Fact Sheet

Tumour Markers

Definition

The ideal tumour markers are substances produced either by the tumour or hosts in response to the tumours. They should be detected easily in serum and can be used reliably to differentiate from non-cancerous conditions.

Availability

Available markers at ACT Pathology include AFP, CA-125, CA15-3, CA19.9, CEA, HCG, PSA (including free PSA) and TG. There is *no* ideal tumour marker that is specific for a particular malignancy. Generally, tumour marker levels are rarely elevated inpatients with early malignancy. High levels are usually found only when patients have advanced disease.

No cancer marker has absolute organ specificity. Some, however, are more organ specific than others such as PSA for prostate tissue and HCG for choriocarcinoma. Requesting of multiple markers (such as CEA and the CA-125) in an attempt to identify an unknown primary cancer is *rarely* of use and can indeed be misleading and falsely reassuring.

The measurement of tumour markers in body fluids other than serum is not routinely done and therefore not recommended. This is because often the ranges for body fluids are not available or readily studied, making interpretation of these values next to useless.

Reference ranges for cancer markers are not well defined and are used only for guidance. In serum, please note that a level below the reference range *does not* exclude malignancy while concentrations above the reference range *does not* necessarily mean the presence of cancer.

Levels should be used to monitor changes over time in response to surgery and/or chemotherapy rather than absolute levels at one point in time. The use of this level as an indicator of relapse and hence the institution of early treatment is also controversial and should be used in conjunction with clinical assessment of the patient in close liaison with the treating physician.

For further information please contact

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