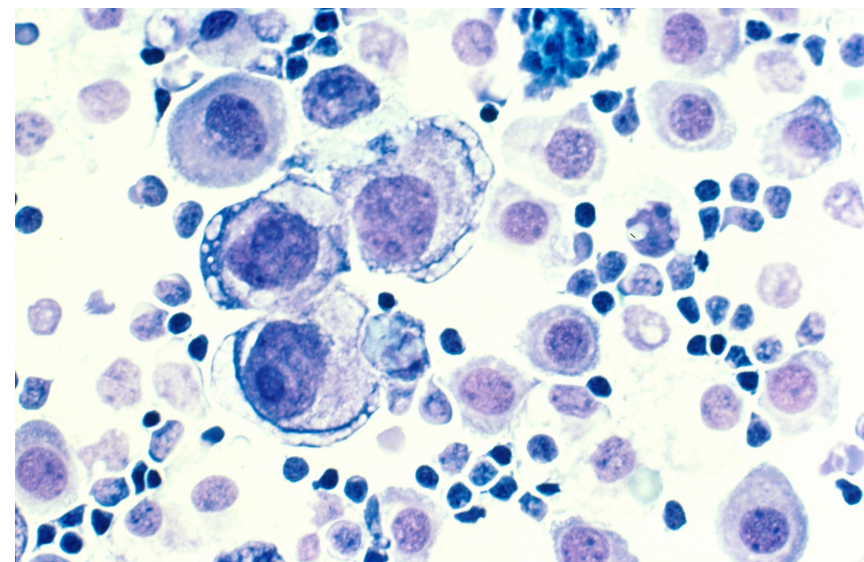


# MACHINE LEARNING ANALYSIS OF CANCER -OMICS DATA UNVEILS EARLY DIAGNOSTIC BIOMARKERS

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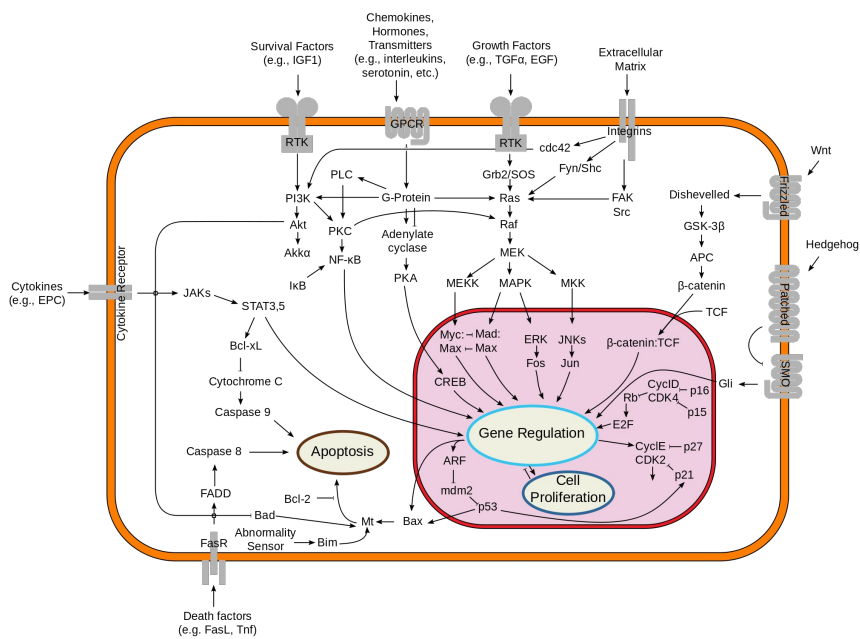
## Topic

- Despite the advances in the field of medicine, about 1 in 6 deaths is due to cancer, with an economic impact estimated at approximately \$1.16 trillion in 2010.
- Lack of effective prevention strategies leads to relapse and resistance, which are the main challenges to the achievement of long-term survival.



## Problems

- Extract relevant features from the noisy genomic, transcriptomic and proteomic datasets.
- The difficult integration of the multiple layers that govern the regulation of signalling pathways and cellular processes.



## Objectives

- Find the best Machine Learning strategy to highlight the most relevant genes for tumor insurgence and progression.
- Analyze the Network of interaction between proteins relevant for the transition into tumor cells, to find the crucial nodes to characterize involved pathways.

