

Cancer Institute & Hospital

Chinese Academy of Medical Sciences

Peking Union Medical College

HISTORY

- Cancer Hospital was founded in 1958.
Its former name was Ritan Hospital.
- Cancer Institute was established in 1964.





First president Wu Huanxing (left)
Vice-president Li Bing (right)

Synopsis

- **Affiliated to CAMS and PUMC.**
- **A comprehensive cancer center in China which integrate clinical practice with basic research and field work.**
- **Emphasize on cancer prevention, diagnosis and treatment.**
- **One of the WHO Collaborative Centers for Research on Cancer in China.**

Organization

- Hospital
- Institute

- National Cancer Prevention and Control Office
- Chinese Cancer Research Foundation
- National Center of Cancer Registries

Organization (1) - The Institute

- **National Laboratory of Molecular Oncology**
- **Dept. of Chemical Etiology & Carcinogenesis**
- **Dept. of Epidemiology**
- **Dept. of Cellular and Molecular Biology**
- **Dept. of Immunology**
 - **Central Laboratory**
 - **Animal Department**

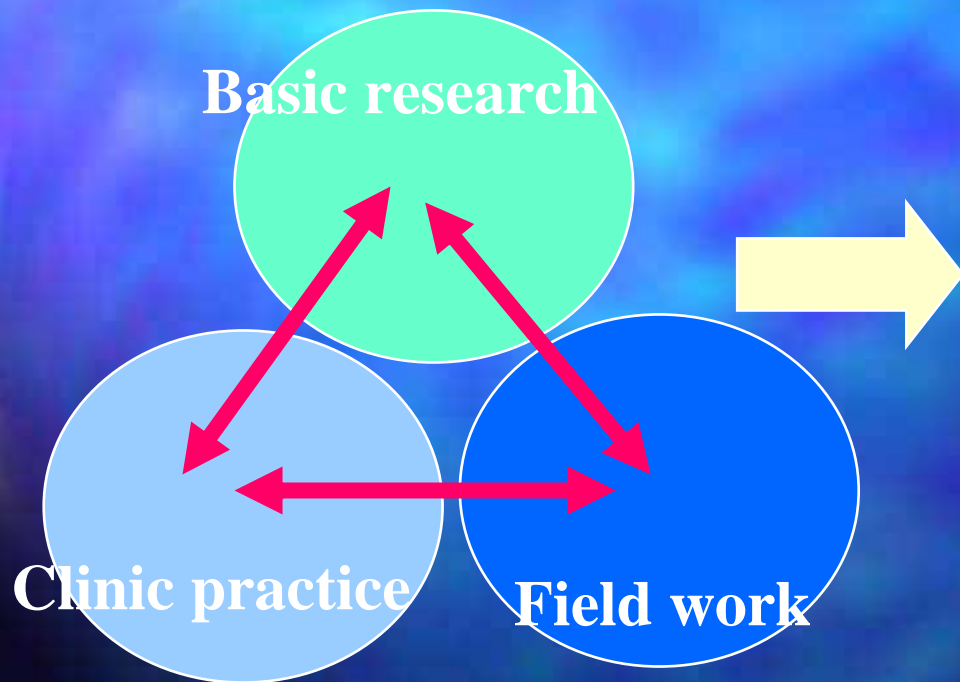
Organization(2) - The Hospital

- Dept. of Medical Oncology
- Dept. of Head & Neck Surgery
- Dept. of Thoracic Surgery
- Dept. of General (Abdominal) Surgery
- Dept. of Urological Surgery
- Dept. of Gynecological Oncology
- Dept. of Anesthesia
- Dept. of Radiation Oncology
- Dept. of Image Diagnosis
- Dept. of Clinical Pathology and Cytology
- Dept. of Nuclear Medicine
- Others

Staff

- **There are 1577 staff members.**
- **2 Academicians of the Chinese Academy of Sciences,**
- **2 Academicians of the Chinese Academy of Engineering.**
- **145 Associate professors, 75 professors**

Research focus



Early detection

Early diagnosis

Early treatment

• **Esophageal cancer**

• **Hepatoma**

• **Lung cancer**

• **Breast cancer**

• **Cervical cancer**

• **ect.**

Research Projects

- **73 ongoing projects** which are granted by the state government and foundations, including basic research, applied research and high-tech research.
- **Over 20 million RMB financial supports** gained in 2003 from various sources

Source of Research Funds

**State
government**

10th 5-year National Strategic Plan

National Hi-Tech R & D Program (863 Program)

