(K): 82.69% and 93.03% met the recommended requirements respectively (3–5 mEq/kg/day and 2–5 (mEq/kg/day); phosphorus (P): 23% within the recommended limits (1.45–2.5 (mM/g/day), 64.47% above; and calcium (Ca): 80.44% within the recommended range (3–4 mEq/kg/day). Recommended volume (140 ml/kg/day): 7.96% on range, 92.04% below. kcal/kg; in 95.5% of patients increased compared to that recommended on the first day (60 kcal/kg/day); and 90% of patients were below the recommended level in the third week (120 kcal/kg/day).

RAT under 1 month: 24 patients and 248 NPs. aa: 43.54% met the requirements (2.3–3), exceeding 43.14%. HCl and lipids: 100% within the limits (16–18 and 3–4 respectively). Na: 71.79% within the recommended range (2–3); K: 66.49% within the recommended range (1.5–3); 33.5% above; P: 39.5% met the recommendations (1–1.5), 24.5% below, 36% above; and Ca: 75.40% on range (2–3). Volume ml/kg: 90.38% lower than recommended (140 ml/kg/day). Energy requirements: 83.33% of patients lower than recommended (110 kcal/kg).

Conclusion We consider an acceptable degree of adequacy to the published recommendations regarding macronutrient inputs and caloric distribution. The energy and water contributions below the mean could be justified by the administration of concomitant enteral nutrition. The contribution of micronutrients is more variable because of the individual situation of each patient.

REFERENCES AND/OR ACKNOWLEDGEMENTS
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4CPS-190 RITUXIMAB USE IN CHILDREN, A SINGLE HOSPITAL EXPERIENCE

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Background Rituximab is a monoclonal antibody directed against the CD20 antigen, expressed on the surface of B-lymphocytes, promoting the lyses of the cells. It is labelled for use in non-Hodgkin’s lymphoma, chronic lymphocytic leukaemia (CLL), rheumatoid arthritis and granulomatosis with polyangiitis and microscopic polyangiitis. Nowadays it is commonly used as an off-label treatment for many other diseases, including some paediatric disorders.

Purpose To describe the patterns of rituximab use in a paediatric teaching hospital.

Material and methods We conducted a retrospective observational study involving all patients treated in a paediatric hospital with rituximab from January 2001 to June 2018.

Clinical data were collected from electronic patients’ medical records, including: patient age, prescribing services and indication.

Results The study comprised 145 patients (39% males) with a median age of 15.4 years. The principal indications according to the prescribing services were:

- Forty-seven patients of the nephrology unit: resistant or refractory nephrotic syndrome (34) and transplants—rejects (13).
- Forty patients of the oncology unit: non-Hodgkin lymphoma (23), syndrome opsoclonus–myoclonus in neuroblastoma (14) and others (three).
- Twenty-five patients of the haematology unit: disease: haemolytic anaemia (11), leukaemia (four), haemophagocytic syndrome (four), thrombocytopenic purpura (two) and others (four).
- Thirteen patients of the rheumatologic diseases unit: juvenile idiopathic arthritis (four), systemic lupus erythematosus (four), vasculitis (two) and others (three).
- Twelve patients of the nephrology unit: autoimmune encephalitis (nine), post—Herpes Simplex encephalitis (two) and others (one).
- Seven patients of the infectious unit: Epstein–Barr virus infection (seven).
- One dermatologic disease: Steven–Johnson disease (one).
- No unexpected side effects were observed outside those reported in the summary characteristics of the product.

Conclusion In paediatrics, rituximab treatment is prescribed for off-label indications. Our study shows that rituximab is used in a wide variability of disorders, where the renal disease, specifically the nephrotic syndrome, is the most common indication as a second-line treatment.

Although the utilisation of rituximab increases every year and some uses are well described, further studies for some indications are necessary to establish a correct safety and efficacy profile in children.

REFERENCES AND/OR ACKNOWLEDGEMENTS
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No conflict of interest.

4CPS-191 EFFECTIVENESS AND SAFETY OF RADIUM-223 CHLORIDE IN BONE-METASTATIC CASTRATION-RESISTANT PROSTATE CANCER

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Background Radium-223 (223Ra) chloride has been shown to improve overall survival (OS) and progression-free survival (PFS) in patients with castration-resistant prostate cancer (CRPC) and bone metastases.

Purpose To evaluate the effectiveness and safety of 223Ra in real-life clinical practice in patients with CRPC and bone metastases.

Material and methods Retrospective observational multicentre study evaluating all males with CRCP treated with 223Ra from July 2015 until September 2018. Demographical, diagnostic, therapeutic and clinical variables were collected. The response was assessed through the PFS and OS. To assess safety, all treatment-related adverse events were recorded.

Results Sixty-three patients with metastatic CRPC were treated with 223Ra at three different hospitals. Mean age 71.9 years (SD=10.3), 64% of patients ECOG 0–1% and 36% ECOG 2–3. Six per cent of patients received 223Ra as first treatment, 48% as second line and 25% as the third...
one: the remaining 21% $^{223}$Ra was used in the fourth line or higher. Thirty-seven patients completed six treatment cycles and 26 stopped treatment before completing six cycles because of side effects or worsening performance status: $^{223}$Ra mean dose was 4.6 MBq (SD=0.7). Fifteen per cent of patients had more than a 40% reduction in PSA levels at the end of treatment. According to Kaplan–Meier estimation, median OS and PFS were 10.0 (95% CI: 8.1 to 11.9) and 5.0 (95% CI: 4.1 to 5.9) months, respectively. Six- and 12 month OS rates were 76% and 39%, respectively. Patients receiving all six cycles experienced the major benefit from the therapy. In addition, nine patients were given $^{223}$Ra at least 1 month prior to death. Forty-nine per cent of patients suffered haematological adverse effects such as thrombocytopenia and neutropenia, three patients grade 3 or 4 toxic effects and 24% of patients showed gastrointestinal side effects such as diarrhoea, nausea and vomiting in grade 1–2. Fourteen patients reported a worsening of their bone pain.

Conclusion PFS and OS observed in this study are lower than those reported in the clinical trial. This could be explained by a worse performance status and that approximately half of the patients had been heavily pre-treated, $^{223}$Ra receiving as a third line or higher. $^{223}$Ra was well tolerated, the adverse effects being clinically manageable.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.