Letter regarding the article of Jiao G. J. et al. entitled “Prognostic significance of cyclooxygenase-2 in osteosarcoma: a meta-analysis”

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Dear Editor,

In a recent issue of *Tumor Biology*, Guangjun Jiao Wen and his workmates published an article [1] entitled “Prognostic significance of cyclooxygenase-2 in osteosarcoma: a meta-analysis.” In this study, the investigators performed a meta-analysis to derive a precise estimate of the prognostic role of cyclooxygenase-2 (COX-2) expression in patients with osteosarcoma. The investigators concluded that osteosarcoma patients with high COX-2 expression were more closely associated with neoplasm metastasis and advanced clinical stage, and also have poor 3-year survival compared with those with low COX-2 expression. However, we have several opinions that we would like to raise to the investigators.

Firstly, the investigators had not focused specifically on the issue of the completeness of the search strategy report for databases. They just described the retrieval strategy by using combinations of keywords such as, “osteogenic sarcoma,” “COX-2,” “Cyclooxygenase-2,” “prognosis,” “prognostic,” “marker,” “survival,” and “metastasis.” We suggest that the investigators should

provide us the details of the retrieval strategy and the flowchart of selection.

Secondly, 14 studies with a total of 735 osteosarcoma patients were included into the meta-analysis. In Table 1, the number of osteosarcoma patients in these studies [2–7] was less than the COX-2 positive numbers, respectively. We hope that the investigators could give us a reasonable explanation.

Thirdly, the investigators did not provide us any funnel plots for the Begg’s test and the Egger’s test. To strengthen the credibility of the meta-analysis, the investigators should provide us all these plots.

Finally, the investigators did not follow the meta-analysis of observational studies in epidemiology (MOOSE). As a minor suggestion, by adding MOOSE checklist, some summary could make this manuscript better.

In a word, more well-designed researches with large groups of patients are needed to provide further evidence for the prognostic significance of COX-2 expression in patients with osteosarcoma.

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Table 1 Main characteristics of all articles included in the meta-analysis

Study	Original country	Age (year)	Number of studies	Inclusion period	Methods	Antibodies	Cutoff (%)	Positive	Enneking stage	Follow-up (month)	Number of metastases
Dickens et al. [8]	USA	Mean, 11.43	99	1983–2003	IHC	BioGenex	25	43	NR	NR	66
Li et al. [2]	China	Mean, 19 Range, 7–70	85	1998–2006	IHC	Maxim	10	89	I, 23 II, 69 III, 46	NR	48
Ouyang et al. [3]	China	Mean, 18.6 Range, 9–37	98	2001–2006	HIS	Whboster	5	100	II, 102 III, 50	NR	26
Geng et al. [9]	China	Mean, 19.8 Range, 6–56	59	2002–2006	IHC	Maxim	>0	48	NR	Mean, 20.1 Range, 5–48	8
Huang et al. [4]	China	NR	37	1996–2005	IHC	Whboster	>0	47	I, 11 II, 37 III, 21	NR	16
Zhu et al. [6]	China	Mean, 25.5 Range, 10–66	31	1987–2001	IHC	Santa Cruz	5	33	NR	NR	17
Jiang et al. [7]	China	Range, 11–34	31	1998–2003	IHC	Nr	5	35	NR	NR	17
Rodriguez et al. [10]	USA	Range 9–75	36	1990–2001	IHC	Santa Cruz	5	31	NR	NR	10
Urakawa et al. [5]	Japan	Mean, 15 Range, 4–57	51	1987–2008	IHC	Santa Cruz	10	63	NR	Mean, 67.4 Range, 3.8–162.6	18
Boulytcheva et al. [11]	Russia	Range, 16–70	40	NR	IHC	Dako	10	27	NR	NR	16
Liao et al. [12]	China	Median, 21 Range, 7–65	57	1998–2004	IHC	ZsBio	>0	27	NR	Mean, 36 Range, 8–90	20
Ma et al. [13]	China	Range, 7–53	45	2005–2009	IHC	NR	10	36	II, 34 III, 25	NR	NR
Xu et al. [14]	China	Mean, 20 Range, 7–53	28	NR	IHC	ZSGB-BUI	5	22	I, 10 II, 24 III, 16	NR	NR
Zhang et al. [15]	China	Median, 19 Range, 16–43	38	1995–2006	IHC	Zymed	5	22	I, 11 II, 30 III, 19	NR	NR

NR not reported, IHC immunohistochemistry, HIS hybridization in situ

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