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About the Cover

The cover photographs illustrate the dramatic suppression of muscle-invasive bladder cancer by intravesically administered rapamycin, which inhibits the mammalian target of rapamycin (mTOR), in a genetically engineered mouse model of progression from pre-invasive to invasive bladder cancer. The larger, muscle-invasive tumor (top) developed in a mouse treated with control vehicle; the smaller, non-muscle–invasive tumor (bottom) developed in a mouse treated with rapamycin. The measures numbered along the x and y axes are centimeters. These findings are the first to demonstrate the chemopreventive effectiveness of a molecular-targeted agent given intravesically in a relevant murine bladder model; they support broadening the study of intravesical therapeutic agents in high-risk non-muscle–invasive bladder cancer patients and provide a preclinical mouse model for testing novel such agents. Showing that intravesical delivery of an mTOR inhibitor blocks progression to invasive disease provides new hope for patients at a high risk for developing muscle-invasive bladder cancer, for whom few treatment options exist. See articles by Seager et al. (beginning on page 1008) and McConkey and Dinney (beginning on page 1001) for more information.