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EVALUATION OF HUMAN EPIDIDYMAL SECRETORY PROTEIN E4 (HE4) FOR MONITORING FOR OVARIAN CANCER RECURRENCE

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Introduction: Serum HE4, a new biomarker for ovarian cancer, was shown to have a better sensitivity for detecting ovarian cancer compared to Ca 125, especially in early disease. In this study, we measured the HE4 levels in patients who had relapsed ovarian cancer in an attempt to elucidate its role in disease monitoring and recurrence detection.

Methods: HE4 levels were measured at pre-treatment, immediately post treatment (remission), just prior to diagnosis of recurrence and at recurrence using a commercial available ELISA kit in women with ovarian cancer recurrence. The results were compared with Ca 125 levels. Levels of more than 70 pmol/L and 35 u/ml were considered raised for HE4 and Ca 125 respectively. Chi square test was used to detect difference between groups.

Results: 67 patients with saved sera available at recurrence were included in the study. At pretreatment 59 (88%) have raised Ca 125 compared to 63.6% with raised HE4. The sensitivity for recurrence detection was 92.5% (62/67) and 61.2% (41/67) for HE4 ($p=0.004$) respectively. Specificity of HE4 and Ca125, based on the levels when there was no evidence of disease were 82.1% for HE4 versus 98% for Ca 125. 12 (24.4 %) patients had raised HE4 before the rise of Ca 125, whereas 6 (14.3%) had raised Ca 125 first.

Conclusion: HE4 reflected in the disease process in women with ovarian recurrence but has a lower sensitivity than Ca 125 in recurrence detection.