

Breakout Session 4

Diet and Breast Cancer

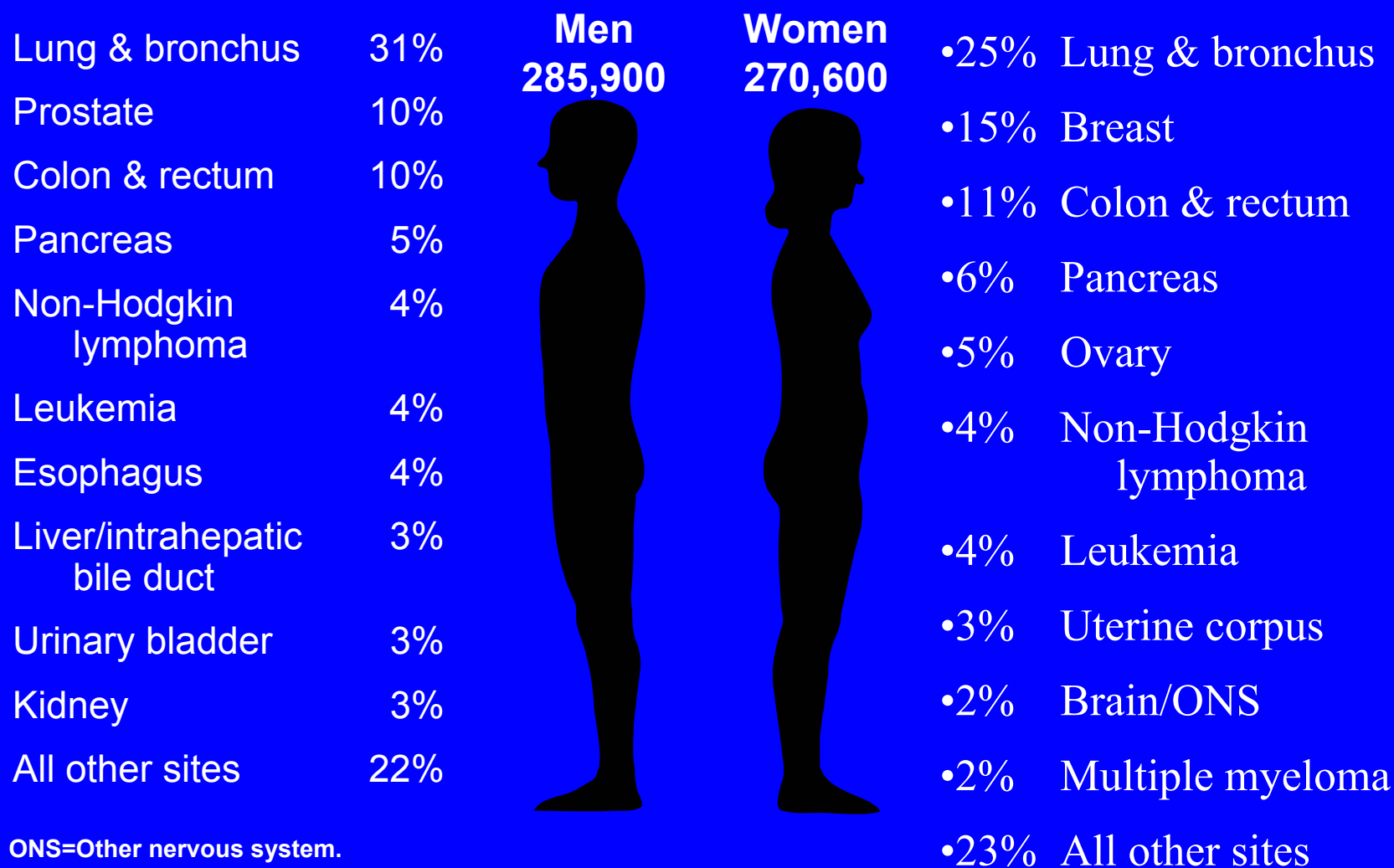
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US Mortality, 2000

