

주최·주관 대한심장혈관흉부외과학회

2024 대한심장혈관흉부외과학회 제56차 추계학술대회

2024. 10. 31 (Thu) - 11. 01 (Fri) 여수 엑스포 컨벤션센터



Extracorporeal Membrane Oxygenation for Refractory Septic Shock: A Multicenter Cohort Study in Korea

- A recent multicenter retrospective study demonstrated a significant survival benefit for septic shock patients treated with ECMO.

Lancet. 2020 22;396(10250):545-552.

- Additionally, a recent individual participant meta-regression analysis found that ECMO may increase mortality in septic shock patients who do not have left ventricular dysfunction.

Crit Care. 2021 14;25(1):246.

- The 2024 Korean clinical guidelines also highlight limited evidence for using VA-ECMO in adult septic shock patients and recommend a cautious approach to its application.

Korean Disease Control and Prevention Agency. 2024 Aug (www.kdca.go.kr)

- This study aims to analyze ECMO outcomes in septic shock patients from a Korean multicenter registry to identify factors associated with improved survival.



Multicenter ECMO Registry in Korea

- 6 Hospitals in Korea
- 2018. Jan – 2024. Apr
 - Prospective: since 2023. Apr (n=549, 2024.Jun)
 - Retrospective: 2018. Jan - 2023. Mar (n=2237)
- Adult (> 18 year) ECMO patients (N = 2,786)

Septic Shock with ECMO Cohort

- N=**78** / 2,786 (**2.8%**)
- Age (year)
 - mean (SD): **57.5** ± 12.3
 - median (range): **60** (22 - 85)
- Male: 54 (69.2%)



체외막 산소화 치료 레지스트리
Extracorporeal membrane oxygenation registry

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체외막 산소화 치료 레지스트리 (Extracorporeal membrane oxygenation registry)
체외막 환자 혈액 관리 (Extracorporeal Patient Blood Management)

