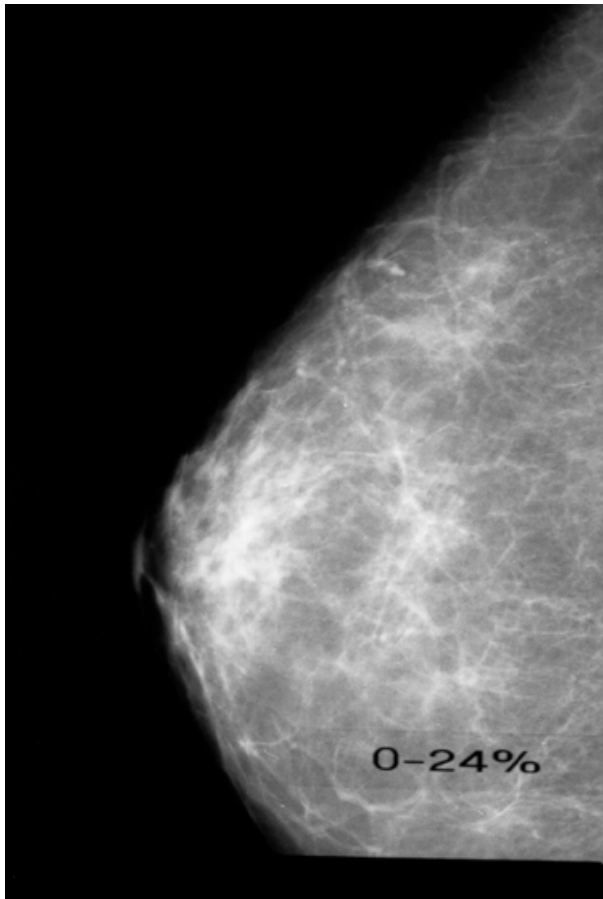
We depend highly upon our community partners to assist us with recruitment, most importantly, Public Health



# Age-specific Incidence of Breast Cancer in Ontario



# Women Under 50



# ONTARIO BREAST SCREENING PROGRAM 1990-2005

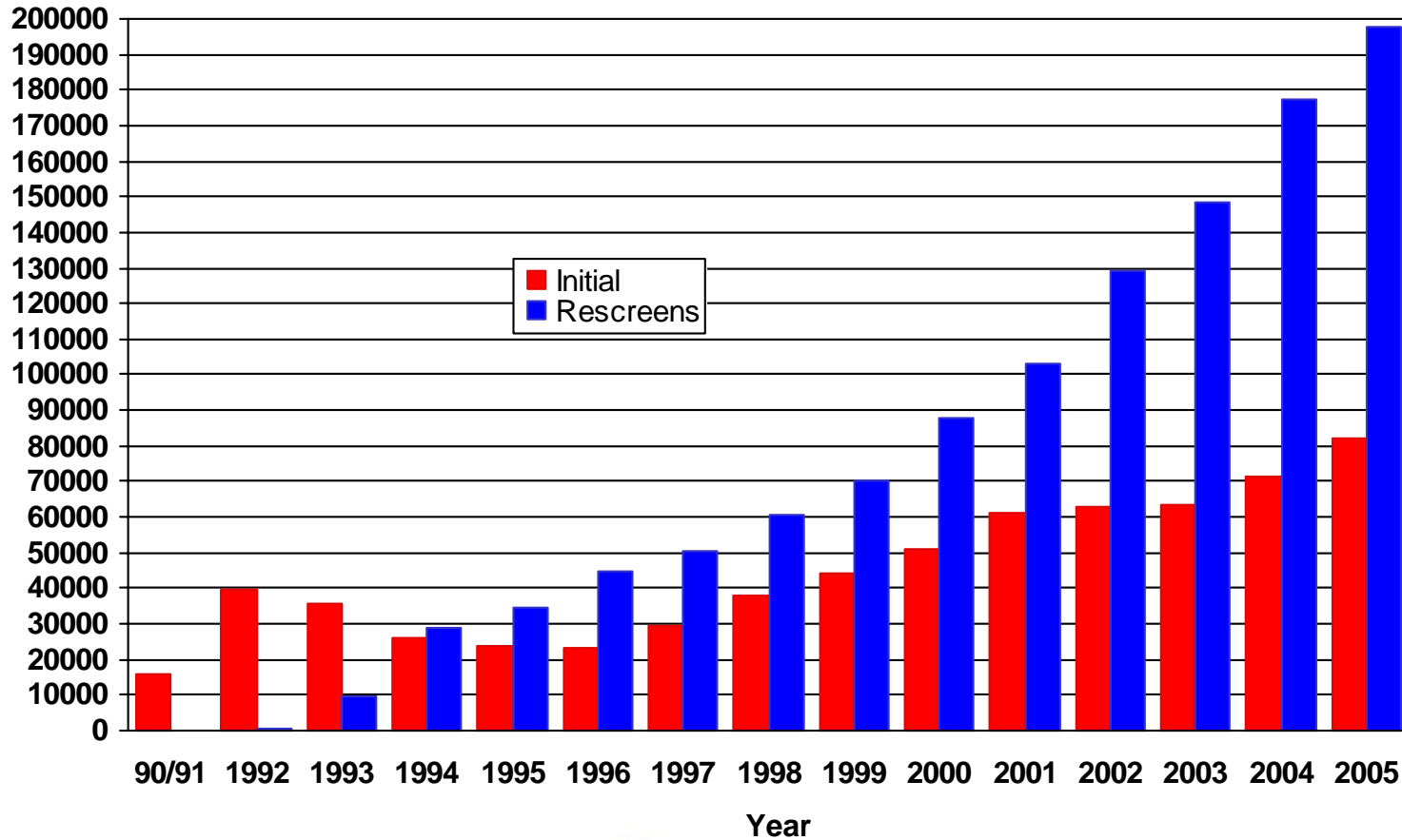
- Participation Rate
- Referral Rate
- Cancer Detection Rate
- Positive Predictive Value
- Biopsy Yield Ratio
- Diagnostic Procedures and Interval
- Histologic Features of Cancers
- Tumour Size
- Lymph Node Involvement
- TNM Staging
- Comparison to Canadian Standards

