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## IN BRIEF

### LUNG CANCER

#### How to switch on a tumor suppressor

The action and activity of proteins in cancerous cells is an area of study that has provided us with many therapeutic targets. However, the targeted activation of tumor-suppressor proteins has not been readily achieved in the clinic. Now, research into EphB3, a protein that is overexpressed in non-small-cell lung cancer (NSCLC), has led to the surprising discovery that phosphorylation of this protein by EphB3 kinase 'turns' it into a tumor-suppressor protein.

The researchers, led by Dong Xie at the Shanghai Institutes for Biological Sciences, used patient-derived paired normal and NSCLC cell lines to investigate the mechanism behind this observation. They identified a novel binding protein for EphB3 kinase—the receptor for activated C-kinase 1—and showed that this protein mediates formation of a signaling complex that was associated with inhibition of metastasis.

**Original article** Li, G. *et al.* EphB3 suppresses non-small-cell lung cancer metastasis via a PP2A/RACK1/Akt signalling complex. *Nat. Comm.* doi:10.1038/ncomms1675

### HEAD AND NECK CANCER

#### Good old acupuncture

Several studies have suggested that acupuncture is a very effective method to mitigate xerostomia (dry mouth), a side effect from radiotherapy that can occur in up to 100% of patients with head and neck cancer.

To confirm whether the effects observed in these studies were truly due to acupuncture, Meng *et al.* have carried out a study in which 23 patients were randomly allocated to two groups to receive, during radiotherapy, real acupuncture or sham acupuncture at inactive points and with non-penetrating needles. According to a xerostomia questionnaire, real acupuncture reduced the occurrence and severity of xerostomia in 75% of the patients, whereas only 10% of the patients in the sham-acupuncture group felt their symptoms relieved. Based on these findings, future large-scale, multi-center, randomized placebo-controlled trials are indicated.

**Original article** Meng, Z. *et al.* Sham-controlled, randomised, feasibility trial of acupuncture for prevention of radiation-induced xerostomia among patients with nasopharyngeal carcinoma. *Eur. J. Cancer* doi:10.1016/j.ejca.2011.12.030

### HEAD AND NECK CANCER

#### Salivary biomarkers for early detection of oral cancer

Currently, clinical examination is the only validated technique for early detection of oral cancer. However, data from a study by David Elashoff and colleagues demonstrate that salivary biomarkers can be used to discriminate between patients with oral squamous-cell carcinoma and healthy individuals.

The researchers analyzed 10 previously reported biomarkers (seven mRNAs and three proteins) in 395 individuals. Expression of all 10 biomarkers was higher in patients with oral squamous-cell carcinoma than in healthy participants. Moreover, the increase in expression of interleukin-8 and SAT was statistically significant, and these biomarkers showed the greatest sensitivity and specificity for oral cancer of all those analyzed. These findings indicate that detection of salivary biomarkers is a reasonable strategy for early diagnosis of oral cancer.

**Original article** Elashoff, D. *et al.* Pre-validation of salivary biomarkers for oral cancer detection. *Cancer Epidemiol. Biomarkers Prev.* doi:10.1158/1055-9965.EPI-11-1093