

Breast Cancer: Magnitude of the Problem

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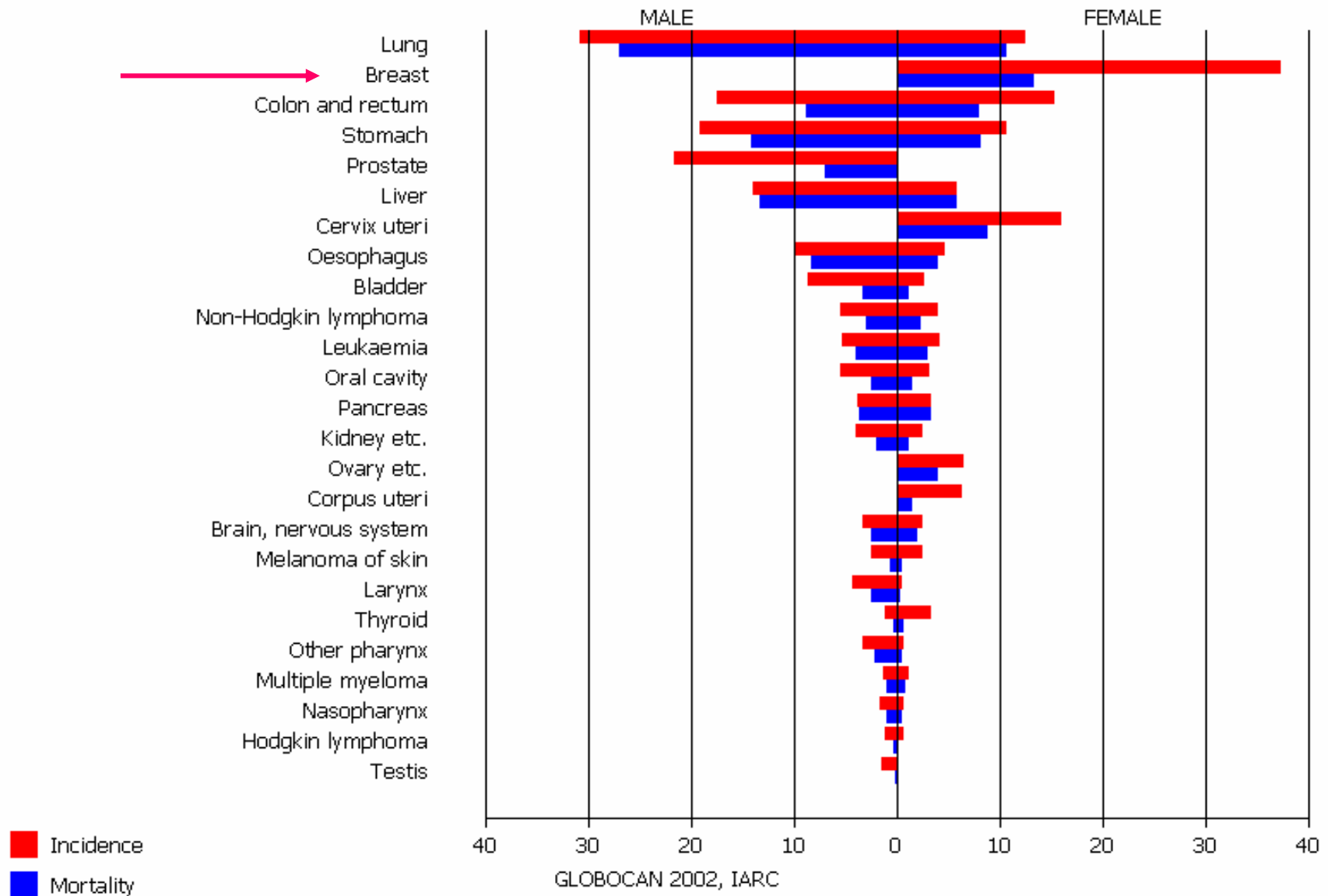
Egyptian Society of Surgical Oncology Conference
Taba - Sinai
30 March – 1 April 2005

Outline

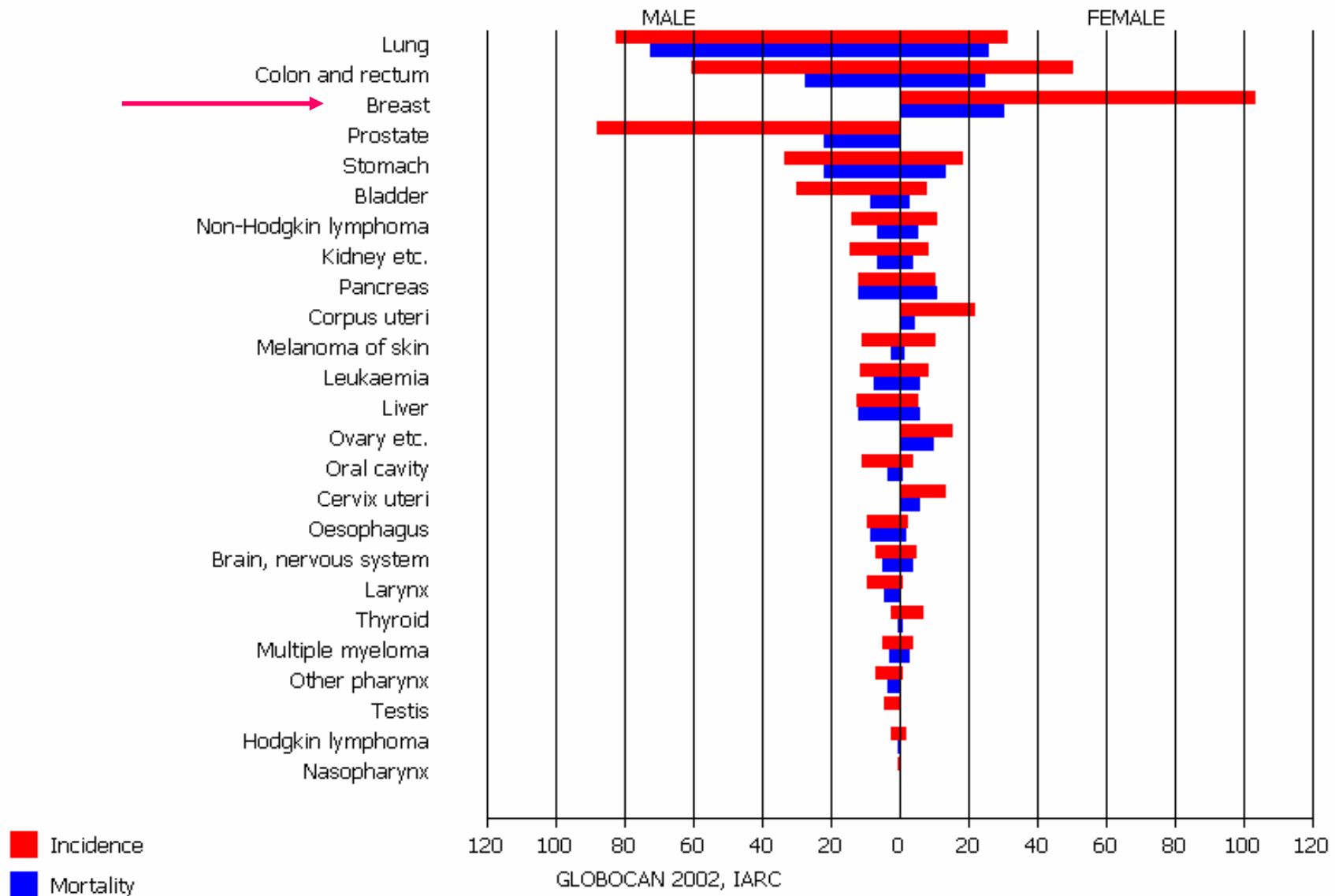
- World Incidence of Breast Cancer
- Frequency of Breast Cancer in Arab World
- Frequency of Breast Cancer in Egypt
- Risk Factors of Breast Cancer

