INTRODUCTION
Chemosensitivity-induced bone loss (BON) is among the most frequent sequelae of oncological treatment often leading to increased bone fragility and subsequent fractures [1-3]. During the last two decades, CTSB has been evaluated in both bone and hematological malignancies [4]. Generally, CTSB, also known as osteoclast differentiation factor (ODF), is involved in bone resorption and turnover. Studies performed in the 1990s evidenced that the presence of CTSB in bone marrow and tumor tissue is strongly correlated with bone loss [5,6]. The key role of CTSB in bone metabolism and turnover stimuliations performed in the 1990s evidenced that the presence of CTSB in bone marrow and tumor tissue is strongly correlated with bone loss [5,6]. The key role of CTSB in bone metabolism and turnover. Using antibodies against CTSB, Wang et al. demonstrated the presence of CTSB in bone marrow of patients with BON [7]. These findings have been confirmed in multiple studies performed in the last two decades 

RESULTS
As can be observed from Table 1 the median age of the pts included was 65 years and thus roughly five years younger as compared to other populations of T0C. The vast majority of pts had histologically proven cancer with high grade versus adenocarcinomas. The most frequent included adenocarcinomas of the lung and prostate with the majority of pts having a history of smearing and smoking. The majority of pts had a double tumor with the most frequent combination being colon and breast cancer.

Type of therapy

Regimens without bevacizumab

- Carboplatin monotherapy
- Paclitaxel + carboplatin
- Carboplatin + gemcitabine
- Carboplatin + paclitaxel + gemcitabine

Regimens with bevacizumab

- Carboplatin monotherapy + bevacizumab
- Paclitaxel + carboplatin + bevacizumab
- Carboplatin + gemcitabine + bevacizumab
- Carboplatin + paclitaxel + gemcitabine + bevacizumab

CONCLUSIONS

- This is the first report demonstrating that the effect of chemotherapy alone on selectectedy actively is significantly enhanced by adding an anti-angiogenic agent to the pharmacological strategy
- The effect of chemotherapy + bevacizumab on the expression of selectectedy actively was assessed in vitro by Western Blot and/or immunohistochemistry (IHC)
- These results are in good agreement to our previous findings in pts with renal cancer [8] and breast cancer [9] and further support the antiangiogenic strategy
- In the present study, we investigated the expression of VEGF and its receptor as well as the VEGF downstream effectors in tumor and normal tissue
- These results should preferably be interpreted as an inhibition of bone formation more than an enhancement of bone resorption
- It remains a matter of debate whether the effects on bone metabolism in this study will further translate into an increased incidence of CTSB and complications

Table 1: Patients’ characteristics

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<th>Age (years)</th>
<th>median</th>
<th>range</th>
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<td>59</td>
<td>39–86</td>
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Menopausal status

- pre-menopausal (pts) n (%) 16 (19.0)
- post-menopausal (pts) n (%) 68 (81.0)

Tumor type

- ovarian carcinoma n (%) 78 (92.9)
- fallopian tube carcinoma n (%) 2 (2.4)
- primary peritoneal carcinoma n (%) 4 (4.8)

Histologic subtype

- Type I carcinoma n (%) 19 (22.6)
- serous, non-high grade n (%) 6 (7.1)
- mucinous n (%) 2 (2.4)
- endometrioid n (%) 3 (3.6)
- clear cell n (%) 4 (4.8)
- small cell n (%) 1 (1.2)
- other n (%) 3 (3.6)

Type II carcinoma n (%) 65 (77.4)

Disease status

- Primary n (%) 47 (56.0)
- Recurrent n (%) 37 (44.0)

Type of chemotherapy

- Regimens without bevacizumab n (%) 66 (78.6)
- Carboplatin monotherapy n (%) 2 (2.4)
- paclitaxel + carboplatin n (%) 38 (45.2)
- Carboplatin + gemcitabine n (%) 19 (22.6)
- Carboplatin + paclitaxel + gemcitabine n (%) 6 (7.1)
- Carboplatin + paclitaxel + gemcitabine + bevacizumab n (%) 1 (1.2)
- Regimens with bevacizumab n (%) 18 (21.4)
- Carboplatin monotherapy n (%) 14 (17.6)
- paclitaxel + carboplatin n (%) 1 (1.2)