National Basic Research Program (973 Program)

National Natural Science Foundation

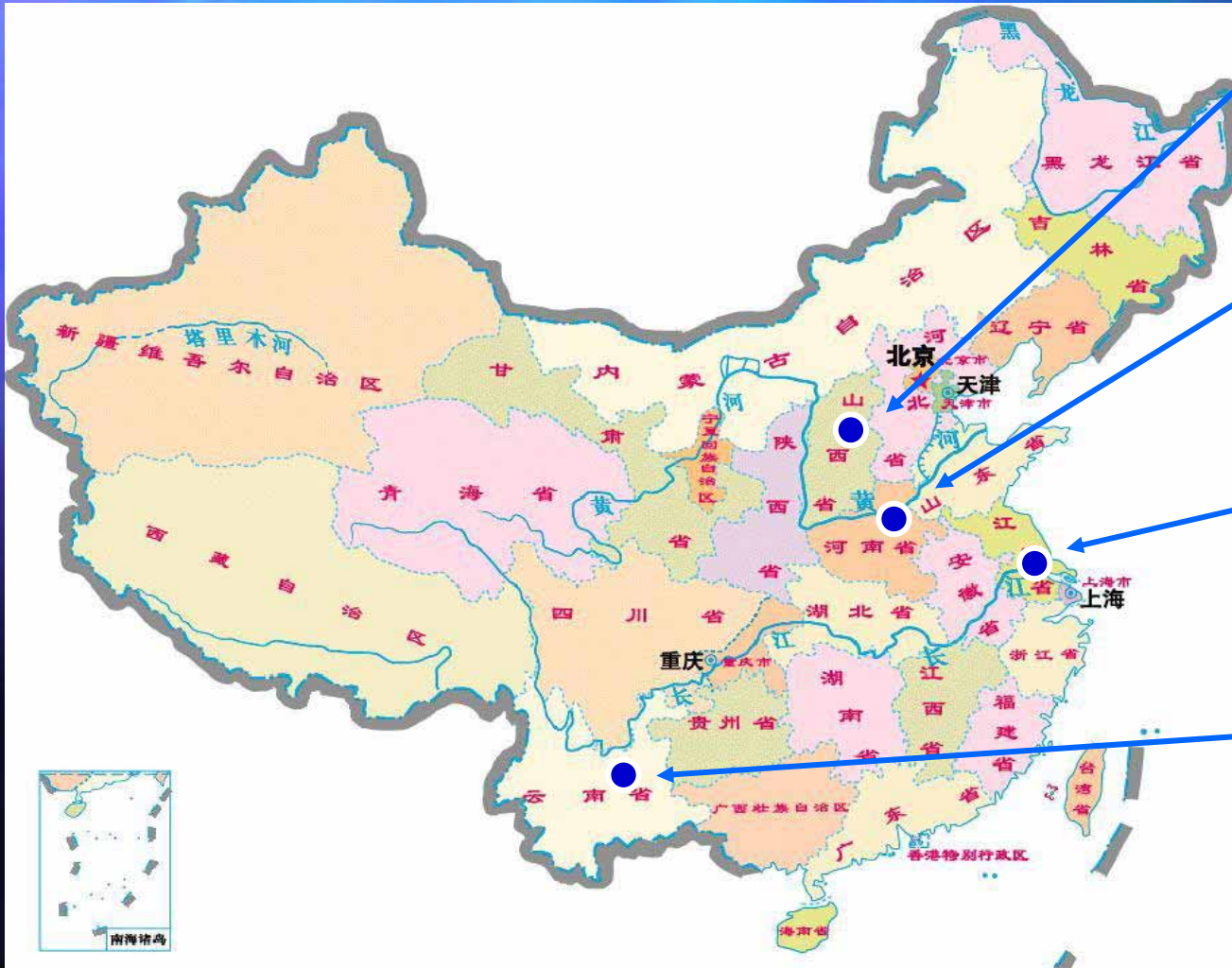
company

Other Funding

**International
cooperation**

**with NIH , IARC ,PATH, CTSU University of Oxford
etc.**

Field station



Yangcheng city , Shan xi Province

cervical cancer high risk area;

Linzhou city, Henan province,

esophageal cancer high risk area;

Qidong city, Jiangsu province ,

liver cancer high risk area;