Breast cancer is the second leading cause of deaths in women today (after lung) and it is the most common cancer among women worldwide (23% of all new cancer cases).

World Crude rate per 100,000 (all ages)



More developed regions Crude rate per 100,000 (all ages)

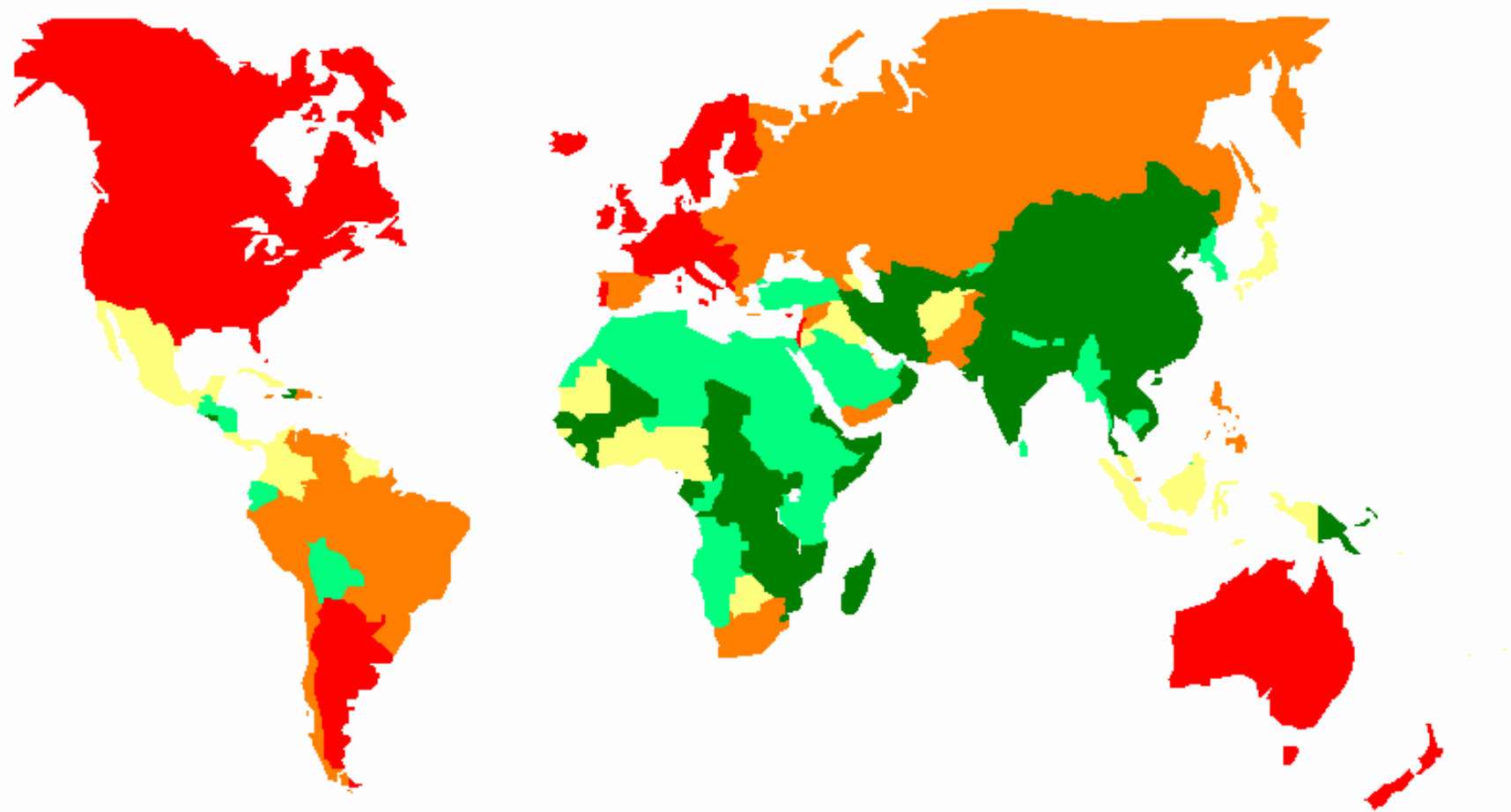


World Estimates, Globocan 2002

	Number of new cases	Incidence	Death
World	1,151,298	37.4	13.2
More developed countries	636,128	67.8	18.1
Less developed countries	514,072	23.8	10.3