## PROGRAM OUTCOME



# Number of OBSP Screens 1990 - 2005

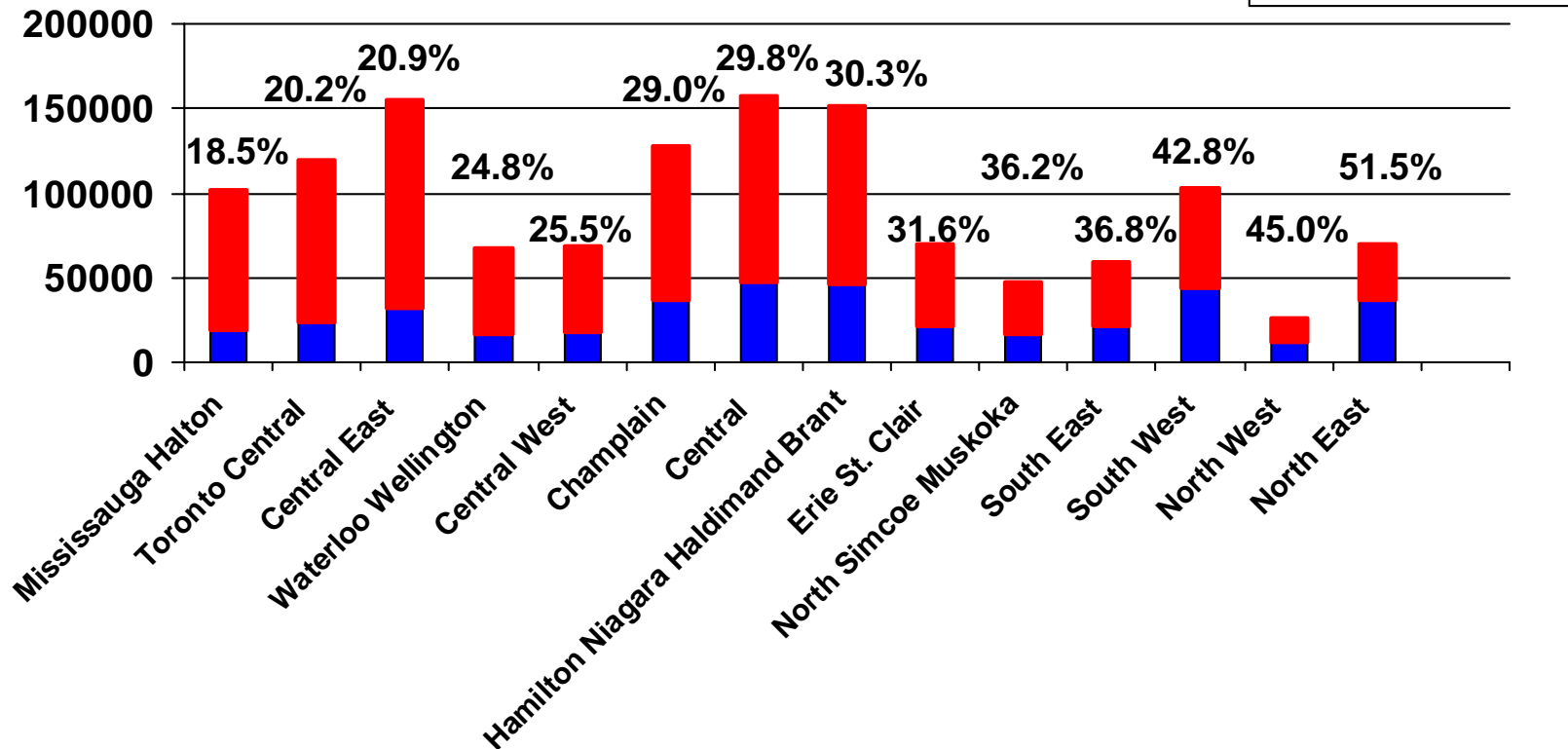
Thousands



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# OBSP Participation Rate\* in Ontario Women aged 50-69 by LHIN Region 2004 and 2005

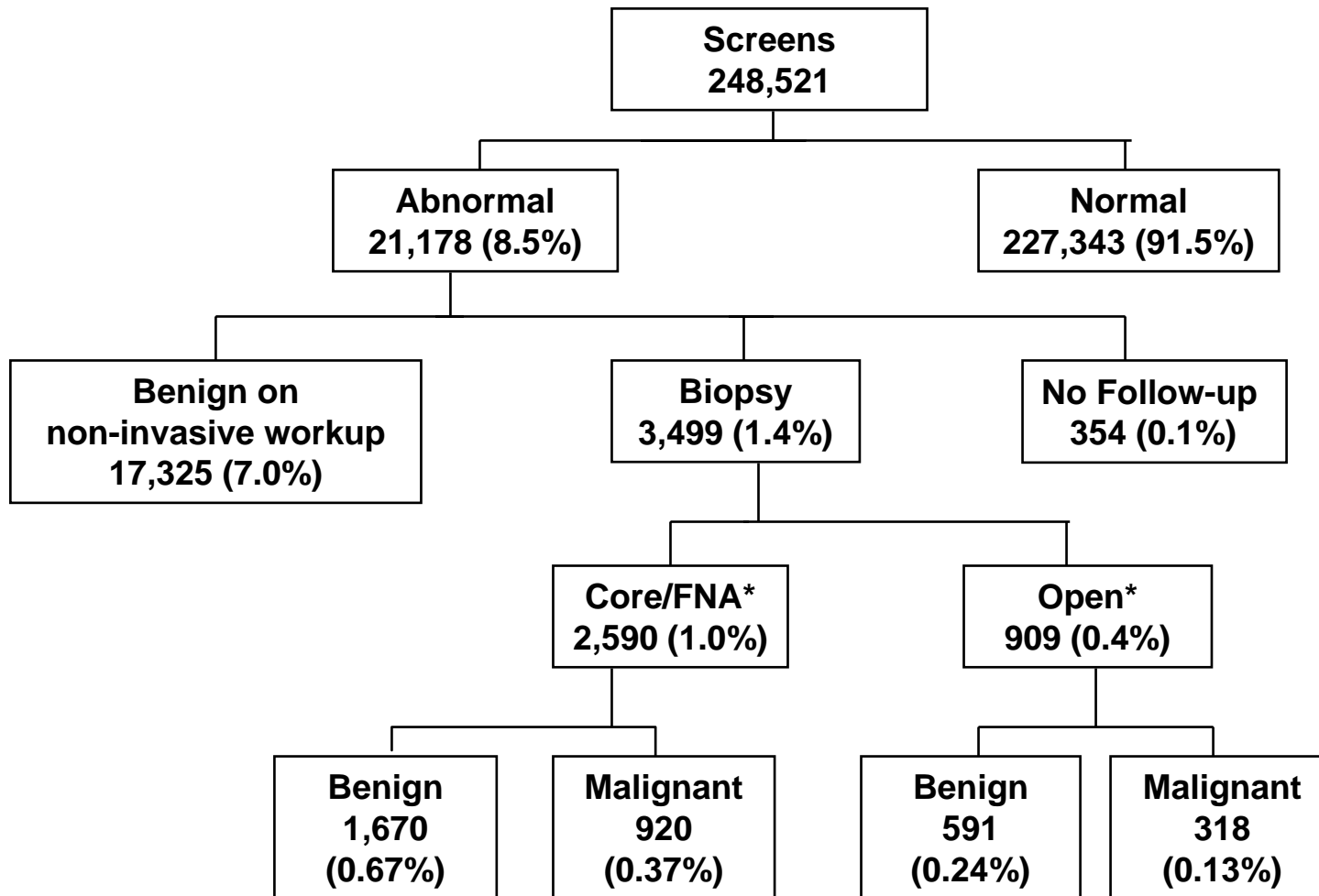
Thousands



\* Based on 2004 and 2005 Ontario population projections by LHIN from the Ministry of Finance. The OBSP participation rate for Ontario is 29.6%. The sum of the red and blue bars equals the total population.