Gejiu city, Yunnan province ,

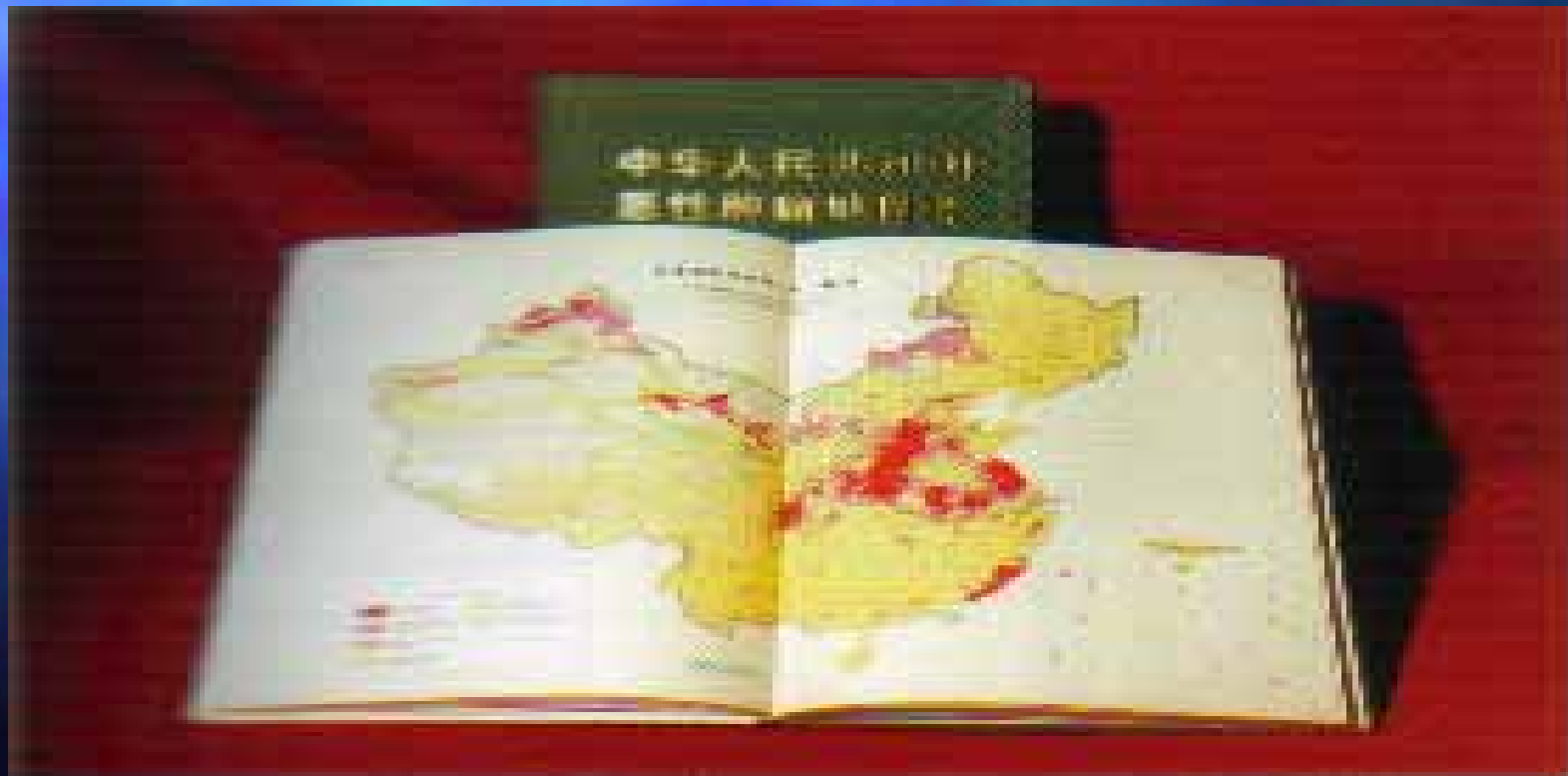
professional lung cancer high risk area.

