Global Stability Analysis and Optimal Control Therapy of Blood Cell Production Process (Hematopoiesis) in Acute Myeloid Leukemia.

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Highlights

- We show the effect of fast self-renewal on hematopoietic cell dynamics and how important it is to consider it in modeling.
- Understanding and control of cells interconnection can lead to successful treatment.
- Theoretical analysis of mathematical models may help to understand the principles of the disease and provide insight into clinically relevant treatment strategies.
- The effectiveness of using optimal control theory to stop the growth of cancerous cells and in the same time, minimize the toxicity of chemical agents.