Rates/100,000

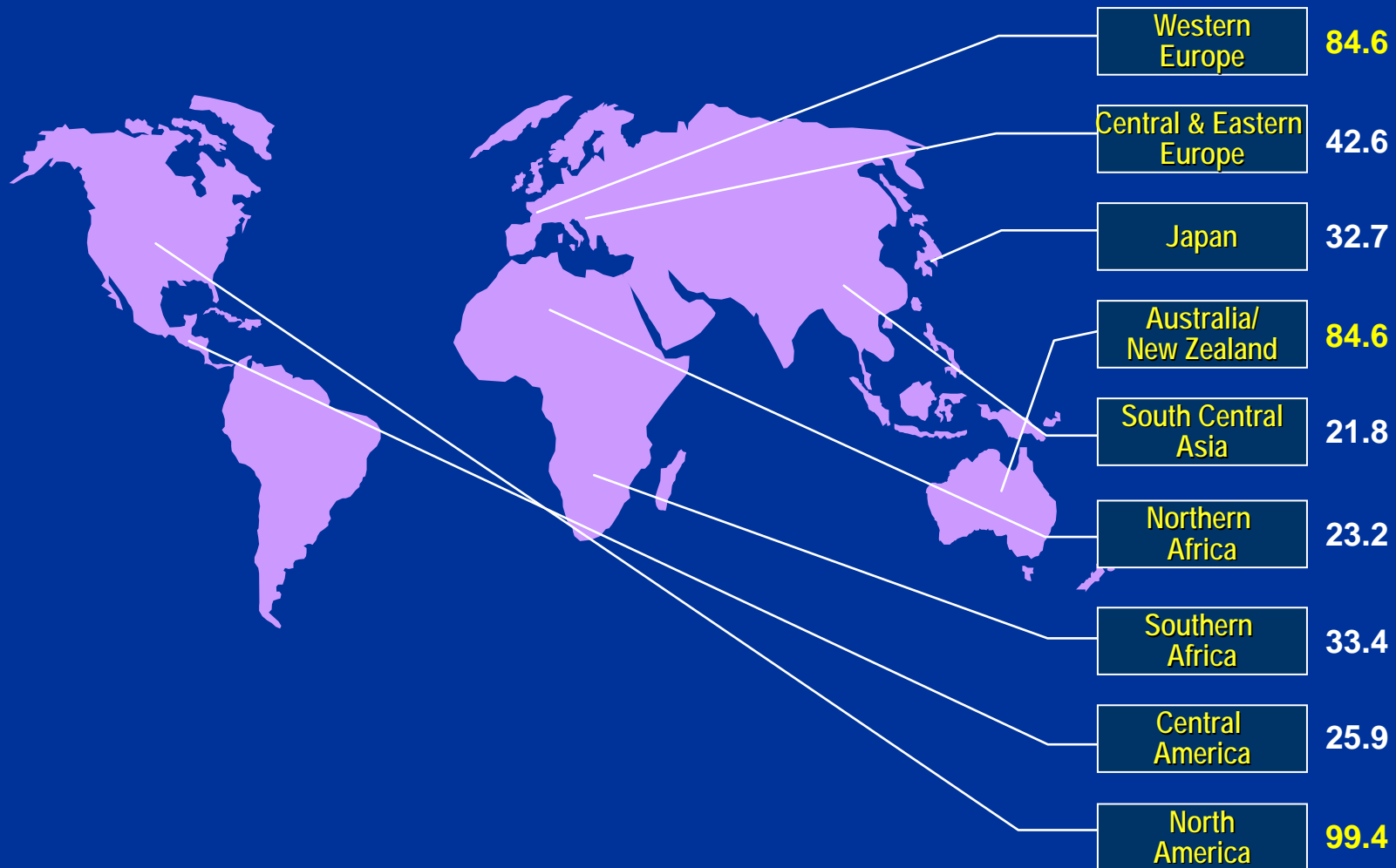
Breast
Age-Standardized incidence rate per 100,000



■ < 19.5 ■ < 25.9 ■ < 34.2 ■ < 52.2 ■ < 101.1

GLOBOCAN 2002, IARC

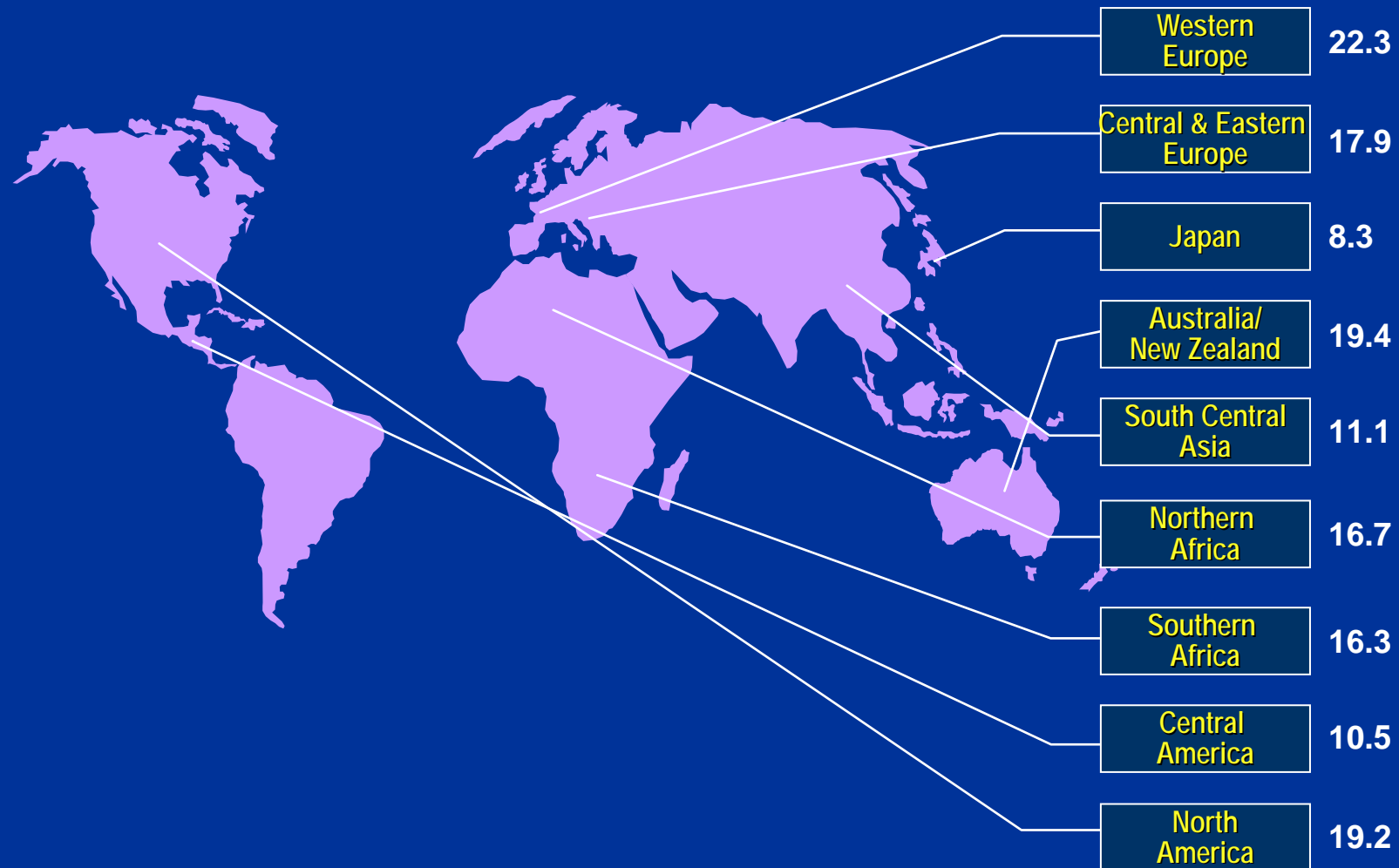
Worldwide Age-Adjusted Incidence Rates in Females by Region *



