

Detection of neuroendocrine marker in blood samples using an optofluidic chip

Abstract:

Detection of a newly discovered prostate cancer (PC) biomarker neuroendocrine marker (NEM) using an optofluidic chip, consisting of arrayed optical nanosensors, has been carried out. Different from prostate-specific antigen (PSA), NEM is produced by prostate tumor cells and is released or leaked in blood. Hence, NEM is tumorspecific and more reliable biomarker than PSA. In this effort, for the first time, we have detected 10pg/mL NEM in BSA solution and NEM in blood serum from a patient using the optofluidic chip with high specificity, indicating this type of chip can be potentially used for screening and achieving early detection of PC.