

# 多发性骨髓瘤的新免疫治疗：程序性死亡受体1(PD-1)/程序性死亡配体1(PD-L1)检查点阻断

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**Title:** New immunotherapy for multiple myeloma: Programmed death receptor 1 (PD-1)/programmed death ligand 1 (PD-L1) checkpoint block

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**关键词:** 多发性骨髓瘤; PD-1/PD-L1; 免疫治疗

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**摘要:** 多发性骨髓瘤是一种B淋巴细胞克隆性恶性肿瘤, 近十年来, 骨髓瘤的治疗模式发生了重大的演变, 对疾病发病机制的认识不断深入, 研发了不仅靶向肿瘤细胞而且靶向其微环境的治疗剂, 使得多发性骨髓瘤的疗效和患者生存显著改善, 但复发或难治性骨髓瘤患者的预后仍然很差, 需要开发新的治疗方法。PD-1/PD-L1阻断可恢复多发性骨髓瘤效应细胞介导的抗肿瘤免疫应答。靶向作用于PD-1/PD-L1轴的免疫检测点抑制剂已经成为能控制抗肿瘤免疫应答有希望的药物。本文对近年PD-1/PD-L1检查点阻断在多发性骨髓瘤治疗中的进展做一综述。

**Abstract:** Multiple myeloma is a clonal malignant tumor of B lymphocytes. In recent ten years, the treatment mode of myeloma has undergone significant changes, and the understanding of the pathogenesis of the disease has deepened. Developing a therapeutic agent that targets not only tumor cells but also its microenvironment, which makes the curative effect of multiple myeloma and the survival of the patient significantly improved, but the prognosis of patients with recurrent or refractory myeloma is still poor and needs to be developed. PD-1/PD-L1 blockade restores multiple myeloma effector cell-mediated anti-tumor immune responses. Inhibitors targeting the PD-1/PD-L1 axis have become promising drugs that can control anti-tumor immune responses. This review summarizes recent advances in PD-1/PD-L1 checkpoint blocking in the treatment of multiple myeloma.

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