

## Stool Examination for Liver Fluke Detection and Ultrasonography for Detection of Abnormal Biliary Tract in Cholangiocarcinoma Control Program: A Reappraisal from Endemic Area in Indochina

Sir, cholangiocarcinoma is a deadly malignancy of biliary tract that has its highest prevalence in Indochina. The patients usually present with severe hyperbilirubinemia with grave prognosis.<sup>[1]</sup> The relationship between cholangiocarcinoma and liver fluke infection is widely mentioned.<sup>[2]</sup> In Thailand, an endemic area, the systematic screening program using two important procedures, stool examination for liver fluke detection for all local people aged more than 15 years old and ultrasonography for the detection of abnormal biliary tract for all local people aged more than 40 years old program has just been launched.<sup>[3]</sup> This screening program has been implemented and mentioned for its advantage in the south northeastern region of Thailand, where there is the highest incidence of cholangiocarcinoma.<sup>[4,5]</sup>

Here, the authors reappraise the recent data on the result of screening program in the mentioned region. The public available data (available on [http://bie.moph.go.th/e-insreport/file\\_present/2018-05-22-02-09-22-11.pdf](http://bie.moph.go.th/e-insreport/file_present/2018-05-22-02-09-22-11.pdf)) in year 2018 are analyzed. Data on detection rate from screening program in all four provinces in the studied region are collared and summarized [Table 1]. The detection rate of fluke in stool examination and the detection rate of abnormal biliary tract ultrasonography screening are equal to 0.61% (95% confidence interval [CI] between 0.55% and 0.68%) and 10.35% (95% CI between 10.04% and 10.66%), respectively. The rate of final diagnosis of cholangiocarcinoma is 0.04% (95% CI between 0.02% and 0.07%). It can show that both screenings can detect the pre-cholangiocarcinoma risk. The detection rates from both screenings are higher than the rate of final diagnosis of cholangiocarcinoma. Comparing to the rate of abnormal biliary tract ultrasonography, the rate of positive stool screening test is more closed to the rate of final diagnosis of cholangiocarcinoma. Conclusively, the stool examination is still a good basic screening for the risk of cholangiocarcinoma and additional ultrasonography screening might be helpful for finding precancerous biliary tract abnormality that can further progress to cholangiocarcinoma.

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**Table 1: Detection rate according to the screening program**

Screening	Detection rate			
	Province 1	Province 2	Province 3	Province 4
Stool examination	0.16	0	32.04	7.03
Ultrasonography	10.23	8.47	21.51	3.80
Final cancer diagnosis	0.15	0	1.05	0.01

### Conflicts of interest

There are no conflicts of interest.

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