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INTRODUCTION

BACKGROUND AND RATIONALE

Leading cause of global cancer mortality

ICU Admission traditionally implies poor prognosis for lung cancer patients

Changing landscape
→ Time to rethink lung cancer in ICU

STUDY OBJECTIVES

- To identify clinical and oncological characteristics associated with prognosis
- To determine modern clinical relevance of ICU admission

METHODS

ONCOTHO-ICU

Setting: Multicenter, retrospective cohort study
4 Intensive Care Units (ICUs) in Lyon, France

Population: Lung cancer patients admitted to the ICU
(January 2021 - December 2023)

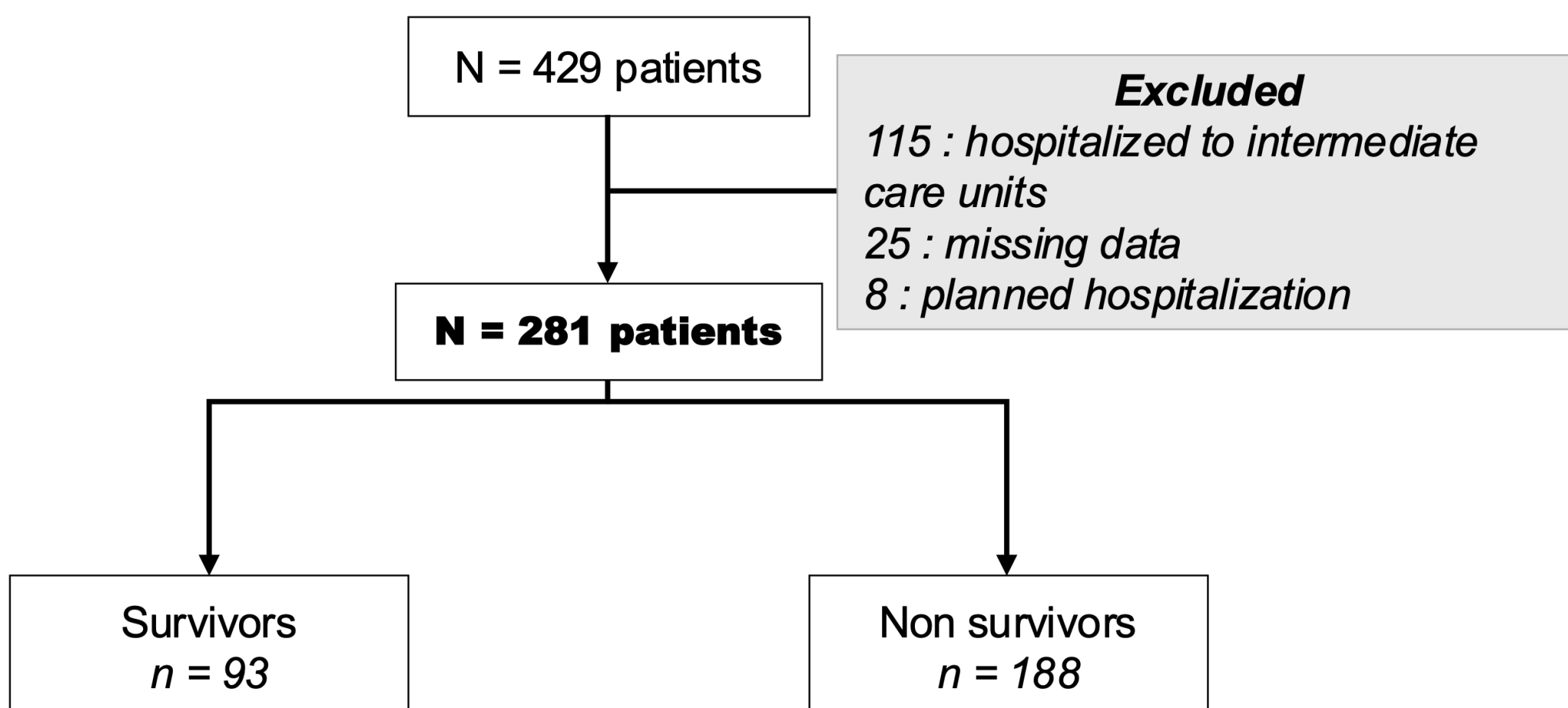


Figure 1: Flow chart

Data Collection: From Electronic Medical Records (EMR)