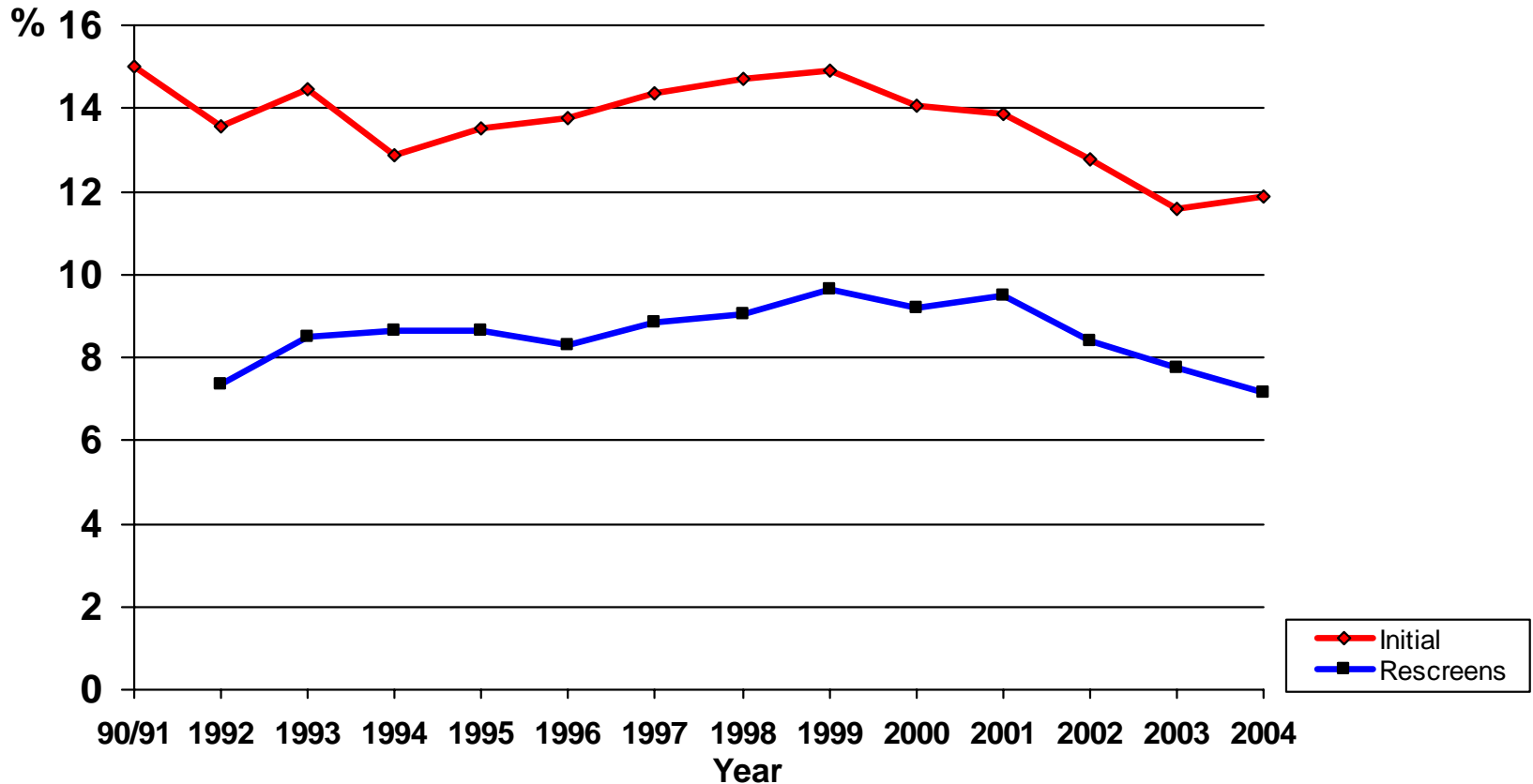
# Screening Outcome Summary 2004



•Biopsy which resulted in a final diagnosis.

Percentages may not add up precisely to the preceding total due to rounding.

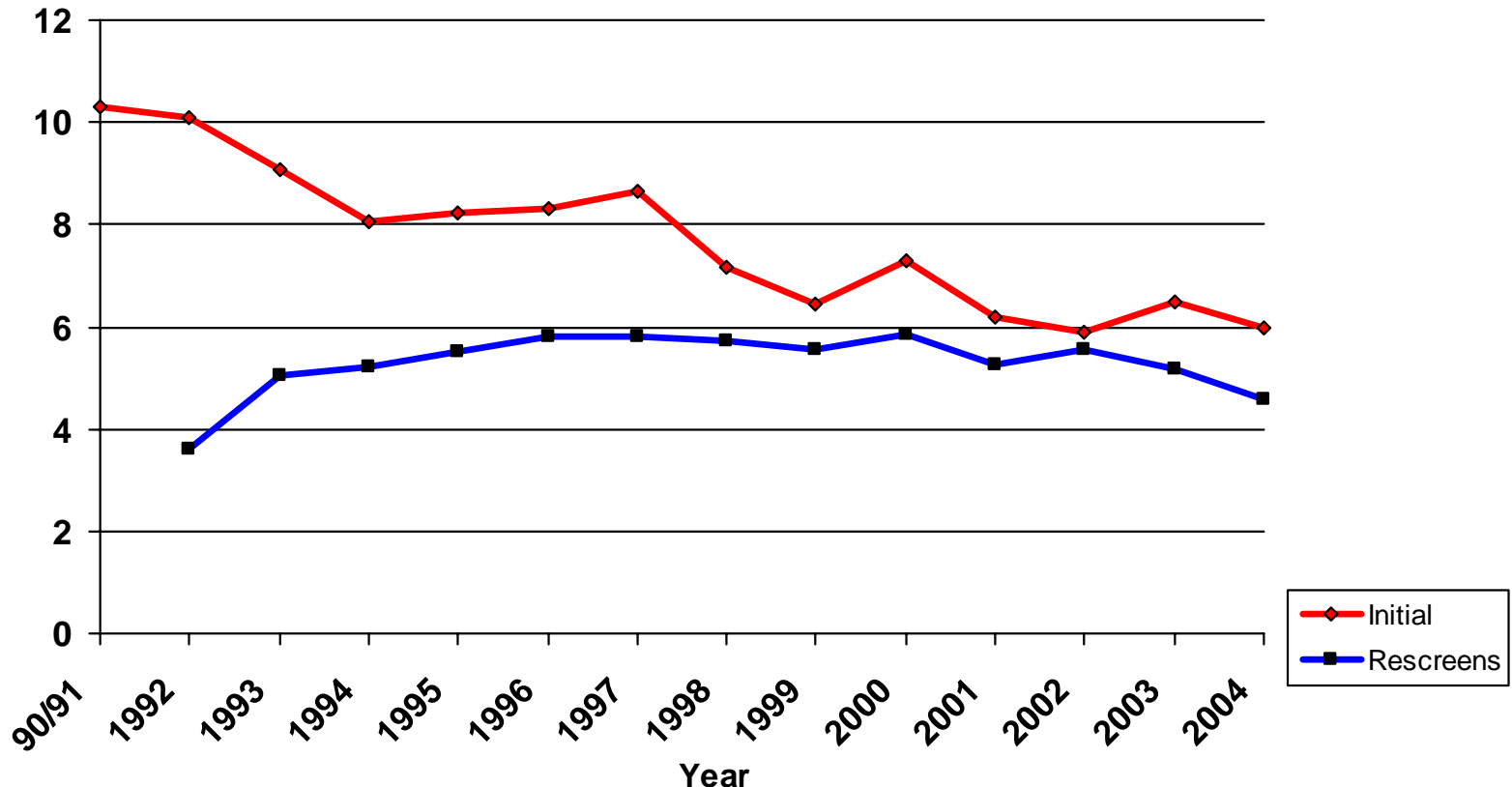
# REFERRAL RATE (%) by Screen Year and Number 1990-2004



