

APPROPRIATENESS OF ALBUMIN TREATMENT IN NON-CRITICAL AND NON-ONCOHAEMATOLOGICAL HOSPITALISED PATIENTS

Juvany R¹, Esteve E¹, Latorre P¹, Llop J¹, Pérez MT², Rivera L³, Pérez JL⁴, Domenech L³, Jódar R¹, Montoro B³

¹Servicio de Farmacia. Hospital Universitari de Bellvitge-IDIBELL, Universitat de Barcelona. L'Hospitalet de Llobregat. ²Servicio de Farmacia. Hospital Universitario de Guadalajara. Guadalajara; ³Servicio de Farmacia. Hospital Universitari Vall d'Hebron. Barcelona; ⁴Unidad de Gestión Clínica de Farmacia. Hospital Universitario Virgen del Rocío. Sevilla.

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BACKGROUND

Albumin has a high impact on medication expenditure in hospitalized patients; however there are still doubts on its correct use. There are some indications widely accepted while others are occasionally appropriate when some criteria are fulfilled.

OBJECTIVES

To evaluate the appropriateness of albumin treatment in non-critical and non-oncohaematological patient according to published evidence, hospital prescription protocol and serum albumin values (SALBV).

MATERIAL AND METHODS

-Retrospective multicentric observational study of patients treated with albumin during 2013 in four university hospitals.

-**Exclusion criteria:** Critically ill and oncohaematological patients.

-**Data collected:**

- demographics
- service
- albumin indication
- albumin daily dose (ADD)

- SALBV at the beginning (BSALBV)
- SALBV at the end (ESALBV)
- treatment duration (TD)

-**Calculations:** Percentage of adhesion to accepted recommendations; if no BSALBV albumin indication was considered inappropriate. Median (IQR) of age, ADD, TD, BSALBV, ESALBV and serum albumin increase (SALBI). Data were analyzed globally and stratified by indication

RESULTS

Albumin indications and adhesión to accepted recommendations

475 patients were analyzed (127 paracentesis). 39% (178) were female and median age was 67 years (56-77).

| Indication | N | % | Approved |
|--|-----------|------------|----------|
| Paracentesis | 127 | 26.7 | Yes |
| Edema refractory to diuretics in non-hepatic pathology | Alb > 20* | 114 (26)** | No |
| | Alb < 20 | 32 | Yes |
| Hepatic resection | Alb > 20* | 27 (15)** | No |
| | Alb < 20 | 1 | Yes |
| Hypovolemia | 42 (13)** | 8.8 | Yes |
| Hepatorenal syndrome | 81 (27)** | 17.1 | Yes |
| Nutritional supplement | 27 (5)** | 5.7 | No |
| Perioperative hepatic transplantation | Alb > 25* | 15 (2)** | No |
| | Alb < 25 | 9 | Yes |