Research achievements

- In the past 40 years, 140 science and technology awards have been achieved, most are at the National-level and Ministry-level.
- in the recent four years, 923 research papers have been published
- in the recent four years, 21 patents have been applied

Research achievements

- Atlas of Cancer Mortality in the People's Republic of China (in 1970's)

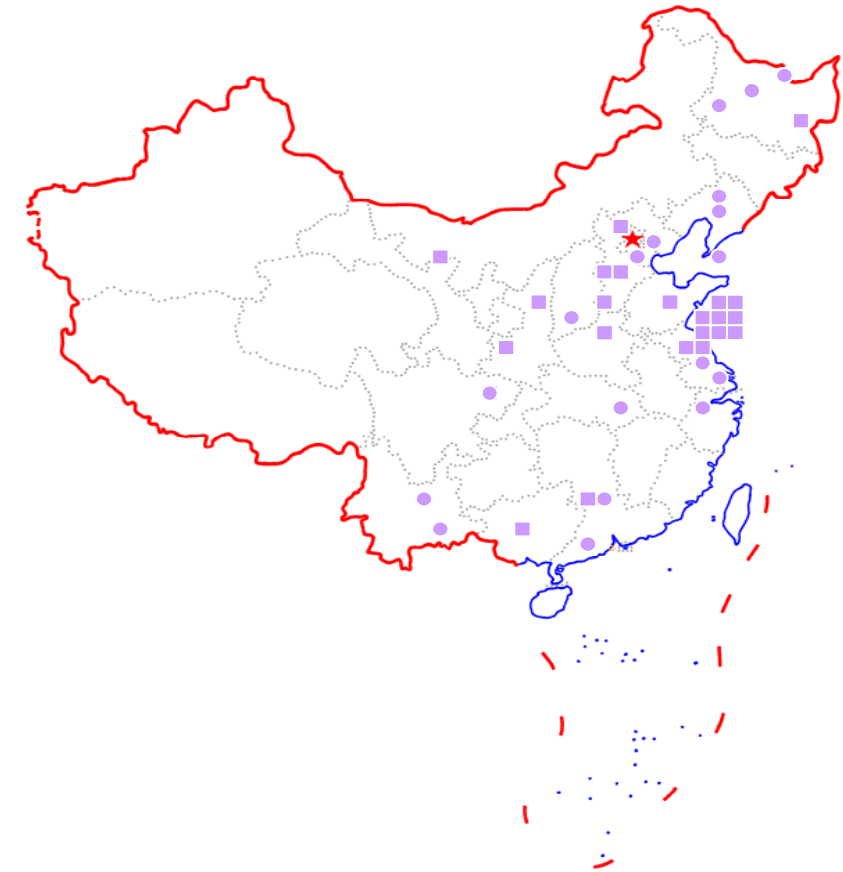


Research achievements

- The Distribution map of mortality rate of esophageal carcinoma (1959-1991) of Linzhou City, Henan Province



Geographic distribution of Chinese Cancer registries



- In 2002, there are about 49 Chinese cancer registries in 20 provinces, municipalities and autonomous regions, located at:
 - 18 cities
 - 31 counties

National Center for Cancer Registries

10 Chinese cancer registries had data published in Cancer Incidence in Five Continents Vol. VIII

12 Chinese cancer registries had data published in Cancer incidence and mortality in selected cities/counties in China

National Center for Cancer Registries

- (1) To collaborate IACR to sponsor the 26th annual scientific meeting of IACR in Beijing (September 2004).
- (2) To carry out research on the methods and strategies for cancer registry in China (since 1995).
- (3) To conduct cancer registry training courses, i.e., ICD-O-3 (November 2002), Can-Reg4 (April 2003), and hold national meeting/training course of cancer registration (2004).
- (4) To select the registries which qualify to join the programme in order to expand the size of the national center.

Research achievements

- **The field research on prevention and treatment of esophageal cancer was credited as one of the ten greatest science and technological achievements of state level in 1995.**

Recent publications(1)

- 1) Human epithelial cancers secrete immunoglobulin G with unidentified specificity to promote growth and survival of tumor cells. Xiaoyan Qiu. *Cancer Research*. 2003,63:6488
- 2) Substantial reduction in risk of lung adenocarcinoma associated with genetic polymorphism in CYP2A13, the most active cytochrome P450 for the metabolic activation of tobacco-specific carcinogen NNK. Haijian Wang Wen Tan. *Cancer Research*. 2003, 63: 8057-8061
- 3) A functional polymorphism in the matrix metalloproteinase-2 gene promoter (-1306C/T) is associated with risk of development but not metastasis of gastric cardia adenocarcinoma. Miao xiaoping Yu Chunyuan. *Cancer Research*. 2003, 63: 3987-3990
- 4) Gadd45a contributes to p53 stabilization in response to DNA damage. Shunqian Jin. *Oncogene* . 2003,00:1-5
- 5) The deregulation of arachidonic acid metabolism- related genes in human esophageal squamous cell carcinoma. Huiying Zhi. *Int.J.Cancer*. 2003,106:327-333
- 6) Esophageal and gastric cardia cancer risk and folate- and vitamin B(12)-related polymorphisms in Linxian, China. . Stolzenberg-Solomon RZ. *Cancer Epidemiol Biomarkers Prev*. 2003, 12(11Pt): 1222-6
- 7) Evaluation of 4-aminobiphenyl-DNA adducts in human breast cancer: the influence of tobacco smoke. Faraglia B. *Carcinogenesis*. 2003,24(4):719-725
- 8) Shanxi Province cervical cancer screening study II: Self-sampling for high-risk human papillomavirus compared to direct sampling for human papillomavirus and liquid based cervical cytology Belinson JL. *Int J Gynecol Cancer*. 2003,13(6):819-826
- 9) Immunohistochemical analysis of cyclooxygenase-2 expression In premalignant and malignant esophageal glandular and squamous lesions in Cixian , China. Wei Zhang. *Cancer Detection and Prevention*. 2003,127:243-249

