Both low and high doses of gemcitabine suppress DC-induced CD8$^+$ T cell responses. Mice were immunized i.p. two times with 2x10$^6$ OVA-DC. Gemcitabine was administered concomitantly at days 2 and 5 after DC vaccination. OVA-specific CD8$^+$ T cell responses were determined by streptamer staining (a). Serum titers of OVA-specific IgG, IgG1 and IgG2a were measured by ELISA (b-d). Data represent one of two independent experiments (n = 5 per group).
Immune cell populations in tumors, spleens and lymph nodes. PancOVA tumors were induced subcutaneously. To adjust for the growth delay of tumors in the gemcitabine groups, in these groups tumor cells were inoculated ten days before tumor induction in non-gemcitabine groups. OVA-DC ± Gem was started after seven or 17 days, respectively. Gemcitabine was administered at 50 mg/kg body weight at day 2 and 5 after DC vaccination. Mice were sacrificed five weeks after the first of a total of four vaccinations. Mean tumor size at the end of the protocol was uniformly distributed throughout all groups (data not shown). Both DC vaccination and gemcitabine increased intratumoral frequency of CD4+ T cells (a) and NK cells (b) significantly compared to untreated animals. Spleens were removed and absolute numbers of B cells, CD4+ and CD8+ T cells (c) as well as MDSC (d) were determined. Frequency of splenic Treg (e) was calculated as percentage of foxp3+ cells among CD4+ T cells. Lymph nodes were harvested and relative frequencies of Treg (f) as well as B cell, CD4+ T cell and CD8+ T cell frequencies (g) were analyzed.