

## EMT - An emerging axis of evil in the war on cancer

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### ABSTARCT

Tumors are cellularly and molecularly heterogeneous, with subsets of undifferentiated cancer cells exhibiting stem cell-like features (CSC<sub>s</sub>). Epithelial to mesenchymal transitions (EMT) are transdifferentiation programs that are required for tissue morphogenesis during embryonic development. The EMT process can be regulated by a diverse array of cytokines and growth factors, such as transforming growth factor (TGF)- $\beta$ , whose activities are dysregulated during malignant tumor progression. Thus, EMT induction in cancer cells results in the acquisition of invasive and metastatic properties. Recent reports indicate that the emergence of CSC<sub>s</sub> occurs in part as a result of EMT. Recent studies implicating the function of TGF- $\beta$ -regulated noncoding RNA<sub>s</sub> in driving EMT and confirms that EMT may contribute to drug resistance, as well as therapeutic to overcome this clinically.