



# Repeated transarterial chemoembolization (TACE) in the treatment of patients with liver metastases of breast cancer: local tumor control and survival



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## Purpose:

To evaluate the tolerability and efficacy of transarterial chemoembolization (TACE) using different drug combinations in the treatment of liver metastases in breast cancer patients concerning local control and survival.

## Materials and Methods:

217 patients with unresectable hepatic metastases of breast cancer were repeatedly treated with TACE in 4-week intervals. In total, 1,310 chemoembolizations were performed with a mean of 6 sessions per patient. At the time of the first chemoembolization, the average age of the patients was 52.2 years (range, 29 - 81 years). While 62.2% of the patients showed multiple metastases, 8.8% had 1 metastasis, 9.2% had 2 metastases and 19.8% had 3 to 4 metastases. The local chemotherapy protocol consisted of Mitomycin C only (8 mg/m<sup>2</sup> b.s.) (n=76), Mitomycin with Gemcitabine (n=120), and Gemcitabine only (1000 mg/m<sup>2</sup> b.s.) (n=21). Embolization was performed with Lipiodol and starch microspheres for vessel occlusion. Tumor response was evaluated by magnetic resonance imaging (MRI). The change in size was calculated and the response was evaluated according to the RECIST criteria.

## Results:

For all protocols local tumor control evaluation resulted in a partial response in 13.4% of cases, stable disease in 50.2%, and progressive disease in 36.4%. During the course of therapy the clinical situation changed: 142 patients (65.4%) were treated palliatively, 34 patients (15.7%) symptomatically, and 41 patients (18.9%) neoadjuvantly. The 1-year survival rate after TACE was 68%, but the 2-year survival rate had been reduced to 43%. The median survival time from the date of diagnosis was 8.2 years (according to Kaplan-Meier), and from the start of TACE treatment 19 months. Median survival time of the patients after TACE therapy with Mitomycin C only was 13.3 months, with Gemcitabine only 11 months, and with combined Mitomycin C/Gemcitabine 25.4 months. The median survival time of the palliative group was 19 months, of the symptomatic group 6 months, and of the neoadjuvant group 44.3 months.

## Conclusions:

TACE is an optimal minimal-invasive therapy for treatment of liver metastases in breast cancer patients with superior results for the combination group.