*Incidence per 100,000 population

(Globocan, 2002)

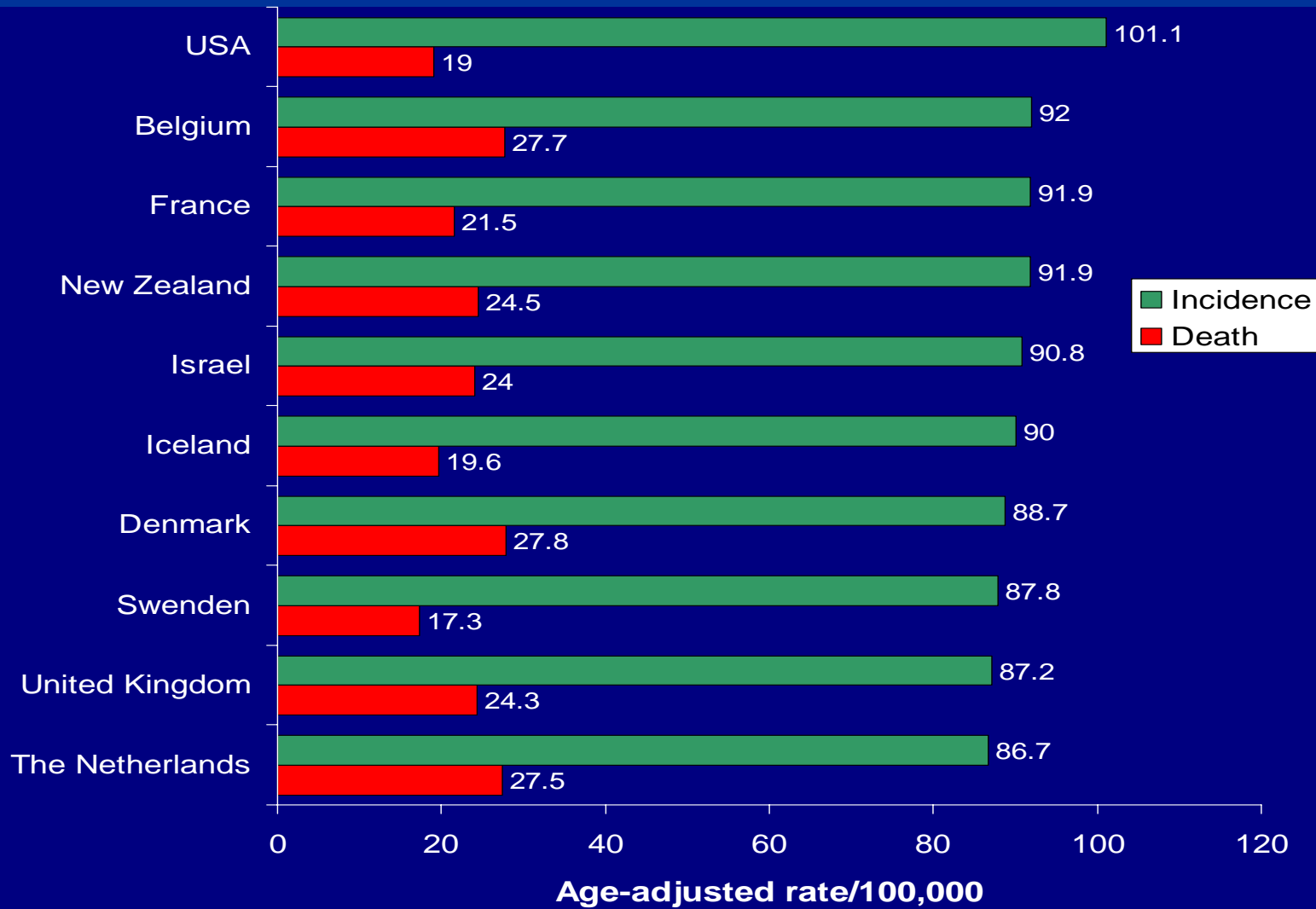
Worldwide Age-Adjusted Death Rates in Females by Region *



Death per 100,000 population.

(Globocan, 2000)

