Table 1. Number of patients with high serum marker levels. Chronic pancreatitis (CHP) and pancreatic cancers (PC)

	CA50 > 17 U/ml	CA19-9 > 37 U/ml	CA50 > 85 U/ml	CA19-9 > 100 U/ml
CHP	8/71 (11%)	6/71 (8%)	0/71 (0%)	1/71 (1%)
PC	41/50 (82%)	40/50 (80%)	23/50 (46%)	36/50 (72%)

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Epirubicin Plus a Calmodulin Inhibitor (Trifluoperazine) Activity in Advanced Pancreatic Adenocarcinoma

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THE RESPONSE rates obtained with chemotherapy in advanced and metastatic pancreatic cancer are generally poor [1]. The initially promising results obtained with ifosfamide [2] have not been confirmed [3, 4]. Anthracyclines and their analogue epirubicin have been shown to induce remissions [5]. Unfortunately, the multidrug resistance (MDR) phenotype, which involves anthracyclines, reduces their efficacy. Some calmodulin inhibitors, such as trifluoperazine, may revert MDR [6]. We report a phase II study designed to determine clinical response and toxicity of the epirubicin–trifluoperazine combination.

A total of 33 previously untreated patients with proven and measurable unresectable adenocarcinomas of the pancreas were treated with a combination of trifluoperazine 60 mg/24 h days 1–4, plus epirubicin 40 mg/m^2/day continuous infusion on days 2–4 in 28-day cycles. The median age was 57 years, with 22 males and 11 females. The median Karnofsky index was 80 (range 60–100). Of the 33 patients, 26 were evaluable for toxicity (six early deaths, one protocol deviation), 24 patients were evaluable for response (six early deaths, one protocol deviation, one toxic death, one refusal), and 32 patients were evaluable for survival (1 lost to follow-up).

There were 3 cases with grade 4 leucopenia, 1 case of septic death and 4 cases with grade 4 thrombocytopenia. Non-haematological toxicity was as follows: nausea and vomiting (1 patient), oral (4 patients), infection (4 patients) and alopecia (15 patients). There was no cardiac toxicity of sedative effects related to high dose trifluoperazine administration. Of 24 patients evaluable for response, 3 achieved an objective remission (response rate 13%; 95% confidence interval 2.6–32.3%), 14 (58%) had no change and 7 (29%) showed progression of the disease. The median time to progression was 3.5 months. The Karnofsky index was improved or unchanged in 23 (69%) patients during the treatment, and 13/21 (62%) no longer required analgesics. The median survival of the 32 evaluable patients was 5.3 months. The percentage of survival at 1 year was 22% and at 2 years 10%.

Epirubicin plus trifluoperazine did not show an improvement in response rate and survival in comparison with other treatment schedules without anti-MDR agents.

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