genitourinary tumours, non-prostate

817P PROGNOSTIC IMPACT OF CHANGE IN NEUTROPHIL TO LYMPHOCYTE RATIO (NLR) IN RESPONSE TO TARGETED THERAPY FOR METASTATIC RENAL CELL CARCINOMA (mRCC)


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Aim: NLR is a marker of host inflammation and adds independent prognostic information to the International Metastatic Renal Cell Carcinoma Database Consortium (IMDC) model (Templeton et al. ASCO GU 2014). Here we evaluate the impact of change in NLR after exposure to targeted therapy.

Methods: We included patients with mRCC treated with targeted therapy for which NLR data were available at start of first-line treatment, and 6 and 12 weeks thereafter (± 2 weeks). Change from below to above (or vice versa) NLR cut-offs between 2.5 and 5.0 by week 6 and 12 were studied. Median overall survival (OS) and progression free survival (PFS) was estimated using the Kaplan Meier method, the impact of conversion on OS and PFS was evaluated by Cox regression model. The impact of NLR conversion on objective response rates (ORR) was evaluated by binary logistic regression.

Results: Data comprising 1199 pts from 9 Consortium sites were evaluated. Median age was 62 years; 23%, 52%, 25% were in the favorable, intermediate and poor prognostic groups, respectively. Sunitinib was first line treatment in 74%. Median baseline NLR was 3.5. Compared with pts without change in NLR, a fall was associated with longer OS and PFS for all cut-offs tested. A rise in NLR showed opposite effects for the 3 endpoints. Data for change in NLR by week 6 using a cut-off of 3.0 are shown in the table. Similar results were observed for changes by week 12.

Table: 817P

<table>
<thead>
<tr>
<th>NLR week 0 -&gt; NLR week 6 (cut-off 3.5)</th>
<th>H -&gt; L</th>
<th>H -&gt; H</th>
<th>L -&gt; H</th>
<th>L -&gt; L</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>320</td>
<td>276</td>
<td>58</td>
<td>545</td>
</tr>
<tr>
<td>OS median (mo)</td>
<td>19.4</td>
<td>8.1</td>
<td>14.3</td>
<td>28.9</td>
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<tr>
<td>HR*; P</td>
<td>0.54; &lt;0.001</td>
<td>2.20; &lt;0.001</td>
<td></td>
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<tr>
<td>PFS median (mo)</td>
<td>8.6</td>
<td>3.9</td>
<td>6.6</td>
<td>11.7</td>
</tr>
<tr>
<td>HR*; P</td>
<td>0.56; &lt;0.001</td>
<td>2.20; &lt;0.001</td>
<td></td>
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<tr>
<td>ORR N (%)</td>
<td>91 (32)</td>
<td>29 (12)</td>
<td>6 (11)</td>
<td>176 (35)</td>
</tr>
<tr>
<td>OR*; P</td>
<td>3.48; &lt;0.001</td>
<td>0.16; 0.002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* adjusted for IMDC score. H, high (i.e. NLR > 3.5); L, low (i.e. NLR ≤ 3.5).

Conclusions: NLR is a readily available and inexpensive biomarker. Changes in NLR as early as 6 weeks after exposure to targeted therapy appear to have both prognostic and predictive value. Prospective validation of change in NLR is warranted.

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