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Study: LifeTracDx blood test shows positive results in detection of early stage cancer in solid tumors

LifeTracDx, a blood test for the universal screening of early stage cancer, identified invasive cancer with 87% accuracy in a new study.

LifeTracdX is sponsored by Creatv MicroTech, a privately-held biotechnology company.

The results are from a training set of 10 cancer types, Cha-Mei Tang, chief executive officer of Creatv, said in a statement.

"The data shows that we obtained 85% sensitivity for all cancers (from 79% of patients in stage I and increasing to 95% of patients in stage IV), and also shows 100% specificity when tested against healthy normal controls," Tang said. "This represents a significant step towards pan cancer screening by a routine blood draw with high sensitivity and specificity."

The test analyzed the patient's immune response to the presence of cancer by isolating stromal cells originating from cancer sites that have migrated into the bloodstream. Creatv has shown that a particular subtype of circulating stromal cell, Cancer Associated Macrophage-Like cells, can be used to identify patients with cancer but are absent in healthy persons.

CAMLs are phagocytic myeloid cells derived from the patient's immunological response to active malignancy that have engorged cancer cells, thereby containing cancer protein markers and cancer DNA.

In a large multi-institutional study, 7.5mL of peripheral blood was taken from 308 cancer patients after a diagnosis of invasive malignancy, [stage I (n=76), stage II (n=73), stage III (n=72), stage IV (n=65) and unstaged non-metastatic (n=22)]. Patients were recruited with lung, pancreas, breast, prostate, esophageal, renal cell, hepatocellular, neuroblastoma, melanoma, and others. To compare specificity of the test, blood was also taken from 39 patients with untreated non-malignant conditions (i.e. benign breast masses, lupus, liver cirrhosis, etc.), and from 76 healthy volunteers. CAMLs were 87% accurate at identifying cancer patients when compared to healthy controls or from patients with non-malignant conditions.

These initial findings were granted funding from NCI/, Department of Defense and NCI/NIH for validation studies in the screening of 1,000 breast patients, 1,000 lung patients and 300 prostate patients.