

Magnitude of Liver Cancer in Egypt

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Outline

- World Statistics: Globocan 2000, IARC
- Statistics for Egypt:
 - Gharbiah Population-based Cancer Registry, 1999
 - National Cancer Registry Center
 - National Cancer Institute (NCI)
- Risk Factors for Liver Cancer

World

- Liver cancer is the 5th most frequent cancer site for males after lung, prostate, stomach and colorectal cancer.
- It constitutes 7.5% of all cancer types
- For females, it is the 8th most common, accounting for 3.5% of all cancer types

World Estimated New Cancer Cases, Crude and Age-adjusted Incidence Rates by Gender, Globocan 2000

Gender	Number of new cases	Crude incidence rate	Age-adjusted incidence rate
Males	398,364	13.1	15.0
Females	165,972	5.5	5.5

Incidence rates/100,000

World Estimated Cancer Deaths, Crude and Age-adjusted Death Rates by Gender, Globocan 2000

Gender	Number of deaths	Crude death rate	Age-adjusted death rate
Males	383,593	12.6	14.4
Females	164,961	5.5	5.46

Death rates/100,000

World Age-adjusted Incidence Rates by Gender, Globocan 2000

	Males	Females
World	15.0	5.5
More developed countries	8.7	2.9
Less developed countries	17.4	6.8

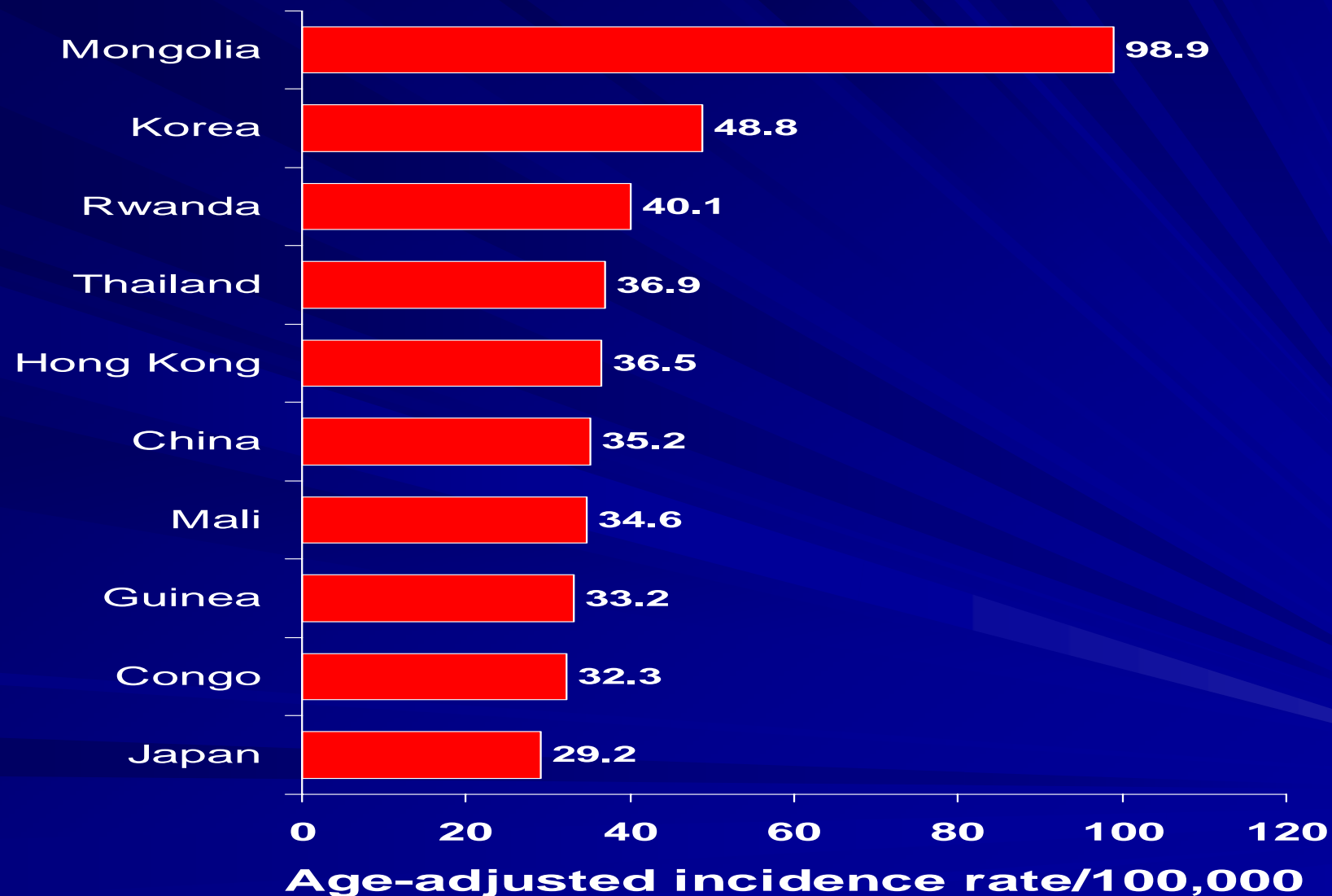
Incidence rates/100,000

World Age-adjusted Death Rates by Gender, Globocan 2000

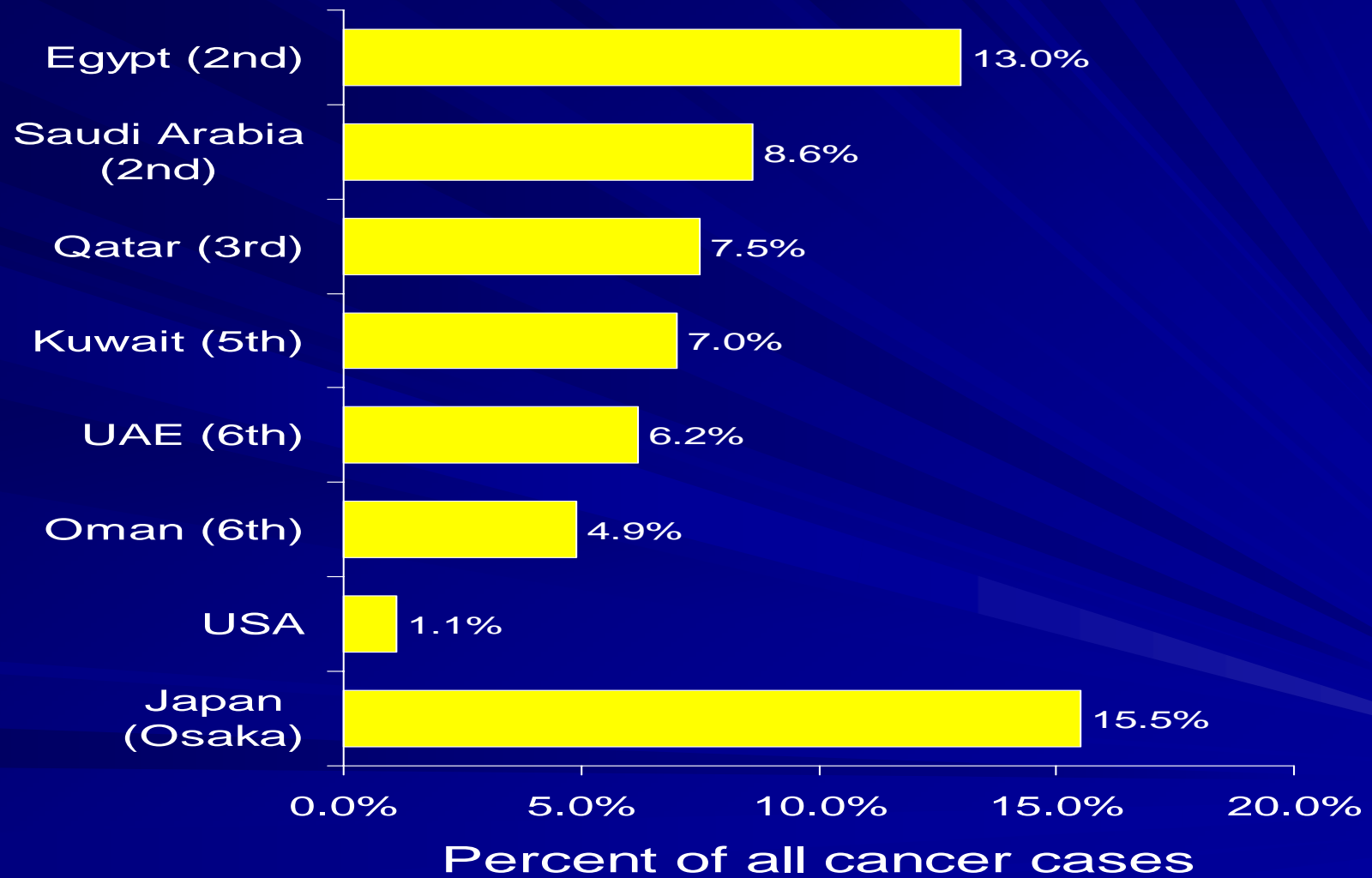
	Males	Females
World	14.4	5.5
More developed countries	8.1	3.0
Less developed countries	16.9	6.6