Referral Rate is the percentage of screened women referred for diagnostic assessment

# CANCER DETECTION RATE (per 1000) by Screen Year and Number 1990-2004

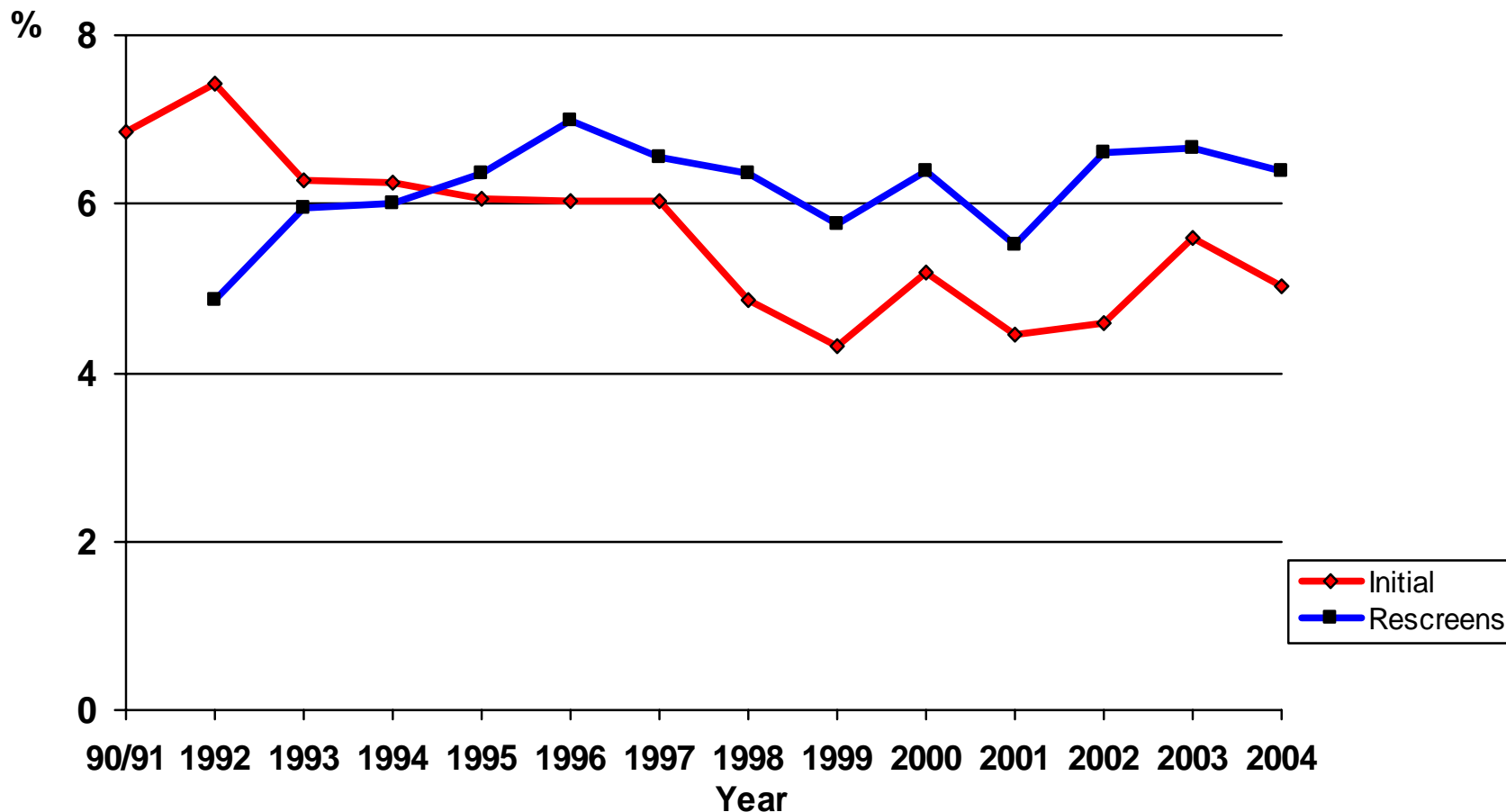
per Thousand



Cancer Detection Rate is the proportion of screened women found to have breast cancer after diagnostic assessment

