

# **Altered expression of epidermal growth factor receptors in human bladder and lung tumours**

## **Abstract:**

The expression of epidermal growth factor (EGF) receptors on 31 primary bladder and 109 lung tumours was evaluated by immunohistology using two monoclonal antibodies which recognise either the external ligand binding domain or the internal tyrosine kinase domain. At the immunocytochemical level receptor over-expression was detected at a higher frequency in squamous lung tumours than in other types of lung tumours. In the bladder tumours those with the highest level of EGF receptor expressions were invasive and poorly differentiated. In all tumours similar receptor expression levels were detected with both antibodies indicating that expression of truncated receptors is not detectable by this method. Analysis of DNA from the bladder and lung tumours failure to show gene re-arrangement, except in one unusual case of a carcinosarcoma, thus confirming these histochemical results. Gene amplification accompanied by massive over expression of receptors was found in 1 of 29 bladder tumours and in 2 of 10 squamous cell carcinomas of the lung. The results suggest that analysis of receptor over expression could prove useful for diagnosis of certain tumours.