A malignancy quantification index for tumor
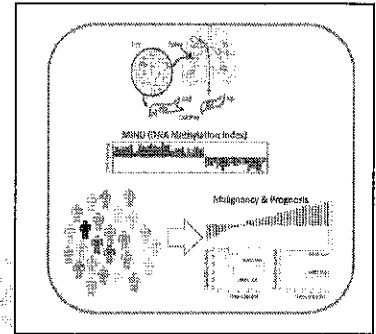
PI： Prof.　CHAO-CHI HO

　　Department of Medicine, National Taiwan U.

Experience:

Attending physician (Pulmonologist), Department of Internal Medicine, National Taiwan University Hospital

Clinical associate professor, Department of Internal Medicine, College of Medicine, National Taiwan University

Market Needs:

Since cancer-associated fibroblasts (CAFs), a key determinant within the tumor microenvironment (TME), possess multifaceted capacity for supporting tumor growth and its malignancy, contributing to tumor recurrence and drug resistance, targeting CAFs to inhibit tumor-promoting activities has arisen as a novel therapeutic strategy to complement common approaches of targeting the tumor itself. The identification of DNA methylation-based predictive markers for quantifying the protumorigenic potency of CAFs is in urgent need for TME-targeted personalized medicine.

Our Technology:

We developed a robust and efficient methylome/transcriptome co-analytical system for CAFs and paired normal fibroblasts (NFs) from non-small-cell lung cancer patients. We built a **methylation index for normal/cancer-associated fibroblasts discrimination (MIND)** that could quantify the level of TME malignancy with high sensitivity and specificity, and effectively assess prognosis.

Strength:

MIND has the potential to detect premalignancy and predict tumor recurrence across individual patients. Precision TME grading provides additional pathological information to guide cancer prognosis and helps open up more options in personalized medicine.

Competing Products:

Base on the google patent database, there is no similar patent to be found.

Intellectual Properties:

1. We have applied the official patent of this technique.
2. Our team have worked on this field for more than 10 years with fruitful publications.

Contact (do not need to fill out):

Center for Industry-Academia Collaboration, NTU

Tel: 02-3366-9945,　E-mail: ordiac@ntu.edu.tw