

miDOS

BIOLOGICAL ASSAY FOR PREDICTING NEUTROPENIA AFTER EXPOSURE TO RADIATION

WHAT IS miDOS?

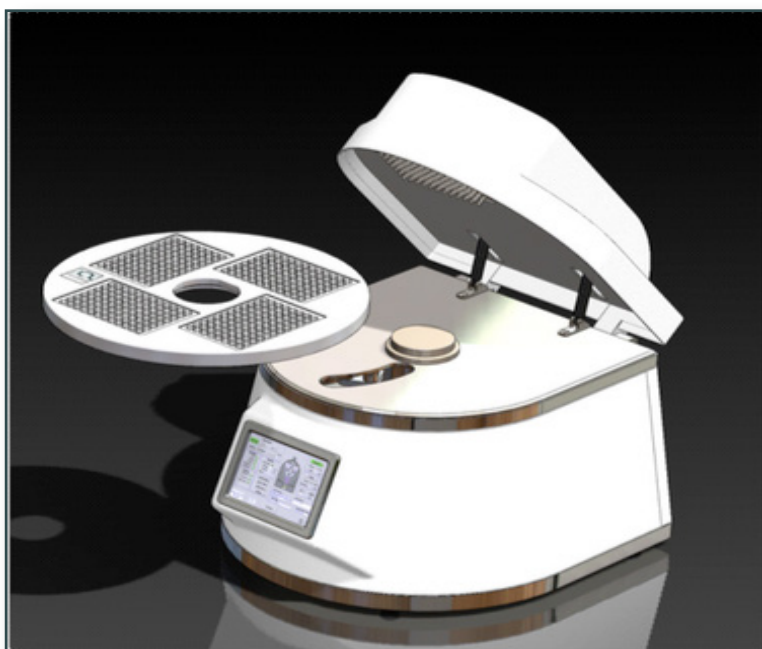
miDOS is a point-of-care device that quickly determines if a person is at risk of developing neutropenia, a critical clinical condition in which the body loses its ability to fight off bacterial infections. This device can pre-symptomatically predict the onset of neutropenia (up to 5 days prior to development) in people who have been exposed to radiation or chemotherapeutic agents, using a panel of circulating miRNA biomarkers found in standard blood samples.

WHY IS miDOS NEEDED?

miDOS will give medical personnel the capability to differentiate between patients at risk for developing mild neutropenia and patients whose lives are in jeopardy. Neutropenia is treatable through the prophylactic use of myeloid colony-stimulating factor drugs, such as FDA approved filgrastim or sargramostim. The ability to predict the onset of Neutropenia could prove critical during a mass casualty Rad-Nuc event.

HOW DOES miDOS WORK?

miDOS measures the concentration of circulating micro RNA (miRNA) in a sample of 200 μ L of blood obtained via a lancet. miRNA are the body's regulator of gene expression. miRNA expression profiles are specific to each cell type, and



can signal specific types of tissue damage.

WHAT MAKES miDOS DIFFERENT?

The miDOS system will be the first minimally invasive device capable of rapidly determining delayed radiation or chemotherapy induced neutropenia in order to inform treatment decisions. This is made possible by the following ChromoLogic innovations: 1) Our chemo-mechanical plasma isolation kit which enables blood sample collection and processing in low resource settings; 2) Our unique miDOS neutropenia panel composed of circulating miRNA with established tissue origins.