Incidence rates/100,000

Countries with Highest Age-adjusted Incidence Rates, Globocan 2000



Frequency in Arab World (Males)



Egypt, Gharbiah Population-based Cancer Registry, 1999

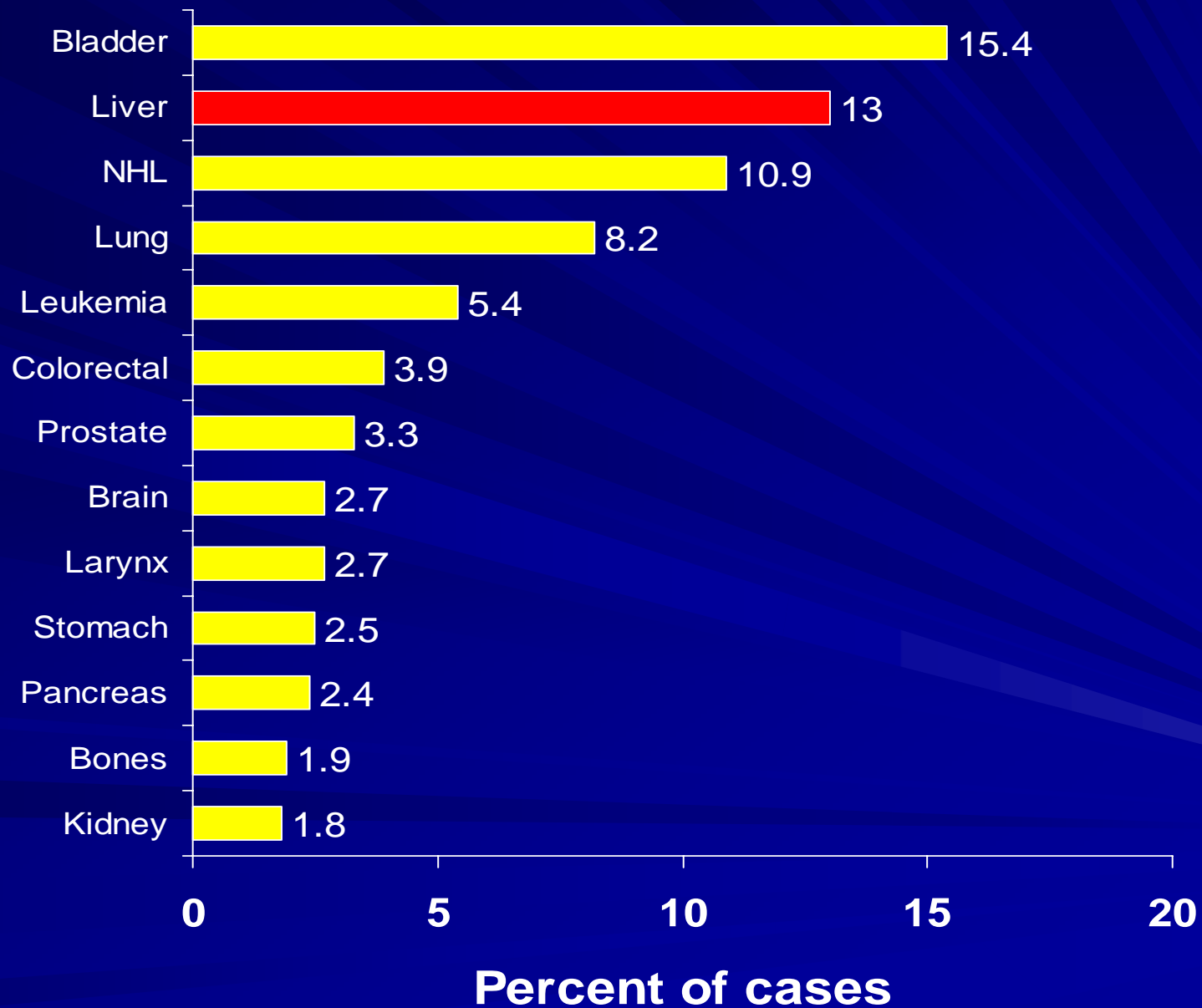
- Gharbiah is Egypt's first Population-based Cancer Registry
- Liver cancer is the 2nd most frequent cancer site for males after bladder. It constitutes 13% of all cancers
- For females, it is the 4th after breast, NHL and leukemia. It constitutes 4.1% of all cancers

Estimated New Cancer Cases, Crude and Age-adjusted Incidence Rates by Gender for Egypt, Gharbiah 1999

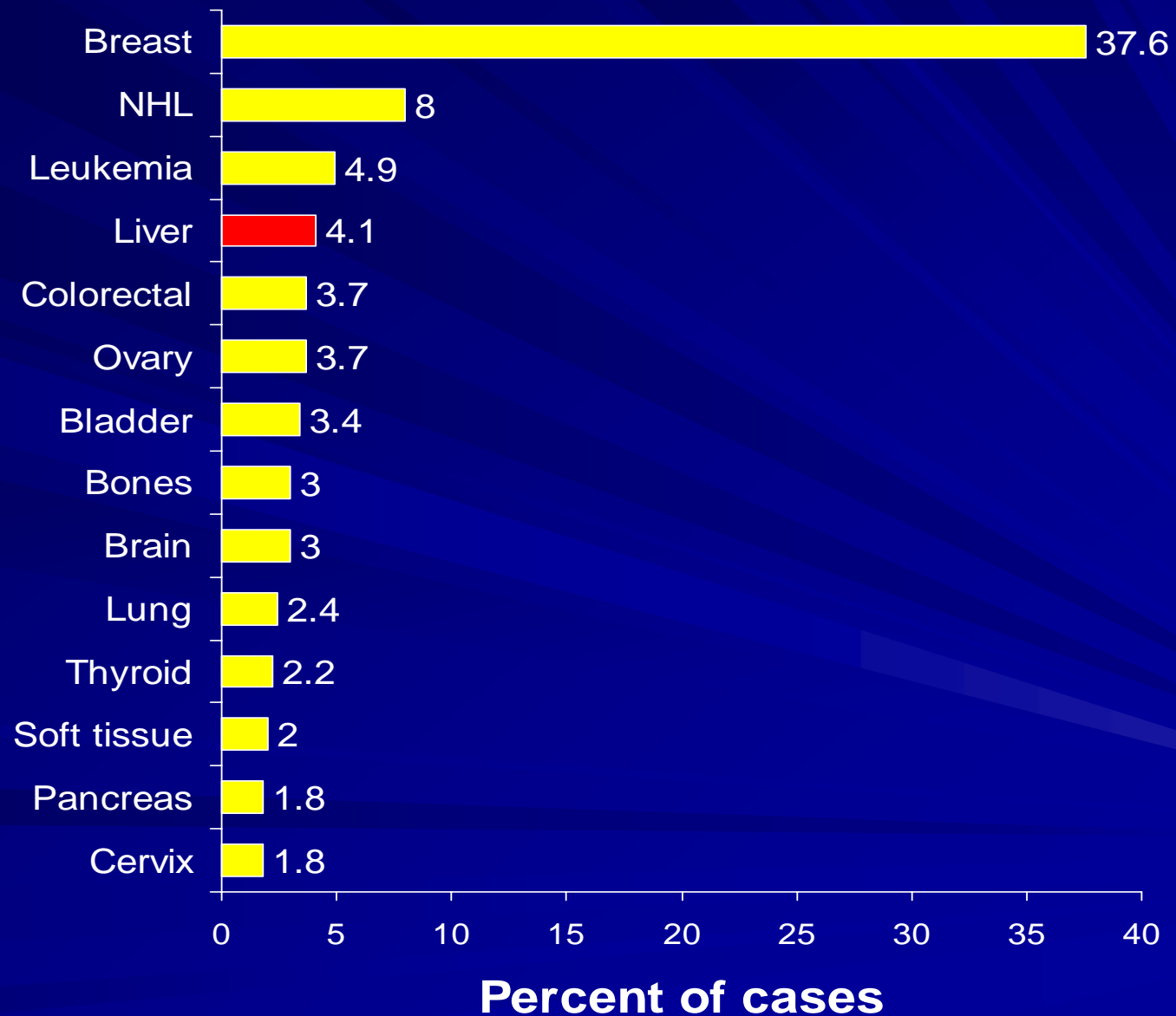
Gender	Number of new cases	Crude incidence rate	Age-adjusted incidence rate
Males	225	13.0	21.4
Females	69	4.1	6.0