*or without serum albumin values at the beginning

**in brackets number of patients without serum albumin values at the beginning

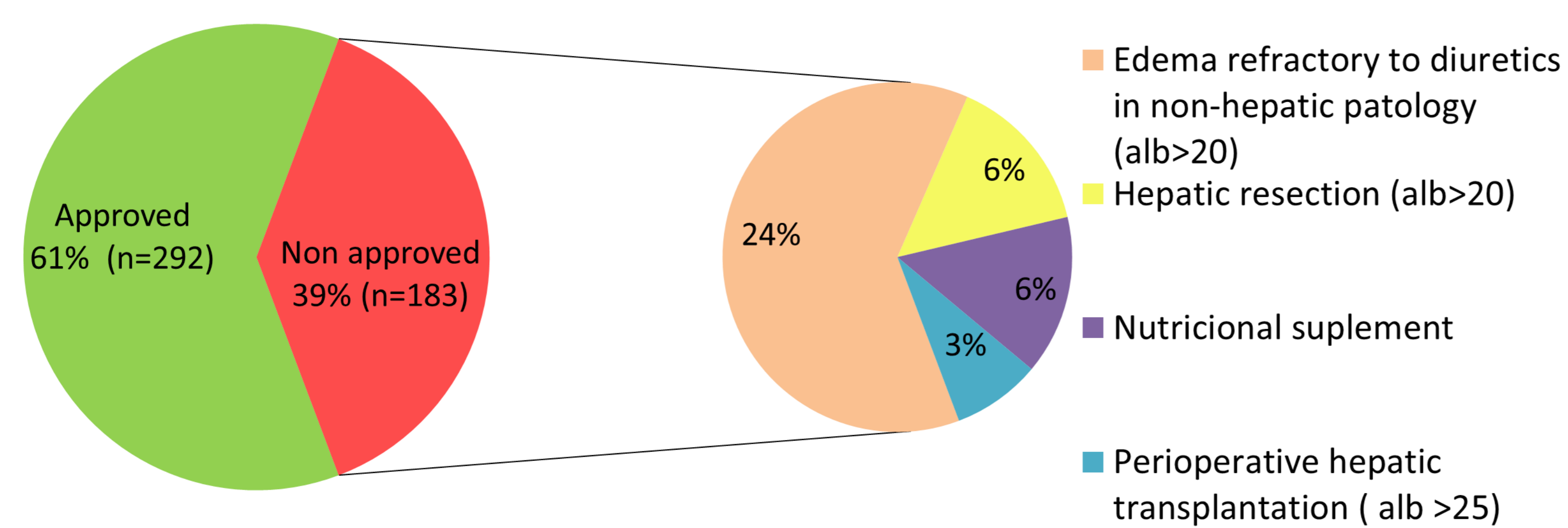


Figure 1. Distribution of albumin indications and percentage of adhesion to accepted recommendations (n=475). Albumin prescription was inappropriate in 39% of patients (183 of 475), 26% without serum albumin values at the beginning (48 of 183)

Digestive surgery and Internal Medicine accounted the majority of inappropriate indications with 38 % (n=70) and 21% (n=38) respectively.

Evolution of serum albumin values during albumin treatment

Excluding paracentesis, overall 25% of patients (88 of 348) hadn t SALB at the beginning and 22 % (76 of 348) at the end. Only 212 of 348 patients had BSALB and ESALB .

| n = 212 | median | p25 | p75 |
|-------------|--------|-----|-----|
| ADD (g/day) | 25 | 20 | 30 |
| TD (days) | 4 | 2 | 6 |
| BSALB (g/L) | 24 | 20 | 28 |
| ESALB (g/L) | 30 | 26 | 34 |
| SALBI (g/L) | 6 | 2 | 10 |

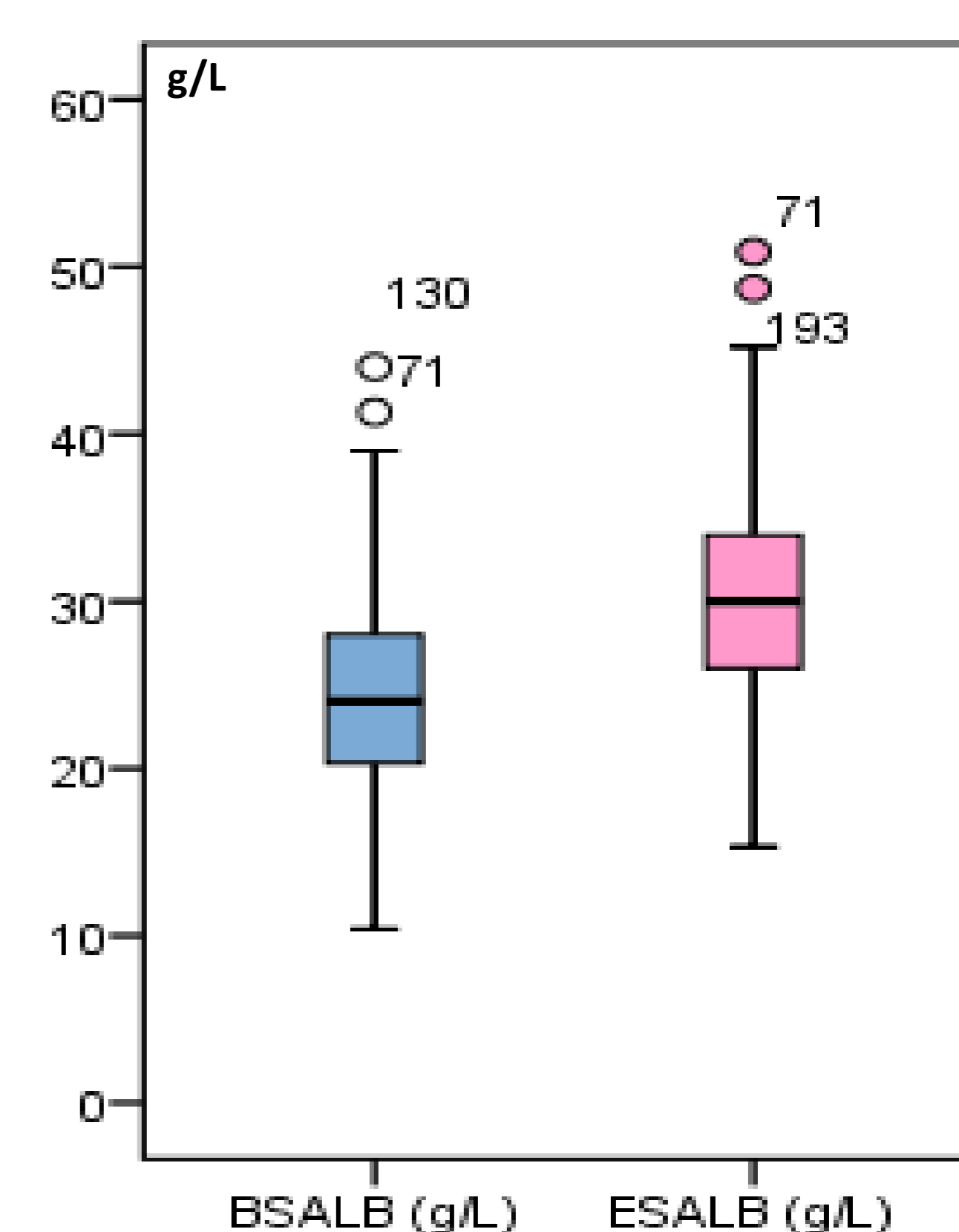


Figure 2. Distribution of serum albumin values at the beginning and at the end of treatment.

