

Microfluidic Integration of a Pancreatic Tumor Microenvironment System to Study
the Effects of Chemotherapeutics
(Technical Report)

Unconvinced Patients: Resistance to Care among Patients with Depression
(STS Research Paper)

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by

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Preface

Physical and mental wellbeing are the interdependent essentials of human health.

In 2020, approximately 600,000 Americans died of cancerous diseases. With a simulated pancreatic tumor, drugs could be tested *in vivo* apart from human clinical trials. A prototype novel microfluidic device for the controlled delivery of variable concentrations of drugs to a tumor microenvironment was developed and tested. The device may serve as a useful biomimetic drug interrogation platform. The prototype was shown to have a high efficacy and further study will allow for the integration into the tumor microenvironment.

Many clinically depressed persons do not seek treatment or decline to follow prescribed care. Avoidance of care or treatment is often due to depressed persons' low assessment of their self-efficacy. Education, destigmatization, patient-clinician collaboration, patient support systems, and healthcare regulation is necessary.

List of Contents

1. Technical Report: Microfluidic Integration of a Pancreatic Tumor Microenvironment System to Study the Effects of Chemotherapeutics
2. Sociotechnical Research Paper: Unconvinced Patients: Resistance to Care among Patients with Depression
3. Prospectus