Recent publications(2)

- 10) Hypermethylation of p16INK4a in Chinese lung cancer patients: biological and clinical implications. Liu yong An qian. *Carcinogenesis*. 2003, 24: published online ahead of print
- 11) Inactivation of DNA repair gene O6-methylguanine-DNA methyltransferase by promoter hypermethylation and its relation to p53 mutations in esophageal squamous cell carcinoma. Zhang Lei. *Carcinogenesis*. 2003, 24: 1039-1044
- 12) Substantial reduction in risk of breast cancer associated with genetic polymorphisms in the promoters of the matrix metalloproteinase-2 and tissue inhibitor of metalloproteinase-2 genes.. Zhou Xifeng. *Carcinogenesis*. 2003, 24: published online ahead of print
- 13) Proteomic analysis of pancreatic cancer using 2-DE coupled antibody microarray. Xiaoguang Ni. *Molecular & Cellular Proteomics*. 2003,2(9):821
- 14) Cloning and characterization of a novel gene EC97 associated with human esophageal squamous cell carcinoma . JIAYUN LU. *International journal of molecular medicine*. 2003,11:243-247
- 15) ECRG2, a novel candidate of tumor suppressor gene in the esophageal carcinoma, interacts directly with metallothionein 2A and links to apoptosis. Yongping Cui. *Biochemical and Biophysical Research Communications*. 2003,302: 904-915
- 16) Direct reduction of N-acetoxy-PhIP by tea polyphenols: a possible mechanism for chemoprevention against PhIP-DNA adduct formation. Lin Dongxin. *Mutation Research* . 2003, 523-524:193-200
- 17) A partial allelotyping of urothelial carcinoma of bladder in the Chinese. Zhang Jianjun. *Carcinogenesis*. 2003, 24(12): published online ahead of print
- 18) Expression of Cox-2 in stomach cancers and its relation to their biological features. Han ShaoLiang. *Digestive Surgery*. 2003, 20: 107-114

Recent publications(3)

