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MedGenome to present insights into the impact of CD8 T-cell infiltration on patient survival

The poster will be presented at 'Frontiers in Cancer Immunotherapy' conference in New York

MEDGENOME

FOSTER CITY, CA, UNITED STATES, February 8, 2017 /EINPresswire.com/ -- MedGenome will present a poster titled "Tumor microenvironment analysis provides insights into the activity of CD8 T-cells and their impact on survival." at the Frontiers in Cancer Immunotherapy conference organized by the 'The New York Academy of Sciences' on 27 – 28 February, 2017.

Tumor cells employ a variety of different strategies to evade the host immune attack. The immune reactivity of a tumor is a measure of its inflammatory state, which is determined by a combination of tumor-intrinsic and host-derived factors. To further investigate the immune reactivity of tumors and its impact on patient survival, the MedGenome team characterized the tumor microenvironment of low and high T-cell infiltrated tumors from 33 cancers in TCGA data using their OncoPept™ platform. The analysis identified cancers that benefited from CD8 T-cell infiltration such as melanoma or Head and Neck cancer from those that showed a lack of benefit, such as lung adenocarcinoma or kidney cancer. By comparing the low and high CD8 T-cell infiltrated tumors in these two groups, the study identified multiple tumor intrinsic oncogenic pathways associated with CD8 T-cell exclusion, such as PI3K-AKT pathway in breast cancer or recurrent mutations in Zinc finger protein ZNF814 in liver cancer. Additionally, the analysis identified features in the tumor microenvironment that modulated the function of CD8 T-cells and correlated with or without survival benefit. With further validation, these findings can lead to the development of novel biomarkers for selecting patients who will benefit from cancer immunotherapy.

OncoPeptTUME™ is MedGenome's powerful tumor microenvironment analysis solution. The pipeline uses extensively curated and expression-verified gene signatures to interrogate RNA sequencing data to capture the cellular landscape of tumors. Immune phenotype scores normalized to the immune content separate tumors with high and low infiltration of specific cell types. Current immune cell types captured in this version of OncoPeptTUME™ include CD8 and CD4 T-cells, T-regulatory cells, NK cells, dendritic cells, B-cells, macrophages and myeloid derived suppressor cells (MDSCs).