

# Outcomes after Intensive Care Unit admission in cancer patients: beyond mortality

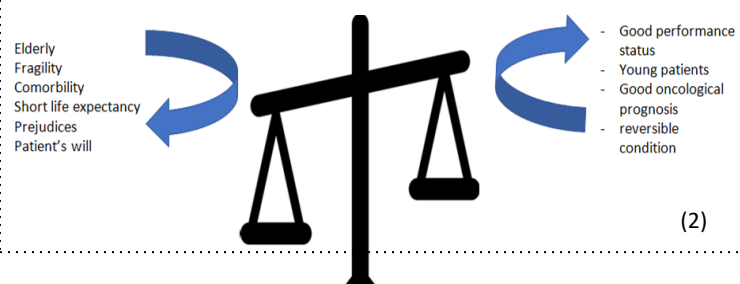
M. García de Herreros<sup>1</sup>, J.C. Laguna<sup>1</sup>, J. Padrosa<sup>1,2</sup>, T. Barreto<sup>1</sup>, C. Zamora-Martínez<sup>1,2</sup>, M. Viladot<sup>1</sup>, T. Gorriá<sup>1</sup>, L. Fernández-Mañas<sup>1</sup>, L. Ghiglione<sup>1</sup>, È. Seguí<sup>1</sup>, I. Casablanças<sup>1</sup>, Á. Marín<sup>1</sup>, A. Pascual<sup>1</sup>, S. Fernández-Méndez<sup>2</sup>, A. Téllez<sup>2</sup>, P. Castro<sup>2</sup>, J.M. Nicolás<sup>2</sup>, A. Tuca<sup>1</sup>, A. Prat<sup>1</sup> and J. Marco-Hernández<sup>1,2</sup>.

<sup>1</sup> Department of Medical Oncology, Hospital Clínic de Barcelona, Barcelona, Spain <sup>2</sup> Medical Intensive Care Unit, Hospital Clínic de Barcelona, Barcelona, Spain

## BACKGROUND

- New cancer treatments have improved life prognosis in oncology, leading to an increasing demand for critical care attention and complexity in clinical decisions. (1)
- There is poor data regarding outcomes in cancer patients after Intensive Care Unit (ICU) admissions, beyond mortality data.

### Pros & Cons of ICU admission in cancer patients



(2)

## OBJECTIVE

- We aim to assess the burden that an ICU admission represents in terms of mortality, length of stay and life quality, measured with:

- Deterioration of performance status (PS)
- Cancer treatment discontinuation
- Hospital readmission

## PATIENTS AND METHODS

- This is a retrospective study of patients with solid malignancies admitted to the Hospital Clínic de Barcelona ICU between 01/2019 - 12/2019.
- Patients with elective procedures were excluded
- Clinical and laboratory data were collected and anonymized.

## REFERENCES

- Chellongowski P et al. ESMO Open 2016
- Putxy et al, JCC 2014

## RESULTS

### Patients characteristics

A total of 97 patients were enrolled:

| Clinical characteristics |                | N=97 (%)    |
|--------------------------|----------------|-------------|
| Age (median, SD)         |                | 63,8 (11,7) |
| Gender                   | Male           | 52 (53,6%)  |
|                          | Female         | 45 (46,5%)  |
| BMI (mean)               |                | 22,8        |
| Comorbidities            | Hypertension   | 49 (50,5%)  |
|                          | Diabetes       | 18 (18,5%)  |
|                          | COPD           | 15 (15,4%)  |
| Barthel (median)         |                | 90          |
| PS month before          | 0              | 22 (22,6%)  |
|                          | 1              | 49 (50,5%)  |
|                          | ≤2             | 27 (27,8 %) |
| Smokers                  | Current/former | 54 (56%)    |
|                          | Non-smokers    | 43 (44%)    |

Table 1; Baseline characteristics

### CANCER DISTRIBUTION AND STAGE

Out of the 97 patients, 21% of them had lung cancer followed by colorectal (16%). A total of 56% were stage IV and most frequent metastasis site was liver