| Rank | Cause of Death | No. of deaths | % of all deaths |
|------|---------------------------------------|---------------|-----------------|
| • | 1. Heart Diseases | 710,760 | 29.6 |
| • | • | | |
| • | 2. Cancer | 553,091 | 23.0 |
| • | 3. Cerebrovascular diseases | 167,661 | 7.0 |
| • | • | | |
| • | 4. Chronic lower respiratory diseases | 122,009 | 5.1 |
| • | • | | |
| • | 5. Accidents (Unintentional injuries) | 97,900 | 4.1 |
| • | • | | |
| • | 6. Diabetes mellitus | 69,301 | 2.9 |
| • | • | | |
| • | 7. Influenza and Pneumonia | 65,313 | 2.7 |
| • | • | | |
| • | 8. Alzheimer's disease | 49,558 | 2.1 |

2003 Estimated US Cancer Deaths*



ONS=Other nervous system.

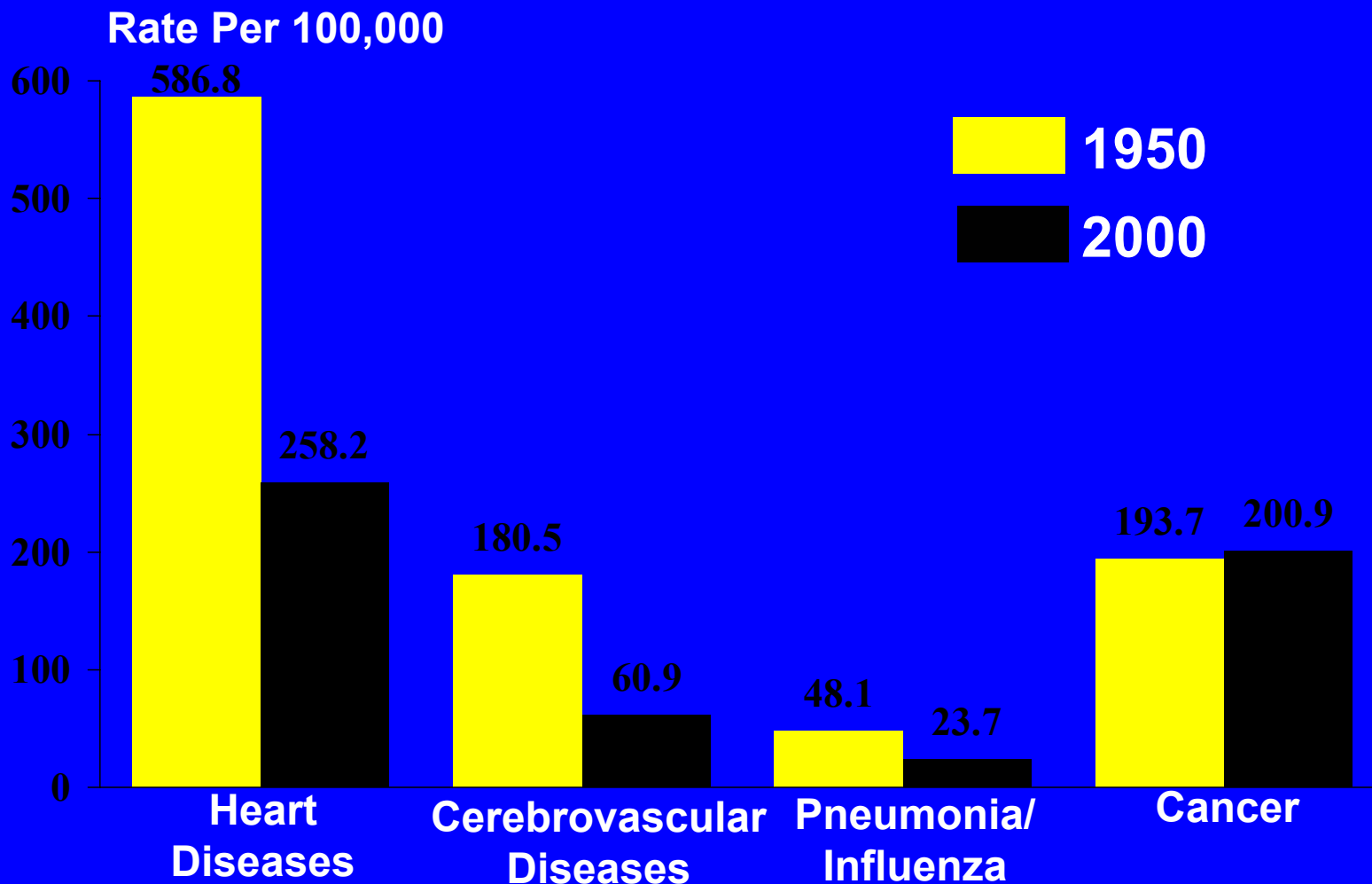
*Excludes basal and squamous cell skin cancers and in situ carcinomas except urinary bladder.

