Supplemental Table 1: The raw and age-standardized cancer incidence rates of two big cities (Beijing and Shanghai) and two rural areas (Qidong and Linzhou) during 1988 – 2009.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Beijing | Shanghai | Qidong | Linzhou |
| Raw | WASR | Raw | WASR | Raw | WASR | Raw | WASR |
| Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 1988-1992 | 178.5 | 151.5 | 156.9 | 120.8 | 288.7 | 221.7 | 230.5 | 154.3 | 226.1 | 128.2 | 209.0 | 103.9 | 225.1 | 165.1 | 334.3 | 212.4 |
| 1993-1997 | 195.2 | 174.7 | 143.9 | 122.4 | 305.4 | 248.7 | 213.1 | 157.2 | 245.9 | 126.9 | 230.5 | 103.7 | 201.9 | 138.1 | 306.4 | 180.3 |
| 1998-2002 | 218.9 | 206.7 | 142.1 | 127.7 | 339.4 | 296.4 | 226.0 | 175.8 | 295.3 | 149.6 | 198.5 | 97.7 | 218.9 | 158.3 | 264.8 | 164.2 |
| 2003-2007 | 262.2 | 248.3 | 122.5 | 117.5 | 376.8 | 350.0 | 150.4 | 139.4 | 360.8 | 212.5 | 180.1 | 101.7 | 221.6 | 173.5 | 208.0 | 140.6 |
| 2008 | 303.1 | 296.8 | 175.3 | 169.1 | 412.2 | 376.3 | 198.8 | 180.1 | 421.1 | 253.9 | 226.0 | 127.0 | 279.9 | 191.8 | 364.2 | 210.9 |
| 2009 | 305.3 | 305.2 | 168.3 | 169.3 | 431.9 | 389.0 | 201.9 | 282.2 | 395.8 | 237.4 | 208.7 | 116.0 | 262.3 | 245.2 | 223.5 | 181.8 |

Raw rate and WASR (world age- standardized rate), expressed as per 100,000, were compiled from data obtained from:

1. Li L, Rao K, The cancer incidence and mortality statistics of 11 cancer registries in China, 1988 ~ 1992, *China Oncology*, 2000; 9: 435-47.

2. Li L, Rao K, Zhang S, Lu F, and Zou X, Statistical Analysis of Data from 12 Cancer Registries in China, 1993 ~ 1997, *China Oncology*, 2002; 11: 497-507.

3. Zhang S, Chen W, Kong L, Li L, Lu F, Li G, Meng J, and Zhao P, An Analysis of Cancer Incidence and Mor tality from 30 Cancer Registries in China, 1998 ~ 2002, *China Oncology*, 2006; 15; 430-48.

4. Zhao P, Chen W and Kong L, *Cancer Incidence and Mortality in China, 2003-2007*, 1st edition, Beijing, Military Medical Science Press, Jan 2012; ISBN: 978-7-80245-881-9.

5. He J, Zhao P, Chen W, *Chinese Cancer Registry Annual Report, 2011*, Beijing, Military Medical Science Press, Jan 2012; ISBN: 978-7-80245-856-7.

6. He J, Chen W, *Chinese Cancer Registry Annual Report, 2012*, Beijing, Military Medical Science Press, Oct 2012; ISBN: 978-7-5163-0081-7.

Supplemental Table 2: The breast cancer incidence rates of two big cities (Beijing and Shanghai)

and two rural areas (Qidong and Linzhou) during the period of 1988-2009.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Beijing |  | Shanghai | Qidong |  | Linzhou |  |
|  | RAW | WASR | RAW | WASR | RAW | WASR | RAW | WASR |
| 1988-1992 | 27.7 | 23.4 | 35.0 | 26.5 | 12.8 | 11.2 |  |  |
| 1993-1997 | 33.7 | 24.6 | 41.9 | 28.9 | 8.7 | 7.7 | 4.1 | 5.1 |
| 1998-2002 | 45.0 | 29.0 | 54.9 | 35.2 | 16.9 | 11.7 | 9.5 | 8.7 |
| 2003-2007 | 57.6 | 28.3 | 68.6 | 30.3 | 22.6 | 12.3 | 11.5 | 8.9 |
| 2008 | 70.4 | 43.2 | 75.1 | 40.8 | 25.4 | 14.2 | 14.6 | 14.8 |
| 2009 | 68.1 | 41.0 | 73.6 | 38.7 | 23.1 | 13.1 | 23.3 | 17.6 |

Female breast

Abbreviations and sources of the data are the same as Supplemental Table 1.

Supplemental Table 3: The incidence rates of lung and colorectal cancers of two big cities (Beijing and Shanghai) and two rural areas (Qidong and Linzhou) during the period of 1988-2009.