Endpoints:

- *Primary* : 6-month mortality
- *Secondary* : ICU mortality & 6-month Quality of Life

Statistical analysis:

- Multivariate Logistic Regressions
- At Day 0 (At Admission in ICU)
- At Day 2 (After 48h of ICU)

DISCUSSION AND CONCLUSION

KEY FINDINGS

ICU admission: A marker of patient severity

High mortality
(6-month mortality ~ 55 to 79% in recent literature)

Severity of admitted patients
(metastatic stage, SOFA score)

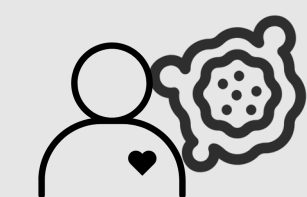
6-month survival predictors:

Initial ICU severity



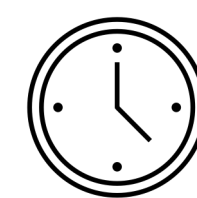
- SOFA score
- Respiratory failure
- Sepsis at admission
- Number of organ failures

Cancer-related characteristics

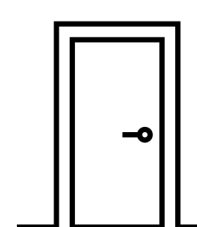


- Cancer-related admission
- Metastatic status
- Time from cancer diagnosis to ICU admission

CLINICAL IMPLICATIONS



Time-limited ICU trials may benefit carefully selected patients.



ICU admission at lung cancer diagnosis is associated with poorer outcomes.

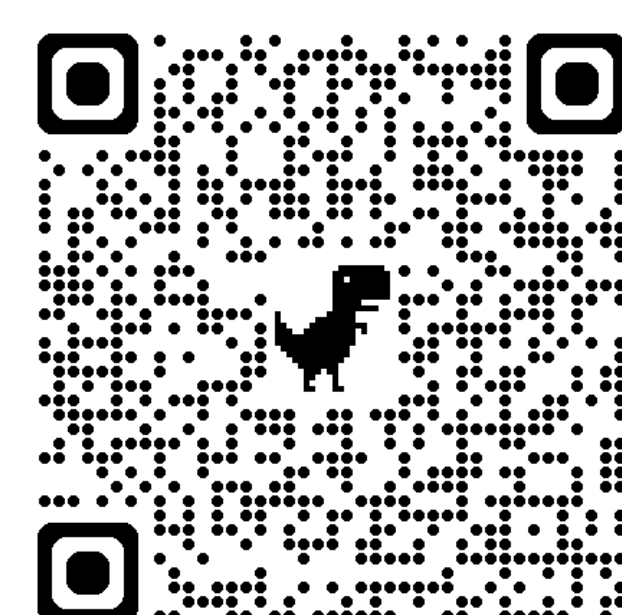


Over half of survivors regain their functional baseline status.

FUTURE DIRECTIONS

- Impacts of initiating or continuing oncologic therapy in the ICU.
- Role of specific oncogenic mutations in prognosis.

