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EDITORIAL

Third International workshop on the biology, prevention, and treatment of relapse after stem cell transplantation

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More than 60 000 patients are treated worldwide annually by hematopoietic stem cell transplantation and the numbers are still growing without plateauing.[1,2] In the last 25 years, major advances have been achieved by reducing therapy-related morbidity and mortality through the use of reduced intensity conditioning regimens, better donor selection and improved supportive care especially regarding infectious complications. In contrast, less progress has been made in reducing the risk of relapse, which has become the most frequent cause of treatment failure after stem cell transplantation.[3,4] This problem has been addressed by two international workshops on biology, prevention, and treatment of relapse after hematopoietic stem cell transplantation sponsored by the National Cancer Institute (NCI) held in Bethesda, Maryland, USA in 2009 and 2012. These workshops served to stimulate further focus on and awareness of the problem of relapse and to foster additional scientific and clinical activity for basic, translational, epidemiologic and clinical research. Both workshops resulted in a series of publications.[5–17]

Since this initiative began, many nationwide study groups have implemented relapse prevention strategies in different hematological diseases. Study groups around the globe have developed standardization protocols for minimal residual disease (MRD) measurement. MRD is now implemented as response criteria in certain hematological diseases.[10–11] Novel, less toxic agents have been developed that may be used after stem cell transplantation without causing unacceptable toxicity and many are undergoing testing or have already been established in certain diseases such as multiple myeloma, malignant lymphoma or myeloid neoplasia.[9,17] Furthermore, the pharmaceutical industry, which historically was averse to conducting studies in the setting of hematopoietic transplant (especially allogeneic) has recognized the potential of novel agents pre- or post transplant to reduce or prevent relapse, and the number of clinical trials with novel agents within the transplant setting is steadily increasing.

Four years after the last workshop, the organizing committee thought it would be worthwhile to convene a 3rd International Workshop on Biology, Prevention, and Treatment of Relapse after Stem Cell Transplantation. Under the patronage of the European Society for Blood and Marrow Transplantation (EBMT) and the American Society for Blood and Marrow Transplantation (ASBMT), the 3rd workshop was held on 4/5 November 2016 in Hamburg/Germany, with the aim to present an up-to-date status of epidemiology and biology of relapse and to summarize the currently available options to prevent and treat post-transplant relapse.

Attendees included more than 150 individuals from 26 countries, and 35 lectures including five 'Meet the Expert' sessions were presented. The major topics, which will be covered in the following issues of *BMT* were:

1. Epidemiology and biology of relapse (microenviroment, tumor stem cell, HLA loss)
2. Biology of relapse (T-cell impairment, NK cells, intrinsic tumor resistance)
3. Role of measurable residual disease (MRD)
4. Prevention and treatment of relapse by cell therapy
5. Prevention and treatment of relapse by donor and graft source selection
6. Prevention and treatment of relapse by immunotherapy
7. Prevention and treatment of relapse by novel agents
8. Current results and ongoing studies in acute leukemias
9. Current results and ongoing studies in lymphoid malignancies

Fortunately, this field is rapidly moving and hopefully the following articles from the 3rd International Workshop on Biology, Prevention, and Treatment of Relapse after Stem Cell Transplantation will accelerate this process.

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