

Practice based standards for the use of tumour markers

- Tumour markers can contribute usefully to patient management but awareness of their limitations is essential
- Tumour markers are not helpful for diagnosis in patients with non-specific symptoms
- Many tumour markers are raised in several cancers and in certain benign diseases so cannot either identify or exclude suspected malignancy, especially early stage disease reliably owing to low diagnostic sensitivity and low specificity
- A negative tumour marker does not exclude disease
- The main application of tumour markers is in monitoring after treatment
- Measurement of both AFP and HCG is mandatory in the diagnosis and management of germ cell tumours
- Measurement of CEA is recommended for post operative follow up of patients with stage 2 and 3 colorectal cancer if further surgery or chemotherapy is an option
- PSA may be used for detecting disease recurrence and monitoring treatment in patients with prostate cancer
- In some high risk patients, measurement of AFP,CA125 or CA19-9 may aid early detection of hepatocellular carcinoma,ovarian cancer or pancreatic cancer respectively
- CA125 should be measured in primary care in women reporting having any of the following symptoms on a persistent or frequent basis, particularly more than 12 times a month-persistent abdominal distension, early satiety and/or loss of appetite, pelvic or abdominal pain and increased urinary urgency and/or frequency in order to reduce the risk of delayed diagnosis of ovarian cancer and if CA125 is >35 IU/ml,an ultrasound scan of the abdomen and pelvis arranged. If less than 35 IU/ml and symptoms persist the patient should be referred for further investigations.
- Opportunistic screening with a panel of tumour markers is not helpful nor measurement of CA125 in males or PSA in females
- When interpreting results, particularly serial results, clinicians need to be aware that results obtained using different methods are not necessarily comparable. It is recommended that laboratories indicate the method used when reporting results for tumour markers
- Laboratory reports should indicate that quoted reference ranges are only a guide and that results should be interpreted together with non-biochemistry investigations and within the clinical context
- Guidelines provide a helpful framework to promote best practice with local ownership being essential for successful implementation and to this end, senior members of the

Biochemistry department should work with their clinical colleagues, in particular their oncologists to produce such guidelines which should be readily accessible to all staff

- Inappropriately used tumour marker results can cause patients additional anxiety and stress and unnecessary investigations such as biopsy may be associated with serious side effects and may delay correct diagnosis and treatment