# Molecular Cancer Research

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ABOUT THE COVER

Carcinomas develop in a complex tumor microenvironment (TME) that includes a diverse spectrum of cell types that influence tumor cell behavior. Notably, in response to genotoxic cancer-directed therapeutics, proliferating tumor cells undergo a complex but coordinated response leading to repair, senescence, or apoptosis. In contrast to tumor cells, the vast majority of benign cells in the TME, including fibroblasts and vascular endothelium, are quiescent, and initiate a damage response program that includes the secretion of cytokines and growth factors capable of promoting the resistance of surviving tumor cells to further cycles of treatment. The cover image shows the expression of genes involved in cell cycle progression (CCP) in microdissected cell populations from prostate cancers that comprise benign prostate epithelial cells, cancer adjacent stroma, and carcinoma. In comparison to prostate cancer, benign epithelium and cells in the prostate stroma exhibit very low CCP activity, indicating they are in a Go, quiescent, terminally differentiated state. Please see the article by Gomez-Sarosi and colleagues (beginning on page 842) for more information.