Countries with Highest Age-Adjusted Rates, Globocan 2002

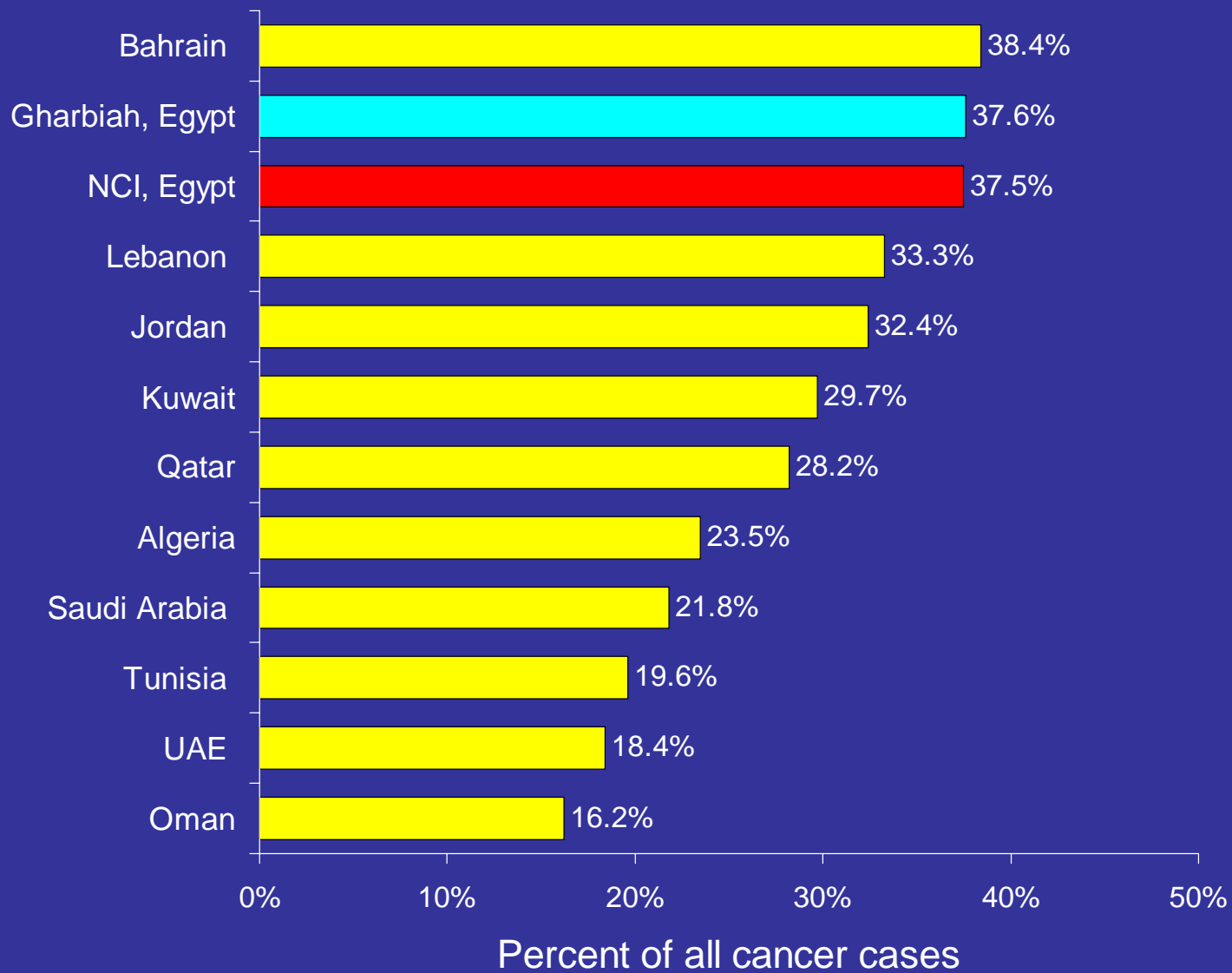


Mortality for leading cancers

Females by Age (years), US

All Ages	20-39	40-59	60-79	≥ 80
Lung 63,075	Breast 1,604	Breast 11,889	Lung 39,077	Lung 13,392
Breast 41,737	Uterine cervix 634	Lung 10,155	Breast 18,292	Colorectal 12,174
Colorectal 28,950	Leukemia 456	Colorectal 3,472	Colorectal 12,950	Breast 9,949
Pancreas 14,529	Lung 442	Ovary 2,841	Pancreas 7,454	Pancreas 5,193
Ovary 13,391	Brain & CNS 401	Pancreas 1,775	Ovary 7,038	NHL 3,881

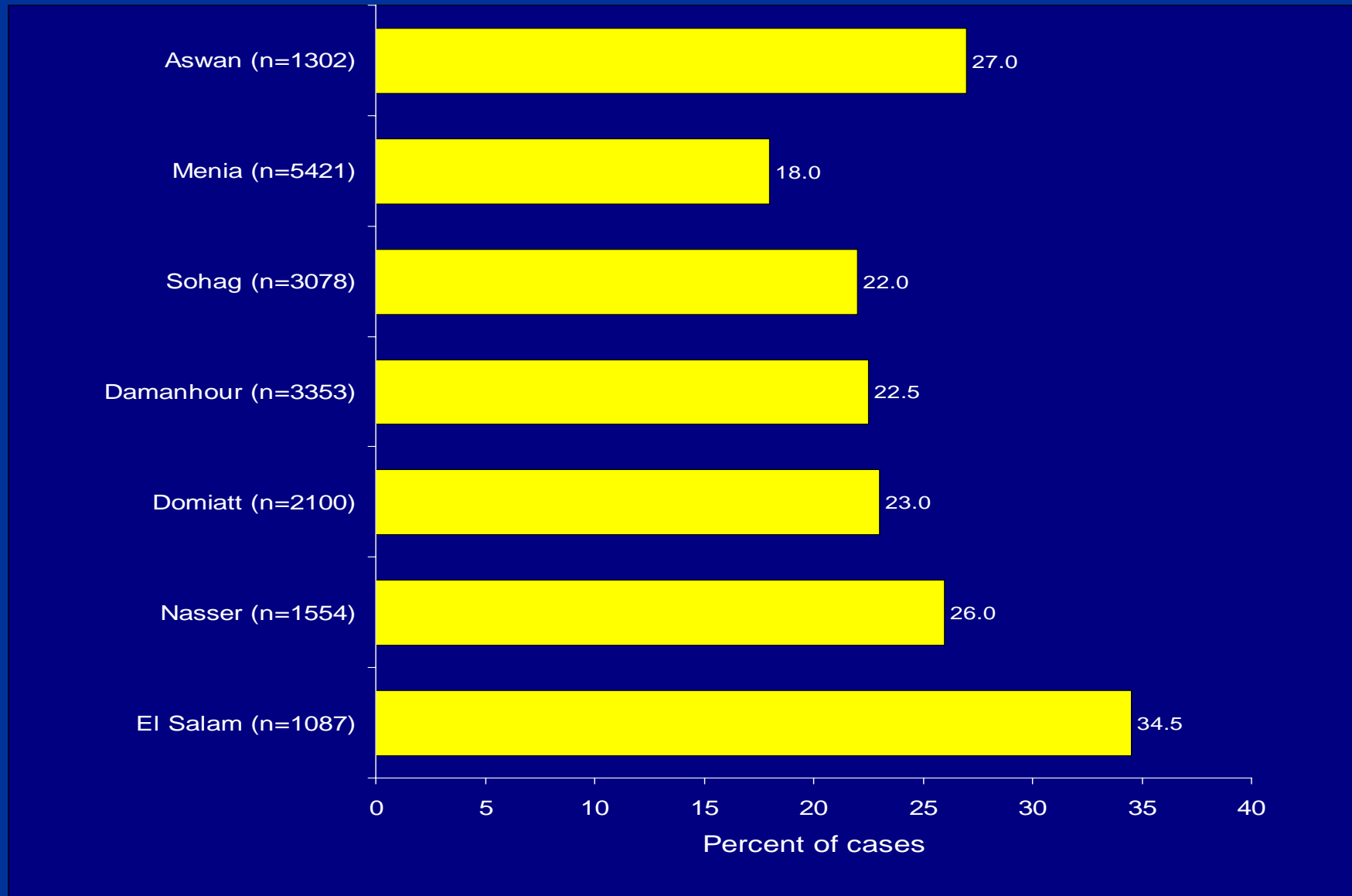
Frequency of Breast Cancer in Arab World (Females)



