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Mesenchymal stem cells engineered through nanoparticles containing cancer diagnostic and therapeutic agents

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Abstract

Numerous studies have shown that nanoparticles containing diagnostic and therapeutic agents as well as mesenchymal stem cells (MSCs) are useful in the treatment of various cancers. Nanoparticles are actually used to improve the accuracy of diagnosis and treatment. In addition to their unique therapeutic properties, MSCs can target treatment due to their tumor tropism capability. It has been shown that diagnostic and therapeutic agents reach the tumor site through these cells. It has also been shown that, in addition to creating a great synergy in cancer diagnosis and treatment, nanoparticle-based cell engineering can help overcome the limitations of these two approaches. As a result, some valuable studies on these two approaches will be discussed.

Keywords: Nanoparticles, Cell therapy, Cancer, Mesenchymal Stem Cell, Theranostic Nanomedicine

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