REFERENCES & ACKNOWLEDGEMENTS



RESULTS

➔ 281 patients included

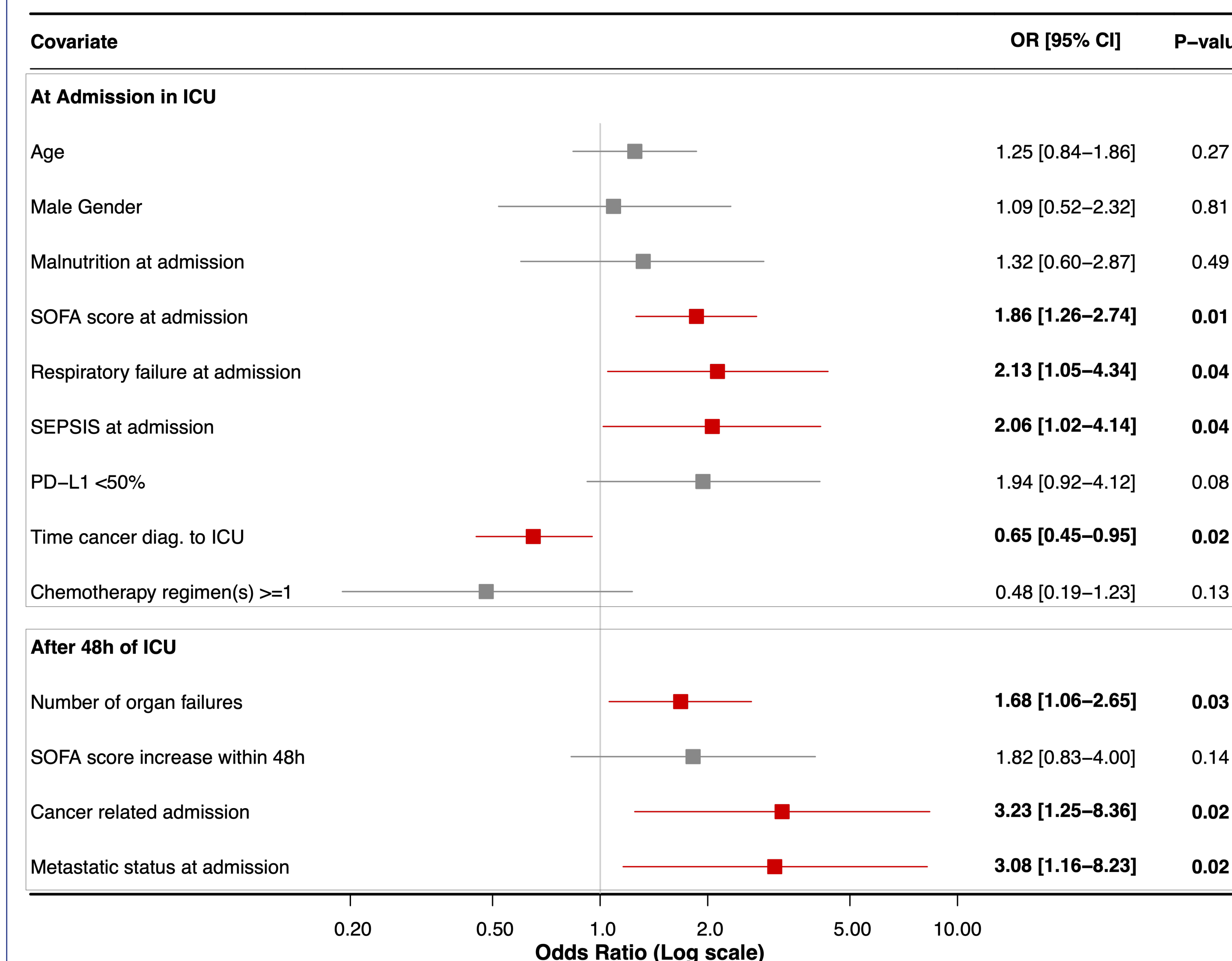
Overall mortality at 6 months = **66.9%** & Mortality in ICU = **32%**