Lung cancer

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Beijing | Shanghai | Qidong | Linzhou |
| Raw | WASR | Raw | WASR | Raw | WASR | Raw | WASR |
| Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 1988-1992 | 44.3 | 28.6 | 37.9 | 22.0 | 71.5 | 28.2 | 56.1 | 18.2 | 37 | 14.1 | 35.2 | 11.2 | 12.0 | 6.1 | 18.1 | 8.0 |
| 1993-1997 | 49.6 | 34.0 | 35.6 | 22.5 | 75.6 | 31.4 | 50.9 | 18.2 | 45 | 14.1 | 43.4 | 11.2 | 9.1 | 5.3 | 13.9 | 7.2 |
| 1998-2002 | 54.3 | 36.7 | 34.0 | 20.6 | 80.2 | 36.9 | 51.5 | 19.9 | 62.9 | 21.3 | 41.3 | 13.1 | 11.2 | 7.2 | 13.2 | 7.1 |
| 2003-2007 | 62.5 | 39.6 | 26.9 | 15.7 | 78.6 | 39.9 | 28.6 | 12.8 | 87.8 | 33.5 | 40.6 | 14.7 | 15.5 | 8.5 | 14.7 | 6.7 |
| 2008 | 72.4 | 46.1 | 39.2 | 22.5 | 83.5 | 41.1 | 37.7 | 16.7 | 104.1 | 37.8 | 53.2 | 17.7 | 19.1 | 13.0 | 25.1 | 13.8 |
| 2009 | 72.6 | 47.5 | 37.2 | 22.2 | 87.4 | 45.7 | 37.4 | 18.0 | 97.5 | 36.9 | 49.1 | 16.8 | 16.9 | 15.11 | 14.3 | 10.9 |

Colorectum

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Beijing | Shanghai | Qidong | Linzhou |
|  | Raw | WASR | Raw | WASR | Raw | WASR | Raw | WASR |
|  | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 1988-1992 | 16.1 | 16.7 | 14 | 12.9 | 27.1 | 26.8 | 21.5 | 18.1 | 10.2 | 12.0 | 9.6 | 9.1 | 3.2 | 5.6 | 3.4 | 6.6 |
| 1993-1997 | 18.7 | 18.9 | 13.7 | 12.8 | 33.3 | 32.1 | 23.1 | 19.5 | 10.9 | 12.8 | 10.1 | 9.9 | 4.8 | 4.5 | 7.2 | 5.7 |
| 1998-2002 | 24.2 | 23.3 | 15.4 | 13.6 | 40.7 | 40.4 | 20.4 | 22.9 | 14.5 | 13.7 | 9.5 | 8.1 | 5.7 | 8.2 | 6.6 | 8.4 |
| 2003-2007 | 33.1 | 28.0 | 14.4 | 11.5 | 52.1 | 50.1 | 20.1 | 17.1 | 21.6 | 19.9 | 10.0 | 8.4 | 7.4 | 9.1 | 6.8 | 7.2 |
| 2008 | 37.3 | 32.9 | 20.6 | 16.6 | 60.0 | 53.3 | 28.5 | 21.8 | 29.5 | 19.0 | 15.3 | 13.4 | 12.3 | 10.0 | 14.5 | 11.1 |
| 2009 | 38.3 | 33.2 | 20.6 | 16.5 | 64.7 | 54.3 | 19.1 | 21.5 | 31.3 | 25.6 | 15.5 | 10.9 | 13.3 | 14.5 | 11.6 | 10.8 |

Abbreviations and sources of the data are the same as Supplemental Table 1.

**Supplemental Table 4. Guidelines of Screening for Breast, Colorectal and Cervical Cancers**

**Breast Cancer:**

It is recommended that women aged 35-40 years have a mammogram every other year and for women over 40 to have a mammogram every year, until they are 70 years old. The guideline further indicates that core biopsy examination and other treatments are supposed to be conducted on mammogram positive cases.

**Colorectal cancer:**

It is recommended that adults aged 20-75 years with a family history of familial adenomatous polyposis (FAP) or hereditary nonpolyposis colorectal cancer (HNPCC), or adults aged 40-75 without family history of FAP or HNPCC have a fecal occult blood test (FOBT) every other year. FOBT-positive cases are suggested to have a colonoscopy every 3 to 5 years. It is further recommended that proper treatments should be given to colonoscopy positive cases.

**Cervical Cancer**

The recommendation applies to women who have been sexually active for over 3 years or who are over 21 years old and are sexually active, but do not apply to women who have had a hysterectomy with the removal of the cervix. Women aged 35 to 60 years in developing areas and 25 to 60 years in the developed areas should be screened with a combination of cytology (Papanicolaou smear) and HPV DNA tests every year. The screening interval could be lengthened to 3 to 5 years if both of the tests are negative. One-year following ups are conducted with DNA positive and cytology negative cases. Colposcopy is recommended once the cytology result is positive.

From: Dong Z. Guidelines for Cancer Screening and Early diagnosis and treatment in China. Beijing: Peking University Medical Press, 2005.