Frequency of Breast Cancer

Central Cancer Registry (1/1/99-31/6/01)

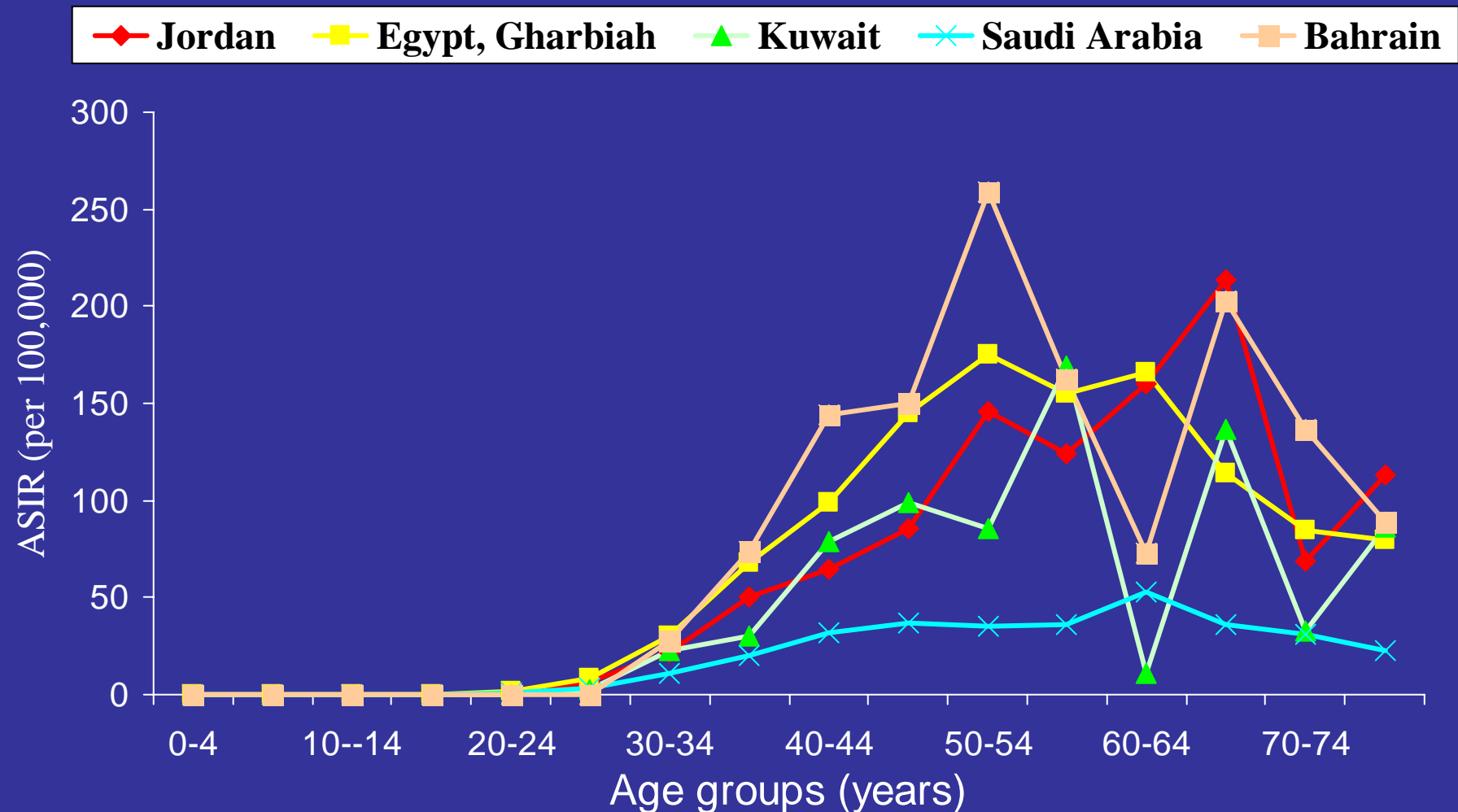
EGYPT



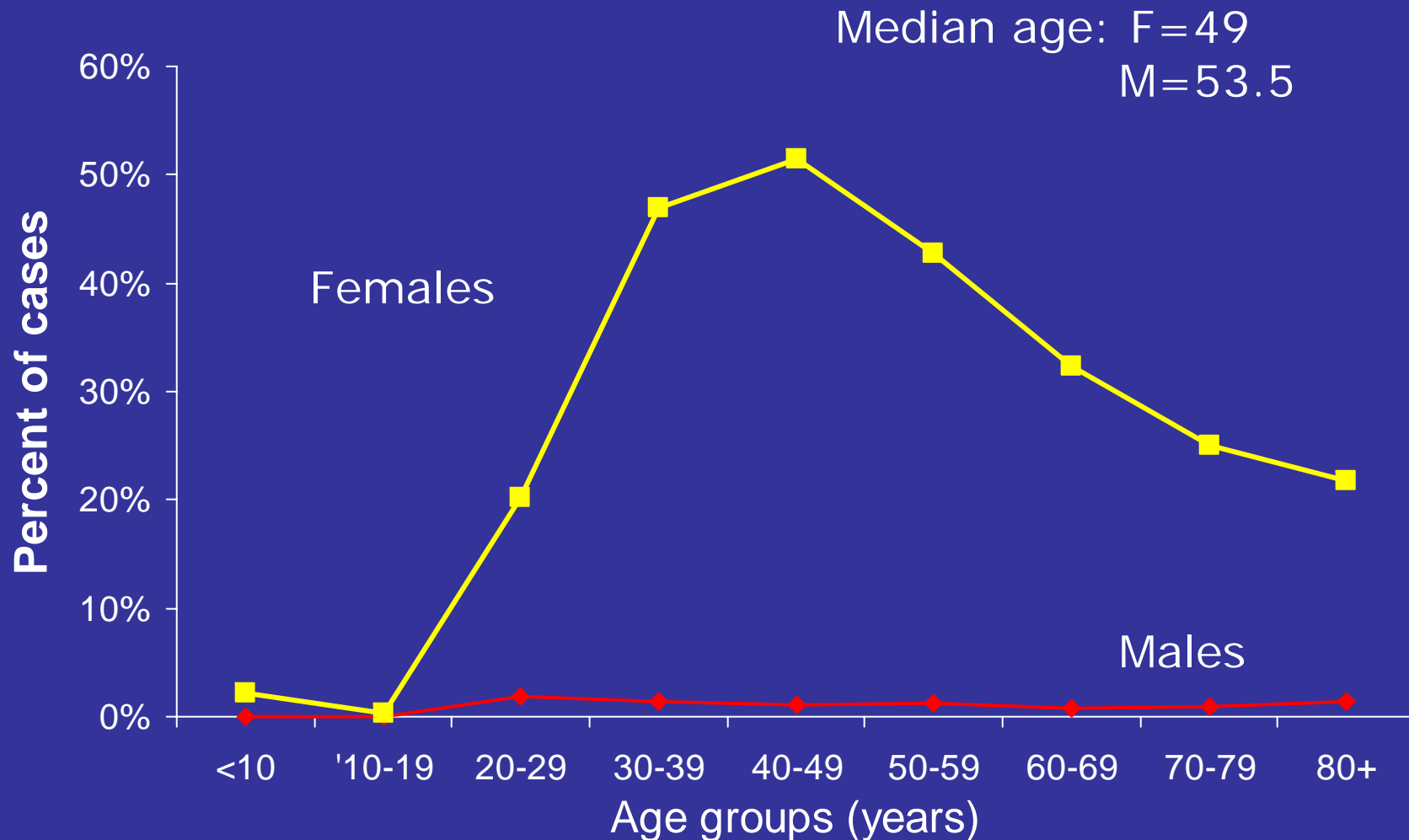
Age of Breast Cancer Female Cases in Selected Arab World

