Hypothesis / aims of study
The etiology of IC/BPS was generally considered to be a multifactorial interplay between psychological, biological, and social factors. Previous study revealed that rates of depression and anxiety disorder were high in IC/BPS patients. However, depression and anxiety was different from somatic symptom disorder (SYD) in clinical manifestation. Recent studies showed that somatic symptom disorder (SYD) pattern might be an important phenotypic factor to IC/BPS. Moreover, it might be possible if SYD lead to IC/BPS or versus. The aim of the study was to investigate the causal relationship between SYD and IC/BPS.

Study design, materials and methods
We performed a retrospective cohort study of Longitudinal Health Insurance Database 2010 with newly diagnosis of SYD from 2002 through 2013. The Longitudinal Health Insurance Database 2000, a representative subset of the National Health Research Institute Database, comprised the complete original claims data of 1,000,000 individuals randomly sampled from the Registry of the National Health Research Institute Database. After limiting our sample to patients with SYD diagnosis (ICD-9 code 300.7or 300.81 or 300.82 or 300.11 or 316 or 306.xx at least once during the study period), we identified an SYD cohort. We then excluded patients with diagnosis of IC/BPS (ICD-9 codes, 595.1) before SYD diagnosis and the age of patient was under eighteen years old. After stratification on propensity-scores calculated by sex, age, and counts of out-patient visits for each of the 17 comorbid diseases, these 672392 patients were stratified into three strata (Figure 1). We calculate person-years for each patient through the date of IC diagnosis or December 31, 2013. The hazard ratio(HR) was estimated by cox regression model. Incidence density of IC/BPS in SYD cohort and non-SYD cohort was also calculated. All results were considered significant at p < .05.

*Figure 1* Flow chart
The incidence density of IC/BPS between the SYD cohort and non-SYD cohort was significantly different across the three strata (relative ratio (95%CI), 2.14 (1.01-4.53), 1.52 (1.47-1.57), 1.59 (1.28-1.98), respectively). The adjusted hazard ratio (HR) of IC/BPS was significantly greater in the female-dominant and older-age strata – stratum 2 and stratum 3 (adjusted HR 1.47 (1.07-2.01), 1.72(1.38-2.16), respectively) (Table 1).

Interpretation of results
After control by both stratification and multivariate cox regression analysis, the adjusted hazard ratio of IC/BPS between the SYD and non-SYD cohort was statistically significant in the female-predominant, middle-age group (stratum 2) and the female-predominant, oldest (stratum 3). This finding accounted for a stronger relationship between SYD and IC/BPS under the condition of female and older age.

Concluding message
There was a stronger causal relationship between SYD and IC/BPS under the condition of female and older age. However, because of the discrete constellations of of somatic symptoms disorder, which had the strongest link to IC/BPS remain to be answered.

Disclosures
Funding: No Clinical Trial: No Subjects: HUMAN Ethics Committee: Tsuotun Psychiatric Center, Ministry of Health and Welfare, Taiwan Helsinki: Yes Informed Consent: No