Antibiotic prophylaxis retrospective analysis for percutaneous nephrostomy in patients with cancer.

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Conclusion first
The results of the present study indicate that the use of antibiotic prophylaxis for managing urinary tract obstruction by percutaneous nephrostomy is not recommended in cancer patients. In contrast, for catheter exchange, antibiotic prophylaxis appears to have a protective effect for urinary tract infection.

This observational longitudinal study retrospectively collected data from the available medical records (Figure 1). Catheter-related urinary tract infection was defined as any diagnosis of urinary tract infection based on clinical symptoms (fever, lower back pain, percussion tenderness in the lumbar area, and signs of sepsis without other apparent focus) recorded in antibiotic prescription charts, and on the results of urine culture collected up to 7 days after percutaneous nephrostomy catheter placement or exchange. The associations between categorical variables were analysed using Fisher’s exact test. The risk factors for urinary tract infection were assessed using logistic regression, and the type of prophylaxis was evaluated using a non-exploratory multiple logistic regression model adjusted for tumour type and patient age.

Introduction
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The goal of the poster
The aim of this study is to determine the rate of urinary tract infection associated with initial placement of percutaneous nephrostomy catheters and subsequent replacements.

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Results
The median age of the patients was 60 years, ranging from 17 to 92 years. Antibiotic prophylaxis was performed before initial nephrostomy catheter placement in 79.3% of the cases and before catheter exchange in 84.9% of the cases (p = 0.337).

<table>
<thead>
<tr>
<th>Variable</th>
<th>No</th>
<th>Yes</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of antibiotic prophylaxis before first nephrostomy catheter placement</td>
<td>18</td>
<td>0</td>
<td>0.99</td>
<td>0.93-1.06</td>
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<tr>
<td>Use of antibiotic prophylaxis before catheter exchange</td>
<td>10</td>
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<td>0.99</td>
<td>0.93-1.06</td>
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<tr>
<td>Use of antibiotic prophylaxis before first nephrostomy catheter replacement</td>
<td>11</td>
<td>0</td>
<td>0.99</td>
<td>0.93-1.06</td>
</tr>
<tr>
<td>Use of antibiotic prophylaxis before catheter exchange after replacement</td>
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<td>0</td>
<td>0.99</td>
<td>0.93-1.06</td>
</tr>
</tbody>
</table>

Table 1 – Associations between the time of nephrostomy catheter placement, antibiotic prophylaxis protocols used, use of antibiotic therapy for urinary tract infection before the procedure, and urinary tract infection after the procedure.

Figure 1. Schematic representation of the study sample.

Figure 2. Results of positive urocultures asked before the first placement (n = 35) and replacement (n = 108) of the nephrostomy catheter.

Our next step on future research is planning a clinical trial randomizing both profilaxies (empirical and targeted).