환자리스트

리스트 < > 시술번호 < > 연구방법 선택 < > ECMO 주 목적 선택 < > 환자 일련번호 < > 검색 >> 640건

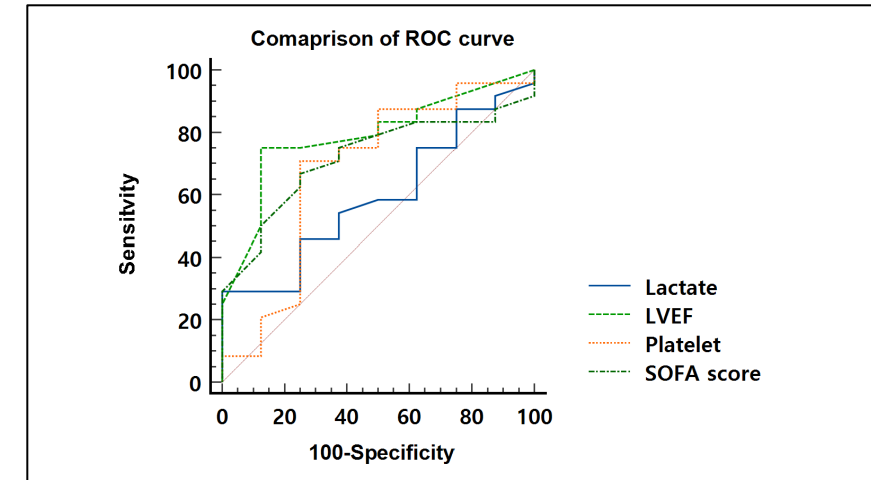
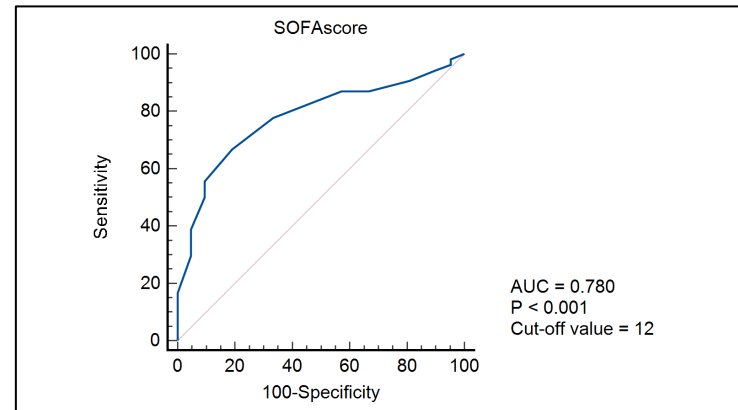
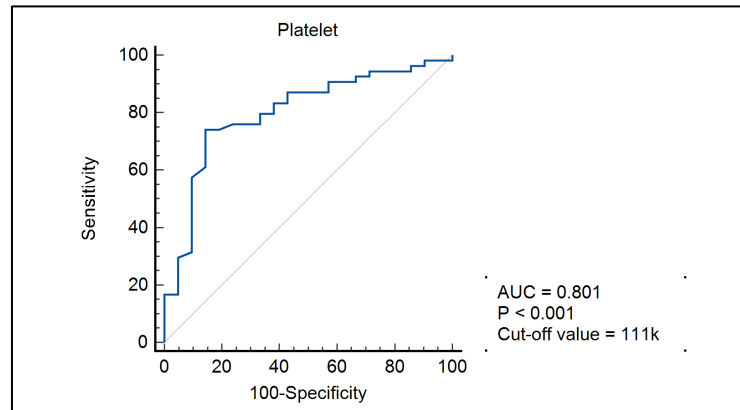
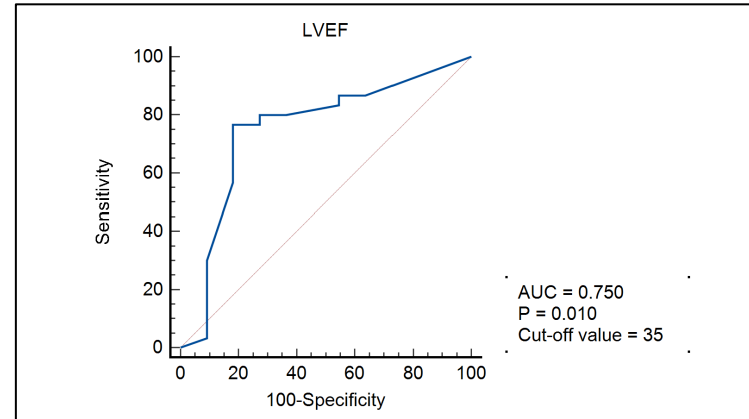
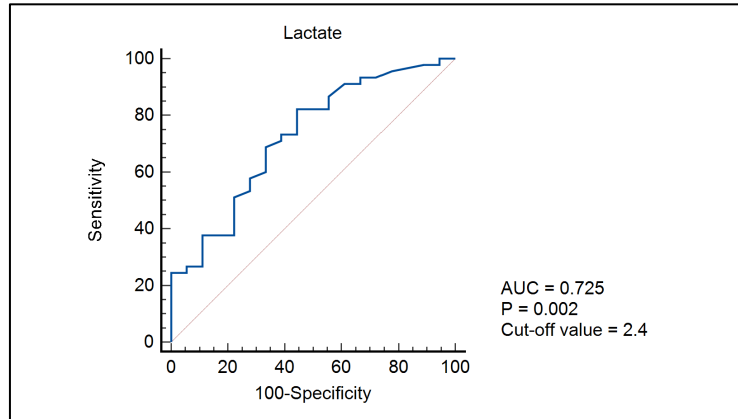
※. 상태 버튼을 클릭하시면 입력하신 내용을 확인 및 수정하실 수 있습니다.

No	일련번호, 환자명 병원번호, 성별, 나이	ECMO 주 목적	상태	Daily lab	Daliy transfusion	transfusion before ECMO	입원일	ECMO시술일	Last follow up date
640	CNH-0641, KSJ 10598865, 남, 43 세	Respiratory ECMO	입력중	입력완료	미등록	미등록	2024-06-18	2024-06-26	2024-06-18
639	CNH-0640, PJS 10608149, 남, 62 세	Respiratory ECMO	입력중	입력완료	미등록	미등록	2024-06-25	2024-06-25	2024-06-25
638	CNH-0639, NDG 23429406, 남, 55 세	Cardiovascular ECMO	입력중	입력완료	입력완료	입력완료	2024-06-21	2024-06-21	2024-06-21
637	CNH-0638, MNY 10605901, 남, 67 세	Cardiovascular ECMO	입력중	입력완료	입력완료	입력완료	2024-06-04	2024-06-21	2024-06-04

