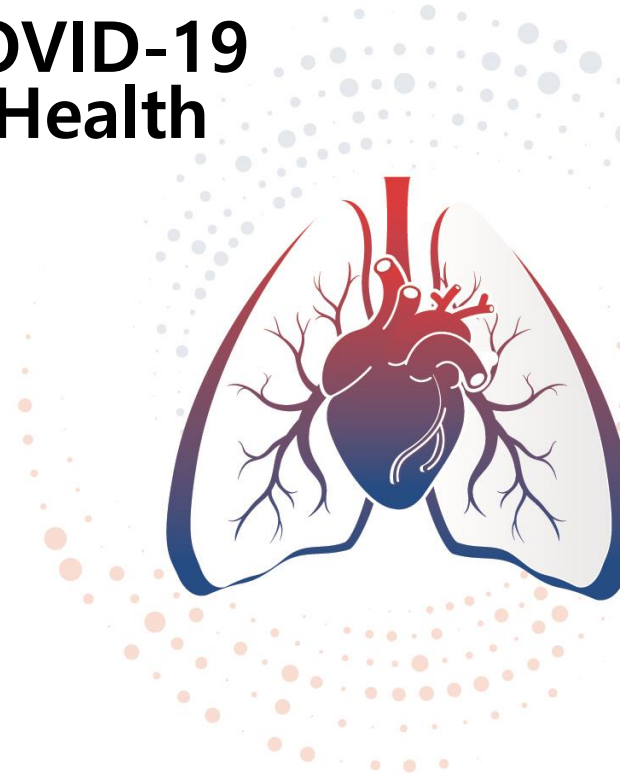


2023 대한심장혈관흉부외과학회

제55차 추계학술대회 & APELSO 2023

2023. 11. 02 (Thu) - 11. 04 (Sat), 그랜드 인터컨티넨탈 파르나스 서울

Analysis of spontaneous pneumothorax and COVID-19 associated pneumothorax using the National Health Insurance Service Database



- Pneumothorax is one of the complications of COVID-19
- While pneumothorax is generally thought to be a non-serious condition, COVID-19 pneumothorax appears to be associated with longer length of stay and poorer outcomes, including mortality and recurrence, compared to spontaneous pneumothorax
- However, most of the data to date have focused on pneumothorax in COVID-19 patients and have not been compared to pneumothorax in non-COVID-19 patients at the same time.
- Korean National Health Insurance Service Database have data on a large number of pneumothorax patients with and without COVID-19, it is expected to be possible to compare two groups.
- If the prognosis for COVID-19 Pneumothorax is indeed worse, we can see that it may require more aggressive treatment, contrary to the changes in treatment of pneumothorax to date.
- As COVID-19 may become as endemic as the flu in the future, research on pneumothorax, which has emerged as one of the complications of COVID-19, will be important in setting policy on how to treat patients in the future