Table 1: Baseline characteristics of the study population

CHARACTERISTICS		TOTAL (N=281)	SURVIVORS (N=93)	DECEASED (N=188)	P-value
Age (years), mean, SD		67.2, 9.6	66.4, 9.7	67.6, 9.6	0.38
Sex, n (%)	Male	207 (73.7)	71 (76.3)	136 (72.3)	0.57
	Female	74 (26.3)	22 (23.7)	52 (27.7)	
Charlson score, mean, SD		8.9, 2.3	8.5, 2.5	9.2, 2.2	0.02
Pre-admission PS n (%)	≤ 2	230 (81.9)	80 (86.0)	150 (79.8)	0.27
	> 2	51 (18.1)	13 (14.0)	38 (20.2)	
Diagnosis in ICU, n (%)	No	256 (91.10)	86 (92.47)	170 (90.43)	0.73
	Yes	25 (8.89)	7 (7.53)	18 (9.57)	
Histological type n (%)	Adenocarcinoma	146 (52.0)	49 (52.6)	97 (51.1)	0.95
	Squamous cell carcinoma	65 (23.1)	21 (22.5)	44 (23.4)	
	Small cell carcinoma	34 (12.1)	11 (11.8)	23 (12.2)	
	Other	32 (11.4)	12 (13.6)	20 (10.6)	
Cancer stage at admission, n (%)	Non-metastatic	47 (16.7)	25 (26.9)	22 (11.7)	<0.01
	Metastatic	227 (80.8)	65 (69.9)	162 (86.2)	
	Considered cured	7 (2.5)	3 (3.2)	4 (2.1)	
PD-L1 status, n (%)	<1%	140 (49.8)	40 (43.0)	100 (53.2)	0.14
	1-49%	72 (25.6)	24 (25.8)	48 (25.5)	
	≥50%	58 (20.6)	25 (26.9)	33 (17.6)	

CHARACTERISTICS		TOTAL (N=281)	SURVIVORS (N=93)	DECEASED (N=188)	P-value
EGFR, ALK, or ROS1 mutation, n (%)	No	267 (95.0)	91 (97.8)	176 (93.6)	0.21
	Yes	14 (5.0)	2 (2.2)	12 (6.4)	
Time from last treatment to admission, n (%)	≤ 3 months	188 (67.0)	58 (62.4)	130 (69.1)	<0.01
	> 3 months	39 (14.0)	21 (22.6)	18 (9.6)	
	No treatment	46 (16.0)	8 (6)	38 (21.0)	
Chemotherapy regimens, n (%)	None	99 (35.2)	27 (29.0)	72 (38.3)	0.16
	≥1	182 (64.8)	66 (71.0)	116 (61.7)	
Time from diagnosis to ICU admission (days)	Median, [IQR]	158 [27.0 ;519.0]	302.0 [72.0 ;612.0]	110.0 [18.0 ; 410.3]	< 0.01
	> 1 year, n (%)	94 (33.4)	40 (43.0)	54 (28.7)	
	1 month–1 year, n (%)	114 (40.6)	39 (41.9)	75 (39.9)	
	≤ 1 month, n (%)	73 (26)	14 (15.1)	59 (31.4)	
Malnutrition, n (%)	No	67 (23.8)	30 (32.3)	37 (19.7)	0.03
	Yes	214 (76.2)	63 (67.7)	151 (80.3)	
Treatment limitation before admission, n (%)	No	275 (97.9)	92 (98.9)	183 (97.3)	0.67
	Yes	6 (2.1)	1 (1.1)	5 (2.7)	
Sepsis at admission, n (%)	No	100 (35.9)	46 (49.5)	54 (28.7)	<0.01
	Yes	181 (64.4)	47 (50.5)	134 (71.3)	
SOFA at admission, mean, SD		7.0, 4.2	5.4, 3.1	7.8, 4.5	<0.01

Figure 2: Predictors of 6-month survival



Non survivors presented with higher baseline severity

- More frequent metastatic stages
- Heavier comorbidities
- Recently diagnosed and being currently treated
- Sepsis & higher SOFA score at admission

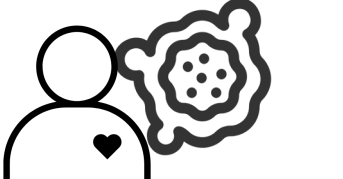
Prognosis seems to be driven by

AT ADMISSION



ICU severity

AFTER 48H



Inherent patient
& Oncological
characteristics