

Cancer Bone Metastasis, Diagnostic Insights and Drug Selection

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Abstract

Cancer bone metastasis was common clinical events to many human cancer, such as breast, prostate and lung cancer. It is a devastating event that is difficult to therapeutic targeting and benefiting. Several reasons are major factors and drawback for disease management and therapeutic cure. To promote clinical treatment outcomes of bone metastasis, high-quality diagnosis and drug selection is indispensable. This editorial discusses bone cancer metastasis diagnosis and relevant therapeutics in the clinic.

Keywords: Bone Cancer; Neoplasm Metastasis; Drug Treatment; Personalized Medicine; Cancer Diagnosis

Introduction

Cancer is the secondary leading cause of human mortality worldwide [1-4]. Cancer metastasis is one of frequent cancer metastasis events and mortality worldwide (90% cancer mortality) in the clinic, especially to categories of breast, prostate and lung cancer (general incidence >30%) [5-10]. To reduce the devastating pathogenesis and human mortality, high-quality disease diagnosis and clinical treatment is indispensable. This editorial discusses the landscape of bone cancer diagnosis and drug selection in the clinic.

Bone cancer diagnosis

To promote therapeutic outcomes, high-quality cancer diagnosis is a modern challenge and an important area to innovate and update. Unlike tumor diagnosis of other origin and subtypes, bone cancer morphological diagnosis is insensitive and difficult for quickest forms of diagnoses, such as X-ray and others. More recently, many new technologies can improve the outcomes of bone cancer diagnosis, such as blood biochemical or biomarker detection [11], nano-technology-assist [12], computer-aid analysis [13] and many others. By the utility of high-quality tumor diagnosis, therapeutic strategies can be earlier or better monitored.

Clinical drug selection

There are a lot of different anticancer drugs in the clinic. High-quality drug selection can help a lot in the future; Since more than 200 anticancer drugs had been licensed worldwide, it is difficult to find right drugs for bone cancer and metastasis treatment. High-quality drug selection is especially important. Following topics are common pathways for these kinds of clinical cancer trials.

- Development of anticancer drugs for bone cancer [14-16]. Since bone cancer may be different from other types of human cancers.
- 90% of cancer mortality is caused by human metastasis. High-quality evaluation, development and utility of anti-metastatic drugs is an important pharmaceutical and clinical topics in the clinic [17-20].
- Herbal medicine may be evaluated in physiological conditions and integrity in animals and human [21-23].
- Personalized medicine is a useful drug selection paradigm that may optimize drug treatment against cancer growth and metastasis [24-33]. These knowledge translations could be used in experimental and clinical study. It may greatly improve clinical therapeutic benefiting by this kind of drug selection worldwide and in the future.

- Drug combination commonly promote clinical outcomes yet mechanisms should be understood [34-36].

Conclusion

Cancer bone metastasis plays key role for clinical therapeutics and patient's survivals. New pathways should be explored to promote it. New discoveries could be expected from high-quality cancer diagnosis and drug selection.

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