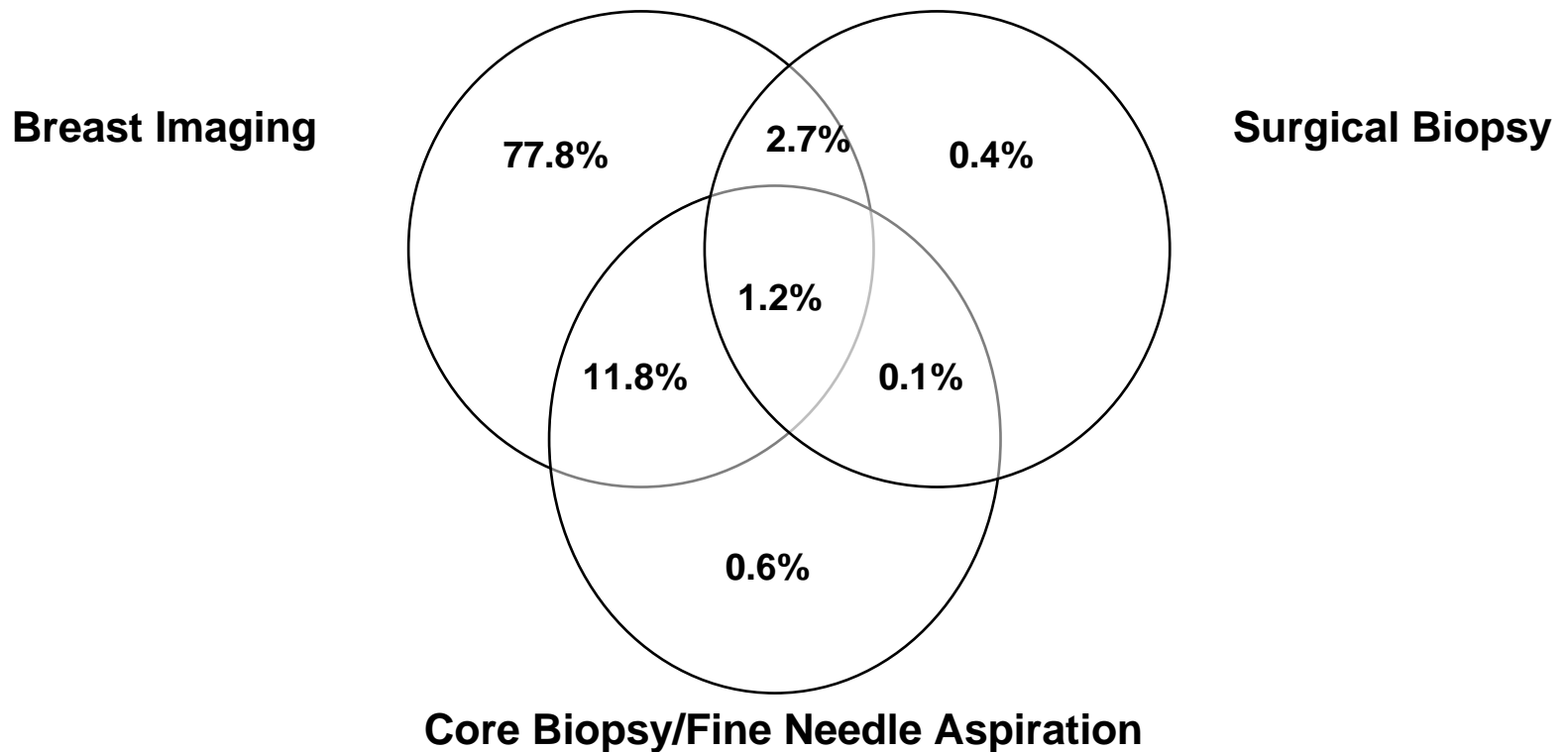


# POSITIVE PREDICTIVE VALUE (%) by Screen Year and Number 1990-2004



PPV is the percentage of referred women found to have breast cancer after diagnostic assessment

# COMBINATIONS OF DIAGNOSTIC PROCEDURES AFTER AN ABNORMAL SCREEN 2004



\* 5.4% of women only had an MD visit, surgical consult or other procedure. Procedures after date of diagnosis have been excluded.



# DIAGNOSTIC INTERVAL 2004, Ages 50-69

**With tissue biopsy  
(includes core or open biopsy)**

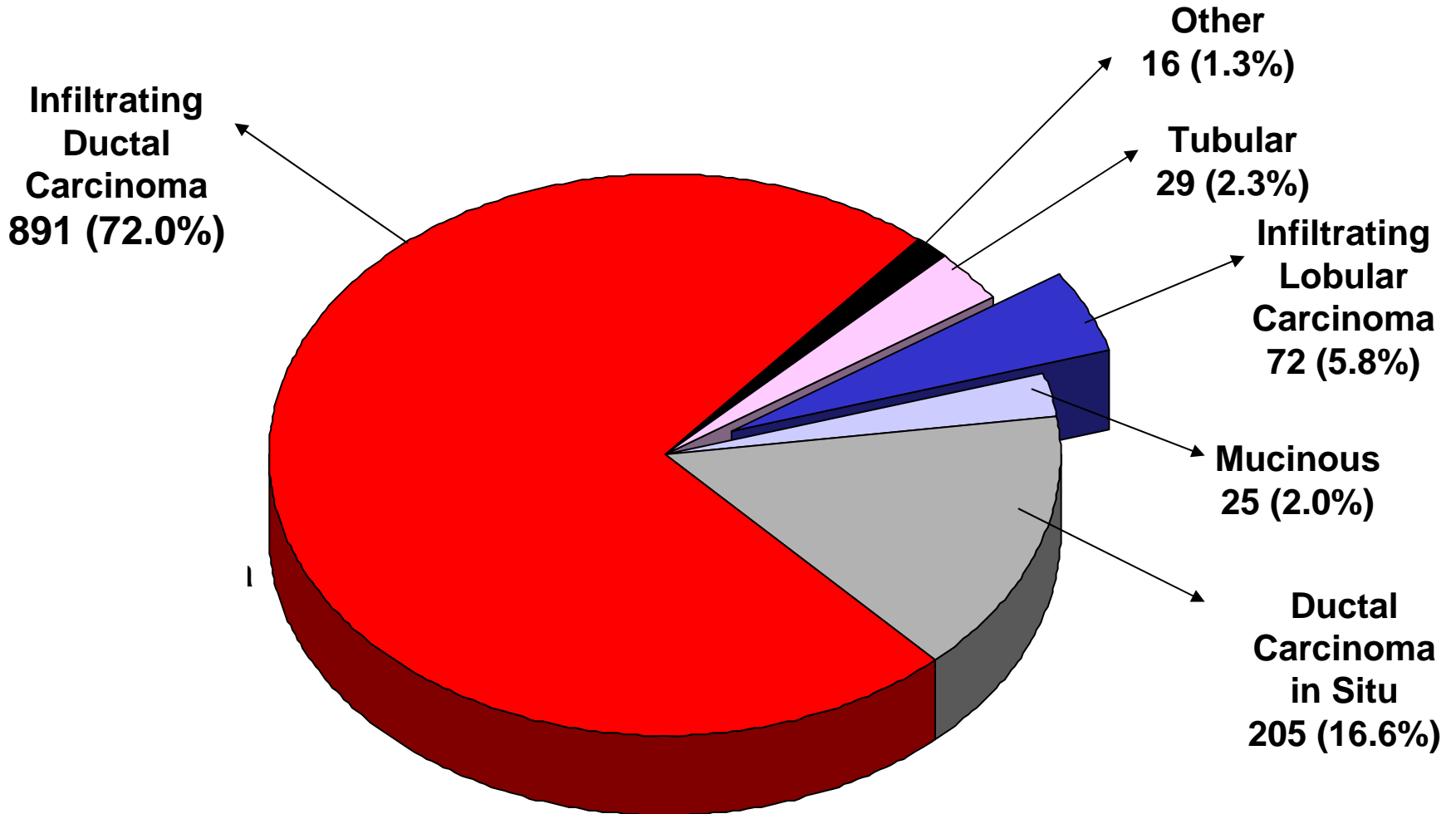
**Without tissue biopsy**

<u>Diagnostic Interval</u>	<u>Frequency</u>	<u>Cumulative Percent</u>	<u>Frequency</u>	<u>Cumulative Percent</u>
within 5 weeks	973	37.42	12,564	79.96
within 7 weeks	491	56.31	1,217	87.70
within 3 months	645	81.12	927	93.60
within 6 months	413	97.00	646	97.72
within 12+ months	78	100.00	359	100.00

