Paving the Way to Cure Multiple Myeloma

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For the past several decades, multiple myeloma (MM), the second most common hematologic malignancy, has been considered a fatal disease with a median survival of three to five years. However, recent advances in the understanding of the molecular pathogenesis of multiple myeloma have led to new treatment strategies. Thalidomide, bortezomib, and lenalidomide, which target the tumor cell in its bone marrow microenvironment and overcome cell adhesion mediated drug resistance to conventional therapies, have been shown to be active alone and in combination with dexamethasone in patients with relapsed refractory MM. Subsequently, each has been combined with dexamethasone for transplant candidates and with melphalan and prednisone for non-transplant candidates with newly diagnosed disease. Within five years, four drugs received FDA approval for treatment in multiple myeloma, making this rare disease a model cancer for testing novel therapies.

The results of the randomized phase III ECOG clinical trial of lenalidomide and high-dose dexamethasone compared to lenalidomide and low-dose dexamethasone in upfront therapy of patients with multiple myeloma will be presented by Dr. S. Vincent Rajkumar on Sunday. This trial found that lenalidomide and low-dose dexamethasone provide a higher overall and progression-free survival as compared with lenalidomide and standard high-dose dexamethasone arm. The results of this study have changed the treatment standard in newly diagnosed patients with multiple myeloma. Further, this new lower dosing schedule of dexamethasone is being adopted in most clinical trials and practices, even for combinations of agents other than thalidomide. In addition, this study appears to show the best 12- and 18-month survival of all phase III trials performed to date in newly diagnosed multiple myeloma.

In another exciting study being reported Sunday, Dr. Jesus San Miguel will report on the VISTA study. He will discuss the results of the combination of melphalan, prednisone, and bortezomib compared to melphalan and prednisone in newly diagnosed patients with multiple myeloma not eligible for stem cell transplantation. Involving more than 680 patients randomized from 151 centers in 22 countries across Europe, North and South America, and Asia, this study demonstrates a superior response rate, progression-free survival, and overall survival in the melphalan, prednisone, and bortezomib arm, again demonstrating that novel therapeutic agents have changed the treatment paradigm of this disease.

Be sure to attend the Education Session on Multiple Myeloma chaired by Dr. Paul Richardson today, and the oral simultaneous sessions on Monday and Tuesday, which report exciting preclinical studies and basic biology studies in multiple myeloma. Thus, the future is bright for myeloma as combinations of novel agents achieve prolonged disease free survival and pave the path to potential cure.