Country	Median (years)
Egypt (NCI)	49.0
Egypt (Gharbiah)	48.7
Saudi Arabia	47.0
Kuwait	49.6
Jordan	51.2
Bahrain	47.6
Oman	46.4
Lebanon	48.7

Age-Specific Incidence Rates (ASIR) of Breast in Selected Arab Countries (Females)



Age-Specific Frequency of Breast Cancer, NCI 2002- 03

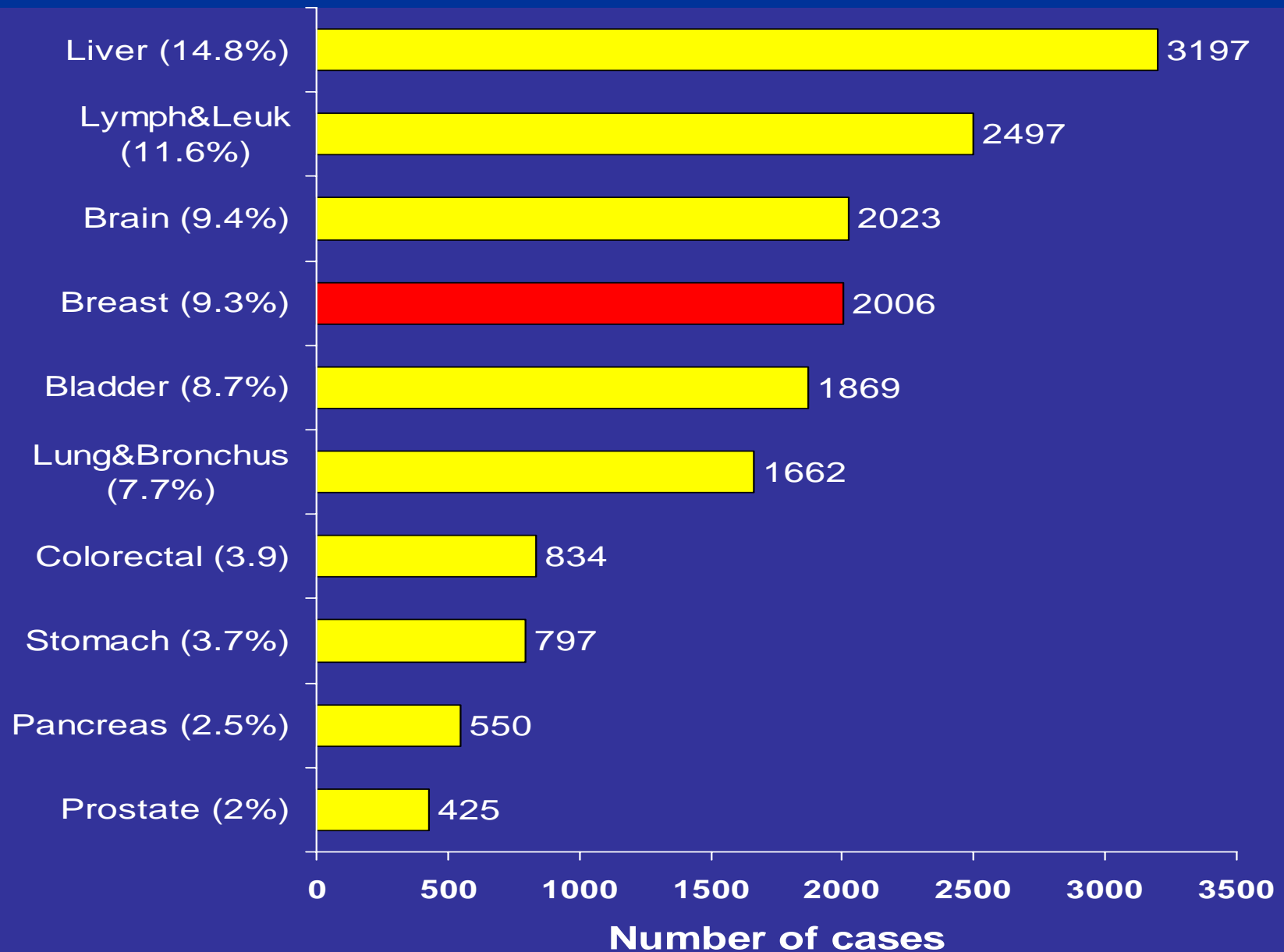


Most Frequent Pathological of Breast Cancer Female Cases in Selected Arab World

Country	IDC
Egypt (NCI)	85.9%
Egypt (Gharbiah)	75.0%
Saudi Arabia	78.9%
Kuwait	79.4%
Jordan	76.0%

