Panitumumab
A Viewpoint by Malcolm Ranson

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The outlook for patients with metastatic colorectal cancer has improved significantly in the last decade with the development of irinotecan and oxaliplatin. The recent clinical development of targeted monoclonal antibodies should lead to further advances in treatment. A chimeric antibody to the epidermal growth factor receptor (EGFR) [cetuximab] has already been approved by the US FDA for use in combination with irinotecan for patients who have not responded to irinotecan-based chemotherapy. Additional antibodies such as panitumumab are under intensive investigation and recent experiences with panitumumab are summarised in this review.

Panitumumab, a fully human monoclonal antibody to EGFR, has begun to yield promising preliminary results in metastatic colorectal cancer and may offer some advantages over existing chimeric antibodies as it is associated with a reduced incidence of hypersensitivity reactions. The toxicity profile of panitumumab is characteristic of EGFR monoclonal antibodies, with reversible, acneiform skin rash being the main adverse event. Tolerability is generally high, and studies have shown that panitumumab can be successfully administered alongside conventional chemotherapy.

Despite the widespread overexpression of EGFR in colorectal cancer, monotherapy studies with EGFR monoclonal antibodies have demonstrated only modest single agent activity – a result which suggests that receptor expression and receptor dependency in colorectal cancer are not closely linked. Using panitumumab in combination with existing therapies holds more promise and large phase III studies are now required.

Further work is needed to identify whether panitumumab has therapeutic superiority to existing EGFR monoclonal antibodies and to identify whether adjuvant use of this agent improves the clinical outcome for patients with Duke Stage C colorectal cancer. The current lack of an easily measured predictive marker that would allow clinicians to select those patients who are most likely to benefit from agents of this class is a major challenge for the future. ▲