

Potential new colorectal cancer treatment target identified

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The cell surface marker carcinoembryonic antigen-related cell adhesion molecule 6 is a novel marker for colorectal cancer stem cell isolation, which halts tumor growth when silenced, according to research published online Oct. 1 in *Cancer*.

(HealthDay)—The cell surface marker carcinoembryonic antigen-related cell adhesion molecule 6 (CD66c) is a novel marker for colorectal cancer stem cell isolation, which halts tumor growth when silenced, according to research published online Oct. 1 in *Cancer*.

Marica Gemei, Ph.D., of CEINGE-Advanced Biotechnology in Naples, Italy, and colleagues characterized CD66c expression in colorectal cancer stem cells by [flow cytometry](#) and immunohistochemistry in colon cancer samples and normal tissue. They evaluated its expression in colon cancer stem cells and in stem cell-enriched colon spheres and examined the role of RNA-mediated CD66c silencing on the in vitro and in vivo growth of Caco2 [colon cancer cells](#).

Compared with normal colon tissues, the researchers found that CD66c expression was significantly higher in colorectal cancer samples, with expression correlating with cancer stage. Its expression was absent in Prominin 1 (CD133)-positive cells from normal colon but was brightest (CD66c^{bright}) in CD133-positive colon cancer samples. In vitro experiments in stem cell-enriched colon spheres exhibited cells expressing CD66c^{bright}, similar to that observed in fresh [liver metastases](#). In Caco2 cells, CD66c silencing hampered in vitro proliferation and clonogenic potential, and in vivo xenograft experimentation attenuated the tumorigenic potential of Caco2 cells.

"CD66c^{bright} expression was associated with colon cancer stem cells and CD66c silencing blocked tumor growth, thereby opening the way to a potential new treatment for colon cancer," the authors write.

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