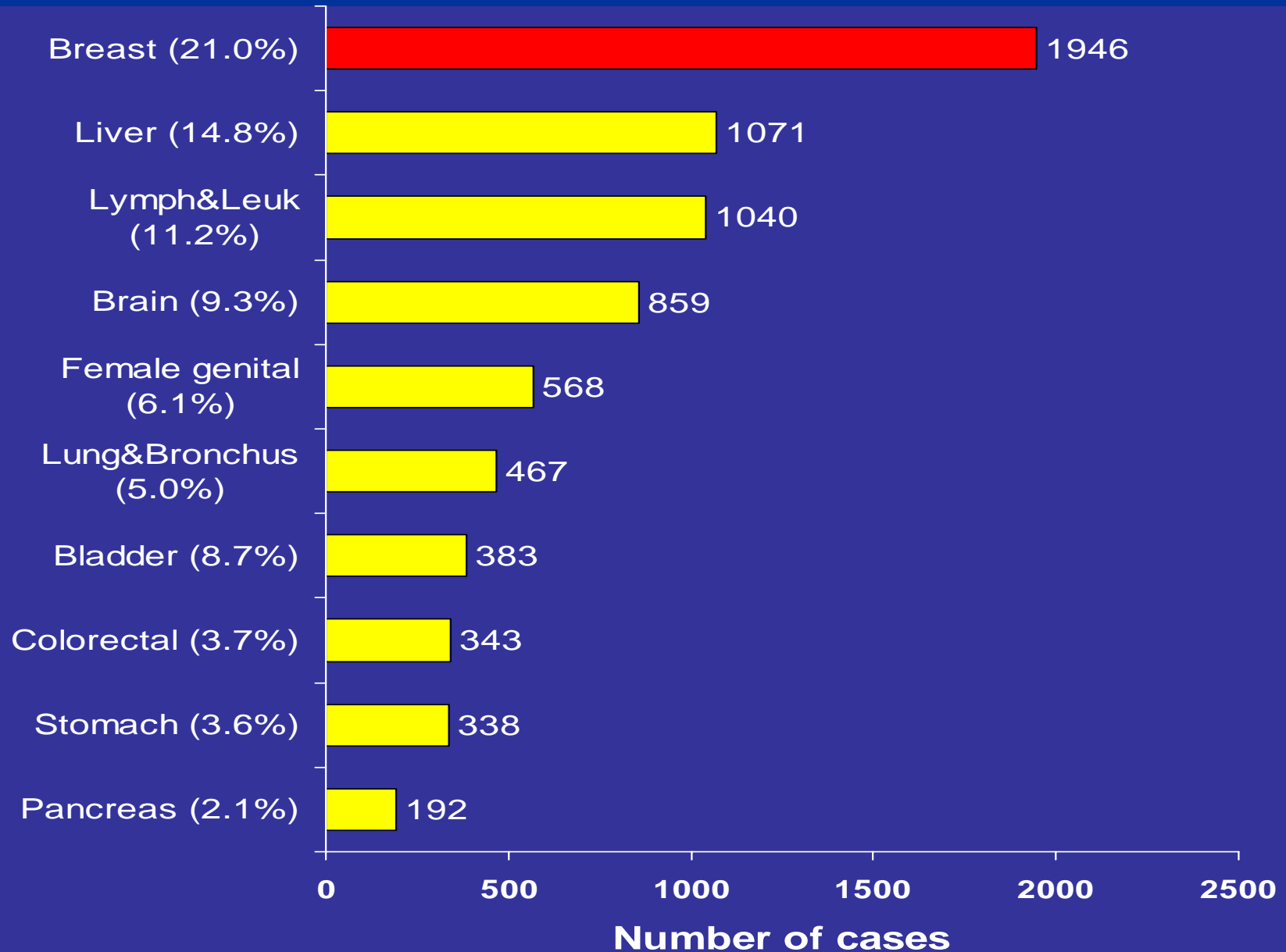
Egypt Mortality Statistics, 2001

Most Common Sites (The Cancer Database, 2001)



Egypt Mortality Statistics, 2001

Most Common Sites in Women (The Cancer Database, 2001)



What Factors Influence Breast Cancer Survival? Time Since Diagnosis

Time since diagnosis	5-year Relative Survival Rate
Five years after diagnosis	87%
After 10 years	77%
After 15 years	63%
After 20 years	52%

Source: American Cancer Society

What Factors Influence Breast Cancer Survival?

Age at Diagnosis

Age at diagnosis	5-year Relative Survival Rate
< 45 years	83%
45-54 years	87%
55-64 years	88%
65-74 years	89%
75 years and over	86%

Source: American Cancer Society

What Factors Influence Breast Cancer Survival?

Stage of Disease

Stage	5-year Relative Survival Rate
0	100%
I	98%
IIA	88%
IIB	76%
IIIA	56%
IIIB	49%
IV	16%

Source: American Cancer Society

Natural history

- Highly variable in different patients
- Relatively slow growth rate
- Generally present several years by time of diagnosis
- Long preclinical period enables early detection
- Median survival >2 years in patients receiving conventional treatment for metastatic disease

Risk factors You cannot change

- Gender: 100 times more common among women than men
- Aging
- Genetic risk factors: Most common: BRCA1 & BRCA2
- Family history of breast cancer
- Prior personal history of breast, endometrium, ovary, or colon cancer
- Race: White women are slightly more
- Age at menarche: Higher risk before age of 12 years
- Menopause: Higher risk after age of 55 years
- Previous breast radiation

Risk factors (cont)

Life style related

- Parity & Age at first birth: Nulliparous or 1st child after age 30
- Breast feeding
- Oral contraceptive use
- Hormone replacement therapy
- Alcohol
- Obesity & high-fat diets
- Physical activity

Risk factors (cont)

Uncertain, controversial, or unproven

- Antiperspirants
- Underwire bras: No scientific or clinical basis for that claim
- Smoking: No conclusive studies yet
- Induced abortion: No effect
- Breast implants: Silicone breast implants can cause tissue scar. No increase in breast cancer risk
- Environmental pollution
- Night work: Eg. Nurses on a night shift, not proven yet
- Antibiotics: Too early to tell

Factors That Increase the Relative Risk for Breast Cancer in Women

Relative Risk	Factor
>4.0	<ul style="list-style-type: none">• Age (65+)• BRCA1 and/or BRCA2• Two or more 1st degree relatives• Personal history of breast cancer• Postmenopausal breast density
2.1-4.0	<ul style="list-style-type: none">• One 1st degree relative with breast cancer• Biopsy-confirmed atypical hyperplasia• High-dose radiation to chest• High bone density (postmenopausal)

Factors That Increase the Relative Risk for Breast Cancer in Women (cont.)

Relative Risk 1.1-2.0	Factor
Reproductive factors	<ul style="list-style-type: none">• Late age at first full-term pregnancy (>30yrs)• Early menarche (<12yrs)• Late menopause (>55yrs)• No full-term pregnancies• Never breast fed a child
Factors that affect circulating hormones	<ul style="list-style-type: none">• Recent oral contraceptive use• Recent & long-term use of HRT• Obesity (postmenopausal)
Other factors	<ul style="list-style-type: none">• Personal history of cancer of endometrium, ovary, or colon• Alcohol consumption• High SES• Jewish heritage

Thank You