**Pdl-1 as a Biomarker of Risk for Skin Cancer Development**

**Title:** PD-L1 as a Biomarker of Risk for Skin Cancer Development

**Invention:** This technology is the use of PD-L1 as a biomarker in a companion diagnostic for a preventative treatment of skin cancer. High levels of PD-L1 expression indicates exposure to UV-radiation, the main risk factor for the development of skin cancer. This technology can also be used as a predictive biomarker and helps determine if you are at risk for developing skin cancer and if you should be monitored more closely.

**Background:** Skin cancer is the most common type of cancer among the Caucasian population worldwide, with an estimated 161,790 cases diagnosed in 2017, 74,680 cases being noninvasive and 87,110 cases being invasive. The estimated total annual cost of treating skin cancers is $8.1 billion in the US. Although the incidence of skin cancer continues to rise, skin cancer can be cured if detected early and can be prevented if appropriate preventative measures are taken. To improve the prevention of skin cancer, early detection and screening programs need to utilize biomarkers that indicate whether or not a patient has an increased risk of developing skin cancer.

**Applications:**

- Biomarkers in a companion diagnostic for determining whether or not a patient will benefit from using a preventative skin cancer therapeutic

**Advantages:**

- Potential to improve the prevention of skin cancer
- Provides a clear indication of whether or not a patient has an increased risk of developing skin cancer

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