Source: American Cancer Society, 2003.

Lifetime Probability of Developing Cancer, by Site, Women, US, 1997-1999

| Site | Risk |
|----------------------|----------|
| All sites | 1 in 3 |
| Breast | 1 in 8 |
| Lung & bronchus | 1 in 17 |
| Colon & rectum | 1 in 18 |
| Uterine corpus | 1 in 37 |
| Non-Hodgkin lymphoma | 1 in 56 |
| Ovary | 1 in 58 |
| Pancreas | 1 in 80 |
| Melanoma | 1 in 81 |
| Urinary bladder | 1 in 88 |
| Uterine cervix | 1 in 123 |

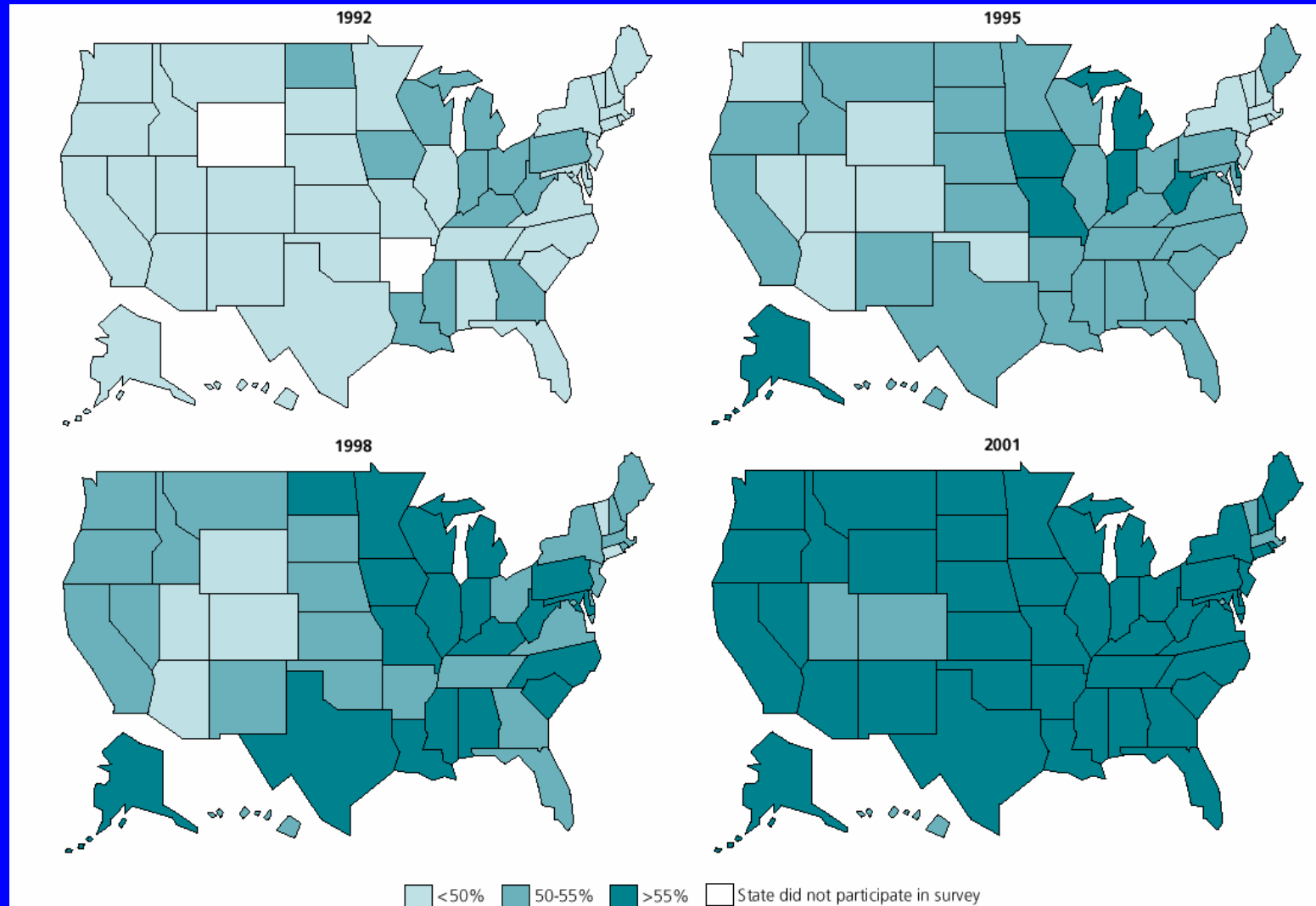
Change in the US Death Rates* by Cause, 1950 & 2000



