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Background and Importance

- HIPEC with cisplatin during cytoreductive surgery offers survival benefits in peritoneal carcinomatosis.
- The prevalence of postoperative acute kidney injury (AKI) can be as high as 48%.
- Prophylactic treatment with **sodium thiosulfate (ST)** can be effective to avoid this complication, but evidence is weak.
- Cisplatin can also cause electrolyte imbalances, especially hypernatremia and hypokalemia.

Aim and Objectives

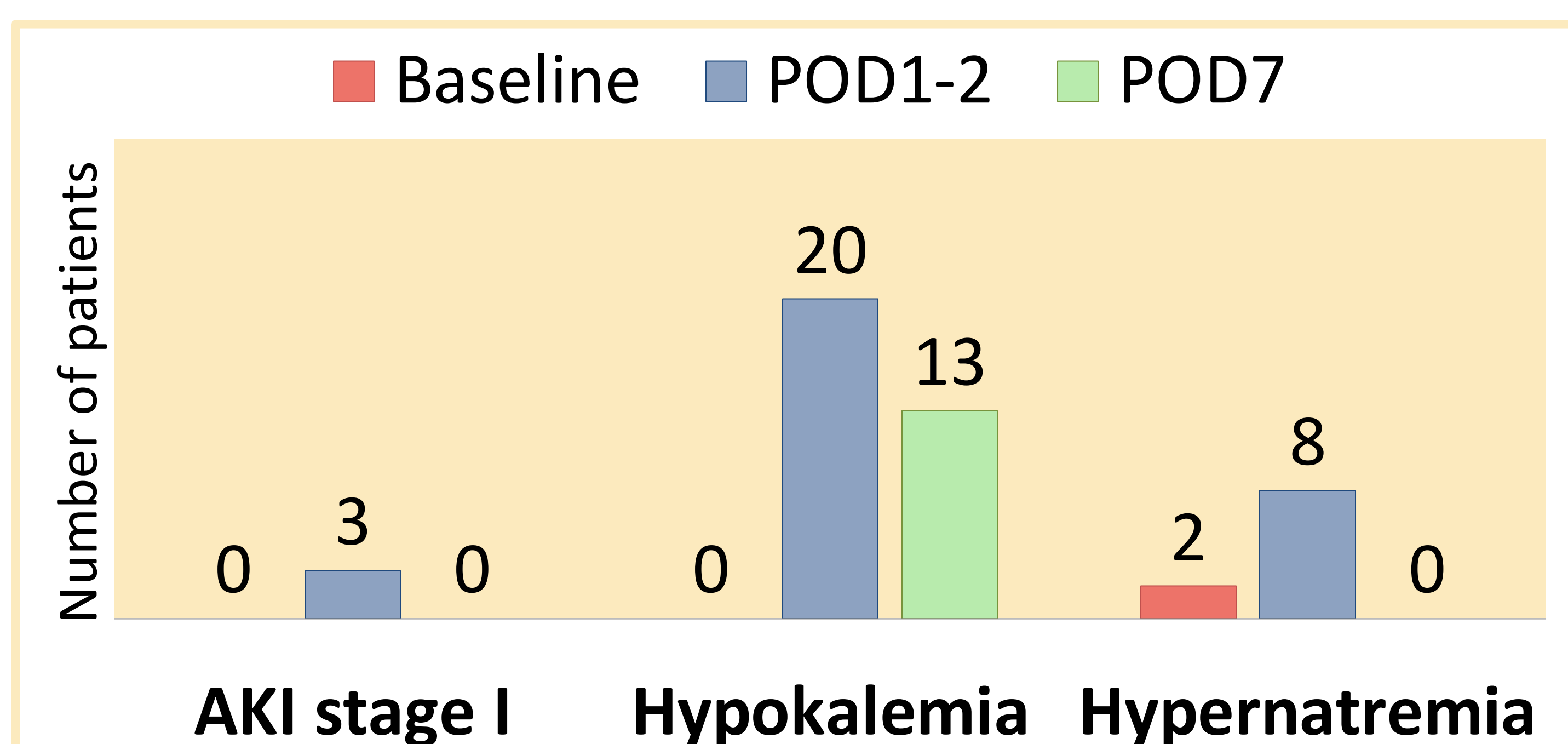
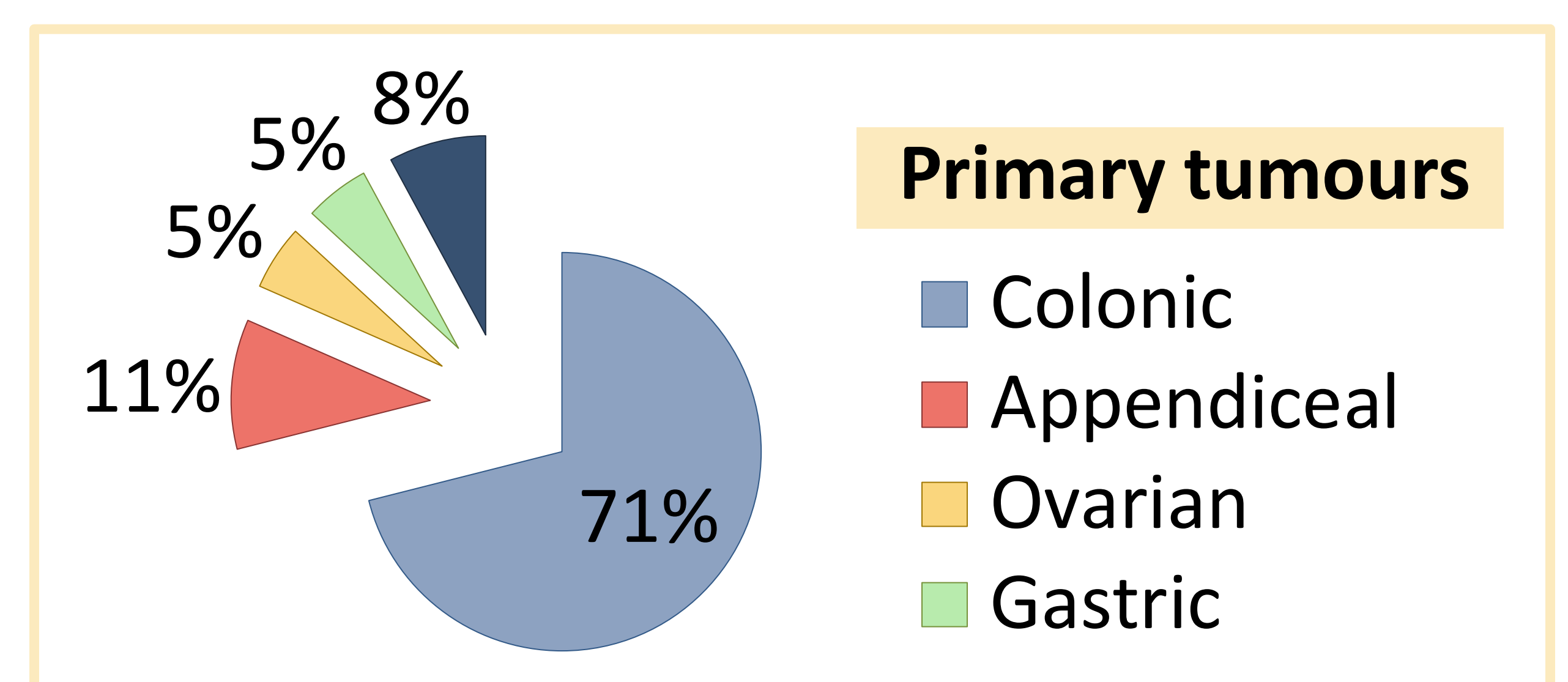
- To evaluate
- renal toxicity of HIPEC with cisplatin while using ST as prophylaxis
 - possible alterations in serum potassium and sodium levels caused by the procedure

Materials and Methods

- Retrospective observational study, which included demographic and clinical data of patients treated with HIPEC with cisplatin from January 2023 to June 2024 at a tertiary university hospital.
- All patients received prophylaxis against AKI with ST and adequate hydration. ST was administered as a 10 g bolus 15 minutes before HIPEC and as a 10 g 6-hour perfusion afterwards.
- Renal function was assessed by blood parameters applying Kidney Disease Improving Global Outcomes (KDIGO) criteria.

Results

- 38 patients were included (63.2% women), with a median age of 67 (IQR: 52, 72) years old.
- Three patients (7.9%) developed AKI stage I. There were no cases of AKI stage II or III.



*POD: postoperative day

- Of those with hypokalemia (33), 69.6% were mild, 26.1% moderate and 4.3% severe.
- Magnesium serum levels were not monitored frequently enough to allow for evaluation.
- ST was not associated with any significant adverse effects.

Conclusion and Relevance

- **Sodium thiosulfate** may be a **safe and effective prophylactic treatment** for cisplatin-induced AKI in HIPEC. Further studies are needed to strengthen these findings.
- **Electrolyte imbalances** are a **frequent adverse effect** of HIPEC with cisplatin, especially **mild hypokalemia**.