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Clinical Cancer Treatment, Gradual Transition of Diagnostic Platforms and Recordings

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Abstract

Cancer is a deadly disease with high therapeutic failures and human deaths. Clinical drug treatment needs diagnosis, prognosis and therapeutic innovations and custom transition. To improve therapeutic outcomes, clinical diagnosis should be expanded in dimensionality and therapeutic guidance as a whole and gradual transition. This editorial discusses issues of diagnosis normality (digital profiling creations) and dataset enrichments in different fields totally.

Keywords: Cancer Diagnosis; Neoplasm Metastasis; Drug Treatment; Digital Profiling; Dilemma

Introduction

Cancer is the secondary leading mortality disease worldwide (12% of all human deaths) [1,2]. 70-90% of all cancer death is caused by neoplasm metastasis or recurrence [3-6]. To achieve this aim, cancer diagnosis needs to improve information and clearance for both tumor growth inhibition and therapeutic specificity against different types of cancer by increasing drug sensitivity and reducing toxicity to patients [7].

Dilemma and Obstacles

To reach such goals of different-stage cancer, cancer diagnosis should be more informative and usefulness for therapeutic guidance and drug selections. This editorial discusses the landscape of cancer diagnosis improvements and transition in the clinic.

Challenge

Cancer metastasis is a challenge for therapeutic improvements of patient's survivals. To promote therapeutics against neoplasm metastases, recurrence, and drug resistance, clinical diagnosis should be expanded in dimensionality for therapeutic options and combination. This issue of diagnostic profiling creations and expansion is a decisive pathway for therapeutic promotion and systemization.

New Ideas and Technology

Nomenclature expansion

Clinical diagnostic systems have different layers and nomenclatures. However, current cancer diagnostic systems are not well categorized for all information and disease predictions. Biopsy, especially histopathology, is the common procedure for pathological and diagnostic evaluation. According to this stage of techniques, more informative data of diagnostic platforms and systems should be created, optioned and integration.

Expansion of TNM

Today, human cancer in the clinic is termed as TNM. It only contains information of morphology, especially the status of tumor metastasis. With the rapid expansion and updating of molecular biology technology [8-15], it should be categorized as TNMH (hallmark) G(genomic) M(molecular) T(target) or other systems to embrace new information of molecular biology for prognostic or therapeutic applications [16]. It means much assistance for targeted pharmacotherapy.

New Insights

Pathology Information Growing

Tumors are subtyped (>200). Proper division or addition of clinical diagnostic data or systems has great benefits for different treatments (surgery, radio, thermos, or pharmaceutical). Due to these new integrations of pathology (TNMH (hallmark) G(genomic) M(molecular) T(target) [16], further treatments will be based on suiting clinical therapeutic decisions, like personalized oncology [17-19] or many other kinds of drug development or industry [20,21]. It is very important for scientific breakthroughs and clinical applications.

Drug Combination Feasibility

Drug combination is one of popular strategies for cancer treatments. However, it is not well defined for standardization and guideline supports. Since drug combination can be as high as (>one million) to several thousands in real clinical settings, how to utilize the optimized drug combination is still a matter of medical frontiers [22-25]. After systematic progress in platforms and technology, new diagnostic systems can be of usefulness for these medical system references. To do this therapeutic upgrading, diagnostic progress will be very helpful.

Associations between Drug Targets, Mechanisms and Developments

Drug treatment outcomes (targets, responses and mechanisms) are not similar between different subtypes of cancer. How to define these differences and relationship waits diagnostic updating, like this one (expansion genetic or bioinformatics data) in tumor pathogenesis nomenclature and systemization.

Tumor Characters

Tumor malignancy in humans is progressed and changeable (genes and molecules). In the earliest, tumor cells have only one or two tumor mutants. After several passages, one tumor cell may have many gene mutants or onco-proteins [7]. Several pathways and mechanisms are proposed to reveal these mutant changes by technology and medical knowledge. Large volume of such research may be followed in upcoming decades. Many pharmaceutical progresses, clinical cancer treatment will be disciplinary changes to improve cancer therapeutics.

Modern Pathogenesis Revelation

To fulfill pathological revelation, advanced diagnostic or molecular information should be upgraded in several pathways; (Table 1).

Table 1: New diagnostic systems and promotion.

BOX. New diagnostic systems and promotion
Study the possibility and sustainability of increased digital pathogenesis of cancer by clinical data coverage, analysis, and innovations
Establish or promote potential systems of TNMHGMT or other forms of platform perfection, like by automatic production or formation better and more coverage than current ones
Cancer pathogenesis investigations and knowledge advances and transition
Establish better personalized oncology or medicine for promoting clinical cancer trials
Streamlines and establish guidelines for finishing or upgrading current diagnosis

Conclusion

Cancer metastasis should be emphasized for patient's survival benefiting. For performing this treatment upgrading, many new discoveries, methodology, and classifications could be pursuit. More efficacy in cancer treatments can be achieved by these new proposals.

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