

decided that inhibition of apoptosis was not the mechanism underlying the aggressive behaviour of pancreatic adenocarcinoma in these cases.

Original article Sagol Ö *et al.* (2005) The effect of apoptotic activity, survivin, Ki-67, and P-glycoprotein expression on prognosis in pancreatic carcinoma. *Pancreas* 30: 343–348

Elevated cardiac troponin T is an early indicator of anthracycline-induced cardiotoxicity

Cardiotoxicity is a serious side-effect of the antineoplastic ANTHRACYCLINES. Kilickap *et al.* have recently investigated whether serum levels of CARDIAC TROPONIN T (CTNT), associated with myocardial damage, can act as a marker for early detection of anthracycline-induced cardiotoxicity.

Between October 2001 and October 2002, 41 patients due to undergo anthracycline therapy for various malignancies, were enrolled in the study. Echocardiography was performed before and after treatment, to assess systolic cardiac function parameters (left-ventricular ejection fraction and fractional shortening), and diastolic indicators (E/A RATIO and isovolemic relaxation time). Serum cTnT levels were determined before, during and after anthracycline therapy. The mean cumulative anthracycline dose was 228 mg/m² (range 50–480 mg/m²).

After a mean follow up of 6.3 months (range 2–11 months), serum cTnT levels were elevated above baseline in 14 patients, although they exceeded the upper limit of normal in only one case. The E/A ratio decreased after treatment in 20 patients. This outcome was more prevalent in the older age group (>44 years). In the younger age group (≤44 years) 3 of 14 patients with elevated cTnT levels had a decreased E/A ratio compared with 3 of 27 patients with normal cTnT levels. Left-ventricular ejection fraction and fractional shortening were not altered by treatment in any of the patients. The investigators concluded that elevated levels of cTnT associated with reduced diastolic cardiac function can be detected in the early stages of anthracycline therapy, and could therefore be a useful marker of cardiotoxicity.

Original article Kilickap S *et al.* (2005) cTnT can be a useful marker for early detection of anthracycline cardiotoxicity. *Ann Oncol* 16: 798–804

Diagnostic algorithm for prediction of adenocarcinoma sites of origin

Metastatic adenocarcinomas of unknown origin were the focus of a recent study by Dennis *et al.*, who investigated a series of diagnostic markers that might help identify the primary tumor site associated with individual adenocarcinoma metastases.

The authors investigated 352 primary adenocarcinomas from seven separate anatomic sites and examined their differential diagnoses. They used tissue microarrays and immunohistochemistry to obtain expression profiles for 27 candidate markers in each of the seven primary sites. Data analysis was carried out including ranking of candidate markers by specificity and sensitivity, in order to develop a classification scheme. A diagnostic panel and decision tree were developed using 10 of the candidate markers—cancer antigen-125, the homeobox protein CDX-2, cytokeratins 7 and 20, estrogen receptor, gross cystic disease fluid protein 15, lysozyme, mesothelin, prostate-specific antigen, and thyroid transcription factor 1. The researchers tested the ability of the panel and tree to predict the primary site of origin of their original tumor samples, and correct classification was achieved in 88% of cases.

Validation of the diagnostic algorithm was performed in a second set of 100 primary tumors and 30 paired metastatic tumors from the seven primary sites, which also produced correct classification in 88% of cases.

The authors conclude that this newly devised classification scheme could lead to an improvement in the prediction of primary sites of origin of metastatic adenocarcinomas with unknown origin, leading to an improvement in patient management and therapy.

Original article Dennis JL *et al.* (2005) Markers of adenocarcinoma characteristic of the site of origin: development of a diagnostic algorithm. *Clin Cancer Res* 11: 3766–3772

Bcl-2 antisense therapy shows promise in older patients with acute myeloid leukemia

Acute myeloid leukemia (AML) has particularly poor outcomes in older patients. Oblimersen

GLOSSARY

ANTHRACYCLINES

A class of chemotherapeutic agents, including daunorubicin, doxorubicin, and epirubicin, used in the treatment of solid and hematologic malignancies

CARDIAC TROPONIN T (CTNT)

A member of the troponin protein complex found in cardiac muscle, responsible for regulating actin and myosin interactions

E/A RATIO

The ratio of early to late ventricular filling; reduced with diastolic dysfunction