* Age-adjusted to the 2000 US standard population.

Source: US Mortality Volume 1950, National Vital Statistics Report, 2002, Vol. 50, No. 15.

Overweight* Prevalence (%), Adults 18 and Older, 1992-2001



* Body mass index of 25.0 kg/m² or greater.

Source: Behavioral Risk Factor Surveillance System, CD-ROM (1984-1995, 1998) and Public Use Data Tape (2001), National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 1997, 2000, 2002.

Physical Activity

- 25% breast cancers worldwide due to obesity/overweight, sedentary lifestyle (Intl Agency for Research on Cancer)
- Women who engage in 3-4 hours/week of moderate to vigorous activity have 30-40% lower risk than sedentary women

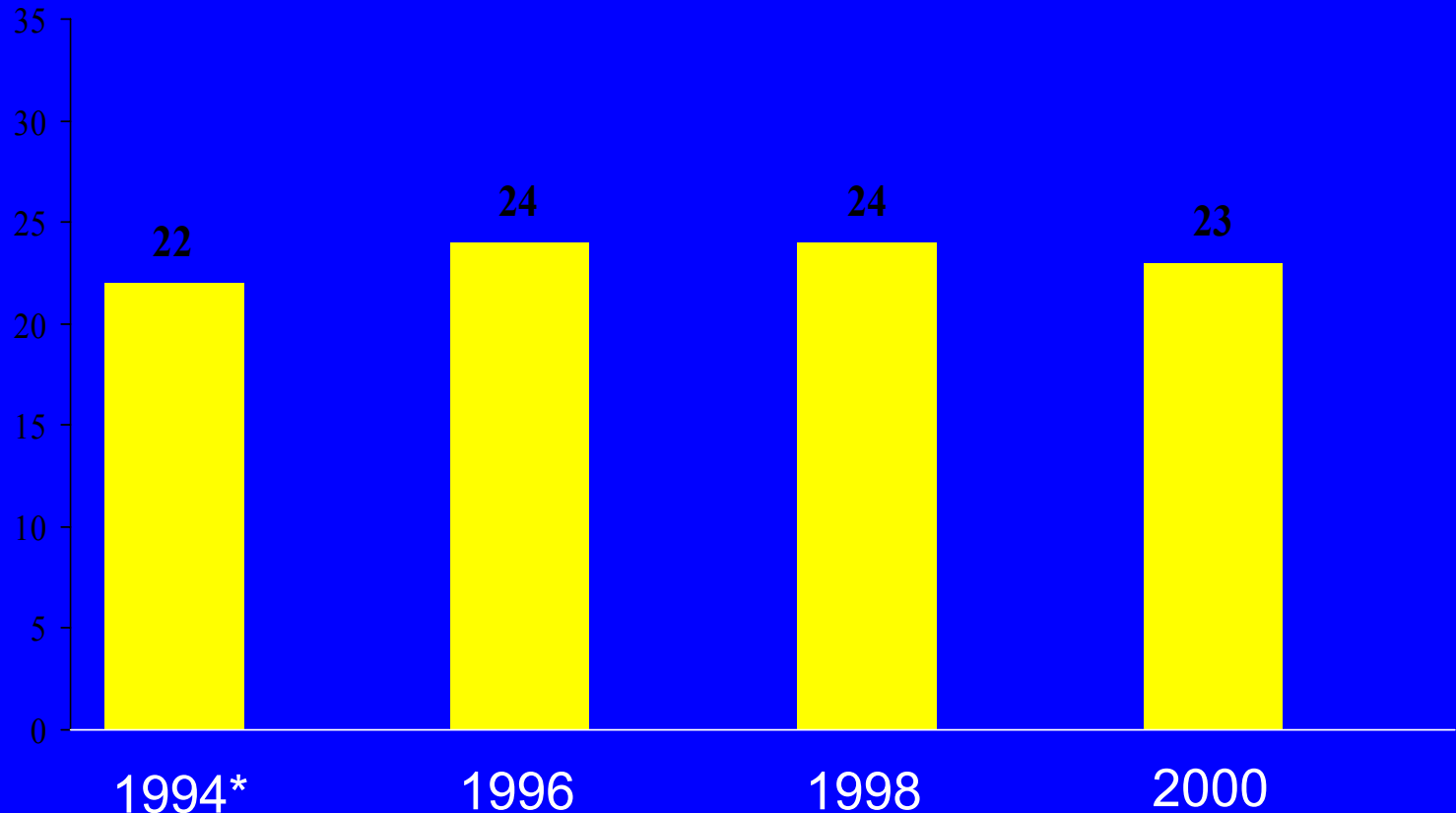
Source: McTiernan A. Oncolog 2003; 326-34

Vegetables and Fruit and Cancer

- Strongest evidence of relationship between diet and cancer is benefit of consuming 5 or more servings FV per day (IOM, 2003).
- Breast cancer: possible/probable association
- FV lower risk of
 - Hypertension
 - Coronary heart disease
 - Ischemic stroke
 - diabetes

5 or More Vegetable and Fruit Servings, Adults 18 and Older, 1994-2000

Prevalence (%)



