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Commentary

Comments on Bu et al. "P16^{INK4a} overexpression and survival in osteosarcoma patients: a meta analysis"

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Abstract: Recently, we read the article "P16^{INK4a} overexpression and survival in osteosarcoma patients: a meta analysis" by Jie Bu and his colleagues, published in the recent issue of *International Journal Of Experimental Pathology*. This research performed a meta-analysis to uncover the role of P16^{INK4a} expression in overall survival rate in patients with osteosarcoma. The investigators concluded as follows: (i) the pateints with overexpression of P16^{INK4a} had a longer overall survival rate than that with loss expression of P16^{INK4a}; (ii) P16^{INK4a} was an effective biomarker of prognosis in patients with osteosarcoma.The findings are valubale and encouraging. However, some flaws and imperfections rooted in this work.

Keywords: Osteosarcoma, meta-analysis, P16^{INK4a}

Firstly, the investigators displayed the search only in PubMed, Embase, web of science and CNKI (China National Knowledge Infrastructure) [1]. The limited electronic databases would compromise the final conclusion. The common sources for meta-analysis are PubMed, Embase and Cochrane Central Register of Controlled Trials. Meanwhile, the investigators searched the CNKI, a Chinese database not a common candidate source for meta-analysis. Five included articles are from this database, which is not normal [2-6]. In addition, the investigators just presented the search strategy by using the keywords such as "osteosarcoma" or "osteosarcomas" and "p16" or "P16^{INK4a}". The specific search strategies and the process of paper included or excluded were not well clearly clarified. To make readers more well understanding this meta-analysis, we suggest the investigators should provide the detailed flow chart in the article.

Secondly, the investigators included the eight eligible articles with total 354 patients with osteosarcoma. However, the characteristics of the enrolled studied was not listed in this article. We advise that the number and demographics of patients included, number of patients with high or loss expression of P16^{INK4a} and survival rate should be provided to assist us in understanding the meta-analysis well.

Thirdly, the standard criteria of positive/negative expression of P16^{INK4a} among the included studies is different [2, 6-8], which leads to the heterogenicity at baseline. Moreover, some enrolled patients with osteosarcoma underwent chemotherpy while others did not, which may confound the outcome [2, 4, 7, 8]. As the chemotherapy may have a effect on expression of P16^{INK4a} in patients with osteosarcoma. We suggest that only studies which analyze the untreated diagnostic samples should be included.

Fourthly, the investigators did not evaluate the quality of the included studies. It is well known that a convicing and persusasive meta-analysis is supported by high quality controlled clincial trials and randomized controlled trials. Therefore, we hope the authors can perform the analysis on the methodological issues.

Eventually, more well-designed and large-scale studies are required to further verify the prognostic role of P16^{INK4a} expression on patients with osteosarcoma.

Disclosure of conflict of interest

None.

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