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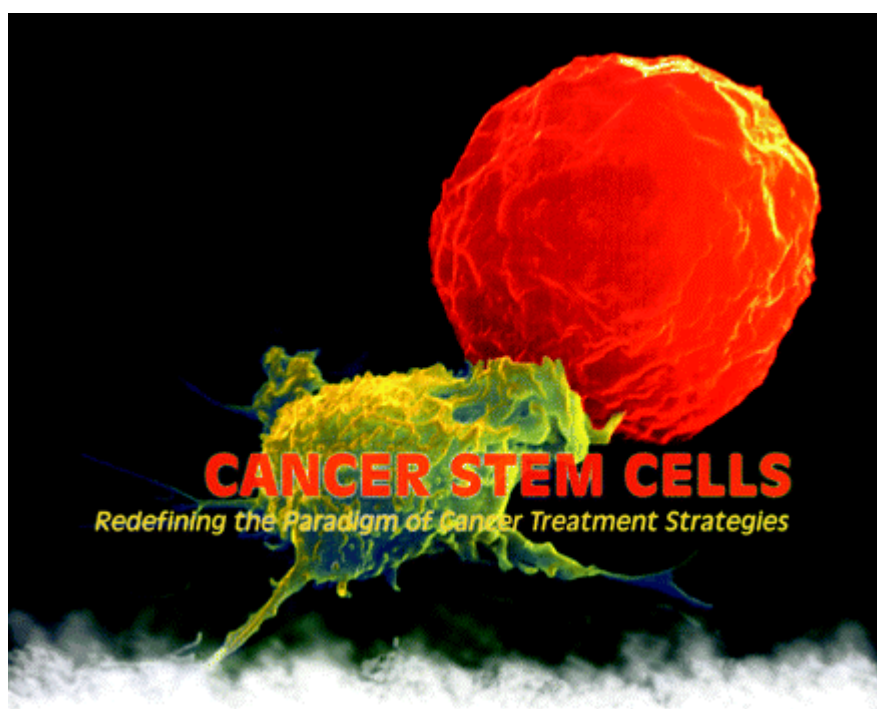
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Review

## **CANCER STEM CELLS: Redefining the Paradigm of Cancer Treatment Strategies**

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Cancer has been known to arise from long-lived cells in the body and to possess properties in common with undifferentiated, embryonic cells. Recent findings of a population of cells in solid tumors resembling stem cells supports a stem cell model of cancer. A scheme in which all cancers initiate from "activated" stem cells helps bring together data from genetic, cell biology, and epidemiology studies. Cancer can arise from embryonic cells in the case of childhood tumors; hormone-activated stem cells in the case of breast cancer; and following chronic activation of stem cells caused by tissue damage. This scheme helps explain the failure of many cancer therapies, points out deficiencies in certain research approaches, and focuses the problem on a subset of cells that can be explicitly targeted, leading to more efficient therapy.