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POSTER TITLE

Identification and Diagnosis of Possible Mutations in Human p53 Lymphocytes

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INTRODUCTION

The most common type of leukemia found in adults and the elderly is chronic B lymphocytic leukemia, (CLL-B). Over the last decade, several paraclinical investigation methods have been identified to predict the progression of this disease, Between factors which control and regulate the apoptosis process and progression of the CLL disease in patients, p53 protein is considered to be of major importance.

AIM

The aim of this work of research was identify the stages of chronic lymphocytic leukemia of type B-CLL, which did not respond to the initial standard treatment due to mutations in the P53 gene. The mutant P53 gene is important because its mutation hurts a patient's clinical course, especially in chronic lymphocytic leukaemia, (CLL), with the presence of isoform p53 protein.

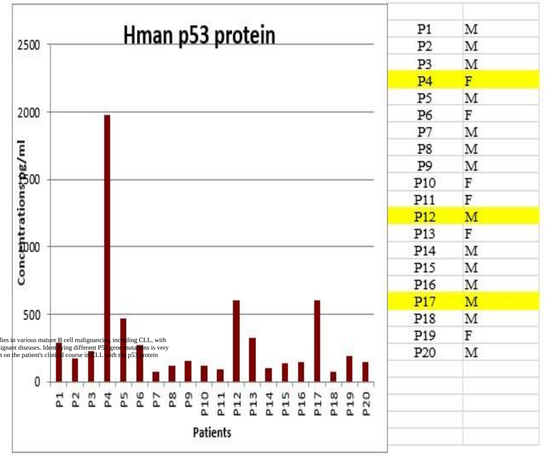
METHOD

The expression of mutant p53 protein, in 85 patients diagnosed with type B-CLL, was analyzed by the Enzyme-Linked Immune-Absorbent Assay, (ELISA) technique, using specific antibodies for isoform p53 protein, PAb 240 antibodies, investigating the relationship of this protein to the stages of the disease, as well as the impact on response to treatment and survival.

RESULTS

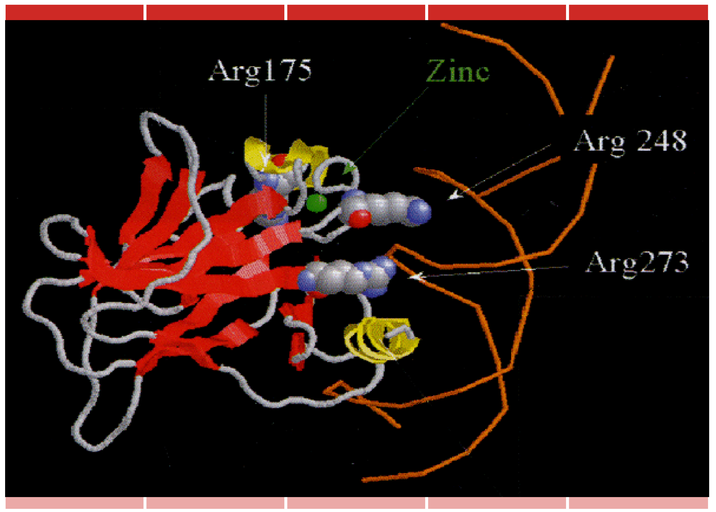
Of 20 eligible patients studied,14 men were aged 55 to 85 years and 6 women were aged 39 to 85 years. Patients were treated at the time of these investigations with cytostatic agents and immunotherapy specific for CLL. In men, p53 protein concentrations were: 20, 15, 18, 40, 10, 12, 14, 60, 30, 10, 13, 15, 10 and 12 µg/dL and in women: 140, 30, 13, 20, 25 and 10 µg/dL. The probability index (NORMDIST), was calculated to be P=0.034.

The pathological values of Graphic 1 reflecting the concentration of mutant p53 protein, emphasizes the frequency of CLL with mutant p53 protein being higher in men than in women,(yellow color), in a ratio of 2:1, in accordance with data from the specialized literature



P1	M
P2	M
P3	M
P4	F
P5	M
P6	F
P7	M
P8	M
P9	M
P10	F
P11	F
P12	M
P13	F
P14	M
P15	M
P16	M
P17	M
P18	M
P19	F
P20	M

Graphic 1. Values of p-53 protein co-concentration, assays performed on the ELISA line. Research on the ELISA system was performed in the Research Laboratory of the Immunology Department of the Stefan Nicolau Institute of Bucharest, in a retrospective study 2019



CONCLUSIONS

In the last years, there have been extensive studies in various mature B cell malignancies, including CLL, with isoform p53 protein, products of this gene, in malignant diseases. Identifying different P53 gene mutations is very important because these mutations have an impact on the patient's clinical course in CLL with the p53 protein mutant isoform.his ELISA method has proven to be a useful prognostic tool for the application of personalized treatment of on-immune therapy, in cases diagnosed with the type B-CLL.

REFERENCES

1.Fischer, M.; Census and evaluation of p53 target genes. Oncogene (2017) 36, 3943–3956.

2.Sabapathy, K.; Lane, DP (2019) Understanding p53 functions through p53 antibodies. J. Mol. Cell Biol 11, 1-35.

3.Campo, E.; Cymbalista, F.; Ghia, P.; Jäger, U.; Pospisilova, S.; Rosenquist, R.; Schuh, A.; Stilgenbauer, S (2018) TP53 aberrations in chronic lymphocytic leukaemia: an overview of the clinical implications of improved diagnostics. Haematologica103, 1956-1968. Doi: 10.3324/haematol.2018.187583.

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