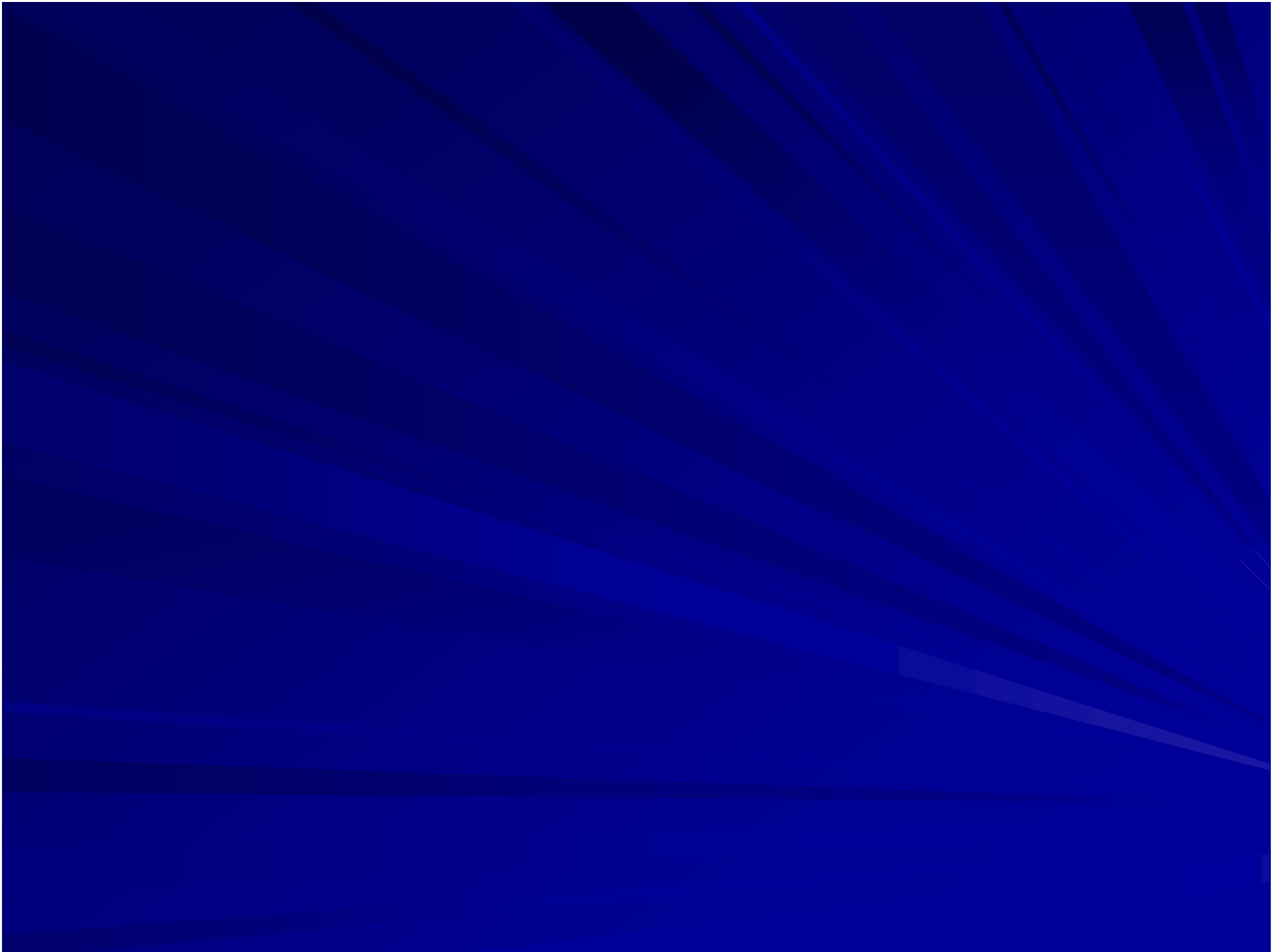
Incidence rates/100,000

Most Common Sites in Males, Gharbiah, Egypt, 1999



Most Common Sites in Females, Gharbiah, Egypt, 1999

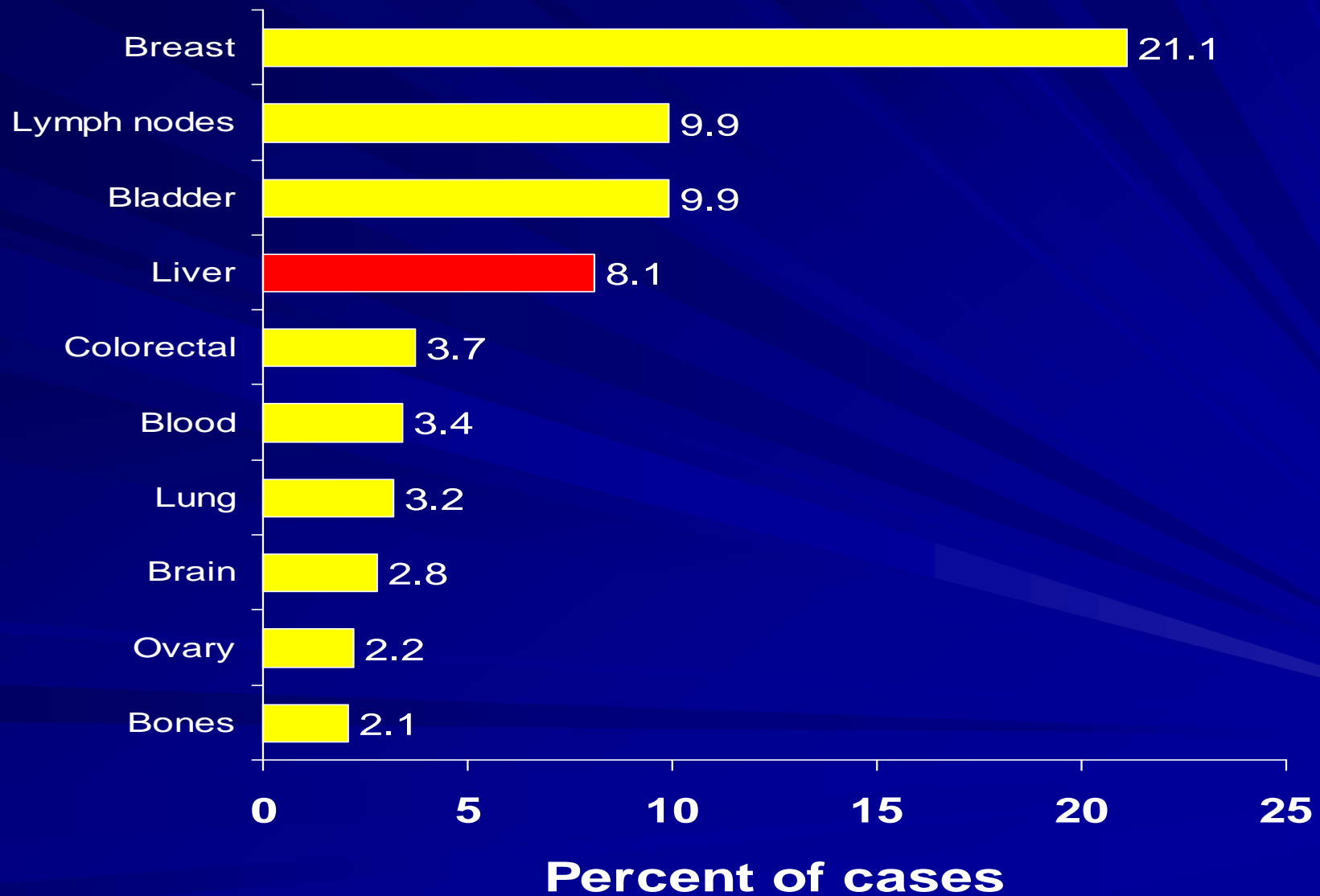




National Cancer Registry Center

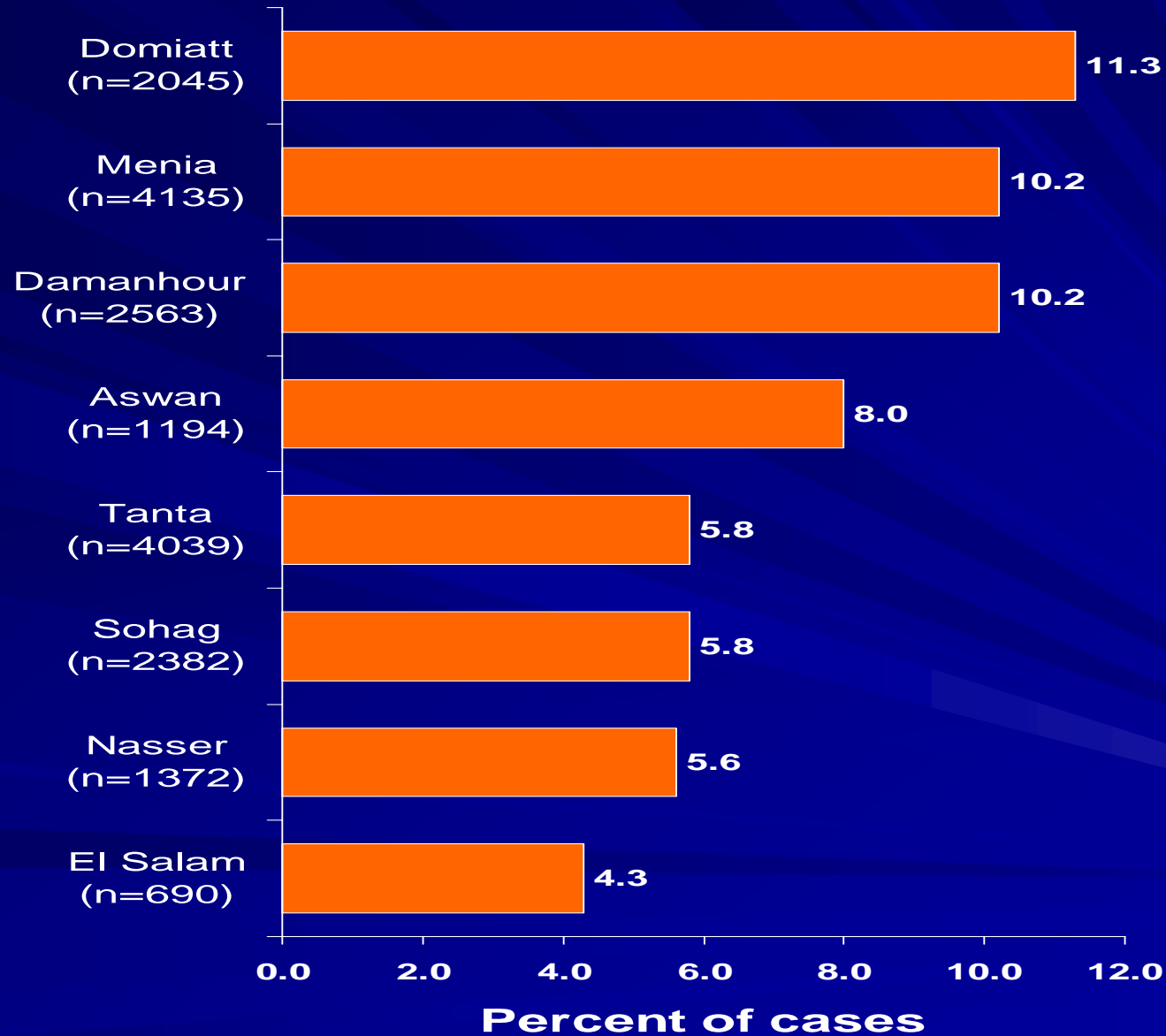
- In August 2000, the Minister of Health and Population launched the National Cancer Registry Project
- The Nasser Institute Hospital in Cairo has been designated as the Center for the National Cancer Registry Project
- The National Cancer Registry Center has a network of regional cancer registries, namely Aswan, Menia, Sohag, Damanshour, Domiat, Tanta, Nasser, and El Salam

Ten Most Common Cancer Sites Based on 18,420 Cancer Cases Registered at the Central Cancer Registry (1/1/99-31/6/01)