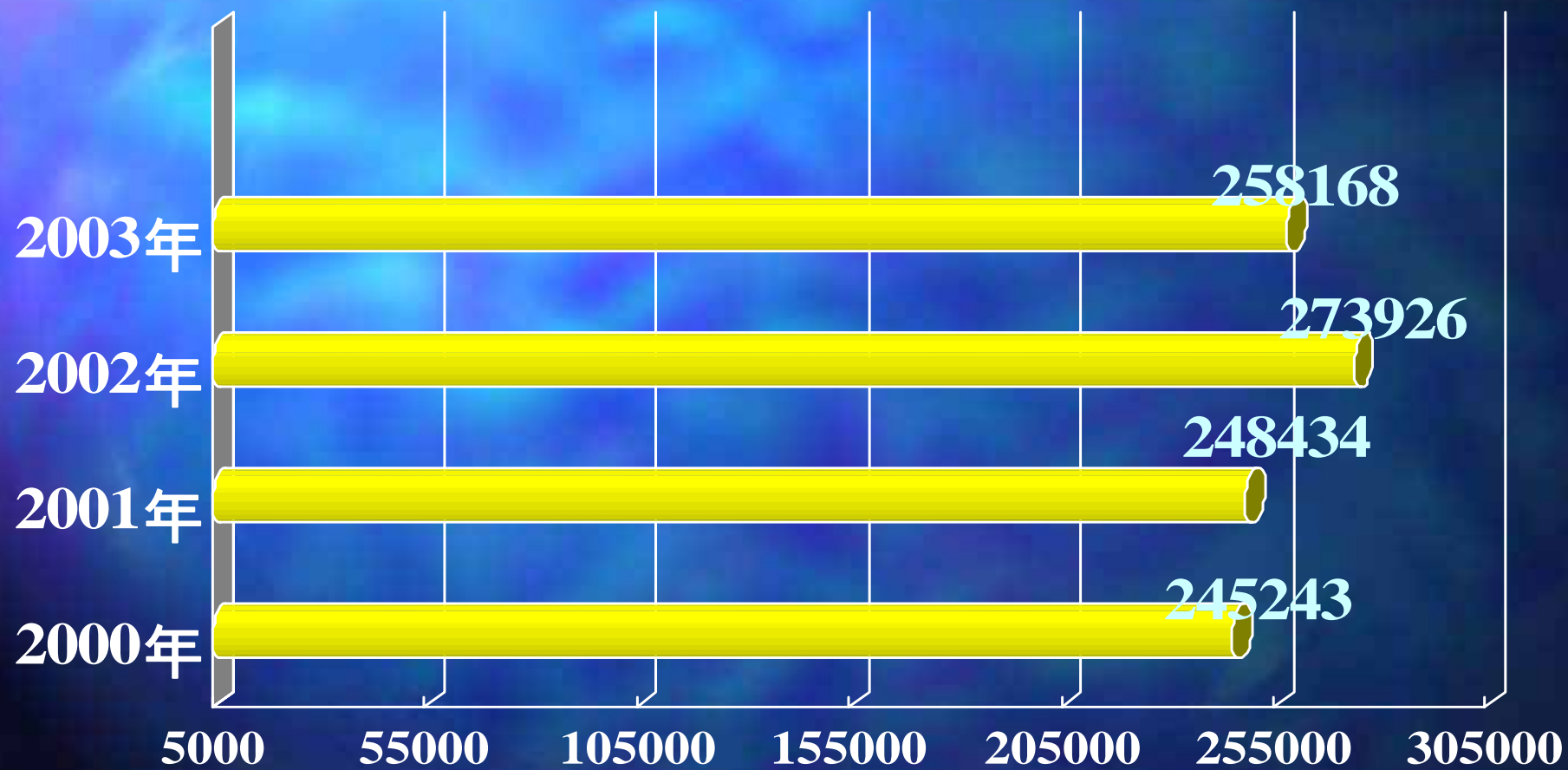
- 19) Lack of association between CCND1 G870A polymorphism and risk of esophageal squamous cell carcinoma . Yu chunyuan. **Cancer Epidemiology, Biomarkers & Prevention**. 2003, 12: 176
- 20) Sequence variations in the DNA repair gene XPD and risk of lung cancer in a Chinese population. Liang guang. **International Journal of Cancer**. 2003, 105: 669-673.
- 21) Identification of differentially expressed genes in immortalized human bronchial epithelial cell line as a model for in vitro study of lung carcinogenesis. An qian. **International Journal of Cancer**. 2003, 103(2): 194-204
- 22) Microsatellite alterations in esophageal dysplasia and squamous cell carcinoma from laser capture microdissected endoscopic biopsies. Ning Lu. **Cancer Letters**. 2003,189:137-145
- 23) Genetic polymorphisms and susceptibility to esophageal cancer among Chinese population (Review). Xing deyin. **Oncology Report**. 2003, 10:1615-1623
- 24) Expression of Adenovirus Type 5 E1A in the Methylophilic Yeast *Pachia pastoris* and the Inhibitory Effect on S-180 Tumor Growth. Yewei Ma. **Biol.Pharm.Bull.** . 2003,26(2):137
- 25) Multidistortion-invariant image recognition with radial harmonic Fourier moment. Ren Haiping **J.Opt.Soc.Am.A** 2003,20(4):631-637
- 26) A novel magnetic resonance-positive emission image registration based on morphology. Ren Haiping. **Bio-Medical Materials and Engineering**. 2003,13(3):187-196
- 27) Noise components on positron emission tomography images. Geng Jianhua. **Bio-Medical Materials and Engineering**. 2003,13(2):181-186
- 28) Conversion of dose-volume constraints to dose limits. Jianrong Dai. **Physics in Medicine and Biology**. 2003,48:3927

Ect.

