原子核物理评论　2005 22 (2): 219-224　ISSN: 1007-4627　CN: 62-1131/O4

交叉学科

辐射基因治疗在肿瘤治疗中的研究现状

闵凤玲[1、2], 张红[1]

（1 中国科学院近代物理研究所， 甘肃 兰州 730000；

2中国科学院研究生院， 北京 100039）

收稿日期　修回日期　网络版发布日期　接受日期

摘要

目前肿瘤基因治疗尚存在许多问题, 距临床应用还有相当的距离, 但是在传统的放疗、化疗和手术治疗的基础上, 辐射与基因治疗的有机结合在肿瘤治疗中却显示出可喜的前景。综述了近年来这一领域的研究进展, 探讨了这一疗法对肿瘤治疗的应用前景。

Although tumor gene therapy has a distance to clinical use due to some problems, the combination of irradiation and gene therapy holds much promise in cancer therapy based on the traditional radiotherapy, chemotherapy and surgery. We have termed this therapeutic radiogenic therapy. This review focuses on the group of radiogenic therapy that are either: (1) improvement of gene transfer efficiency by irradiation; (2) radiotherapy combined with cytokines gene delivery or enhancement of the immunity of tumor cells by transgene; (3) directly stimulated by radiation to produce either directly or indirectly cytotoxic agents; (4) increasing of radiosensitivity in gene therapy; (5) radioprotective gene therapy enhances radiation tumor killing effect while protecting the normal tissue and organs with transgene using transfer vector.

关键词　辐射；　基因治疗；　肿瘤

分类号

DOI:

通讯作者:
张红
作者个人主页: 闵凤玲[1、2]; 张红[1]