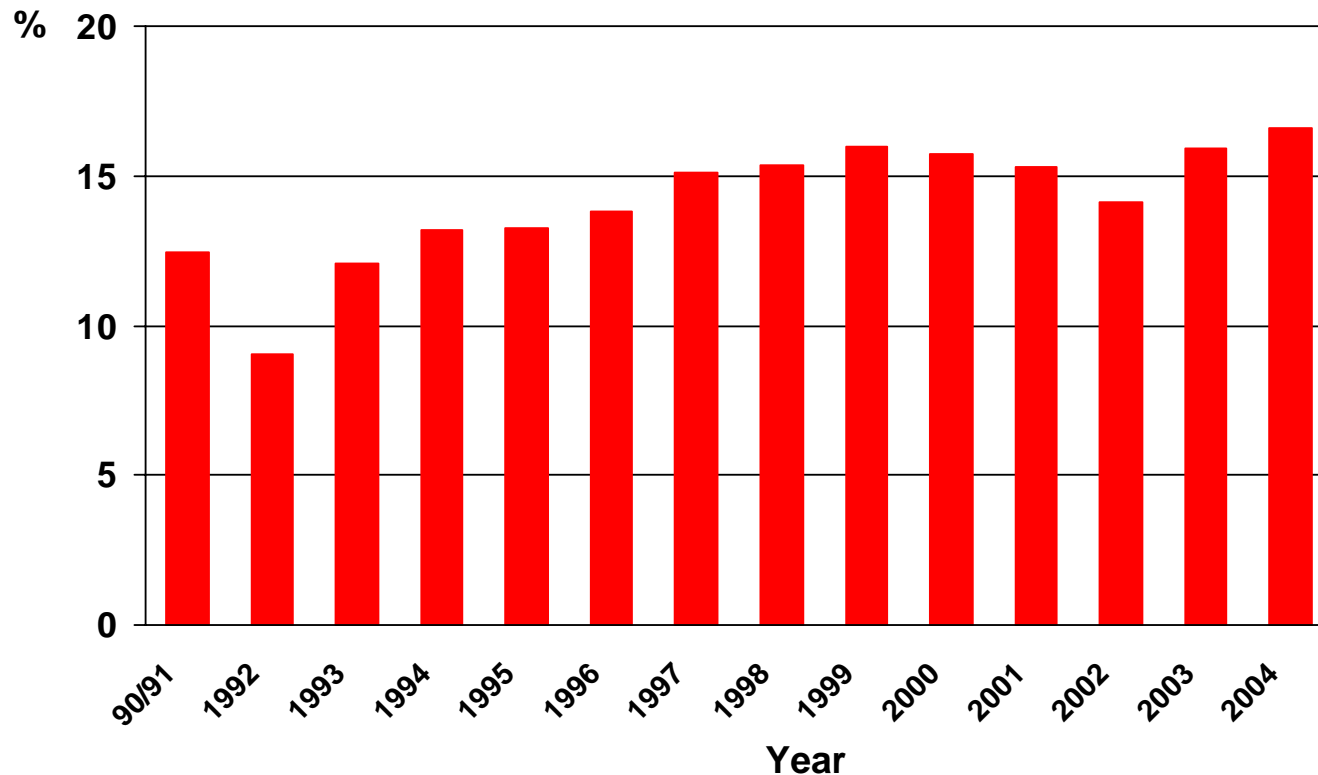


# HISTOLOGY OF CANCERS DETECTED

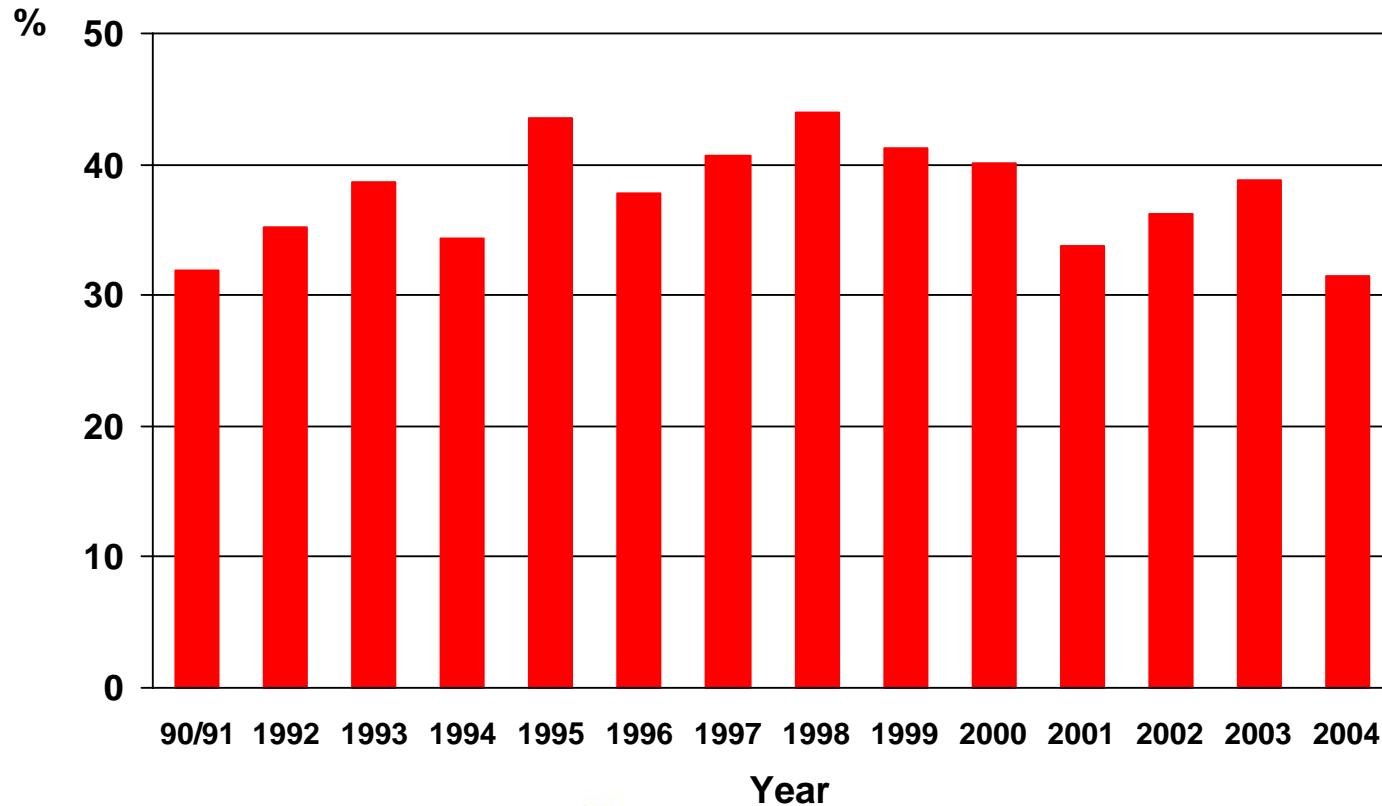
2004 (n=1,238)