Basal Characteristics of pre-ECMO condition

Variable	Survival to Discharge (N=19)	In Hospital Death (N=54)	p-value
Age (year)	55.6 ± 10.6	58.4 ± 12.8	0.386
Cancer within 5 year	0	10	0.028
ECPR or CPR Histroy	0	9	0.044
Lactate (mmol/L)	4.1 ± 4.1	8.3 ± 6.8	0.018
Platelet (10 ³ mm ³)	75.8 ± 190.3	401.6 ± 201.1	0.484
LVEF (%)	30.9 ± 18.6	49.1 ± 19.2	0.010
SOFA score	10.1 ± 3.4	14.4 ± 4.4	<0.001

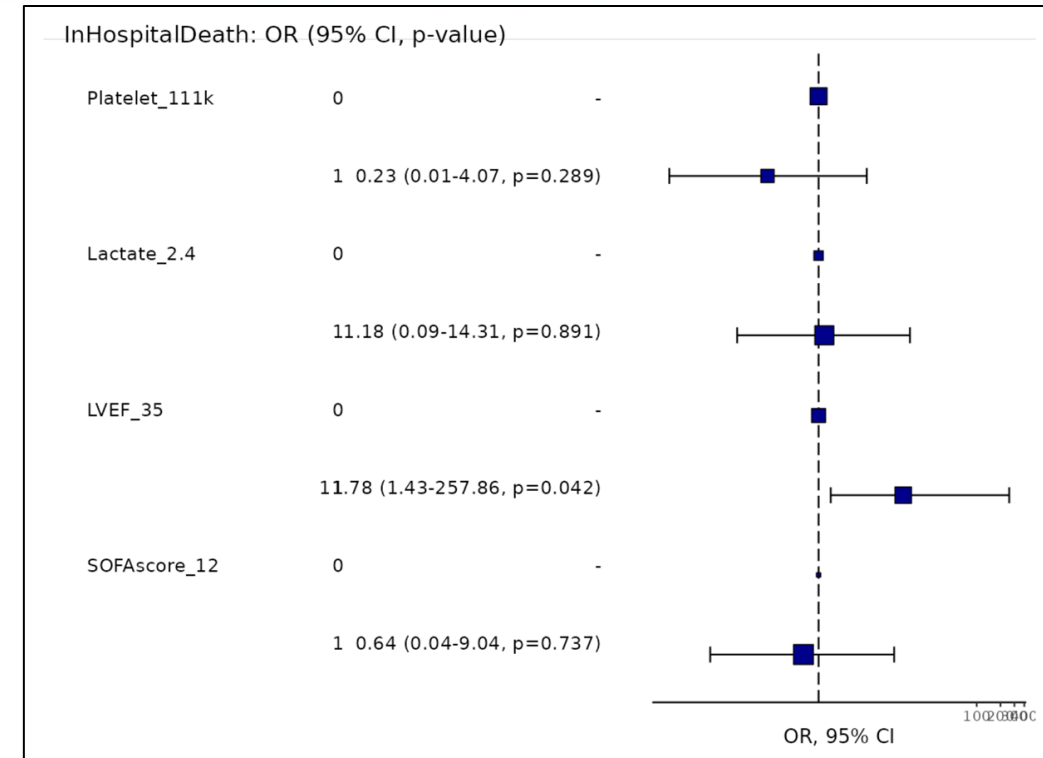
ROC Curve Analysis (4 variables in pre-ECMO condition)



Multivariable Analysis

Variable	Survival to Discharge	In Hospital Death	OR (95% CI, p-value)	
			univariable	multivariable
Platelet_111k	122.1 ± 232.3	75.6 ± 29.0	0.14 (0.02-0.76, p=0.033)	0.23 (0.01-4.07, p=0.289)
Lactate_2.4	3.0 ± 0.6	2.7 ± 0.4	1.80 (0.30-9.90, p=0.499)	1.18 (0.09-14.31, p=0.891)
LVEF_35	4.0 ± 2.6	7.4 ± 7.0	17.00 (2.41-350.35, p=0.015)	11.78 (1.43-257.86, p=0.042)
SOFA score_12	26.3 ± 14.4	47.1 ± 20.0	3.00 (0.47-18.64, p=0.229)	0.64 (0.04-9.04, p=0.737)

OR: Odd Ratio, CI: Confidential Interval



Conclusion

- A clinical outcomes of ECMO in septic shock patients, based on the Korean multicenter ECMO registry, are unsatisfactory.
- ECMO may have a role to save the lives in a selected patients of sepsis induced cardiac dysfunction.