

# 3<sup>rd</sup> International Conference on **Epidemiology & Public Health**

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## **Perspectives of breast cancer etiology: Synergistic interactions between smoking carcinogens and exogenous hormone use**

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Breast cancer has been a big global health issue since 1990s. Breast cancer incidence ranks first among all women cancers and continues to rise worldwide, most rapidly in low risk populations. In the past decades, thousands of medical/health/other scientists have been devoted to breast cancer research. The etiology of breast cancer, however, is not completely understood. This presentation will address the perspectives of breast cancer etiology and new research directions based on comprehensive information from molecular medicine, clinical medicine, and epidemiology of breast cancer including (1) plausibility of smoking in breast carcinogenesis; (2) physiological properties, susceptibility windows, and exposure timing of breast cells; (3) role of exogenous hormones in breast carcinogenesis; (4) biological mechanisms of synergistic interactions between smoking and exogenous hormones in breast carcinogenesis; and (5) evidence from epidemiologic studies and the fitted secular trend between smoking rate, exogenous hormone use, and breast cancer incidence in past decades.

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## **The economic burden of gestational diabetes mellitus in China: 2001-2012**

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The prevalence of gestational diabetes (GDM) is growing in China, and it is associated with a boosted risk of complications for the mother and neonate, such as pre-eclampsia, intrauterine death, stillbirth, post-partum type 2 diabetes, and macrosomia. GDM is also related with birth trauma, hypoglycemia, hyperbilirubinemia, respiratory distress, long-term obesity and childhood diabetes. Early determination and treatment of GDM can significantly diminish the incidence of these complications. The purpose of this study was to estimate the cases of Gestational Diabetes Mellitus (GDM) diagnosed with seven major GDM clinical guidelines between 2001 and 2012, and to estimate the economic burden of GDM. This study used seven major clinical guidelines (WHO, ADA2010, ADA2011, NICE, NDDG, Japan 2002, national guideline - China 2007) to estimate the cost of GDM across China. We synthesized the best available national census and statistics published data to estimate the cases and the economic burden of GDM diagnosed with seven major Gestational Diabetes Mellitus (GDM) guidelines. The prevalence of GDM varies from 1.01% to 23.12%, according to the different clinical guidelines. The economic burden was associated with the criteria factors of clinical guidelines. In the years 2001-2012, the economic burden approximated US\$9.94 billion with the current clinical guidelines (ADA2011), and the range of different guidelines varies from US\$1.43 billion to US\$32.88 billion. The economic burden of GDM is substantial. The diagnostic criteria for GDM, however, remain questionable regarding whether or not it is cost-effective. The next step is to conduct a cost-effectiveness study on GDM screening.

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