

Special Issue for Clinical Cancer Drugs

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Therapeutic strategies for castration-resistant prostate cancer: update and future perspectives

Background: Prostate cancer (PCa) is the most common cancer and the second leading cause of cancer-related deaths among men in Western countries. Localized PCa can be cured by both surgery and radiotherapy. However, both these therapies very often fail and most patients will experience disease progression. For high-risk locally advanced or metastatic prostate cancers, the most effective treatment is represented by androgen ablation therapy, which includes chemical castration, achieved either by GnRH agonist monotherapy or by a GnRH agonist in combination with a pure antiandrogen. Unfortunately, despite an excellent initial response, most prostate cancers will progress to the castration-resistant prostate cancer (CRPC) stage, with increased malignancy. Since 2004, chemotherapeutic drugs, such as dacarbazine, represented the treatment of choice for CRPC patients. However, the majority of treated patients usually progress within a few months and require additional treatments.

Aims & Scope: Aim of this thematic issue of Clinical Cancer Drugs will be to discuss the current treatment strategies for CRPC patients but, more importantly, the recently discovered molecular mechanisms involved in CRPC development/progression and the experimental/preclinical data so far available supporting their role as effective targets for novel therapeutic approaches.

Description: The issue might be based on review articles discussing the following tasks:

- 1) Current treatment strategies for CRPC patients
- 2) Overcoming resistance mechanisms to improve treatment options for CRPC patients
- 3) Targeting cancer stem cells in CRPC: biological aspects and possible clinical implications
- 4) Targeting CRPC epigenome as a novel treatment strategy for CRPC
- 5) Stromal-epithelial interactions in CRPC as a possible target for novel treatment strategies in CRPC
- 6) Recent evidence on the effects of nutraceutical-based interventions in CRPC

Sub Topics:

1. Current treatment strategies for CRPC patients

Aims & Scope: This review, being the first article of the issue, should provide an update of the current therapeutic approaches for CRPC.

Keywords: androgen receptor, GnRH agonists, antiandrogens, docetaxel

2.Overcoming resistance mechanisms to improve treatment options for CRPC patients

Aims & Scope: Aim of this article will be to dissect the current knowledge about the mechanisms of therapy resistance in CRPC and the possible interventions to overcome this resistance

Keywords: antiandrogens, chemotherapy, docetaxel

3. Targeting cancer stem cells in CRPC: biological aspects and possible clinical implications

Aims & Scope: Aim of this article will be to dissect the role of stem cells in CRPC progression and the possible role of the cancer cell subpopulation as an effective target for novel interventions (experimental and preclinical studies)

Keywords: cancer stem cells, androgen receptor, androgen receptor degradation

4. Targeting CRPC epigenome as a novel targeted treatment strategy for CRPC

Aims & Scope: Aim of this article will be to dissect the role of CRPC epigenome as a possible molecular target for future therapeutic interventions (from experimental to clinical trials)

Keywords: DNA methylation, histone deacetylase, histone methyltransferase, miRNA

5. Role of tumor microenvironment in CRPC progression: a possible target for novel treatment strategies?

Aims & Scope: Aim of this article will be to dissect the role of tumor microenvironment in CRPC progression

Keywords: stromal-epithelial interactions, inflammation

6. Recent evidence on the effects of nutraceutical-based interventions in CRPC

Aims & Scope: Aim of this article will be to dissect the role of nutraceuticals as novel chemopreventive/therapeutic strategies in CRPC

Keywords: nutraceuticals, chemoprevention, dietary factors, supplements

Submission Deadline: October, 2015