Platinum and taxane-based chemotherapy dosing, as others antitumor agents, is based on body surface area (BSA), except in the case of carboplatin that is more often based on the area under the curve (AUC). Both parameters depend on the weight, and the obesity (body mass index [BMI]) (30 kg/m²) could lead to overdose. Some guidelines recommend using actual body weight (ABW) in this patients avoiding arbitrary dose-reductions that can compromise efficacy. Therefore this issue remains a challenge.

**Introduction**

To analyze the evidence and recommendations available about the dosage of platinum-based (cisplatin, carboplatin, oxaliplatin) and taxane-based (paclitaxel, docetaxel, nab-paclitaxel) chemotherapy regimens in obese patients.

**Methods**

A formal literature search was performed for each chemotherapy drug on three databases: PubMed, Scopus and Web of Science (WoS). The following strategies were used:

- **CISPLATIN**: 36 articles
- **CARBOPLATIN**: 53 articles
- **OXALIPLATIN**: 12 articles
- **PACLITAXEL**: 43 articles
- **DOCETAXEL**: 40 articles

**Results and Discussion**

<table>
<thead>
<tr>
<th>Pharmacokinetics</th>
<th>Efficacy and toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CISPLATIN</strong> 36 articles</td>
<td>Drug clearance is increased. AUC ratio in obese patients and lean controls is closer to one when dosing using ABW. Dose adjustments in obese patients is discouraged. (Sparrboom 2007).</td>
</tr>
<tr>
<td><strong>CARBOPLATIN</strong> 58 articles</td>
<td>Use adjusted body weight (BW) to estimate clearance with Cockcroft-Gault equation and use Calvert formula for dosing. (Nelson 2012, Elhart 2009).</td>
</tr>
<tr>
<td><strong>PACLITAXEL</strong> 43 articles</td>
<td>Drug clearance is increased in obese patients. Consider ABW for dosing in obesity. Dose adjustments in obese patients is discouraged. (Sparrboom 2007).</td>
</tr>
<tr>
<td><strong>DOCETAXEL</strong> 40 articles</td>
<td>The use of ABW in the formula for dosing resulted in statistically significantly increased exposure in the obese, especially in women (Sparrboom 2007).</td>
</tr>
</tbody>
</table>

**Exclusion criteria:**

- **A** Not useful or incomplete information for the aim of the study
- **B** Insufficient simple size (Total n<10, Subgroup n<5)
- **C** Obesity criteria ≠ IMC ≥ 30 kg/m²
- **D** Systematic review
- **E** Full-Text no available

**Objective**

To analyze the evidence and recommendations available about the dosage of platinum-based (cisplatin, carboplatin, oxaliplatin) and taxane-based (paclitaxel, docetaxel, nab-paclitaxel) chemotherapy regimens in obese patients.

**Conclusion**

For platinum and taxane-based chemotherapy the use of ABW for dosing in obese patients is the most accepted proposal according to the analyzed literature. For carboplatin, depending of the GFR obtained, this should be limited to a maximum of 150 mL/min or use an adjusted body weight for dosing. Furthermore, analysis of body composition could be used for dosing or reducing risk of toxicity in sarcopenic patients.