Proceedings International
Platinum Open Access Journal (ISSN 2668-6384)

Proceedings, Abstract
Volume 5, Issue 1, 2023, 49
https://doi.org/10.33263/Proceedings51.049

The Role of the P-53 Gene and the p-53 Protein in the Oncogenesis of Non-Hodgkin Malignant Lymphomas †

Aurelian Udristioiu [1,*]

[1] Department of Molecular Biology, Faculty of General Nursing, Branch City Targu Jiu, Titu Maiorescu University of Bucharest, Bucharest, Romania
* Correspondence: aurelianu2007@yahoo.com (A.U.);
† Presented at 2nd Edition of the OncoHub Conference – Connecting Scientists and Physicians for Next Generation Cancer Management, Poiana Brașov, Brașov, 21-23 September 2022

Received: 10.12.2022; Accepted: 20.12.2022; Published: 5.01.2023

Abstract: P-53 Gene mutations are the most common genetic abnormalities of cancer. They have been extensively studied in various mature B cell malignancies, including Chronic Lymphocytic Leukemia (CLL). In recent years, more attention has been paid to the importance of the p53-expressed protein in CLL, and a combination with low survival and non-response to classical conventional chemotherapy, due to mutations in the P-53 gene, with progression to Richter Syndrome. Identifying different P-53 gene mutations is very important because these mutations impact patients' clinical course in CLL with the p-53 protein mutant isoform. This paper aimed to highlight the stages of Chronic Lymphocytic Leukemia type B (CLL-B), which did not meet the standard treatment criteria for malignant hematological diseases due to mutations in the P-53 gene, with progression to Richter Syndrome. The frequency of p-53 protein expression in 85 patients diagnosed with CLL was analyzed by the Enzyme-Linked Immune-Absorbent Assay (ELISA) technique to investigate the relationship of this protein to the stage of the disease, as well as the impact on response to treatment and survival. Cell extracts $10^3 \times 10^3$/L in 100 µl lysis buffer were applied to ELISA plates coated with PAb 240 capture antibody. The frequency of increased positivity of the protein with the modified structure, the isoform, p-53 in type B CLL, was 17% in the 85 cases initially included in the study. The percentage of p-53 protein isoforms, positive above normal value, with very high values, 50, 60, respectively 140 µg/dl was found in the percentage of 3.5% with the transformation of CLL into non-Hodgkin's malignant lymphomas (NHL) type Diffuse Large Lymphoma, (DLL) or in Mantle Lymphoma, from Richter syndrome. In the context of a heterogeneous condition such as LL-B, this cheap and safe method, ELISA, seems to provide a useful prognostic tool capable of identifying patients who can be candidates for therapeutic, targeted, personalized strategies.

Keywords: chronic lymphocytic leukemia; P-53 gene; intrinsic apoptosis; CD-5 receptor; non-Hodgkin malignant lymphomas; Richter syndrome.

© 2023 by the authors. This article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

Funding

This research received no external funding.

Acknowledgments

This research has no acknowledgment.

Conflicts of Interest

The authors declare no conflict of interest.