Ottava Giornata della Ricerca della Svizzera Italiana
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Modulo per la sottomissione abstract ricerca di LABORATORIO

Titolo (massimo **15 parole**)

Myeloid-derived suppressor cells confer castration resistance in prostate cancer

Autori (cognome e iniziali, es: Grassi L.)

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Affiliazioni (ospedale o istituto, servizio o reparto, indirizzo, es: Ospedale Regionale di Lugano, Servizio di angiologia, Lugano)

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Testo (massimo **250 parole**, preferibilmente in italiano (accettato anche in inglese), suddiviso in Introduzione, ***Metodi***, ***Risultati***, ***Conclusioni*** e ***Finanziamento***

prostate cancer cells are surrounded by a complex tumor microenvironment that controls disease progression and treatment resistance. Sustained androgen receptor (AR) signaling is the primary driver of castration resistant prostate cancer (CRPC) and is a key target for therapeutic interventions. However, resistance to androgen deprivation therapies (ADT) remains inevitable in advanced disease. Generating a better understanding of the mechanisms controlling the development of castration resistance is a priority. The well-established dependency of cancer cells on the tumor microenvironment suggests that the non-cancer cell component of the tumor impacts the emergence of CRPC.
To address this clinical need and their related biological questions we analyzed by immunohistochemistry, multianalyte analyses, and multiparametric flow-cytometry tumor-infiltrating myeloid-derived suppressor cells MDSCs in prostate cancer patients and in several prostate cancer mouse models before and after castration. we identify MDSCs as a driver of CRPCs. Mechanistically, we found that MDSCs activate the AR pathway and promote endocrine therapy resistance. Intriguingly, MDSC infiltration increases with castration resistance in patients and in transgenic, immune competent mouse models of prostate cancer. Genetic inactivation of a specific cytokine in tumor-infiltrating myeloid cells restored sensitivity to ADT in vivo, inhibiting tumor growth. Taken together, our results reveal that MDSCs are capable of promoting endocrine resistance in prostate tumor cells by acting in a non-cell autonomous manner. Treatments that inhibit MDSC recruitment can block MDSCs-mediated endocrine resistance mechanisms and synergize with standard of care endocrine treatments.

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Visto superiore (prego indicare Nome e Cognome del superiore)

Andrea Alimonti

Criteri per sottomissione Abstract:
NO Case report
NO Abstract senza nessun risultato
VISTO da un superiore

Invio Abstract