Titel des Beitrags:
Treatment of malignant pleural effusion with the trifunctional antibody catumaxomab (Removab) (anti-EpCAM x Anti-CD3): results of a phase 1/2 study.

Abstract:
Catumaxomab is a trifunctional monoclonal antibody consisting of a mouse immunoglobulin G2a part and a rat immunoglobulin G2b part with 2 different antigen binding sites binding the epithelial cell adhesion molecule antigen on tumor cells and CD3 on T lymphocytes. The intact Fc region provides a third functional binding site, binding and activating selectively Fc gamma receptor I, IIa, and III-positive accessory cells. These binding properties lead to specific tumor cell killing. As catumaxomab demonstrated efficacy in patients with malignant ascites, we performed this phase 1/2 trial in patients with malignant pleural effusion (MPE). We investigated a series of 3 escalating doses of 5 to 200 microg catumaxomab administered intrapleurally to patients with MPE containing epithelial cell adhesion molecule-positive cells. Primary objectives were determination of dose-limiting toxicity, safety, and tolerability. Secondary objectives were efficacy and pharmacodynamics. Twenty-four patients were treated with catumaxomab. Most frequent adverse events were pyrexia, elevated liver enzymes, nausea, and decreased lymphocytes. Dose-limiting toxicities were observed in 2 patients: One had pleural empyema and fatal sepsis and
1 had grade 3 erythema and hepatobiliary disorder. Five patients with breast cancer out of 7 evaluable patients had a response to treatment. Intrapleural administration of catumaxomab is feasible although the substantial number of drop-outs and deaths in short proximity to study treatment raise questions whether MPE is the right indication for catumaxomab or whether the patient population should be defined different. Safety profile was as expected reflecting catumaxomab's mode of action. Preliminary efficacy showed a suggestion of improvement in some patients.