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Endometrial Cancer Recurrence Risk Biomarker

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Biomarker for Recurrent Endometrial Cancer

Analysis of recent human clinical samples determined that patients with high levels of ubiquitin carboxyl-terminal hydrolase 14 (USP14) were six times more likely to experience recurrence of endometrial cancer than patients with low levels. In addition, higher USP14 levels added predictive value even when disease grade was known.

Cancer Biomarker could Guide Treatment Decisions

No biomarkers are currently available to assess the risk of recurrence of endometrial cancer, the most common form of gynecological cancer in the United States. Since USP14 staining intensity can be determined pre-operatively via biopsy (along with grade), this technology could help low-risk patients avoid aggressive surgery and/or lymph node dissection and guide high risk patients toward surgical and adjuvant therapy regimens likely to improve their outcomes.

USP14

USP14 is not only a biomarker for recurrent disease, but a potential therapeutic target as well. The data show a strong positive correlation between the intensity of USP14 staining and degree of proliferation of endometrial cancer in situ, suggesting that highly proliferating cells may be more dependent on USP14 activity. Further, the data showed that pharmacological inhibition of USP14 with the FDA approved inhibitor VLX1570 reduced cell viability of endometrial cancer cells.

BENEFITS AND FEATURES OF USP14 AS A BIOMARKER FOR ASSESSING RISK OF ENDOMETRIAL CANCER RECURRENCE:

- Determines risk of recurrence of endometrial cancer
- Can guide surgical and/or therapeutic decisions
- USP14 inhibition could be used as cancer therapy
- Improves the prognosis and treatment of endometrial cancer patients
- Testing is inexpensive and easy
- Low-risk patients could be spared aggressive surgery, including lymph node dissection
- High-risk patients could be advised to undergo adjuvant therapy

Phase of Development Assay development, pre-clinical validation

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