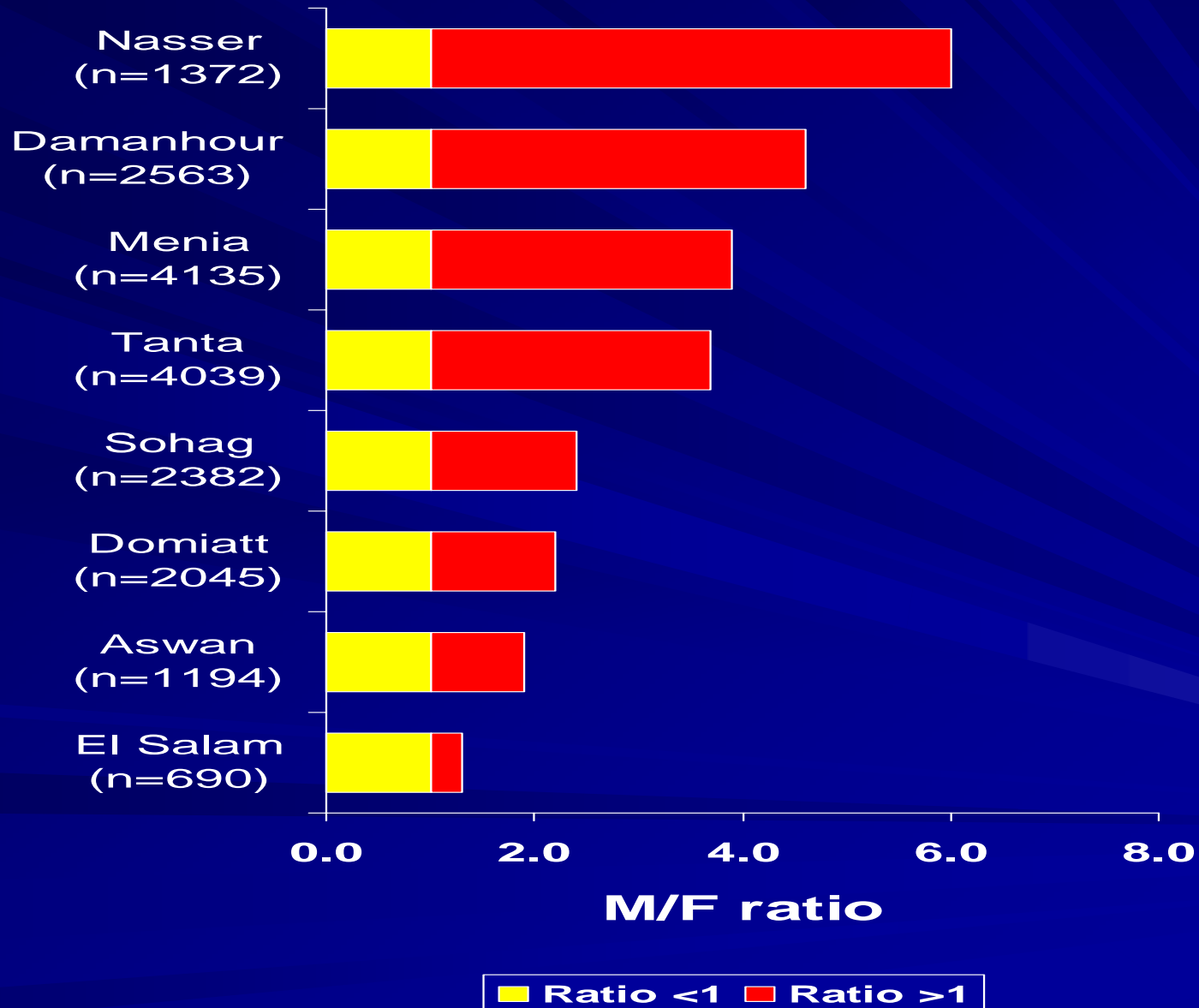
Frequency of Liver Cancer

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

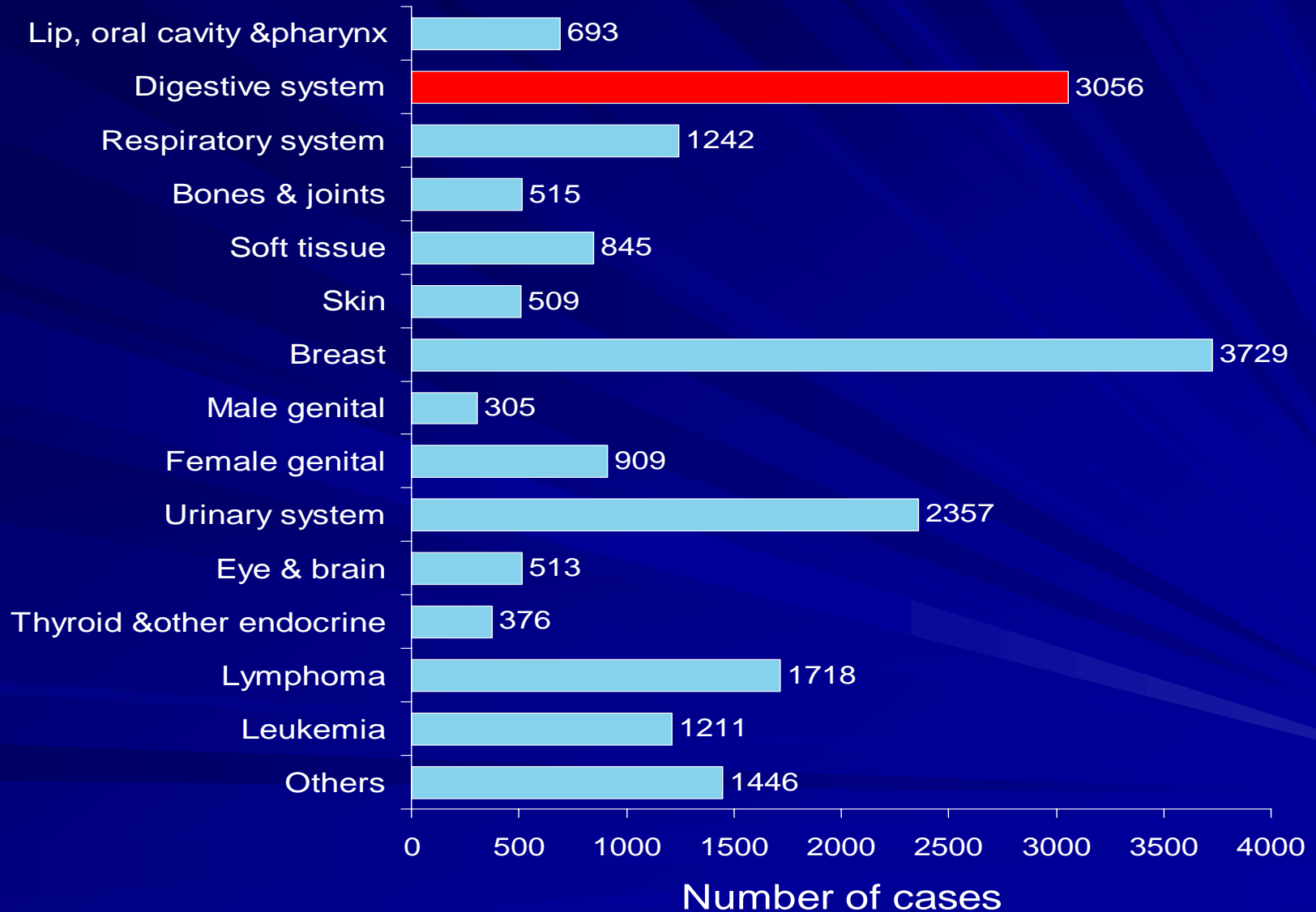


Male to Female Ratio

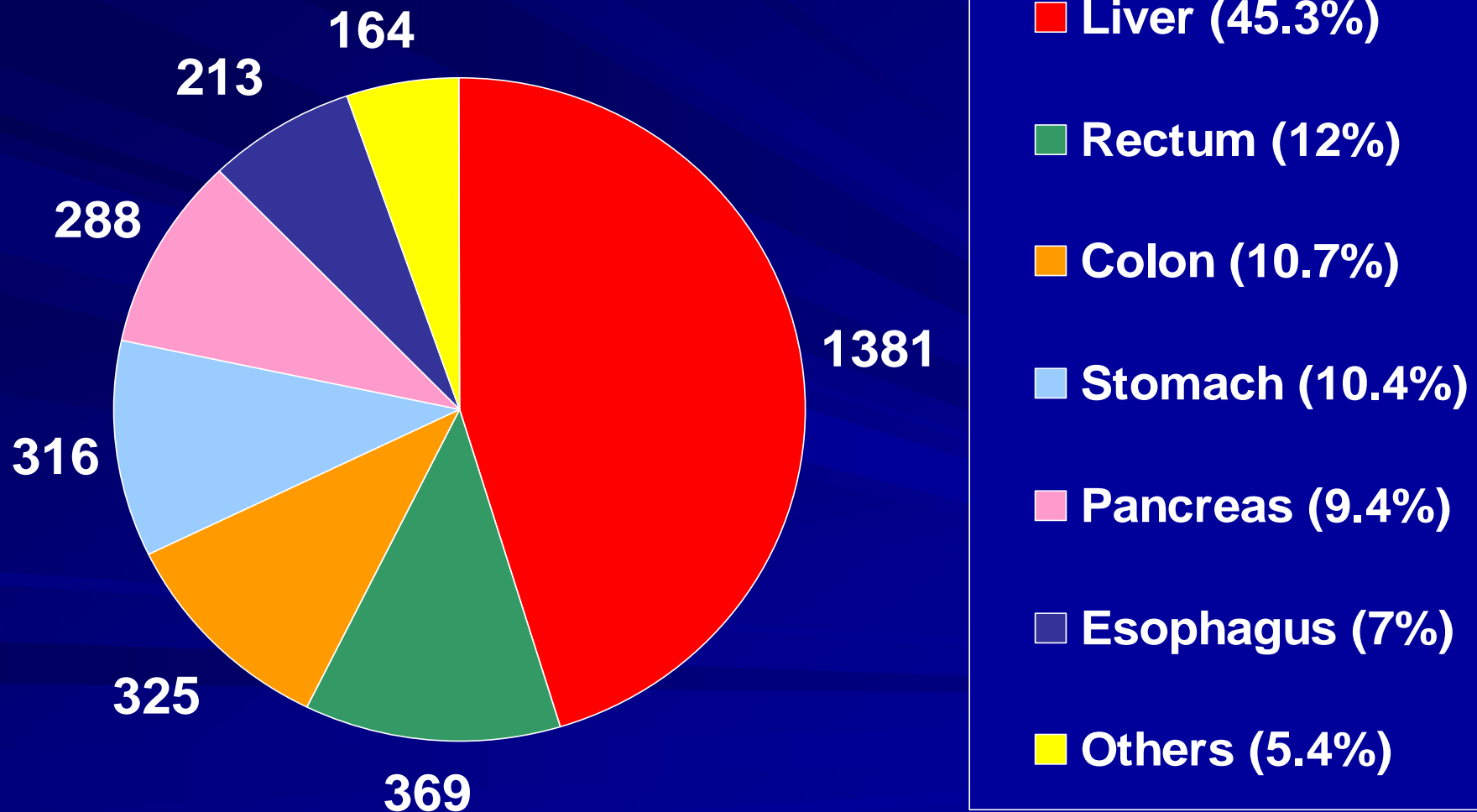
Central Cancer Registry (1/1/99-31/6/01)



