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Autore Cavallaro Ugo

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The cancer stem cell (CSC) paradigm represents one of the most prominent breakthroughs of the last decades in tumor biology. CSCs

are that subpopulation within a tumor that can survive conventional therapies and as a consequence are able to fuel tumor recurrence. Nevertheless, the biological characteristics of CSCs and even their existence, remain the main topic among tumor biologists debates. The difficulty in achieving a better definition of CSC biology may actually be explained by the plasticity of such a cell subpopulation. Indeed, the emerging view is that CSCs represent a dynamic "state" of tumor cells

that can acquire stemness-related properties under specific

circumstances, rather than referring to a well-defined group of cells. Regardless of their origin, it is clear that designing novel antitumor treatments based on the eradication of CSCs will only be possible upon unraveling the biological mechanisms that underlie their pathogenic role in tumor progression and therapy resistance. The Special Issue on "New aspects of cancer stem cell biology: implications for innovative

therapies" aims at highlighting recent insights into CSC features that can make them an attractive target for novel therapeutic strategies.