* Includes fewer than 50 states and the District of Columbia. All other prevalences include the 50 states and District of Columbia.

Source: Behavioral Risk Factor Surveillance System, 1994, 1996, 1998, 2000, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 1997, 1999, 2000, 2001.

Breast Cancer and Diet

- IOM (2003)
 - VF possible
 - Alcohol convincing
 - Phys Act convincing
 - Obesity convincing
 - Mono possible
 - Folate possible
 - Vit A possible
- AICR (1997)
 - VF probable
 - Alcohol probable
 - Phys act possible
 - Weight gain probable
 - Fat/sat fat possible
 - Fiber possible
 - Carotenoids possible
 - Red meat possible

References

- Curry S, Byers T, and Hewitt M (eds). Fulfilling the Potential of Cancer Prevention and Early Detection. Institute of Medicine, National Academy Press: Washington DC, 2003.
- American Institute for Cancer Research. Food, Nutrition and the Prevention of Cancer: a Global Perspective. AICR: Washington DC, 1997.

Three Presentations

- Fiber, Estrogen and Breast Cancer
 - Malcolm Pike, PhD
- Role of Body Size and Fats in Breast Cancer
 - Catherine Carpenter, PhD
- Breast Cancer Prevention with Phytoestrogens in Grape Juice
 - Shuian Chen, PhD