1. Background

CTC: Circulating tumor cell

- Recovering isolated CTCs is difficult (Only enrichment)
- Loss of CTCs can exist from connections

2. Concept

Cell Isolation using Air/Liquid interface

- Isolating CTCs from many blood cells
- Aspirate the isolated CTC as a single cell

3. Result

Rare Cell Isolation from blood

- Sample: Blood sample (diluted) + GCIY
- Blood sample is not pretreated
- Precounted GCIYs are spiked (15 cells/sample)

CTC Isolation from Mouse-CTC model (Lung metastasis)

- Collection rate: 86% (X2 diluted)
- High throughput: 3 mL/hr

Succeeded in Isolating CTCs (13/15)

4. Conclusion

- CTC isolation from blood by air-liquid interface
- Diluted blood sample provided a cancer cell collection rate of about 90%
- Our platform aims at achieving liquid biopsy to estimate the risk for metastatic relapse easily

Reference

- Woneui Song, et al, “気液界面を利用した希少細胞の高速自己配列プラットフォーム”，2P25, 29th Cheminas