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CA 125 INFORMATION SHEET

PHYSIOLOGY

CA 125 is a serum tumour marker for ovarian carcinoma. It is defined as the antigen recognised by the monoclonal antibody OC-125 (OC: Ovarian Cancer). CA 125 is a heterogenous group of high molecular weight glycoproteins derived from Mullerian ducts and produced by ovarian tumours. The antigen is not present on normal ovarian tissues and has a half-life about 6 days.

OVARIAN CANCER

CA 125 is the best available tumour marker for epithelial and non-mucinous ovarian cancer and is important for monitoring response to treatment and recurrence of disease. About half of patients with localised (stage I) disease will have elevated levels increasing to over 90% for more advanced disease (stages II-IV). The sensitivity for serous carcinoma is higher than that for mucinous ovarian carcinoma. After definitive therapy patients should be retested every 3-4 months for 2 years then less frequently. In this setting, elevated levels (>35 kU/L) are associated with recurrence in nearly 100% of patients. Although CA 125 does not show sufficient specificity for screening for ovarian cancer it should be measured in all women presenting with a pelvic mass.

OTHER CANCERS

CA 125 can also be significantly elevated in endometrial, cervical, pancreatic, bronchial and breast cancer as well as with hepatoma.

BENIGN DISEASE

False positives can occur with benign ovarian disease, pelvic inflammatory disease, endometriosis, chronic hepatitis, pancreatitis and in normal pregnancy with a peak at 8-10 weeks. Hypothyroidism and myxoedematous ascites have also been described to elevate CA 125.

Levels over 2,800 kU/L become very specific for ovarian cancer. 95th centile for benign diseases is 285 kU/L.