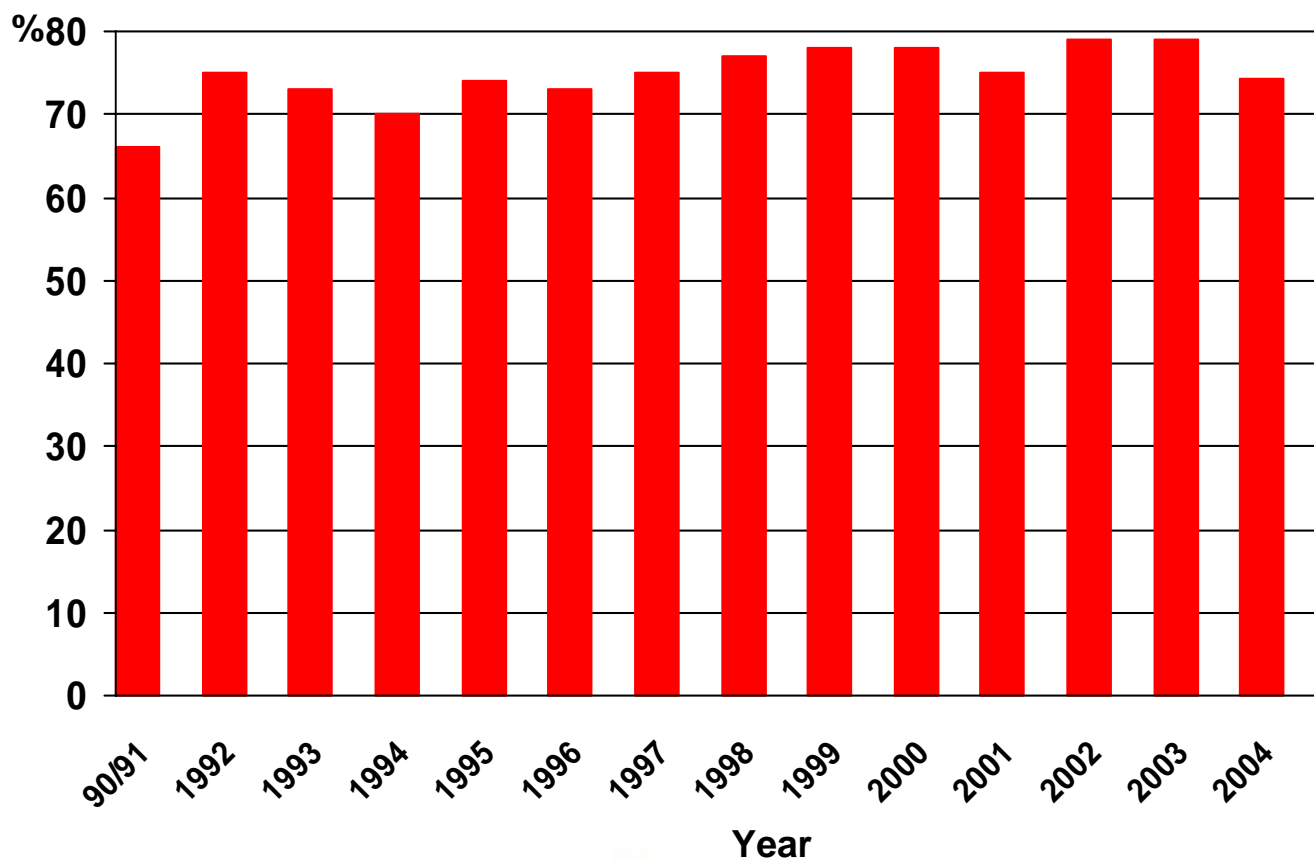
# PERCENTAGE OF DCIS by Screen Year 1990 - 2004



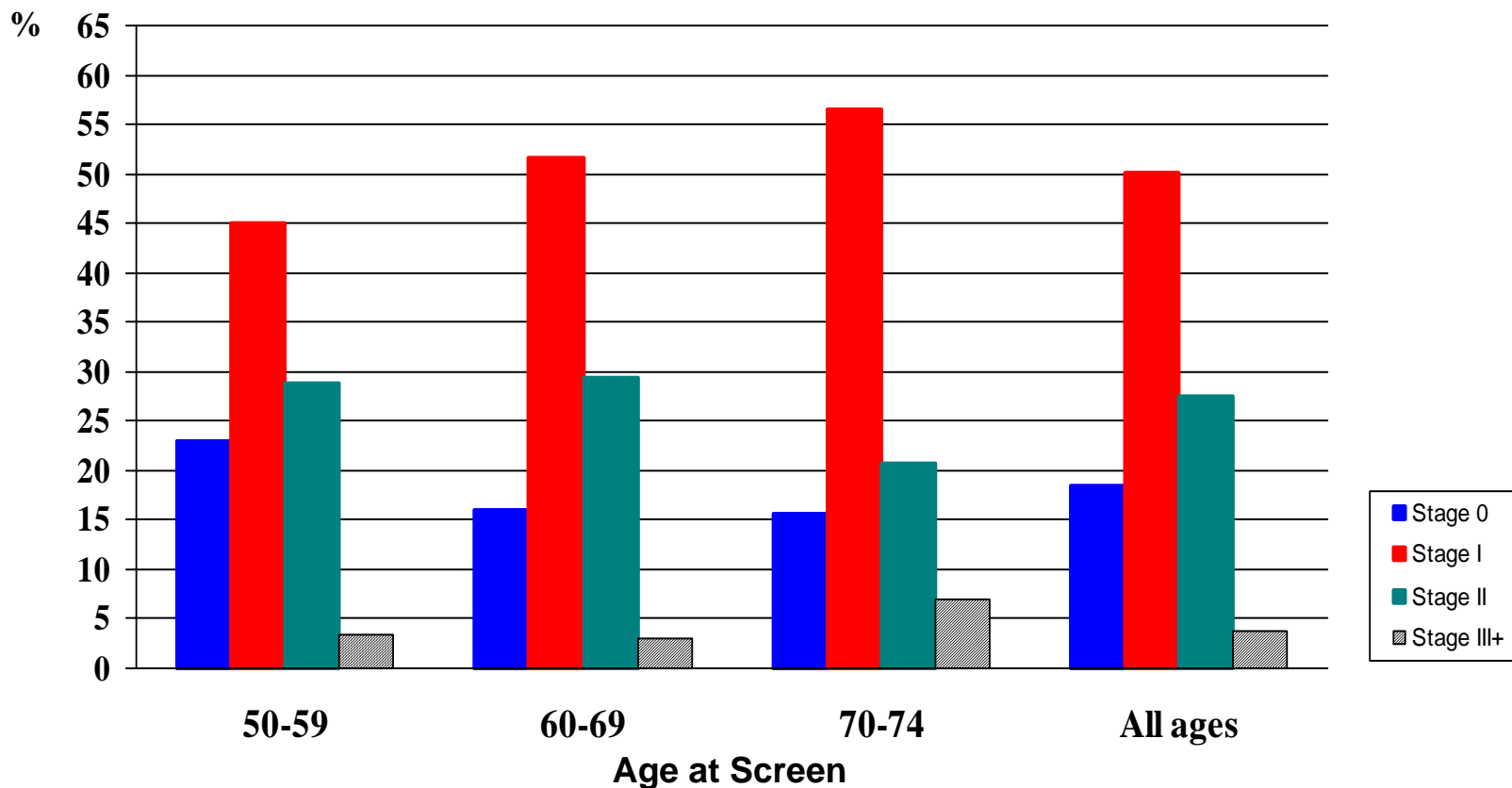
# INVASIVE CANCERS $\leq 10\text{mm}$ (%) by Screen Year 1990 - 2004



# INVASIVE CANCERS WITH NO LYMPH NODE INVASION (%) by Screen Year 1990 - 2004



# TNM STAGING FOR CANCERS by Age Group 2004 (n=1,125\*)



\*TNM stage is available for 91% of screen detected breast cancers

# What's the bottom line?

- Breast cancer mortality rates in Ontario women aged 50-69 decreased 29% between 1989 and 2002.



