Outcomes according to tumor RAS and BRAF mutation status in patients treated with cetuximab in 1st-line treatment of unresectable metastatic colorectal cancer (mCRC): updated results from EREBUS cohort

D. Smith1, A. Sa Cunha2, M. Rouyer3, E. François4, A. Monnereau5, E. Yon3, E. Bignon3, P. Noize3, C. Droz-Perroteau3, N. Moore3,7, A. Fourrier-Réglat2,6,7

1: Hôpital Haut-Lévêque, CHU de Bordeaux, Pessac, France - 2: Hôpital P. Brousse, Villejuif, France - 3: INSERM CIC1401, Université de Bordeaux, Bordeaux, France - 4: Centre Lacassagne, Nice, France – 5: Institut Bergonié, Bordeaux, France - 6: CHU Bordeaux, INSERM CIC1401, Bordeaux, France - 7: INSERM U1218, Université de Bordeaux, Bordeaux, France

Methods

EREBUS cohort
- Unresectable mCRC and NRAS wild-type initiating 1st-line systemic treatment between 2008 and 2010
- N = 390

Methods
- EREBUS cohort
- Unresectable mCRC and NRAS wild-type initiating 1st-line systemic treatment between 2008 and 2010
- N = 390

- Baseline characteristics of patients

<table>
<thead>
<tr>
<th>Patients with wild-type RAS</th>
<th>Patients with mutated RAS</th>
<th>Patients with wild-type RAS ( / ) mutated BRAF</th>
<th>Patients with mutated RAS ( / ) wild-type BRAF</th>
</tr>
</thead>
<tbody>
<tr>
<td>248</td>
<td>390</td>
<td>213</td>
<td>177</td>
</tr>
</tbody>
</table>

- Response to treatment and metastases resection rates

<table>
<thead>
<tr>
<th>RAS wt / RAF wt</th>
<th>RAS wt / RAF wt</th>
<th>RAS wt / RAF wt</th>
<th>RAS wt / RAF wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 64</td>
<td>n = 33</td>
<td>n = 22</td>
<td>n = 213</td>
</tr>
</tbody>
</table>

- Operated patients:

<table>
<thead>
<tr>
<th>Patients RAS wt</th>
<th>Patients RAS mt</th>
<th>Patients RAS wt / BRAF wt</th>
<th>Patients RAS mt / BRAF mt</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 64</td>
<td>n = 22</td>
<td>n = 213</td>
<td>n = 232</td>
</tr>
</tbody>
</table>

- Study design

- Survival outcome

PFS was evaluated at 2 years of follow-up and OS at 5 years of follow-up in study populations (PFS: table 3, and figure 2; OS: table 3, and figure 3), and in operated patients with mCRC RAS mt and RAS wt / BRAF wt (PFS: table 4, and figure 4; OS: table 4, and figure 5).

Results

- Baseline characteristics of study populations

Baseline characteristics of patients are described according to RAS and BRAF tumor mutation status in Table 1.

- Response to treatment and metastases resection rates

Objective response to treatment and metastases resection rates are described in Table 2.

Objective response to treatment before surgery (partial + complete response, %) (15.0%)
- Objective response to treatment before surgery (partial + complete response, %) (15.0%)
- Metastases resection (whichever surgery: right CRC, R1, R0, or R2, %) (15.0%)
- Complete response rate after surgery (R0, R1 or CRC R0, %) (15.0%)
- Complete response rate after surgery (R0, R1 or CRC R0, %) (15.0%)

- Declarative of Interests

This study was supported by an unconditional grant from MERRCK SERONO S.A.S., an affiliate of Merck KGaA, Darmstadt, Germany.

Conclusion

In line with RCT findings, these results support in real-life practice, the difference of benefit associated to tumor KRAS, NRAS, and BRAF mutations in patients with unresectable mCRC treated with cetuximab as 1st-line treatment.