Multifunctional Theranostic Nanomedicines in Cancer
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# Chapter 5 - Multifunctional silica nanoparticle as a promising cancer theranostics

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## Abstract

Cancer is a global disease and has a high mortality rate. In recent times, mesoporous silica nanoparticles (MSNPs) (size <500 nm) have gained great attention in therapy and diagnosis of cancer because of their viable basic properties suitable for drug delivery, drug targeting, and biomedical imaging. This chapter highlights the advancements of multifunctional MSNPs intended for theranostic applications in cancer. MSNPs are becoming a promising tool for more efficient and safer cancer therapy. However, still there are challenges to bring these nanomaterials in a level of the clinical setting. The pharmacokinetics and toxicokinetics are still challenges to the scientists.

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## Keywords

Multifunctional silica nanoparticle; theronostic; biomedical imaging; cancer; nano-based drug delivery; nanoporous silica chips

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