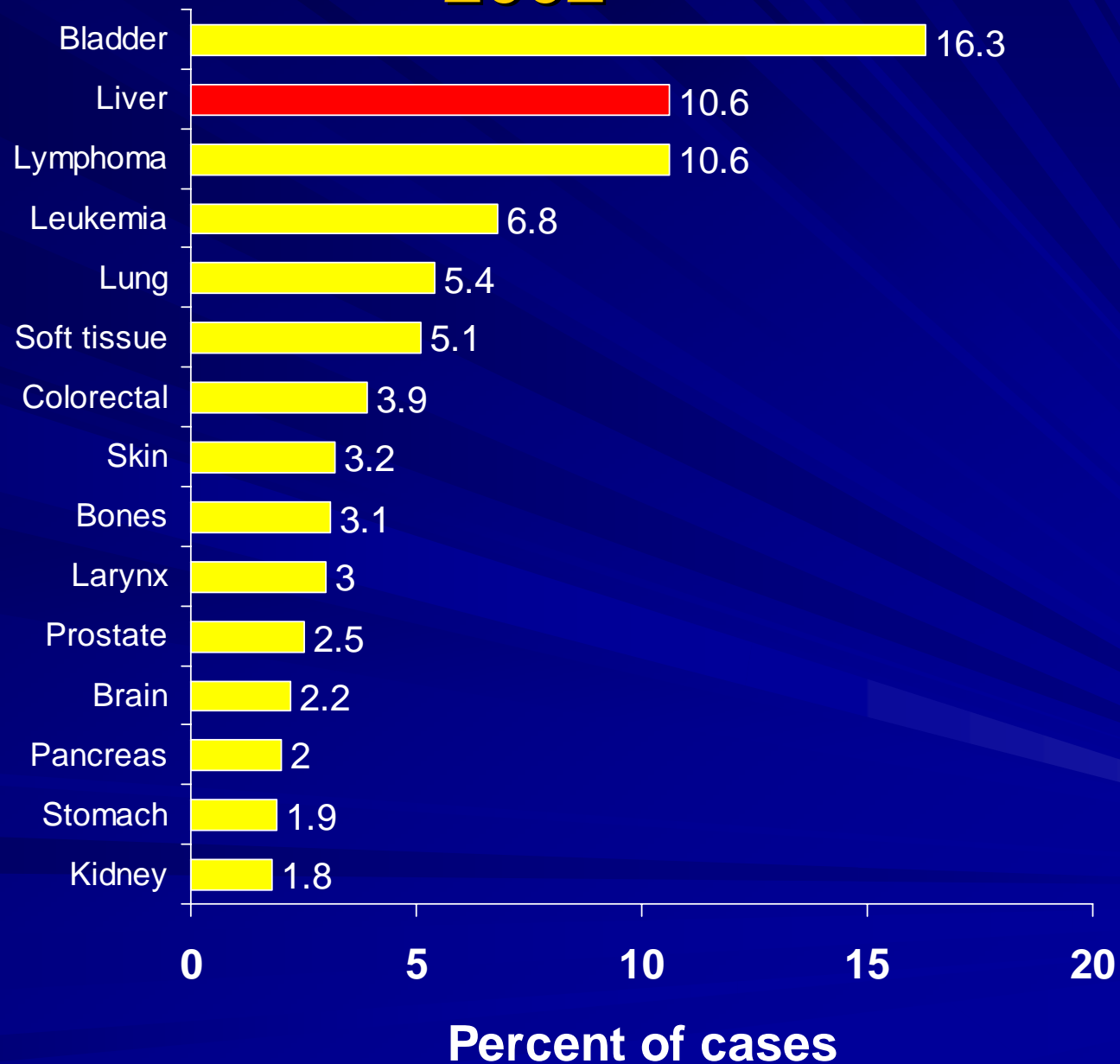
19,568 New Cancer Cases by Systems, NCI 2001-2002



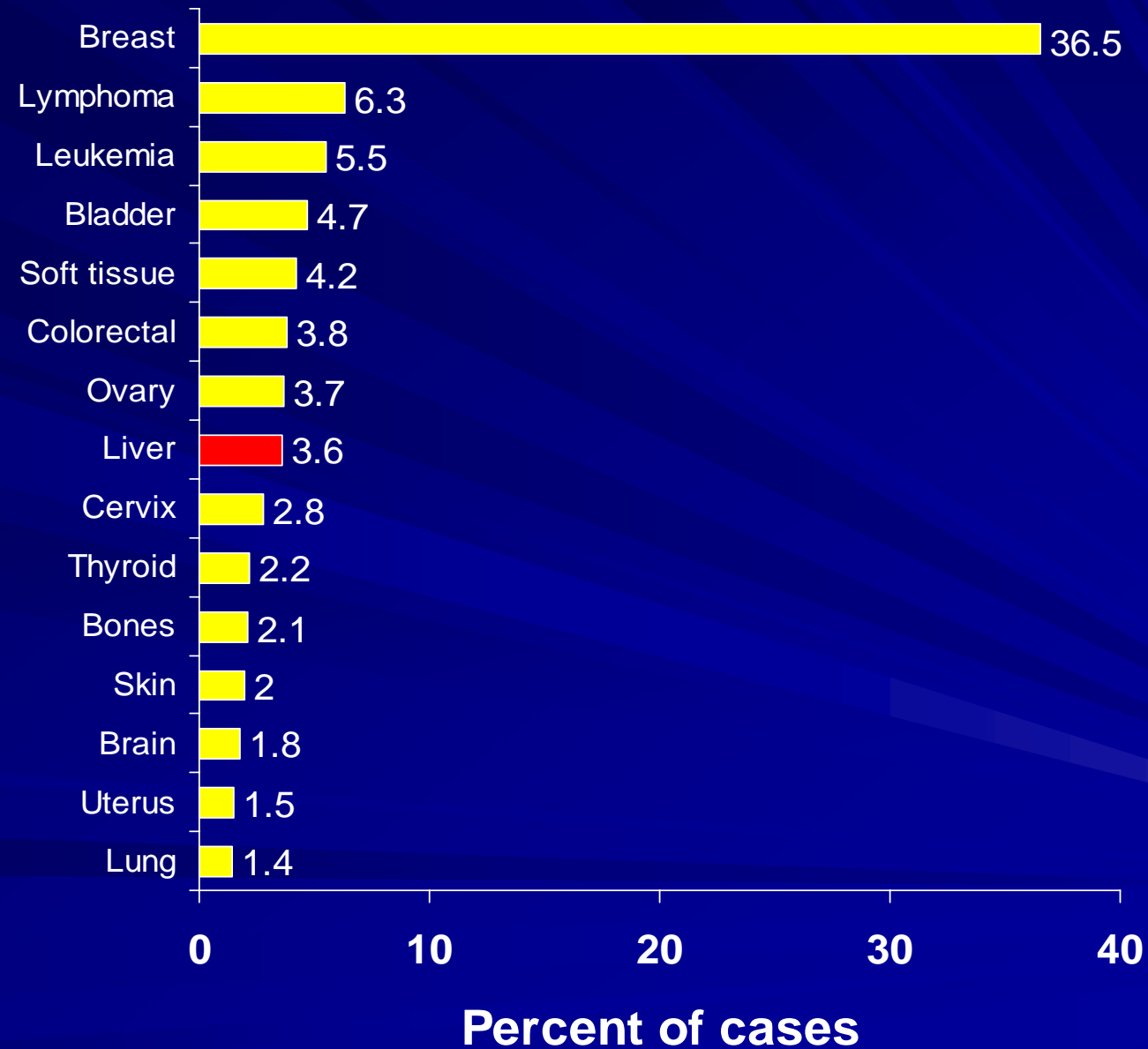
3,056 (15.6%) New Cases of Digestive System, NCI 2001-2002



