

Last Chance: Late-Breaking Abstracts

By Margaret Ragni, MD, MPH

For the first time in its 49-year history, the ASH Annual Meeting will feature late-breaking abstracts. The six selected abstracts will be presented in a separate late-breaking abstracts simultaneous session this morning. Although submitted after the general submission deadline, these abstracts were competitively selected for their ground-breaking findings that otherwise would not have been presented at the meeting. It is of particular note that of the authors of the six selected late-breaking abstracts, two are medical students and one is a fellow.

The first late-breaking abstract #LB1, titled "Mantle cell lymphoma can be cured by intensive immunochemotherapy with *in-vivo* purged stem cell support: Final report of the Nordic Lymphoma MCL2 study," will be presented by Christian H. Geisler, MD, PhD, Rigshospitalet, Copenhagen, Denmark. Mantle cell lymphoma is uncommon, representing only 5 percent of all NHL, and although chemosensitive, tends to recur and is rarely ever cured. Based on some preliminary studies, Dr. Geisler undertook a phase II trial of intensive immunochemotherapy alternating with rituximab followed by BEAM/BEAC irradiation and autologous stem cell support in 159 untreated patients. His team noted a 55 percent complete response and a 41 percent partial response, with a 72 percent, five-year response duration and only 3.8 percent treatment-related deaths among the 153 responding to induction therapy. These exciting data represent the longest event-free survival reported among individuals with mantle cell lymphoma and provide the basis for future studies of intensified immunochemotherapy in this group.

Another late-breaking abstract, #LB2, titled "Antibody-based depletion of hematopoietic stem cells empties niches for efficient transplantation," will be presented by Agnieszka Czechowicz, a medical student at Stanford University School of Medicine. Currently, the use of bone marrow/stem cell transplantation (BMT/HSCT) in hematologic malignancies, as well as diabetes, multiple sclerosis, or solid organ transplantation, is limited by the toxicity of the conditioning regimens. Myeloablative conditioning regimens, including irradiation and chemotherapy, are thought to be required to eliminate host HSCs and allow donor HSC engraftment. Thus, Czechowicz and her colleagues evaluated a novel non-myeloablative system using ACK2, an antibody directed against *C-kit*, a cell surface antigen expressed on HSCs. They found that when ACK2 was cultivated with endogenous HSCs, there was 98 percent removal of host HSCs, which allowed 180-fold higher engraftment of donor HSCs, thus suggesting a potentially promising approach in human BMT/HSCT.

Also noteworthy is abstract #LB6, titled "Collaboration between activating mutations in JAK2 and trisomy 21 in the acute lymphoblastic leukemias of Down syndrome," which will be presented by Ithamar Ganmore, a medical student at Sheba Cancer Research Center, Sheba Medical Center, Ramat Gan, Israel. Children with Down syndrome (DS) have a 10- to 20-fold increased risk of ALL, the most common childhood cancer, a risk associated with the extra chromosome 21. While there is a 20 percent failure to achieve remission in ALL in general, the risk of treatment failure is higher among those with DS, who have poorer biologic features and greater sensitivity to treatment toxicities and infectious complications. The recent identification of the activating janus kinase 2 (JAK2) mutation in a patient with DS and ALL by Malinge, et al. (*Blood* 2007;109:2202) led to the Ganmore study of more than 8,000 ALL samples. In contrast to the high proportion of those with MPD with JAK2 mutations, only 20 percent of those with DS-ALL had JAK2 mutations. These findings suggest that JAK2 plays a role in B-cell development and that JAK2 is a potential target for treatment of DS-ALL.

All six late-breaking abstracts will be presented today at 7:30 a.m. in the Sidney J. Marcus Auditorium.