Fibromyalgia and Painful Bladder Syndrome/Interstitial Cystitis (PBS/IC) are two diseases both with chronic pain. About 17.7% of the PBS/IC will have fibromyalgia by previous study. These two diseases have similar common characteristics, such as demographic characteristics; comorbidities; past history; risk factors; difficult to treat. However, the exact pathogeneses are still unknown. This study assumes that there is a causal relationship between the two diseases, and design a cohort study to explore if the risk of PBS/IC in fibromyalgia patients is higher than those patients without fibromyalgia in Taiwan.

### Hypothesis / aims of study

Fibromyalgia and Painful Bladder Syndrome/Interstitial Cystitis (PBS/IC) are two diseases both with chronic pain. About 17.7% of the PBS/IC will have fibromyalgia by previous study. These two diseases have similar common characteristics, such as demographic characteristics; comorbidities; past history; risk factors; difficult to treat. However, the exact pathogeneses are still unknown. This study assumes that there is a causal relationship between the two diseases, and design a cohort study to explore if the risk of PBS/IC in fibromyalgia patients is higher than those patients without fibromyalgia in Taiwan.

### Materials and methods

The cohort study used longitudinal health insurance database (LHID2010) of the Taiwan National Health Insurance in 2010. We define those who are first-time diagnosed of fibromyalgia during 2002 to 2013 fibromyalgia cohort. Patients without fibromyalgia were matched with age, sex and ten comorbidities acquired the non-fibromyalgia cohort. Prospective observe and compare the risk of PBS/IC during study period in these two cohorts. In addition, to analysis the duration from diagnosis of fibromyalgia to the occurrence of PBS/IC in these cases.

### RESULTS & INTERPRETATION

In unmatched group, including 1,403 FM and 368,507 non-FM patients, the PBS/IC HR was 1.064 (95% CI, 0.813–1.393; p=0.651) in the FM cohort compared with non-FM cohort. In matched group, there were 23,751 patients in both FM and non-FM cohorts and the PBS/IC HR was 1.373 (95% CI, 0.866–2.177; p=0.178). The average year of developing PBS/IC in FM cohort and non-FM cohort were 3.71±2.53 (n=33) and 5.85±3.32 (n=50) years, respectively.

1. **PBS/IC and FM have many similarities between the symptoms and pathogenesis, such as increased sensitivity of pain in the CNS and surrounding tissue, however, only inferences and lack of sufficient evidence. (1997, Clauw)**
2. **A questionnaire survey of 205 PBS/IC and 117 age-matched. PBS/IC were significantly more likely to have fibromyalgia at the same time (17.7% vs 2.6%, p < 0.001), and 20.2% of patients had multiple comorbidities at the same time, and their symptoms were more severe, also may be two way evolution (Nickle, 2010)**
3. **In our study,326,732 patients (30% incidence) with “fibromyalgia” diagnosed by doctors from all departments, however, 31,565(3.1% incidence) were diagnosed by medical specialists, similar to epidemiological investigations (2-8%).**
4. **The cohort study used longitudinal health insurance database (LHID2010) of the Taiwan National Health Insurance in 2010. We define those who are first-time diagnosed of fibromyalgia during 2002 to 2013 fibromyalgia cohort. Patients without fibromyalgia were matched with age, sex and ten comorbidities acquired the non-fibromyalgia cohort. Prospective observe and compare the risk of PBS/IC during study period in these two cohorts. In addition, to analysis the duration from diagnosis of fibromyalgia to the occurrence of PBS/IC in these cases.**

### CONCLUSIONS

FM has no causal effect on PBS/IC in this twelve years’ cohort study. The average year from diagnosis of FM to PBS/IC was 3.71±2.53 years.

### REFERENCES