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## Cytogenetic, immunophenotypic and clinical profiling of hyperleukocytic variant of chronic lymphocytic leukemia

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Early detection and accurate diagnosis of cytogenetic abnormalities together with assessment of immunophenotypic findings is essential for prognosis and therapeutic targeting of Chronic Lymphocytic Leukemia (CLL). Hyperleukocytosis (absolute leukocyte count exceeding 100,000 cells/mm<sup>3</sup>) in CLL has been clinically described in the literature but immunophenotypic and cytogenetic characteristics have not been explored. This study examined retrospective data from hematopathology reports of patients with typical CLL and the hyperleukocytic variant to compare clinical, immunophenotypic and cytogenetic differences between the two groups. We found consistent laboratory associations, particularly thrombocytopenia. Flow cytometry showed that hyperleukocytic CLL cells were immunophenotypically identical. Our data did not demonstrate any difference in the incidence of genetic abnormalities compared to other CLL cases. Our research suggests that development of hyperleukocytosis is an independent event from the mutational status of the immunoglobulin heavy chain variable (IgVH), a leading prognostic indicator. The impact of hyperleukocytosis in CLL on long term survival is still uncertain.

### Biography

Haytham Abdelrahman, is a senior medical student at a joint program between University of Manchester in England and Mansoura University in Egypt. He recently did three month hands on electives at the University of Alabama Pathology department, working under the direct supervision of one of pioneers in Pathology Professor Margaret Brandwein Gensler. He has been working on three research projects at Ameripath Orlando, FL since 2012 with the staff hematopathologist Dr. Antonio Hernandez. He is planning to be a future pathologist and working hard to publish his projects.

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