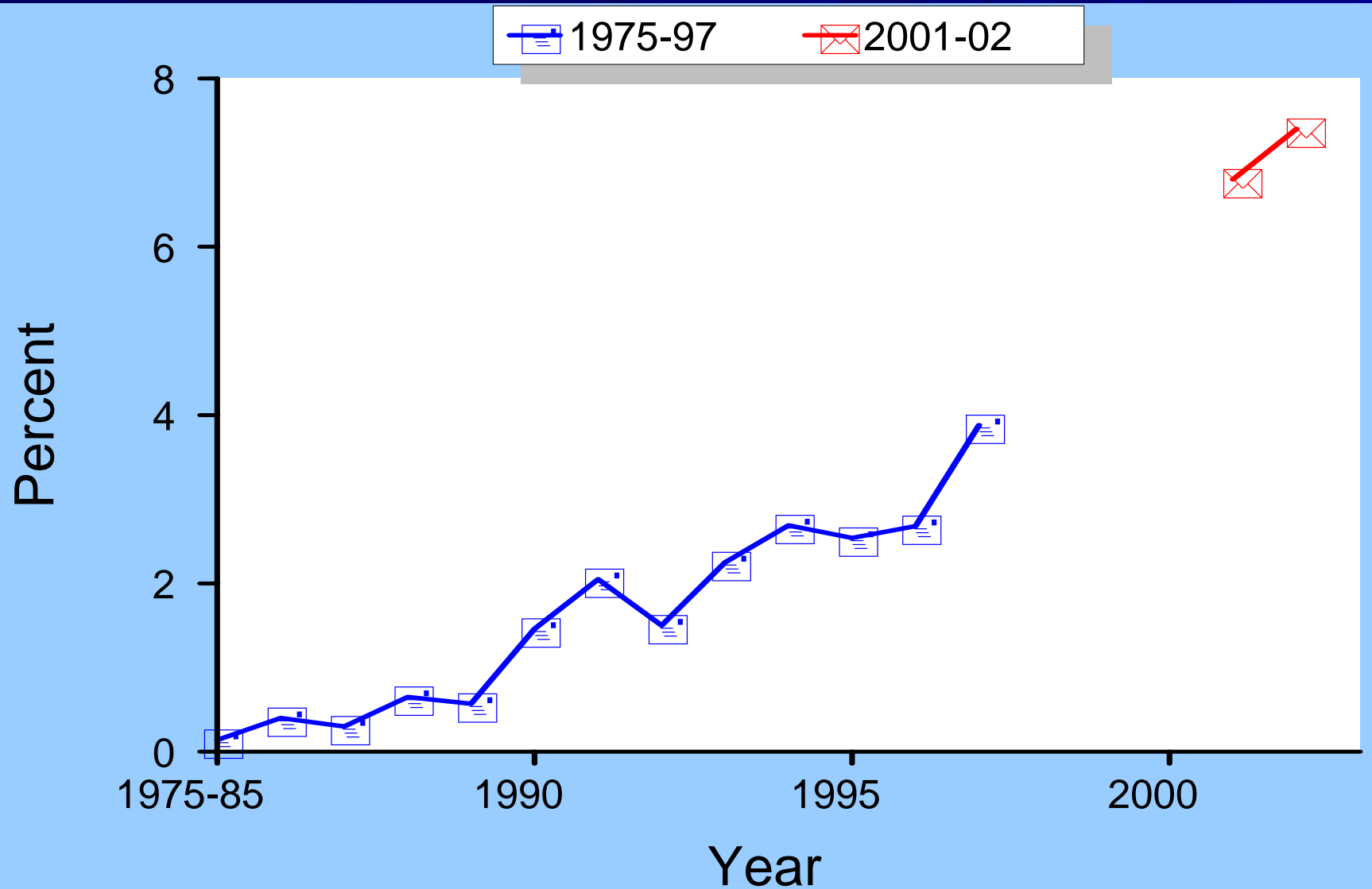
Most Common Sites in Males, NCI 2001-2002



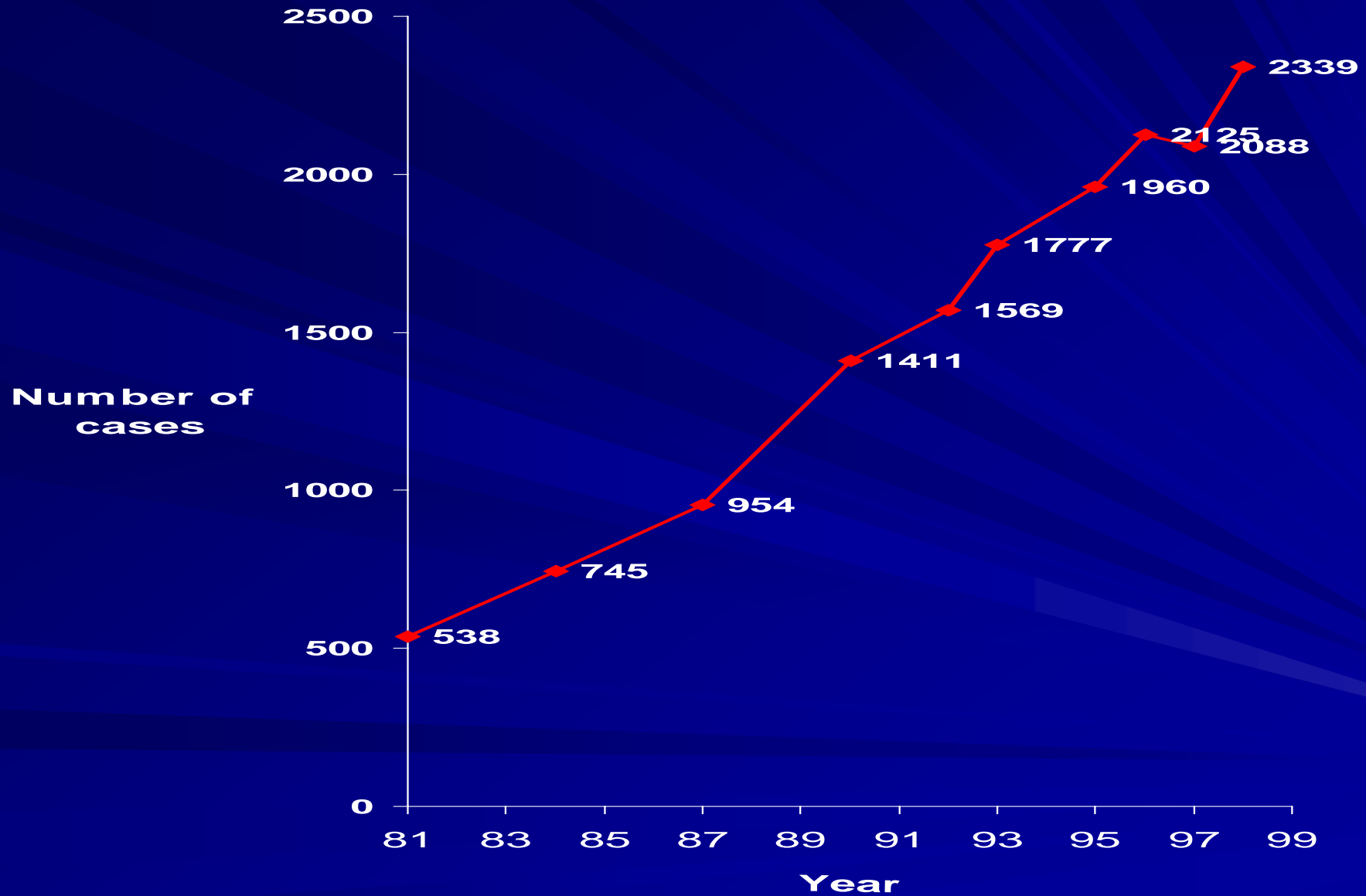
Most Common Sites in Females, NCI 2001-2002