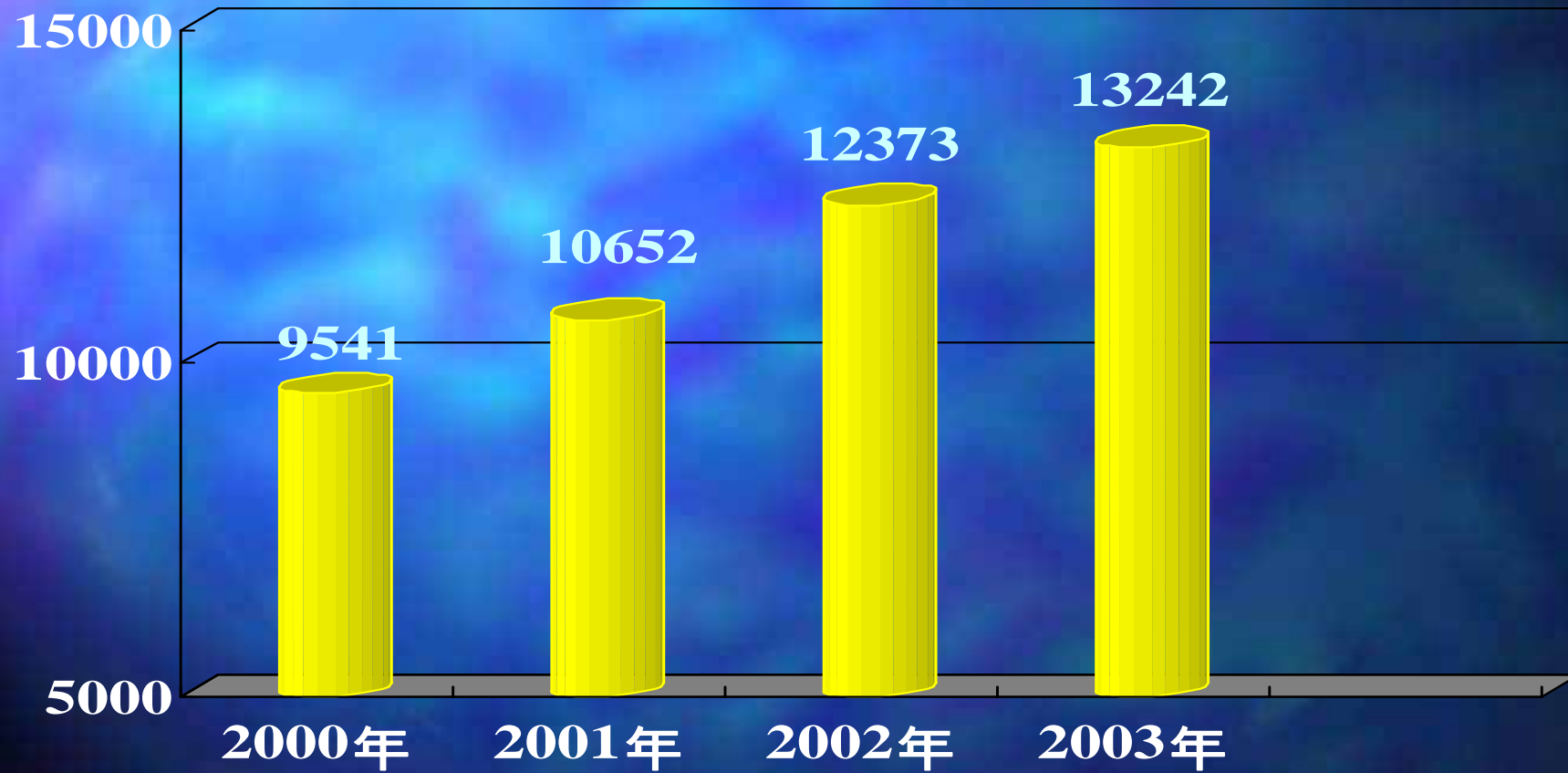
Medical Practice

- The hospital has 850 beds with an estimated annual in-patients of about 11,000 and out-patients of about 300,000.
- About 6,000 in-patients have been operated every year.
- 60% of the patients come from outside of Beijing, including foreign guests and overseas Chinese.
- Good Clinical Practice(GCP)