This dramatic decrease is attributed to increases in the number of women attending breast screening and improvements in treatment.



# How have we done in Southeastern Ontario?



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## In the Southeast Region.....

- We started out in September of 1990 with no facility, no staff, no equipment, no policies and procedures, no budget, no Information System and no clients.
- We now screen over 8500 women each year in Kingston at the Blackburn Mews site and support a regional program that screens an additional 18,000 annually
- Incidentally, there are 111 sites province-wide



# Sites in the Southeast Region

Hub : April 1991    OBSP- Kingston Centre

Screening Affiliates:

1995 PRHC- Roger's Street Site

1997 QHC-BGH and Trenton Memorial

1999 Ross Memorial Hospital in Lindsay

1999 Port Perry- Port Perry Imaging

2000 Brockville General Hospital

2001 QHC- Prince Edward County Memorial

2001 Campbellford Memorial Hospital

2003 The Medical Centre, Peterborough

2005: Hotel Dieu Hospital- Kingston



# ONTARIO BREAST SCREENING PROGRAM

## Women aged 50-69, Total Mammography by LHIN Region, 2004

Indicator	<u>Southeast</u>	<u>OBSP</u>	<u>Canadian Standard</u>
<b>Referral Rate (%)</b>			
Initial	11.8	10.4	<10
Rescreen	6.5	5.9	<5
<b>Invasive Cancer Detection Rate (per 1000)</b>			
Initial	6.1	4.0	>5
Rescreen	4.1	3.3	>3
<b>Positive Predictive Value (%)</b>			
Initial	5.2	5.0	≥5
Rescreen	7.8	6.8	≥6
<b>Benign to Malignant   Direct to Open Biopsy Ratio</b>	1.5:1	1.7:1	≤2:1??
<b>Tumour Size ≤10mm (%)</b>	35.3	32.6	>25
<b>Node Negative (%)</b>	78.7	73.0	>70
<b>Time to diagnosis (%)</b>			
<b>Within 5 weeks</b>			
without a tissue biopsy	77.5	84.0	≥90
<b>Within 7 weeks</b>			
with a tissue biopsy	54.3	58.0	≥90



# Why do we monitor so many outcomes?

1. We need to be able to show that we are doing what we are supposed to be doing, that is, finding early cancers.
2. Screening must be of the utmost quality in order to make a difference. Monitoring outcomes facilitates continuous quality improvement.



# What's next 'in store' for cancer screening?

- A proposed colorectal cancer screening program in Ontario
- Using FOBT
- Males and females aged 50-74
- Recall every 2 years



# How does Organized Screening Relate to you?

1. Depending on your age and risk factors, you should be being screened for cervical and perhaps breast and colorectal cancer.

2. You interact with a number of patients and can reinforce screening guidelines with your patients and their family members.  
Be a recruiter!

3. There may be unique career opportunities for nurses in screening. For example, nurses performing clinical breast exams in the OBSP. There will be opportunities for nurses in a colorectal cancer screening program. There is a study looking at the feasibility of non-physicians doing tests such as flexible sigmoidoscopy. There are nurses running cervical screening clinics in this region.

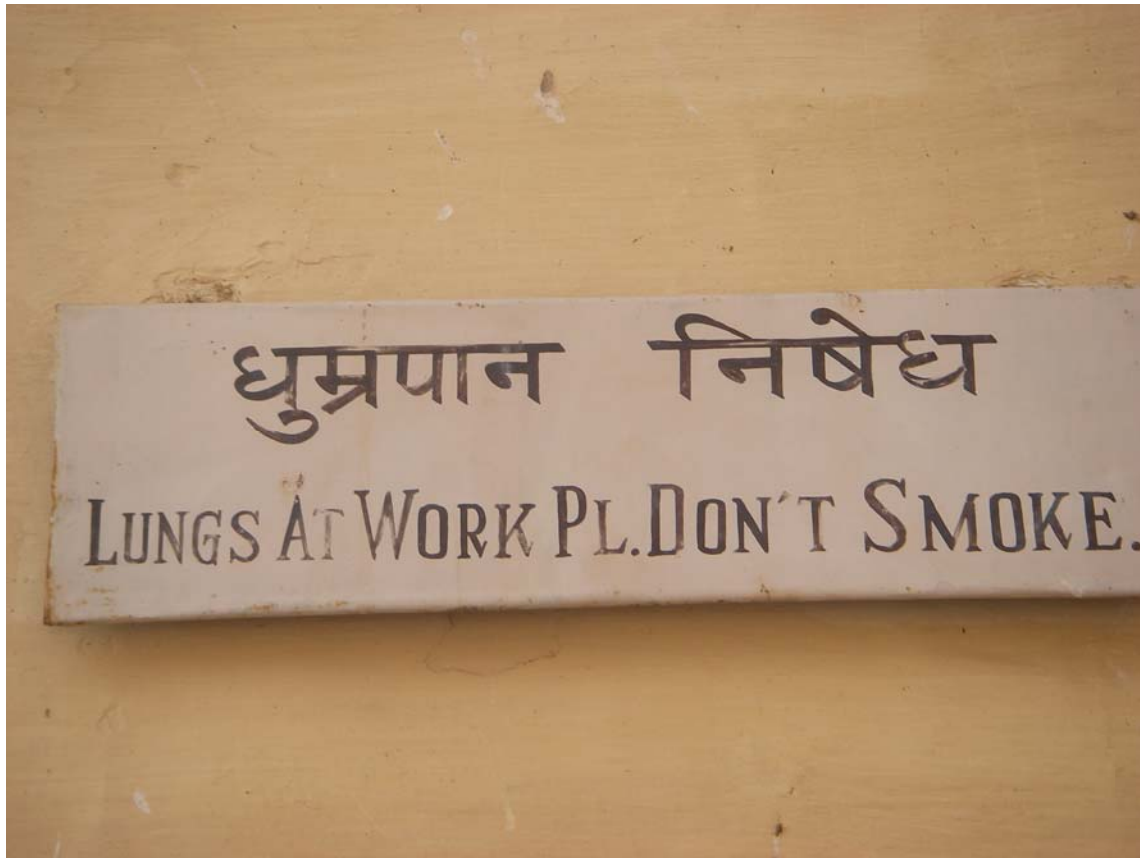


Screening alone is not sufficient to reduce cancer mortality. We need to do more.





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# Proves I was there!

