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Enliven: Challenges in Cancer Detection and Therapy

Country Cancer Report

Tan Xu^{1,2}, Lucky Giroh³, Tong Yu⁴, and Wenjie Sun^{5*}

Department of Epidemiology, School of Public Health and Tropical Medicine, Tulane University, New Orleans, LA, USA

²Department of Epidemiology, School of Public Health, Medical College of Soochow University, Suzhou, Jiangsu, China

³Department of Global Health Systems and Development, School of Public Health and Tropic Medicine, Tulane University, New Orleans, LA, USA

⁴Department of Health Economic and Policy, Wannan Medical College, Wuhu, Anhui, China

⁵Department of Global Health and Environmental Sciences, School of Public Health and Tropic Medicine, Tulane University, New Orleans, LA, USA

*Corresponding author: Dr. Wenjie Sun, Department of Global Health and Environmental Sciences, School of Public Health and Tropic Medicine, Tulane University, New Orleans, LA, USA, E-mail: wsun3@tulane.edu

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Cancer is currently an important public health issue for Chinese government. Statistically cancer is rated as the leading cause of death and with high disease burden in China [1]. According to the data from the government, there are 3.5 million new cancer cases ever year in China. Several reasons could explain the growing numbers of cancer incidences. First of all, China aging population contributes to increasing cancer prevalence. For example, National Bureau of Statistics of China of 2010 showed that the people aged 65 year or above constitutes 8.87% of china population in 2010. Moreover, environmental risk factors also associated with the cancer [2]. In recent years, the worse environmental accompany with rapidly increased cancer incidence and mortality in China. The new challenge is correlating environmental pollution with cancer. It is worrisome to the Chinese. Proven this may be difficult, this may be due to lack of substantiating data and lack of transparency in the part of government about environmental concerns and related data. For example, although ambient PM2.5 and PM10 pollutions are prospectively associated with a significantly increased risk of lung cancer mortality [3,4], it is difficult to evaluate the attribute risk factors of PM2.5 due to lacking of the such pollution data. Of noted, the government begins to share PM2.5 data with public since 2012. However, among the correlation of cancer with types of pollution with respect to air, water and soil, the pollution from the soil are more related with cancer cluster. The environment ministry announced that 3.33 million hectares of cropland-2.5% of China's arable land-is too contaminated to grow food safely, according to a national soil survey conducted from 2006 to 2010 [5]. Previous studies reported the rice, a staple food in china, in the market was contained by the heavy metals including cadmium [6], and arsenic [7]. Both of those heavy metals are carcinogenesis. Hence, the economic development accompany with pollution, especially those soil contamination. Then the products from those contaminated soil, which could include carcinogenesis, evenly consumed by the people. This could be an explanation for the cluster phenomena of cancer in some area in China. Recently, Chinese authorities have acknowledged the existence of so-called "cancer villages" in a new report according to multiple media outlets. This could be a signal to show Chinese government start to concern about the huge cancer rate.

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Likewise, individuals show more concern on cancer therapy than prevention or control. Chinese believe the traditional medicine had special effect on cancer. Hence, some "natural therapy" is very popular among Chinese cancer patients. Bama, a county in Guangxi Zhuang Autonomous Region, is highlighted for high longevity which is attributed to her unique environment. Recently, it becomes the haven for Chinese cancer patients. Many cancer patients sort her as last hope for natural therapy and went to Bama. Some patients even give up the formal treatment and just live there. It sound that Chinese cancer patients are more likely to pursue "natural therapy" than the orthodox medicines. However, it is hard to evaluate the effect of "natural therapy" without the scientific examination. Without convince evidences, some stories is more likely to be a magic. This should necessitate cooperation from government or Non-government organization for more research in this field. However, few cancer experts focus on this area. Lacking of the scientific cancer prevention information or message, the Chinese is more vulnerable the uncorrected message on cancer. Hence, National cancer prevention and control plans are warrant. China needs to build a national surveillance and information systems, to gather national statistics on cancer through a network registry. Although Chinese cancer hospitals of each province had been and run for years, hospital-based cancer register is not good enough, much less to surveillance, predict, or make cancer prevention policy. It should be noted that the Chinese National Cancer Registry Program (NCRP) rapidly established new cancer registries, expanding coverage, and in standardizing the existing regional registries over the past years [8]. The population covered by cancer registries in China has increased from over 110 to 200 million, covering more than 15% of the population in 2012 [9]. Cancer Centers in USA combines treatment, prevention, and research; this could a model for Chinese to emulate.

Of noted, there is a pathological change from formerly common cancer like esophagus and stomach tumor linked with the poor people to currently prominent colon and prostrate neoplasm also been observed in China. It could be due to improved economy which may be responsible for better standard of living and lifestyle changes and gains in tobacco control with current declining rate in men at about 1% per year [10], whereas breast cancer is a worldwide phenomenon not limited to China. China's rapid urbanization and adoption of a westernized lifestyle (e.g., more sedentary, consumption of more meat and fewer vegetables, and a higher prevalence of obesity), in combination with high rates of tobacco use, is reflected in the changing cancer landscape [11]. It should be noted that the breast cancer among the female increased rapidly. For example, the overall crude incidence rate was 32.43 per 100,000, accounting for 16.20% of all cancer cases in women, ranking first among all cancer incidences, and the overall crude mortality rate was 8.65 per 100,000, accounting for 7.90% of all cancer deaths in women, ranking fifth among all cancer deaths in 2010 [12]. Early diagnosis of cancer

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can effectively improve the chance of early detection of breast cancer in early stages and successful treatment resulting in improvement survival rate and quality of life [13]. However, there is still lacking of health insurance and having low rate of regular mammography in China. It is difficult to provide regular mammography for all female. Thus, early detecting of breast diseases by self-examination is encouraged among Chinese women, although it might not be accept by the society. There is still a long way to go on fight for the cancer in China. Hence, population base cancer prevention education program is more important than treatment because it has more public health benefits, for individuals, the standard and scientific therapy is needed. Acknowledgment

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