

Abstract

Immunocytochemical analysis of epidermal growth factor (EGF) receptor expression was carried out on frozen sections of 109 primary lung tumours resected at the Brompton Hospital from February 1984 to May 1985. Tumours with detectable levels of this proto-oncogene protein were significantly more frequent among squamous cell carcinomas than among other types of lung tumour. No truncated EGF receptors were detected in the tumours using two monoclonal antibodies (Mabs) directed against different portions of the receptor (EGFR1 and F4). Mab F4 is the first antibody to the EGF receptor to show reactivity in paraffin sections. Southern blot analysis of a subset of the tumours detected amplification of the EGF receptor gene in squamous cell carcinomas but not in adenocarcinomas. The one carcinosarcoma examined had a rearranged and amplified EGF receptor gene. Measurement of EGF receptor expression in lung tumours can be of diagnostic value and may prove to be useful in the development of antibody-directed therapy.