EMD 525797 (DI17E6) is a deimmunized, humanized monoclonal immunoglobulin G2 antibody against the ?v subunit of human integrins. Blocking ?v integrins may be an effective strategy for inhibiting prostate cancer (PCa) metastasis. Evaluate EMD 525797 safety/tolerability and pharmacokinetics (PK) in castration-resistant PCa patients. Secondary objectives included antitumor activity assessments. A phase 1 open-label study in 26 patients (four European centers). Eligible patients (>=18 yr) had histologically proven PCa with bone metastases after prior chemotherapy and evidence of progressive disease (PD) based on prostate-specific antigen (PSA) values. Patients received three intravenous EMD 525797 infusions (250, 500, 1000, or 1500mg every 2 wk). Treatment-emergent adverse events (TEAEs) and dose-limiting toxicities (DLTs) were assessed. PK parameters were calculated according to noncompartmental standard methods. Antitumor activity measures were response after 6 wk, changes in PSA levels, and pain interference total score. Descriptive statistics were used. Patients were treated for a mean
of 16.8 ± 16.7 wk. No DLTs were reported in any of the cohorts. All patients experienced TEAEs, which were considered drug-related in 11 patients. Four deaths occurred during the trial and were considered not related to EMD 525797. EMD 525797 showed dose-dependent, nonlinear PK. Eighteen of 26 patients did not show PD for >=18 wk. Two patients (500-mg cohort), treated for 42.4 and 76.3 wk, had clinically significant PSA reductions and pain relief, including one patient with confirmed partial response. This trial was not specifically designed to assess clinical activity, and further investigations are needed in randomized controlled trials. No DLTs were reported in any of the evaluated cohorts. There was evidence of clinical activity. For the currently ongoing phase 2 trial, EMD 525797 doses of 750 and 1500mg every 3 wk were chosen. NCT00958477 (EMR 62242-002).