## This issue's topics

*"MKK4 is not a critical target"*

***MKK4* is *not* likely to be a critical target of genetic alteration in gastric tumorigenesis**

This is the conclusion reached by Chae and colleagues in this issue. They examined the mutation status and expression of the mitogen-activated protein kinase (MAPK) kinase 4 *MKK4* in 144 human gastric tissues and cell lines, using various PCR, LOH and sequencing techniques, as well as western immunoblotting analysis. *MKK4*, a potential tumour suppressor gene, is part of the Ras-dependent and independent MAPK signalling pathway, and the gene is located near the *TP53* locus at 17p11.2, a region that is commonly deleted in many human tumours. However, the authors found that *MKK4* expression was detectable at similar levels in both normal and tumour tissues, as well as being detectable in the 15 cell lines examined. The expression did not correlate with the stage, grade or histopathological status of the tumours. LOH was observed at two telomeric markers of the *MKK4* locus, but not at a centromeric marker. However, despite allelic loss and mutation of the *TP53* gene, no corresponding mutation/loss was observed for *MKK4*, leading the authors to conclude that the latter was not a critical target in gastric tumorigenesis. The authors state "that further studies will be required to understand the biological significance of MKK4 protein expression and the molecular basis of its regulation in normal and tumour cells of the stomach".

**EUSOMA guidelines for curative radiotherapy**

In this issue, Professor Kurtz (on behalf of the EUSOMA working party) presents guidelines for the curative use of radiotherapy (RT) in the treatment of operable breast cancer that were derived from a workshop held in Geneva on 24 September 2001. He discusses the "technical principles for proper execution", the effects on local recurrence and survival as well as the appropriate indications for the use of RT with regard to the risk of recurrence and overall survival. The importance of multidisciplinary co-operation is emphasised. Optimal scheduling with other treatments and the minimisation of side-effects such as cardiac complications are also examined. The Group sets quality objectives and provides recommendations to achieve these. By providing such a framework, they hope to encourage a greater uniformity in the indications for radiotherapy.

**Infiltrating lymphocyte count in stage I testicular seminoma**

The role of lymphocytic infiltration is unknown in seminoma. Parker and colleagues, using univariate amd multivariate analyses, have studied the prognostic value of tumour infiltrating lymphocytes (TILs) in 150 men with stage I testicular seminoma who were managed by surveillance following orchidectomy. They classified the TILs into three levels: Low, defined as no/few lymphocytes within the tumour interstitium over 10 high-power fields; Intermediate, defined as the presence of numerous lymphocytes within the tumour interstitium in each high-powered field, without the formation of germinal centres; High, defined as a heavy infiltrate of lymphocytes in the tumour interstitium, obscuring the neoplastic cells, with the formation of one or more germinal centres. In the univariate analyis, the risk of relapse was associated a lower TIL count ($P=0.02$). Other significant factors were age $<$and $=33$ years ($P=0.002$), tumour diameter $>6$ cm ($P=0.03$), lymphatic/vascular invasion ($P=0.04$) and tumour invasion of rete testis ($P=0.05$). Age and tumour diameter remained statistically significant predictors of the risk of relapse on multivariate analysis and a lower TIL was of borderline significance. The authors conclude that "the functional role of the lymphocyte infiltrate in testicular seminoma warrants further study".

## Forthcoming papers

**Special Issue: Functional Diagnostic Imaging**
**Guest Editor: Pat Price**

The spectrum of medical imaging
T. Jones

CT colonography (virtual colonoscopy) for the detection of colorectal polyps and neoplasms: current status and future developments
T.M. Gluecker, J.G. Fletcher

PII: S0959-8049(02)00460-4

Functional computed tomography in oncology
K.A. Miles

Magnetic resonance spectroscopy of cancer—practicalities of multicentre trials
J.R. Griffiths, R. Tate, F.A. Howe, M. Stubbs

PET for *in vivo* pharmacokinetic and pharmacodynamic measurements
N. Gupta, P.M. Price, E.O. Aboagye

Functional ultrasound methods in oncological imaging
M.J.K. Blomley, R.J. Eckersley

Functional MRI for anticancer therapy assessment
A.R. Padhani

Advancing animal models of neoplasia through in vivo bioluminescence imaging
M. Edinger, Y.-a. Cao, Y.S. Hornig, *et al.*

PET imaging of gene expression
R. Blasberg

Magnetic resonance imaging in cancer research
B.D. Ross, T.L. Chenevert, A. Rehemtulla

Gamma cancer imaging in malignancy
J.W. Evans, A.M. Peters

Small animal imaging: current technology and perspectives for oncological imaging
J.S. Lewis, S. Achilefu, J.R. Garbow, *et al.*

Challenges of PK/PD measurements in modern drug development
P. Workman

Assessment of technology for functional imaging in cancer
G.R. Laking