

8. Price T.H., Boeckh M., Harrison R.W. (2015) Efficacy of transfusion with granulocytes from G-CSF/dexamethasone-treated donors in neutropenic patients with infection. *Blood*, vol. 126, no 18, pp. 2153–2161.
9. Netelenbos T., Massey E., de Wreede L.C. (2019) The burden of invasive infections in neutropenic patients: incidence, outcomes, and use of granulocyte transfusion. *Transfusion*, vol. 59, no 1, pp. 160–168.
10. Potapnev M., Karpenko F., Nikanchik T. (2014) Social`no-demograficheskaya charakteristika donorov cel`noj krovi i ee komponentov v Respublike Belarus` [Socio-demographic characteristics of donors of whole blood and its components in the Republic of Belarus]. *Hematology and Transfusiology (Moscow)*, vol. 59, no 2, pp. 33–39.
11. Brockmann F., Kramer M., Bornhauser M. (2013) Efficacy and side effects of granulocyte collection in healthy donors. *Transfus Med Haemother*, vol. 40, pp. 258–264.

Поступила/Received: 16.07.2019
Контакты/Contacts: mpotapnev@yandex.by



UDC 616-006.448-031.81-085.015.5/.8-092:575:577.23

Kostyukova N.¹, Rossokha Z.², Gorovenko N.³, Vydyborets S.³

¹ Kyiv Centre of Bone Marrow Transplantology, Kyiv, Ukraine

² Reference-center for molecular diagnostic of Public Health Ministry of Ukraine, Kyiv, Ukraine

³ Shupyk National Medical Academy Postgraduate Education, Kyiv, Ukraine

Костюкова Н.И.¹, Россоха З.И.², Горovenko Н.Г.³, Выдыборец С.В.³

¹ Киевский центр трансплантации костного мозга, Киев, Украина

² Референс-центр молекулярной диагностики Министерства здравоохранения Украины, Киев, Украина

³ Национальная медицинская академия последипломного образования имени П.Л. Шупика, Киев, Украина

Modern Preconditions for the Prevention and Treatment of Refractory Forms of Multiple Myeloma Development

Современные предпосылки к профилактике и лечению рефрактерных форм множественной миеломы

Abstract

Treatment of multiple myeloma has progressed significantly over the past years after the introduction of immunomodulation drugs and proteasome inhibitors. The median of overall survival improved. All patients with multiple myeloma have relapses during a different time interval. The duration of the achieved remission in patients with a relapse of multiple myeloma becomes shorter with each subsequent case. The choice of regimen for relapse of multiple myeloma is very complex. It depends on a number of factors, including the previous induction regimen, the number of lines of the previous therapy, and the degree of aggression of relapse. The article is devoted to peculiarities of drug resistance formation in the first line therapy in patients with multiple myeloma by assessing of genetic markers (deletion variants of GSTT1, GSTM1 genes, GSTP1 (A313G), MDR1 (C3435T)) and clinical-hematological, laboratory characteristics.

Purpose. Devoted to peculiarities of drug resistance formation in the first line therapy in patients with multiple myeloma by assessing of genetic markers (deletion variants of GSTT1, GSTM1 genes, GSTP1 (A313G), MDR1 (C3435T)) and clinical-hematological, laboratory characteristics for predicting the effectiveness of treatment.

Materials and methods. We conducted analysis of 68 clinically-laboratory indexes of 130 patients with multiple myeloma and their results of molecular-genetic research of deletion polymorphism of genes GSTT1, GSTM1, polymorphism A313G, C3435T genes GSTP1, MDR1.

Results. It was determined that important predictors of development of refractory forms of multiple myeloma is allelic polymorphism of gene GSTM1 of patients, higher level α 2-globulin and calcium in blood serum till the beginning of disease.

Conclusions. Implementation of predicative model taking into account polymorphism GSTM1, of level α 2-globulin and calcium in blood serum till the beginning of treatment raises efficiency of evaluation of individual prognosis of response on treatment.

Keywords: multiple myeloma, refractory form, gene polymorphism, calcium, alpha-2-globulin.