Relative Frequency of Liver Cancer, NCI 1975-2002

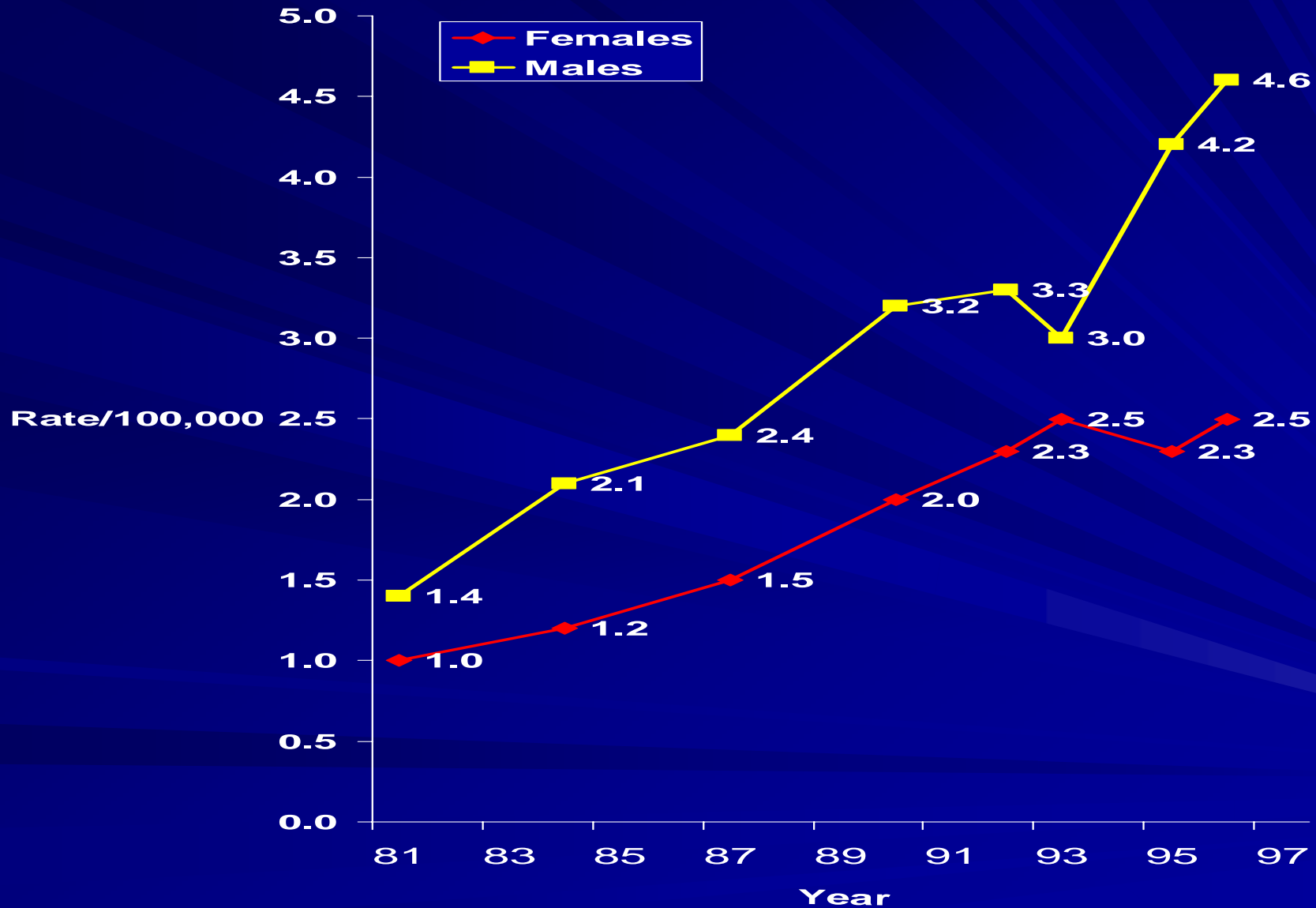


Trend of Registered HCC Mortality in Egypt, 1981-1998 (Mostafa & El-Said, May 2002)



Trend of HCC Mortality in Egypt, 1981-1996

(Mostafa & El-Said, May 2002)



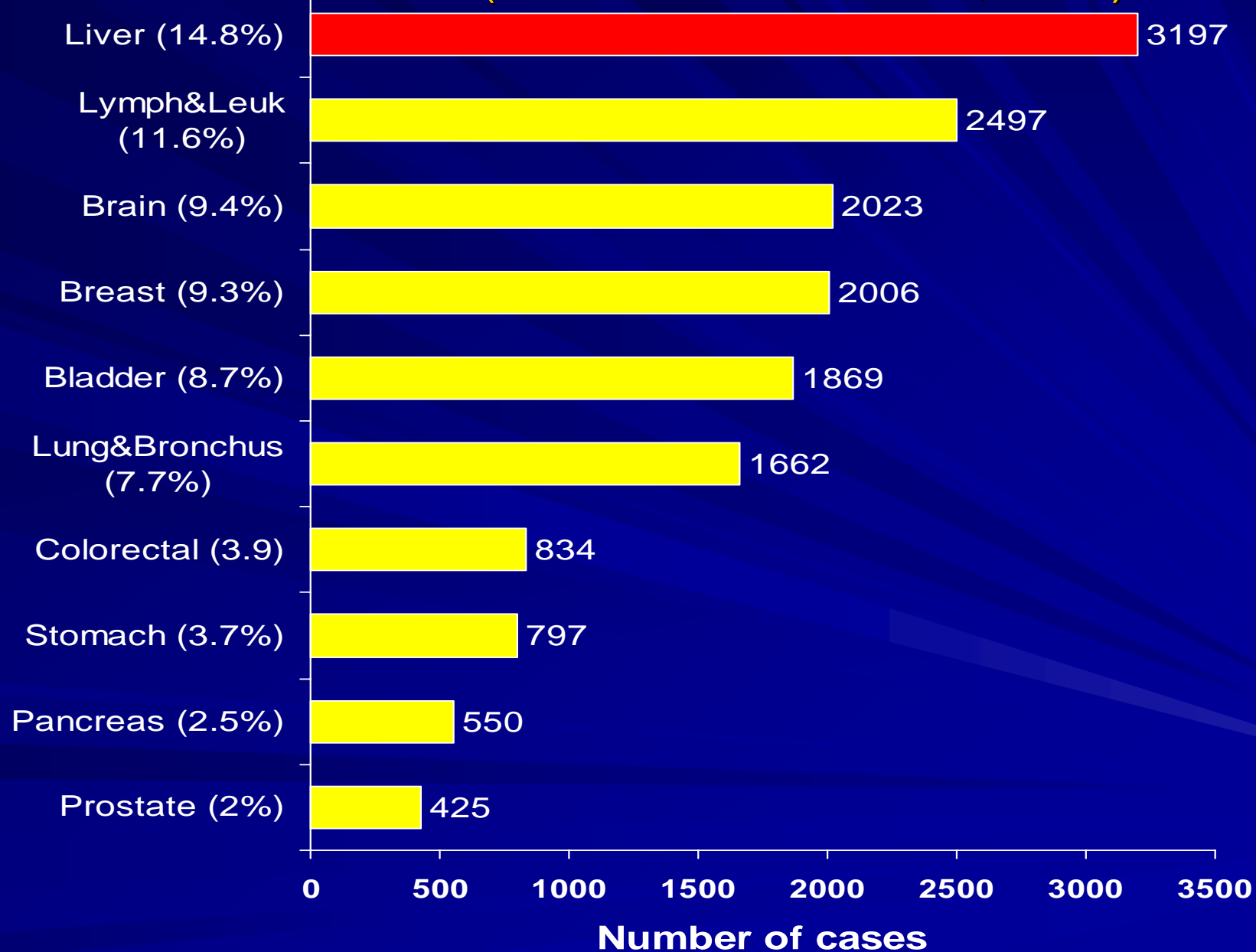
Egypt Mortality Statistics, Liver Cancer, 2001

(The Cancer Database, 2001)

	Number of cases	% of all cancer deaths
Males	2126	17.3%
Females	1071	11.5%
Total	3197	14.8%

Egypt Mortality Statistics, 2001

Most common sites (The Cancer Database, 2001)



Risk Factors for Liver Cancer

- Certain types of Viral Hepatitis:

Chronic infection with hepatitis B virus (HBV) and hepatitis C virus (HCV) is an important liver cancer risk

- Long –Term Exposure to Aflatoxin:

This carcinogenic substance is produced in tropical and subtropical regions by a fungus that often contaminates peanuts, wheat, soybeans, ground nuts, corn, and rice

Risk Factors for Liver Cancer (continued)

- Vinyl Chloride and Thorium Dioxide:

These chemicals are risk factors for angiosarcoma of the liver and to a lesser degree, will increase the risk of HCC

- Birth Control Pills:

Oral contraceptives are a cause of benign tumors, hepatic adenomas. They may also increase the risk of HCC

Risk Factors for Liver Cancer (continued)

- Anabolic steroids:

Long-term use can slightly increase the risk of HCC

- Arsenic:

Drinking water contaminated with arsenic increases the risk of HCC in some parts of the world

- Smoking:

There is some evidence that smoking may increase the risk of liver cancer

Risk Factors of Liver Cancer Among Egyptians

- **Egypt has the World's highest prevalence of hepatitis C**
- **HCV antibody positivity estimated by the Egyptian Ministry of Health (1999) to be 18.9%**
- **Smoking is increasing among men**
- **Pesticides are common in the environment**

Conclusions

- HCC is a recognized complication of hepatitis C.
- There is no prospective studies which can provide accurate estimates of the risk of HCC
- There is a significant differences between gender
- Frequency of liver cancer varied between the different cancer centers, between 4% to 13% of all cancer cases.

Conclusions (continued)

- Liver cancer is increasing in Egypt
- There is significant increase in the age specific incidence rates starting at the age of 40 years
- There is an approximately, fourfold increase in the death rate from 1981
- Liver cancer is the number one cause of death from among all other cancer sites

References

- Globocan 2000: Cancer Incidence, Mortality and Prevalence Worldwide, Version 1.0. Lyon, IARC Press, 2001
- Highlight, The National Cancer Registry Newsletter, March 2002
- The Cancer Database, Egypt 1985-2001: Edited by Omar H. El Hattab; Ministry of Health & Population; World Health Organization, 2002
- Cancer Profile in Gharbiah-Egypt, Gharbiah Population-based Cancer Registry
- National Cancer Institute, 2001
- Epidemiology, Prevention and Control Programs of Hepatitis C in Egypt: Mostafa K. Mohamed and El-Said A. Aoun, WHO Informal Consultation with VHPB, Geneva Switzerland, 13-14 May 2002

Thank You