Diagnostic Tool for Estrogen Receptor Positive Breast Cancer Patient Stratification

**Title:** Diagnostic Tool for Estrogen Receptor Positive Breast Cancer Patient Stratification

**Invention:** This technology is the identification of a biomarker to stratify estrogen receptor positive breast cancer patients to see if they should receive anti-estrogen therapy or not.

**Background:** Breast cancer, the second most common cancer among American women, will affect 330,000 new patients this year. The most commonly diagnosed breast tumors are estrogen receptor positive tumors and these tumors cause the greatest number of deaths among breast cancer. Although it has been long known that estrogen promotes the growth of estrogen receptor positive breast tumors, studies have shown that estrogen may also play a protective role against cancer cell invasion and metastasis. There are currently a number of immunohistochemistry assays that can be used to determine estrogen receptor status to determine patient suitability for anti-estrogenic hormonal therapy. However, there is a need for the identification of a biomarker that is associated with the protective role of estrogen and that can allow for the identification of estrogen receptor positive breast cancer patients who may not benefit from anti-estrogenic hormonal therapy.

**Applications:**

- Diagnostic to stratify estrogen receptor positive breast cancer patients

**Advantages:**

- Associated with the suppressive role of estrogen in cancer cell invasion
- May allow for the identification of estrogen receptor positive breast cancer patients who may not benefit from anti-estrogenic hormonal therapy

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