

## Letter to the Editor

# Capecitabine and mitomycin C in patients with metastatic colorectal cancer resistant to fluorouracil and irinotecan

C Alliot<sup>\*,1</sup>

<sup>1</sup>Hematology/Oncology Division, General Hospital of Annemasse, BP525, 74107 Annemasse Cedex, France

British Journal of Cancer (2006) 94, 935–936. doi:10.1038/sj.bjc.6603021 www.bjcancer.com

Published online 21 February 2006

© 2006 Cancer Research UK

Sir,

In the 5 September issue, Chong *et al* (2005) reported a phase II study of 36 patients with metastatic colorectal cancer treated with a third-line chemotherapy consisting of capecitabine and mitomycin. The response rate was 15.2%, median failure-free survival, 5.4 months, and median overall survival, 9.3 months. No grade 4 toxicity was observed. Although this regimen seems particularly convenient, the study is questionable by several aspects. The first point is the imprecision regarding prognostic factors. In particular, the number of metastatic sites and several biological factors such as albumin, lactate dehydrogenase, alkaline phosphatase or carcinoembryonic antigen have not been detailed. Moreover, there is no mention about the proportion of patients who have been operated for a primary tumour. Since these patients benefit from a follow-up, early detection of metastases can be favoured, leading to the selection of patients with low tumour burden and finally, to a potential advantage in terms of therapeutic efficacy and tolerance. Another point is the first-line therapy which consisted only of 5-fluorouracil (5-FU) in 33 patients, although only two have had received oxaliplatin. Moreover, there is no precision regarding the type of 5-FU-based regimen since a longer progression-free survival has been clearly demonstrated with the LV5FU2 regimen (bimonthly combination of high-dose leucovorin and 5-FU bolus plus continuous infusion) comparatively with the monthly schedule of low-dose leucovorin and 5-FU (de Gramont *et al*, 1997). The authors compare favourably this regimen with results of third-line treatments in randomised phase III studies, while it can be admitted that the patients accrued in phase II studies

inevitably are more selected. Another indirect comparison with cetuximab is questionable since targeted therapies offer their best activity in combination with chemotherapy (Cunningham *et al*, 2004). Conceptually, the probability of response of mitomycin-C after either oxaliplatin or irinotecan is extremely low. Moreover, probably oral fluoropyrimidines will replace 5-FU in a vast proportion of the first-line combinations in advanced diseases, and probably in the adjuvant setting (Twelves *et al*, 2005). The efficacy of capecitabine in second-line combinations also might be discussed as illustrated by several recent phase II studies. No response has been obtained in 22 patients of the MD Anderson Cancer Center with 5-FU-resistance (Hoff *et al*, 2004), and in 51 Korean patients refractory to 5-FU and leucovorin (Lee *et al*, 2004). The same inefficacy has been observed in 20 Swedish patients who all had received 5-FU, irinotecan and oxaliplatin (Gubanski *et al*, 2005). Finally, a poor response rate of 4.8% has been obtained in 21 Korean patients receiving mitomycin-C and capecitabine as third-line chemotherapy after various combinations of 5-FU, irinotecan and oxaliplatin (Lim *et al*, 2005). Although toxicity seems moderate, grade 2 stomatitis or grade 2 diarrhoea may deteriorate quality of life. Moreover, patients participating to therapeutic trials in university centres are particularly well followed. In this line, the lack of haemolytic uraemic syndrome should not lead to excessive self-confidence. In conclusion, this trial does not reflect the current practice in which irinotecan, oxaliplatin and targeted therapies are integrated into the two first therapeutic lines. Nevertheless, mitomycin might eventually be tested in patients ineligible for reference drugs.

## REFERENCES

Chong G, Dickson JLB, Cunningham D, Norman AR, Rao S, Hill ME, Price TJ, Oates J, Tebbutt N (2005) Capecitabine and mitomycin as third-line therapy for patients with metastatic colorectal cancer resistant to fluorouracil and irinotecan. *Br J Cancer* 93: 510–514  
Cunningham D, Humblet Y, Siena S, Khayat D, Bleiberg H, Santoro A, Bets D, Mueser M, Harstrick A, Verslype C, Chau I, Van Cutsem E (2004)

Cetuximab monotherapy and cetuximab plus irinotecan in irinotecan-refractory metastatic colorectal cancer. *N Engl J Med* 351: 337–345

De Gramont A, Bosset JF, Milan C, Rougier P, Bouché O, Etienne PL, Morvan F, Louvet C, Guillot T, François E, Bedenne L (1997) Randomized trial comparing monthly low-dose leucovorin and fluorouracil with bimonthly high-dose leucovorin and fluorouracil bolus plus continuous infusion for advanced colorectal cancer: a French Intergroup study. *J Clin Oncol* 15: 808–815

\*Correspondence: C Alliot; E-mail: alliotcfr@yahoo.fr

Published online 21 February 2006

- Gubanski M, Naucler G, Almerud A, Lidestahl A, Lind PA (2005) Capecitabine as third line therapy in patients with advanced colorectal cancer. *Acta Oncol* **44**: 236–239
- Hoff PM, Pazdur R, Lassere Y, Carter S, Samid D, Polito D, Abbruzzese JL (2004) Phase II study of capecitabine in patients with fluorouracil-resistant metastatic colorectal carcinoma. *J Clin Oncol* **22**: 2078–2083
- Lee JJ, Kim TM, Yu SJ, Kim DW, Joh YH, Oh DY, Kwon JH, Kim TY, Heo DS, Bang YJ, Kim NK (2004) Single-agent capecitabine in patients with metastatic colorectal cancer refractory to 5-fluorouracil/leucovorin chemotherapy. *Jpn J Clin Oncol* **34**: 400–404
- Lim Do HS, Park YS, Park BB, Park RB, Ji SH, Lee J, Park KW, Kang JH, Lee SH, Park JO, Kim K, Kim WS, Jung CW, Im YH, Kang WK, Park K (2005) Mitomycin-C and capecitabine as third-line chemotherapy in patients with advanced colorectal cancer: a phase II study. *Cancer Chemother Pharmacol* **56**: 10–14
- Twelves C, Wong A, Nowacki MP, Abt M, Burris III H, Carrato A, Cassidy J, Cervantes A, Fagerberg J, Georgioulas V, Hussein F, Jodrell D, Koralewski P, Kröning H, Maroun J, Marschner N, McKendrick J, Pawlicki M, Rosso R, Schüller J, Seitz JF, Stabuc B, Tujakowski J, Van Hazel G, Zaluski NJ, Scheithauer W (2005) Capecitabine as adjuvant treatment for stage III colon cancer. *N Engl J Med* **352**: 2696–2747