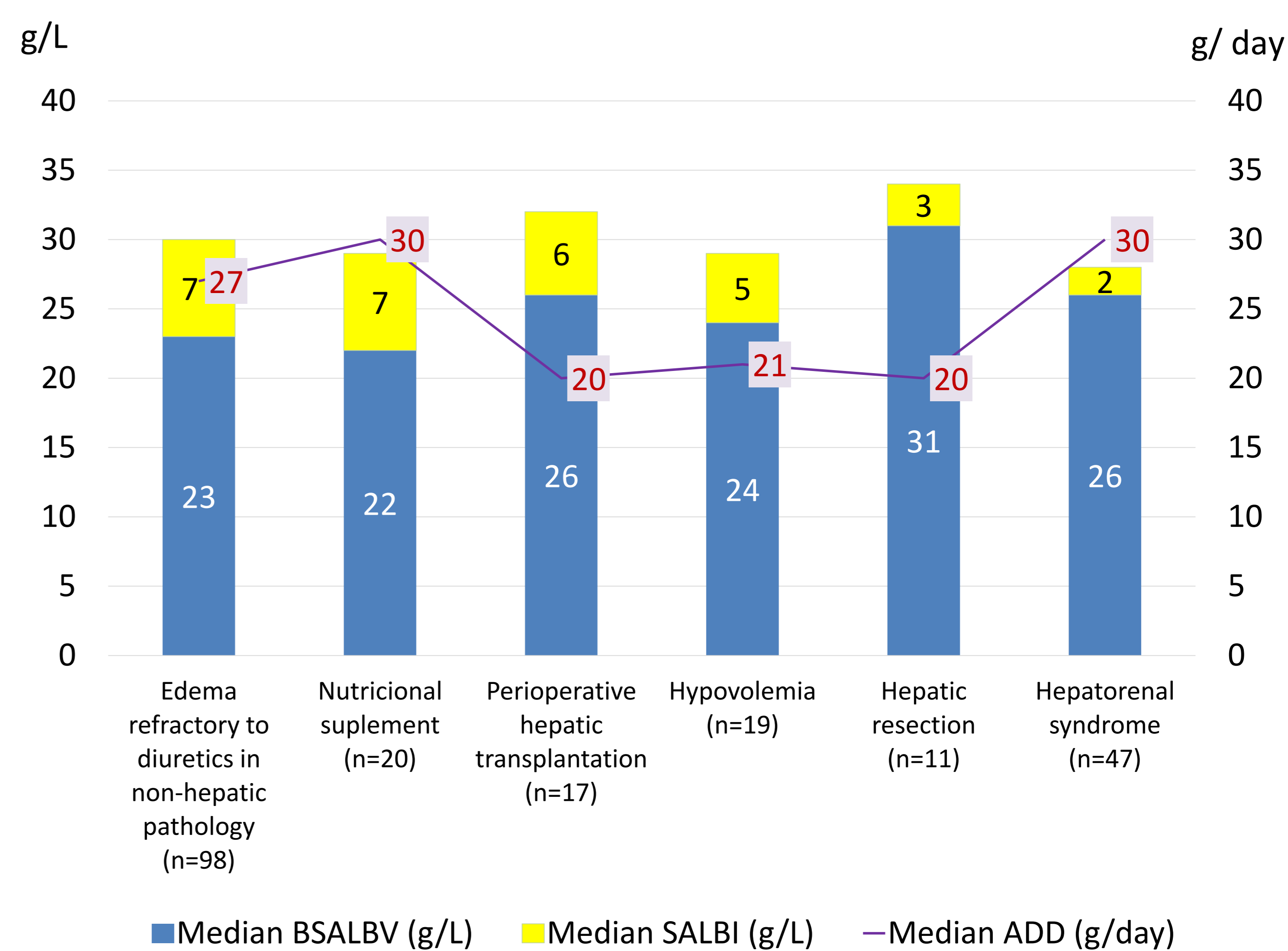


Figure 3. Comparison of median BSALBV (g/L), median SALBI (g/L) and median ADD (g/day) stratified by indication.

CONCLUSIONS

Albumin prescription profile is not consistent with published recommendations. In this study, more than one quarter of the prescriptions were inappropriate. The main reasons were that the BSALBV were higher than the accepted criteria or unknown. It is necessary to ensure compliance with accepted guidance in order to achieve cost-effective practice.