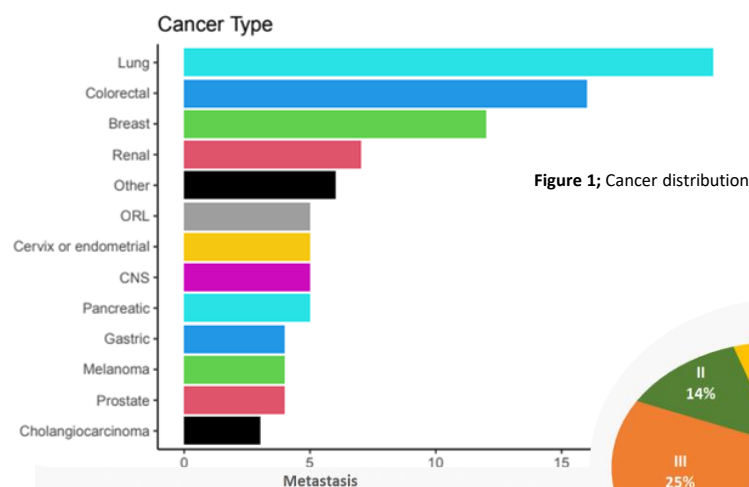


Figure 1; Cancer distribution

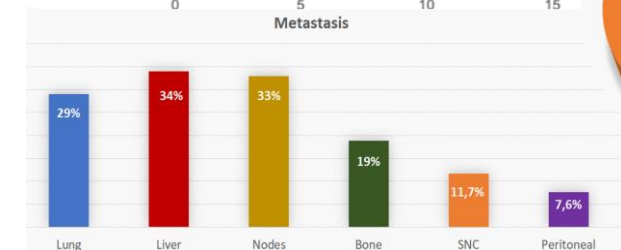


Figure 3; Metastasis distribution

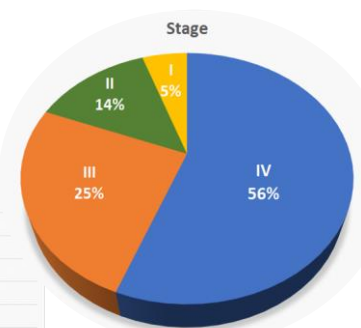
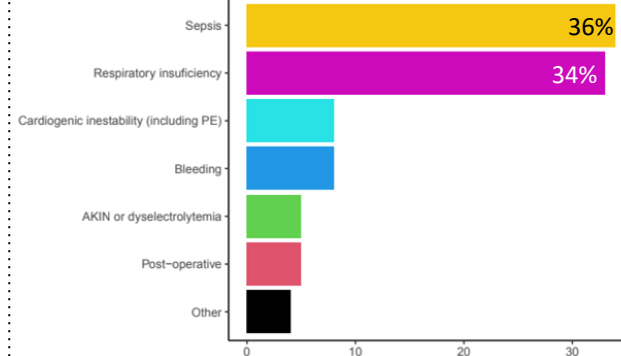


Figure 2; Cancer stage distribution

### ICU admission characteristics

#### REASON FOR ICU ADMISSION



The most frequent reason for ICU admission was septic shock (36% of patients) followed by respiratory failure (34%)

Figure 4: Reason for ICU admission

#### ICU CHARACTERISTICS

| Characteristics of ICU admission |                                     | N=97(%)    |
|----------------------------------|-------------------------------------|------------|
| SOFA                             | 4 (SD 1)                            |            |
| APACHE II                        | 13 (SD 4)                           |            |
| Respiratory support:             | Venturi or nasal cannula            | 37 (38%)   |
|                                  | High flow nasal cannula             | 17 (17.8%) |
|                                  | Non-invasive mechanical ventilation | 4 (4.5%)   |
|                                  | Invasive mechanical ventilation     | 13 (13.6%) |
| Vasoactive drugs                 | 40 (41%)                            |            |
| Surgical procedure               | 13 (13.6%)                          |            |

Table 2: ICU characteristics and requirements

#### LENGTH OF STAY

- ICU length of stay was 4 days (IQR 2-6)
- Hospital length of stay was 25 days (11-34)

