Consolidation with Arsenic Trioxide Significantly Improves Event-free Survival and Overall Survival Among Patients with Newly Diagnosed Acute Promyelocytic Leukemia

Arsenic trioxide is an effective and indicated agent for relapsed acute promyelocytic leukemia (APL). A study now demonstrates that arsenic trioxide has clinical benefit for patients with newly diagnosed APL. Bayard L. Powell, MD, the Comprehensive Cancer Center of Wake Forest University, reported findings from the study in which arsenic trioxide was given as consolidation therapy to patients with APL who had complete remission following standard induction therapy.

The study involved 480 adults (15-79 years old) and 57 children (<15 years old). Adult patients who had complete or partial remission after induction therapy were randomly assigned to receive two 25-day courses of arsenic trioxide (0.15 mg/kg/day) as a first consolidation therapy (followed by standard consolidation therapy; n=243) or to receive standard consolidation therapy (n=237). Children received the same induction therapy and standard consolidation therapy; arsenic trioxide was not offered to children because its safety had not been defined in this population at the time of accrual to the study. Data on children were analyzed separately.

The estimated 3-year event-free survival rate was significantly better for patients who received consolidation therapy with arsenic trioxide (81% vs 66%; p=0.0007). The estimated overall survival rate was also significantly better for this group of patients (86% vs 79%; p=0.063). The 3-year event-free and overall survival rates for the group of children were not significantly different from those for adults who did not receive arsenic trioxide (62% and 86%, respectively).

The response rate was similar for all patients (adults and children). Dr. Powell noted that the rate of complete remission was significantly lower for patients who had high-risk disease (defined as a white blood cell count of more than 10,000) compared with the rate for patients with low- or intermediate-risk disease. In addition, the rate of death during induction and the relapse rate (within 1 year) were higher for patients with high-risk APL. "There were a substantial number of early events during induction, but once patients achieved remission, the shapes of the curves are similar for all three groups," Dr. Powell explained.

Dr. Powell said that treatment with arsenic trioxide was associated with acceptable toxicity. Grade 4 hematological toxicity occurred during consolidation therapy in 55% of patients treated with arsenic trioxide and in 67% of patients who received only standard consolidation therapy. Grade 4 nonhematological toxicity occurred in 5% of patients in both groups.

A Randomized, Controlled, Double-Blind Phase 3 Study of Bevacizumab/Interferon-α2a vs Placebo/Interferon- α2a as First-line Therapy in Metastatic Renal Cell Carcinoma

The AVOREN trial was conducted to compare interferon alone with interferon plus bevacizumab for the treatment of metastatic renal cell carcinoma (RCC). The findings of the trial represent an important step in the recent advances in the treatment of RCC.

"In this placebo-controlled study, the addition of bevacizumab to interferon results in clinically important and statistically significant improvement in progression-free survival and tumor response," said Bernard Escudier, MD, Institut Gustave Roussy, France, who reported the findings of the study. The antiangiogenic agent, which targets vascular endothelial growth factor (VEGF), joins two other VEGF inhibitors, sunitinib and sorafenib, as effective agents for metastatic RCC.

Dr. Escudier explained that analysis of tissue samples from several different types of cancer has demonstrated that RCC is associated with the greatest expression of VEGF. In a phase 2 trial, bevacizumab (10 mg/kg) significantly improved the time to progression after failure of cytokine therapy.

The multicenter trial included 649 patients with advanced RCC who had undergone nephrectomy. The patients were randomly assigned to treatment with interferon (9 MIU, subcutaneously, three times per week) plus bevacizumab (10 mg/kg, intravenously, every two weeks; n=322) or the same dose of interferon plus placebo (n=327). The primary endpoint was progression-free survival (PFS).

Dr. Escudier reported that tumor response and PFS were significantly better in the interferon plus bevacizumab arm than in the interferon alone arm. In the 595 patients who had measurable disease, tumor response occurred in 31% of patients who received the combination