Clinicopathological and molecular characteristics of mucinous adenocarcinoma of the ovary

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Conclusions: Bilateral tumors, presence of Pseudomixoma peritonei, not optimal cytoreduction and advance stage were correlated to worse oncology outcomes in mucinous adenocarcinoma of the ovary. The HER2 amplification was associated with worse oncology outcomes. KRAS mutation was associated with better prognosis.

Introduction
The mucinous tumor of the ovary is the third more common subtype of the ovary cancer, corresponding about 10% of the cases. The Literature emphasizes the importance of anatamopathological and histopathological studies involving HER2 superexpression, and also KRAS mutations search to enable an early detection as well as determine the prognostic factors of the tumor.

The goal
To evaluate the clinic, pathological and molecular characteristics and the prognosis of mucinous adenocarcinoma of the ovary.

Methods
Forty seven patients (pts), with mucinous adenocarcinoma of the ovary, diagnosed at Barretos Cancer Hospital, from 2009 to 2015 were analysed in two phases: 1. Data were collected using a research instrument; 2. Molecular analysis (31 pts of the sample): immunochemistry (IMC) and in situ hybridization (FISH) to HER2 superexpression; KRAS mutation.

Statistics analysis: chi-square test or Fisher exact (p-value of <0.05 was considered significant).

Results
We analysed 47 patients, in which 35 patients (74.5%) had malignant mucinous tumor and 12 pts (25.5%), borderline tumor. Their clinical data were separated into these two groups (Table 1).

<table>
<thead>
<tr>
<th>Tumor</th>
<th>Malignant</th>
<th>Borderline</th>
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<tbody>
<tr>
<td>Unilateral</td>
<td>30 pts (85.7%)</td>
<td>11 pts (91.7%)</td>
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<tr>
<td>Pseudomixoma peritonei</td>
<td>6 pts (17.1%)</td>
<td>3 pts (25%)</td>
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<tr>
<td>Complete cytoreduction</td>
<td>15 pts (42.8%)</td>
<td>3 pts (25%)</td>
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<tr>
<td>No Relapse</td>
<td>26 pts (74.3%)</td>
<td>12 pts (100%)</td>
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**SD= Standard Deviation**

Only two patients (6.5%) had doubtful (+) HER2 superexpression on IMC and positive amplification on FISH: both pts had malignant tumors and PP (100%), only 1(50%) relapsed.

Concern KRAS mutation, 10 pts (32.2%) were positive: 5 pts (50%) had malignant tumors, while 5 (50%) had borderline ones; 9 pts (90%) were unilateral and 8 pts (80%) had Pseudomixoma peritonei.

“*The study keeps going on, emphasizing the molecular tests, so we'll be able to improve our analysis of mucinous tumors of the ovary.*”