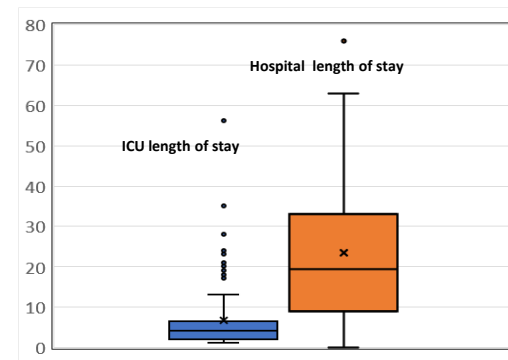


Figure 5: length of stay (days) of ICU and hospitalization



End of life decisions were made in 31% of the patients

### Outcomes; mortality and beyond

#### MORTALITY RATES

Hospital mortality rate was 24% and ICU mortality 9,4%

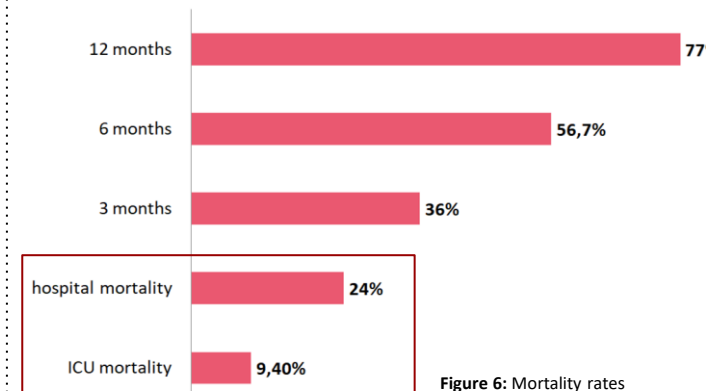


Figure 6: Mortality rates

#### READMISSION RATES

A total of 41% of patients were readmitted to hospital in the following months.

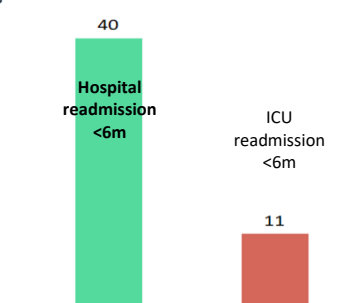


Figure 7: Hospital and ICU readmission

#### DECREASE OF PERFORMANCE STATUS

PS and Barthel were significantly lower at discharge compared to admission

|   |            |
|---|------------|
| Barthel index at admission (median)       | 90         |
| Barthel at discharge                      | 70         |
| Need community health center at discharge | 11 (11.6%) |

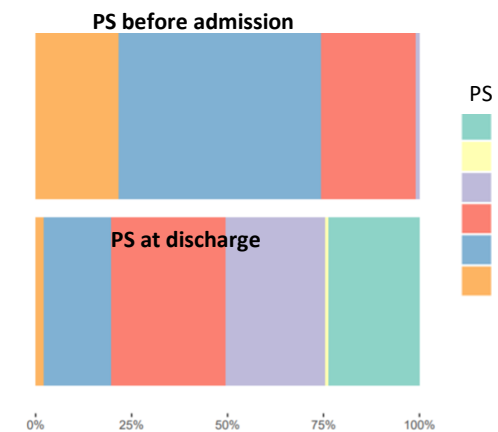
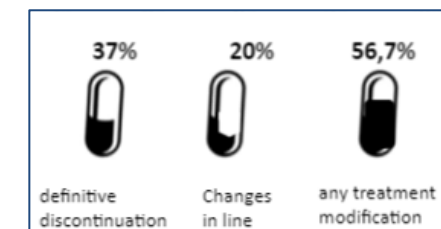


Figure 8: Deterioration of ECOG PS before-after admission

#### TREATMENT MODIFICATIONS



- A total of 37% of patients were not able to receive any cancer treatment after ICU admission.
- In 29% patients disease progressed during admission
- In 20% of patients needed a new line of treatment

## CONCLUSIONS

- Patients with cancer admitted to ICU present high mortality rates and significative deterioration of PS status and Barthel Index.
- They also present high readmission rates, treatment modification requirements and definitive treatment discontinuation.