

## **Nanotechnology for Medical Applications**

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Since cancer is leading cause of death in the United States among people younger than 85 years, it is not surprising that new and developing technologies are applied in cancer research to more efficiently diagnose and treat this disease. Nanotechnology is certainly no exception and the novel properties of nanoparticles and nanodevices make them ideal candidates for more effective drug delivery as well as providing new opportunities for enhancing early diagnosis. In fact, application of nanoparticles to enhance whole body imaging will potentially guide cancer surgery and allow more careful monitoring of drug efficacy. Similarly, nanotech-based therapeutics offer the promise of targeted delivery and reduced adverse side-effects. The Nanotechnology Characterization Laboratory (NCL) at SAIC-Frederick facilitates the rapid transition of basic nanoscale particles and devices into clinical applications by providing the critical infrastructure and characterization services to nanomaterial providers