Out-patients

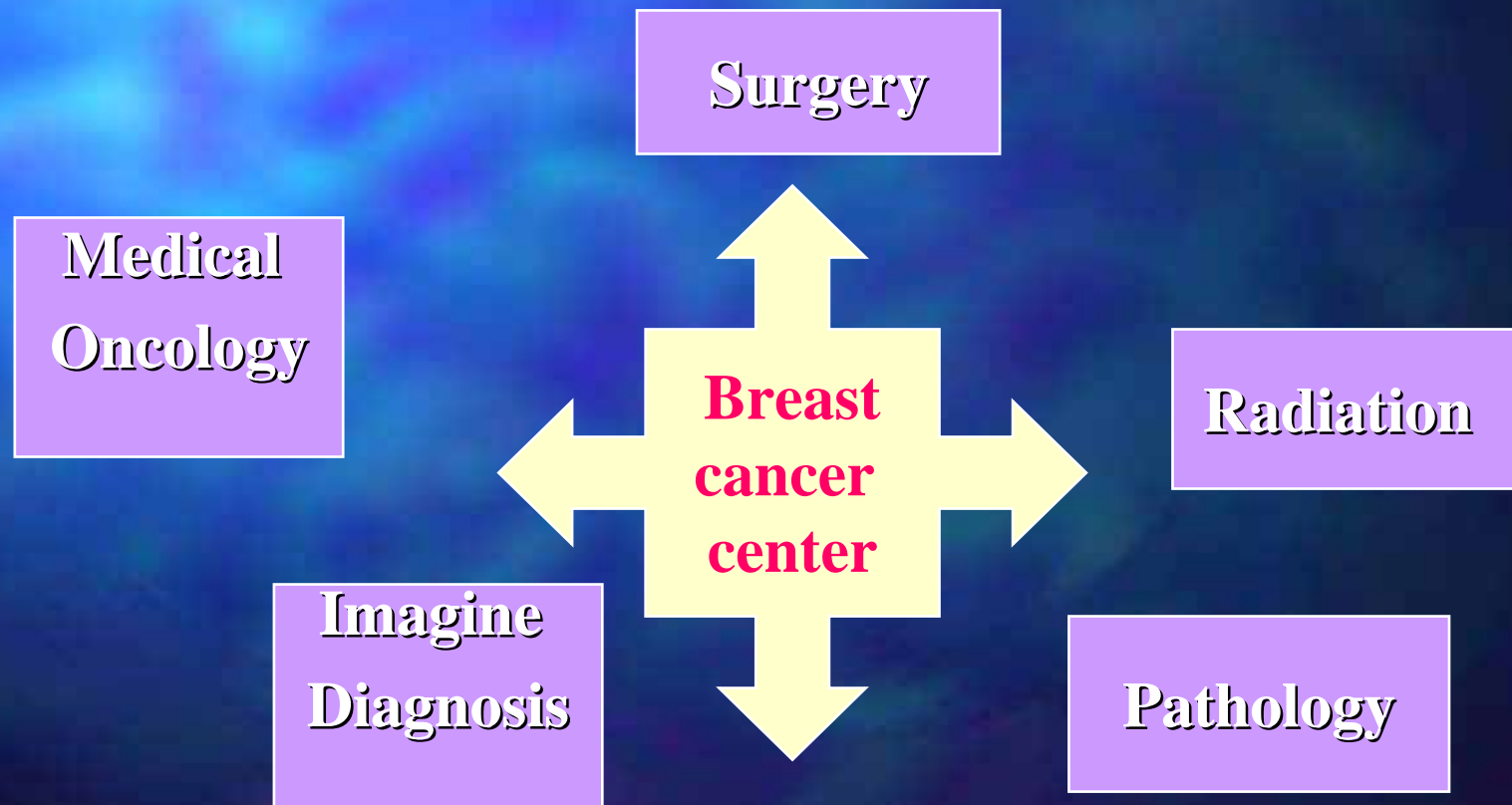


In-patients



Comprehensive treatment

- Multi-disciplinary treating system have been established



Medical cooperation

Medical cooperation with four hospitals in Lianyugang, Guizhou, Changzhou and Marco have been established.

International cooperation

NIH

- Nutrition intervention trials in Linxian China-continued follow-up
- Early detection of esophageal cancer
- Cellular and molecular studies of human hepatocarcinogenesis in China

PATH

- Screening technologies to advance rapid testing for cervical cancer prevention

IARC

- Pilot Phase of a Prevalence survey of HPV infection in Yang cheng county Shanxi Province, China

CTSU University of Oxford

- Clinical study on adjuvant tamoxifen therapy on breast cancer

International exchange

Sister hospital with MD Anderson cancer center



Medical Education

- We have different graduate programs for regular clinicians, masters, doctors and postdoctors.
- Since 1958, 25 post-doctoral, 245 PhD, 430 masters have finished studying.
- More than 3600 in-service training doctors from all over the country have taken their training courses in the hospital.

Tomorrow will be better!