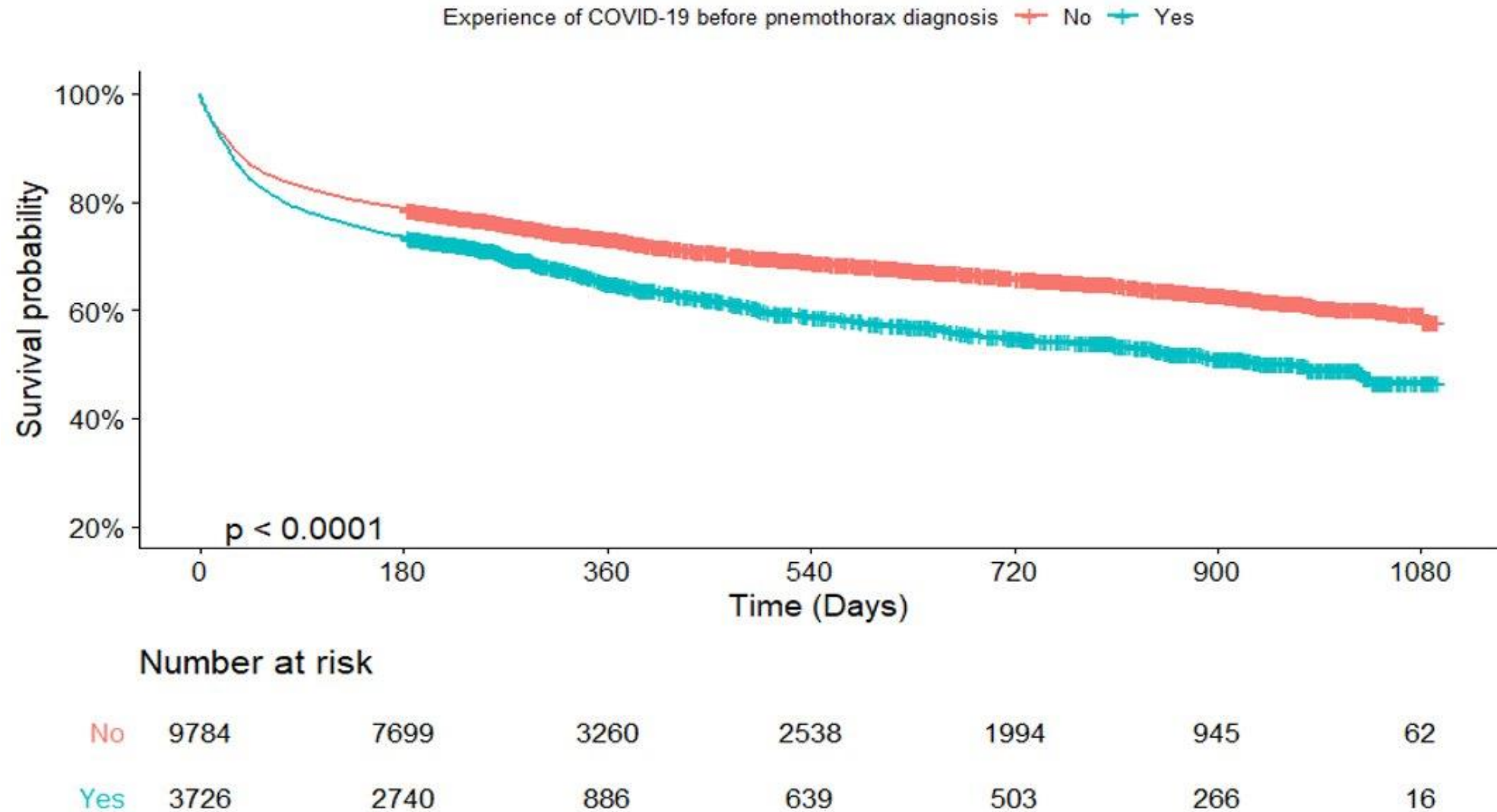
- All patients with pneumothorax in the National Health Insurance Service Database will be examined.
- Patients with and without COVID-19 diagnosis will be separated
- Mortality, LOS, Recurrence, Treatment method will be compared and statistically analyzed
- 1:3 Propensity matching is performed

- Total Pneumothorax cases from 2020 to 2022 : 73,339
- Include – primary spontaneous pneumothorax, secondary pneumothorax, recurrent pneumothorax
- Exclude- Iatrogenic pneumothorax, traumatic pneumothorax, duplicate cases
- Remain pneumothorax cases from 2020 to 2022 : 53,319
- Excluded patients after July 2022 for mortality study : 43,308
- After propensity matching : 13,510

Regression

	All-cause mortality		Length of Stay		Recurrence	
	HR	95% CI	RR	95% CI	HR	95% CI
COVID-19 pneumothrax						
No	1.00		1.00		1.00	
Yes	1.20	(1.13 - 1.29)	1.21	(1.17 - 1.25)	1.12	(1.04 - 1.20)

Year of diagnosis	Control	Case	HR	Lower	Upper	P-value
2020	1,175 (38.5)	601 (56.9)	1.31	1.19	1.45	0.0209
2021	635 (42.0)	285 (51.4)	1.19	1.03	1.37	
2022	1,042 (20.0)	420 (19.9)	1.12	0.99	1.26	



- This study that analyzed the diagnosis of COVID-19 in all National Health Insurance Service Database and analyzed the differences between the two groups.
- Mortality, length of stay, and recurrence rates were all higher in COVID-19 pneumothorax
- COVID-19 pneumothorax needs to be addressed more aggressively
- From 2020 to 2022, HR tends to decrease. This could be due to the COVID-19 virus variants, or it could be due to an increase in mild cases.