Cite this as: Haohua LU, Yu SHI, Kelie CHEN, Zhi CHEN, Haihong ZHU, Yuequn NIU, Dajing XIA, Yihua WU. Impact of antitumor regimens on the outcomes of cancer patients with COVID-19: a pooled analysis[J]. Journal of Zhejiang University Science B, 2021, 22(10): 876-884.
http://doi.org/10.1631/jzus.B2100151

Impact of antitumor regimens on the outcomes of cancer patients with COVID-19: a pooled analysis

JZUS-B

Key words: COVID-19, cancer, antitumor regimens, pooled analysis

Research Summary

This study provided a comprehensive analysis of anticancer regimens and their impacts on cancer patients with COVID-19

We focused on two major outcomes:

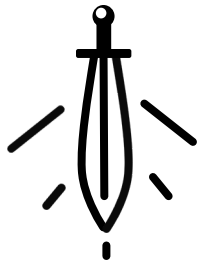
- **All-cause death**
- **Severe events (death, admission to an intensive care unit (ICU), and utilization of mechanical ventilation)**

IZUS-D

Innovation points

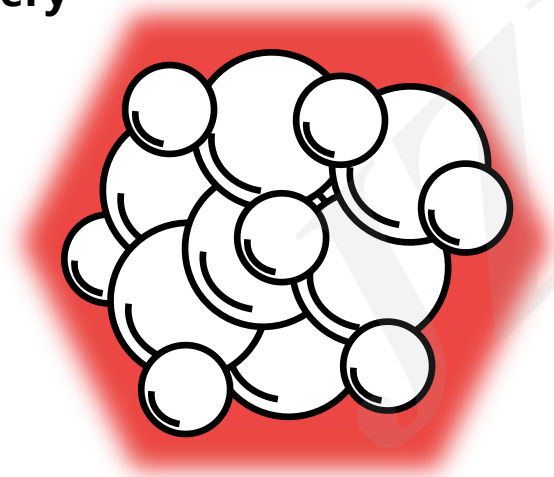
- **Attention** on the role of anticancer regimens in the pandemic of COVID-19.
- **Pooled analysis** of the previous studies with available individual data.





Surgery

Chemotherapy



Targeted therapy

Immunotherapy

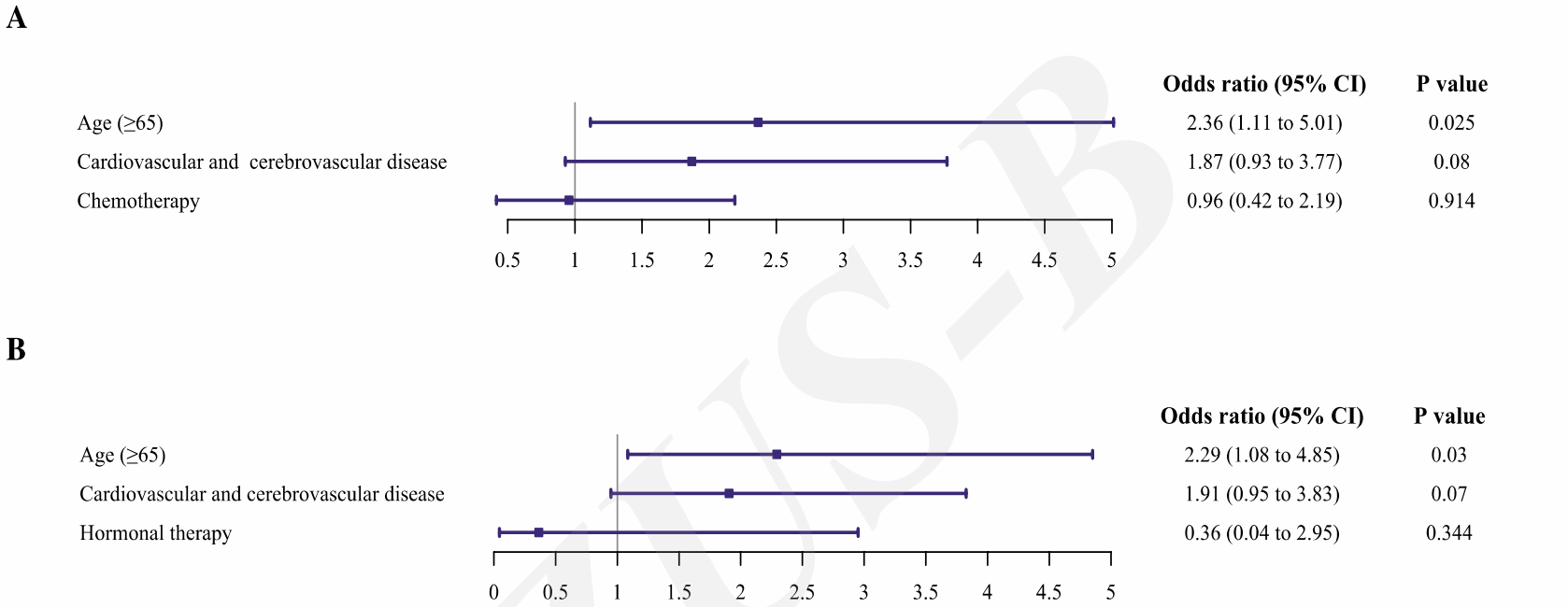


Radiotherapy

Hormonal therapy

IUS-B

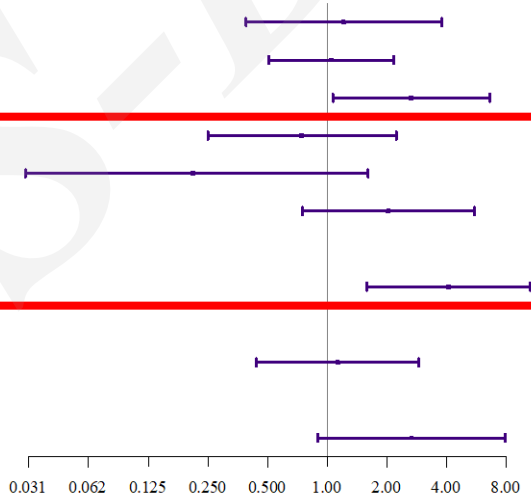
Main results



- **Effects of antitumor regimens became insignificant after adjustment**
- **Effects of crucial clinical characteristics (advancing age and comorbidities) should deserve more attention**

Main results

Subgroup title	No of patients	Treatment	No of events/total treatment	No of events/total control	Odds ratio (95% CI)
tumor type					
solid tumor	277	surgery	4/20	44/257	1.21 (0.39 to 3.79)
		chemotherapy	12/67	36/210	1.05 (0.51 to 2.17)
		immunotherapy	8/24	40/253	2.66 (1.07 to 6.64)
		targeted therapy	4/29	44/248	0.74 (0.25 to 2.24)
		radiotherapy	1/22	47/255	0.21 (0.03 to 1.61)
		hormonal therapy	6/21	42/256	2.04 (0.75 to 5.56)
hematological malignancy	88	surgery	NA	NA	
		chemotherapy	21/30	21/58	4.11 (1.59 to 10.6)
		immunotherapy	NA	NA	
		targeted therapy	12/24	30/64	1.13 (0.44 to 2.9)
		radiotherapy	NA	NA	
		hormonal therapy	12/18	30/70	2.67 (0.9 to 7.92)



- **Immunotherapy** affects COVID-19 patients with solid tumors
- **Chemotherapy** affects COVID-19 patients with haematological malignancies

JZUS-B