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IN BRIEF

RADIOTHERAPY

MRI underestimates the size of pancreatic adenocarcinoma

A study of 92 patients with pancreatic adenocarcinoma (median age 64.5 years) has shown that preoperative contrast-enhanced T1-weighted gradient echo (3D volumetric interpolated breath-hold [VIBE]) MRI analysis underestimates the size of the tumour by an average of 4 mm (range –31 mm to 22 mm). The size calculations were compared against the pathology reports, to which the diagnostic radiologist was blinded. Tumours in the pancreatic head (81 patients), body (four patients) and tail (seven patients) were included in the study, and the stage of the tumours varied from stage IA to stage III. Further optimization is, therefore, required before contrast-enhanced 3D VIBE MRI is integrated into routine radiotherapy treatment planning.

Original article Hall, W. A. *et al.* Tumor size on abdominal MRI versus pathologic specimen in resected pancreatic adenocarcinoma: implications for radiation treatment planning. *Int. J. Radiat. Oncol. Biol. Phys.* doi:10.1016/j.ijrobp.2012.11.019

HAEMATOLOGICAL CANCER

No survival improvement with thalidomide and prednisone

A phase III trial has shown that patients with multiple myeloma after autologous stem-cell transplantation do not benefit from maintenance therapy with thalidomide and prednisone. The study included 332 patients and compared the maintenance combination with observation, finding that although myeloma-specific progression-free survival improved, thalidomide and prednisone did not improve overall survival after a 4-year follow-up duration ($P=0.18$). Survival duration after first disease recurrence was also shorter for patients in the therapy arm than the observation arm. Furthermore, the combined maintenance regimen was associated with a worsening of a range of patient-reported quality-of-life factors that included numbness, dyspnoea, constipation, dry mouth, balance problems, and cognitive function.

Original article Stewart, A. K. *et al.* A randomized phase III trial of thalidomide and prednisone as maintenance therapy following autologous stem cell transplantation (ASCT) in patients with multiple myeloma (MM) with a quality of life assessment: NCIC CTG MY.10 Trial. *Blood* doi:10.1182/blood-2012-09-451872

GENETICS

NF1 drives resistance to RAF inhibition in melanoma

A pooled RNA interference screen that targeted >16,500 genes showed that loss of *NF1* drives resistance to RAF inhibition. The gene encodes the tumour suppressor neurofibromin, which inhibits RAS activity. Loss-of-function mutations of *NF1* result in the sustained activation of the MAPK pathway, which renders cells resistant to RAF and MEK inhibitors. Resistance to RAF inhibitors, such as vemurafenib, is common in patients with *BRAF* V600E-mutant melanoma. Indeed, *NF1* mutations were observed in melanoma tumours from patients with vemurafenib resistance, corroborating the RNA analysis. Furthermore, *BRAF*-mutant tumour cells that are intrinsically resistant to RAF inhibition also displayed *NF1* mutations. These results suggest that *NF1* is a potential clinical target worthy of further investigation.

Original article Whittaker, S. R. *et al.* A genome-scale RNA interference screen implicates *NF1* loss in resistance to RAF inhibition. *Cancer Disc.* doi:10.1158/2159-8290.CD-12-0470