

Figure S1. Types of Cancer in the Study Population.

Distribution of the oncological diagnosis in the two groups. Due to the matching process with the entity of the primary malignant disease as the main matching criteria, the number of patients per type of cancer in each group is the same.

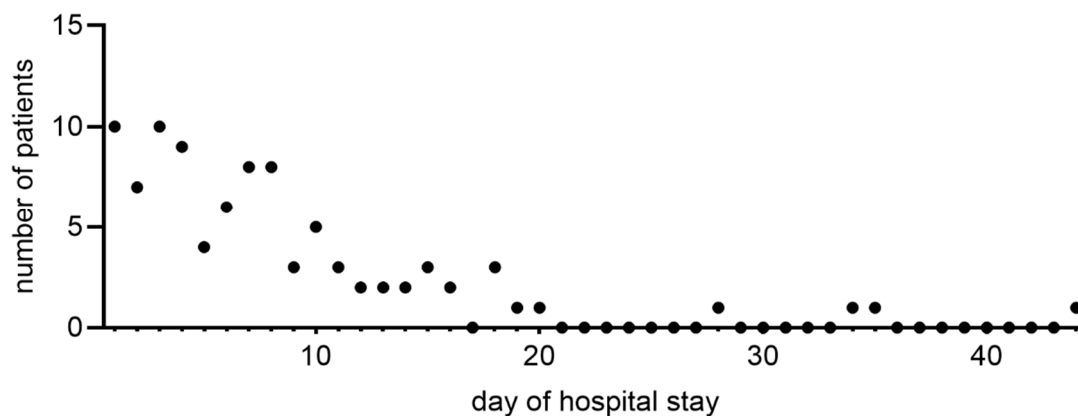


Figure S2. First Occurrence of Hypernatremia.

Overview of the first onset of hypernatremia for each patient: most patients were either hypernatremic at admission or became hypernatremic during the first few days of hospitalization.

Table S1. Co-morbidities.

| | |
|------------------------|---|
| Cardiovascular: | Heart failure, structural heart disease, coronary artery disease, previous heart attacks, previous strokes, peripheral artery disease, thrombosis, lung embolisms, or high blood pressure |
| Pulmonary: | Asthma, chronic obstructive pulmonary disease, emphysema, intestinal lung disease, previous lobectomy, or pneumectomy |
| Endocrinological: | Diabetes mellitus type I, II, or thyroid disease |
| Gastrointestinal: | Crohn's disease, ulcerative colitis, gastroduodenal ulcers, or active helicobacter pylori infection |
| Psychological: | Treatment required disease such as generalized anxiety disorder, depression, schizophrenia, bipolar disorder, or borderline personality disorders |
| Renal: | Acute and chronic kidney disease, previous nephrectomy, polycystic kidney disease |
| Neurological: | Parkinson's disease, multiple sclerosis, central vertigo-associated disorders, Alzheimer's disease, epilepsy or epileptic syndrome |
| Previous Malignancies: | Other current stable malignancies or a previous solid tumor entity |

Table S2. Number of Co-morbidities and Number of Patients per Co-morbidity and Group.

| Number of Co-morbidities | Hypernatremia Group | Normonatremia Group | p-Value |
|--------------------------|---------------------|---------------------|---------|
| | n = 93 | n = 93 | |
| 0 | 1 | 9 | 0.023 |
| 1 | 10 | 25 | 0.009 |
| 2 | 27 | 19 | 0.234 |
| 3 | 27 | 21 | 0.402 |
| 4 | 16 | 16 | - |
| 5 | 9 | 2 | 0.062 |
| 6 | 3 | 1 | 0.613 |
| Relevant Comorbidities | Hypernatremia Group | Normonatremia Group | p-Value |
| | n = 93 | n = 93 | |
| Cardiovascular | 80 | 61 | 0.001 |
| Pulmonary | 23 | 15 | 0.146 |
| Endocrinological | 41 | 28 | 0.069 |
| Gastrointestinal | 27 | 19 | 0.174 |
| Psychological | 6 | 9 | 0.419 |
| Renal | 46 | 25 | 0.002 |
| Neurological | 13 | 13 | - |
| Previous malignancies | 18 | 33 | 0.014 |

Comparing the number of co-morbidities between the hypernatremia and the normonatremia group showed that in the hypernatremia group, most patients had two or three co-morbidities, whereas in the normonatremia group, it was one. The two groups differ significantly in the category without ($p=0.023$) or with one ($p=0.09$) co-morbidity.

Up to nine relevant co-morbidities were recorded for each patient. There is a significant difference in the number of co-morbidities between the two groups when it comes to cardiovascular disease ($p=0.001$), kidney disease ($p=0.002$), and previous malignancies ($p=0.014$).

Table S3. Distribution of Tumor Stages.

| Stage of the underlying malignant disease | Hypernatremia Group | Normonatremia Group | p-Value |
|---|---------------------|---------------------|---------|
| | n = 93 | n = 93 | |
| Lower stages: I and II (%) | 5 (5) | 19 (20) | 0.004 |
| Higher stages: III and IV (%) | 77 (83) | 62 (67) | 0.018 |
| NA (%) | 11 (12) | 10 (11) | - |

Tumor stages were recorded according to the UICC TNM classification and were compared between the two groups. For both lower and higher tumor stages, the two groups were significantly different. Most patients (83% vs. 67%) showed a higher tumor stage (\geq III).