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Does Tumor Development Follow a Programmed Path?¹

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The initiation and progression of a tumor is a complex process, resembling the growth of a embryo in terms of the stages of development and increasing differentiation and somatic evolution of constituent cells in the community of cells that constitute the tumor. Typically we view cancer cells as rogue individuals violating the rules of the games played within an organism, but I would suggest that what we see is a programmed and algorithmic process. I will then question If tumor progression is dominated by the random acquisition of successive survival traits, or by a systematic and sequential unpacking of “weapons” from a pre-adapted “toolkit” of genetic and epigenetic potentialities? Can we then address this hypothesis by data mining solid tumors layer by layer?

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